

ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL

**ENVISIONING THE FUTURE OF URBAN DESIGN
FROM CINEMATIC SPACES:
AN EXPLORATION THROUGH SCIENCE FICTION FILMS**



M.Sc. THESIS

Dila BABAOĞLU

Department of Urban Design

Urban Design Master Programme

JANUARY 2025

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Thesis Advisor: Assoc. Prof. Dr. Eren KÜRKÇÜOĞLU

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İSTANBUL TEKNİK ÜNİVERSİTESİ ★ LİSANSÜSTÜ EĞİTİM ENSTİTÜSÜ

**KENTSEL TASARIMIN GELECEĞİNİN SİNEMATİK MEKÂNLAR
ARACILIĞIYLA DEĞERLENDİRİLMESİ: BİLİM KURGU FİMLERİ
ÜZERİNDEN BİR KEŞİF**

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Date of Submission: 24 December 2024
Date of Defense : 14 January 2025



FOREWORD

During my education at ITU, I studied various projects on different scales and read a lot of works covering many different topics. My school days were tightly scheduled: I was attending a building elements course early in the morning, preparing a presentation for an urban design project in the afternoon, and reading regional development plans when I got home in the evening. After going back and forth for some time on different design problems from the largest to the smallest projects, I have started to develop insights on all of these unconsciously and I have realized that all these works, regardless of their scale, context, or method, had some common points. Each of these studies was like a milestones to *the future*. Projects are developed for future scenarios; articles end with future references and concerns; reports denote future trends. My initial question for this repeated relevance to the future is whether there was anybody reading all of these effectively and how all these various futures were placed in the face of the real future. Since studying the future is somehow studying what has not come yet, these questions have evolved to what future envisions we are consuming/exposed to today and their possible impact on the real future. At this point, the cinema, particularly futuristic science fiction films, is involved in the study. Further details are given in the thesis, but I should note at the very beginning of the thesis that this work may contain spoilers for those readers who have not reviewed the film content yet.

This thesis is brought together thanks to many esteemed people, but first and foremost, I would like to express the greatest gratitude to my thesis advisor, Assoc. Prof. Dr. Eren KÜRKÇÜOĞLU for his guidance and support throughout my bachelor's and master's education. Also, I would like to gratefully thank Assoc. Prof. Dr. Başak DEMİREŞ ÖZKUL for her precious opinions enlightening my way. I would like to thank Assist. Prof. Dr. Büşra ÜNVER for her valuable contribution to my thesis. I present my gratitude to all ITU instructors that I had an opportunity to join their courses. Lastly, I would like to thank my mother, Necla BABAOĞLU and my father, Cemal BABAOĞLU, for being my parents and supporting me in being myself.

January 2025

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(Urban Planner and Architect)



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ABBREVIATIONS

ASL	: Average Shot Length
DIY	: Do It Yourself
HD	: High Definition
IMDB	: Internet Movie Database
Sci-Fi	: Science Fiction
SD	: Standard Definition
UK	: United Kingdom
US	: United States of America



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AN EXPLORATION OF SCIENCE FICTION FILMS IN ENVISIONING THE FUTURE OF URBAN DESIGN FROM CINEMATIC SPACES

SUMMARY

Studying the future involves exploring what lies ahead different from the past and present. When future studies are considered together with urban studies, the challenges of envisioning future cities become evident. As indicated in many contemporary urban studies, our cities face a range of issues—social, economic, environmental, governmental, and so on. Reconsidering existing cities' challenges and high urbanization rates, studying the urban future requires more and more attention nowadays. On the other hand, there are various visuals/images generated in envisioning the future of cities. Cinema, as a medium in representing various futuristic urban images and as a form of widely consumed artwork, plays a crucial role in envisioning the future. Films especially in science fiction genre portray many futuristic urban settings through cinematic spaces.

This thesis aims to uncover insights from futuristic science fiction films in the study of future in urban design. In order to strengthen the relationship between the possible future settings conveyed through futuristic science fiction films and preferred settings of urban design in the future, science fiction films are explored. In this investigation, hidden/invisible clues of urban designs in cinematic spaces are revealed. It is explored how science fiction films adapt/present different urban design approaches. This thesis proposes how cinematic spaces can be *instrumentalized* in discussing the future of urban spaces.

In order to conduct the investigation, two theoretical sections are organized to discuss how the future city is conceptualized in urban design field (Chapter 2) and to discuss how to read the cinematic representation of the city in cinema (Chapter 3). The exploration of the science fiction films is laid on two stages in Chapter 4 and Chapter 5. First stage is conducted in four phases to investigate the selected 70 science fiction films for their spatial and theoretical references to the future of urban design. At end of first stage, all films are categorized and 6 films are identified to focus on. In second stage of investigation in Chapter 5, selected 6 films are explored by using method of cinematics. Reconsidering cinematic spaces by collage, juxtaposition and superposition, the discussion of future urban space and design elements depicted in the sci-fi films is conducted scene by scene.

Based on the aim and methodology above, Chapter 2 introduces a framework for studying the urban future. It emphasizes how the future is conceptualized in different fields such as technology, fashion, health in addition to urban studies. It defines science fiction and design fiction. It suggests that design fiction, which emerged in the mix of science fiction and science fact, is a convenient approach to evaluate the futuristic urban design settings from cinematic spaces in the discussion of the future of urban

design. It highlights the role of diegetic representations of the urban space in cinematic spaces. Moreover, Chapter 2 provides an alternative reading of concepts developed for the future of space in urban design field. The conceptualization of the future space is grouped under three major groups: (I) designing the future cities originated from the past, (II) designing the future cities as a solution for the ambiguity of space and (III) considering the political motifs in generating futuristic urban concepts. In this chapter, it is concluded that none of these conceptions is singularly effective in approaching the future of urban design.

Chapter 3 focuses on cinema and cinematic representation of space. It defines cinema as a type of mass media that is consumed and produced in the cities. It emphasizes how cinematic representation of space attracts various audiences as cine-tourists. Also, Chapter 3 introduces how cinematic space is defined in film studies and puts forward how cinematic representation of the space is convenient for exploring the urban space. Basic terms such as shot, scene and frame are defined in this chapter. Cinemetrics, as an advanced drawing system for representing the space is introduced.

The case study of this thesis is comprised of five phases, which are given in Chapter 4 and Chapter 5. In the first phase, a film pool of 70 futuristic science fiction films is generated from the most cited films in the relevant disciplines about the representation of space. In the second phase, all of the films in the pool are reviewed to *rediscover* their references to the future of urban design. The films that entail spatial references for the future of urban design are converted into ideal drawings. In the third phase, the films are mapped according to their theoretical relevance to the concepts of the future space in urban design, introduced in Chapter 2. In the fourth phase of the investigation, the films are classified according to the time and visual content that they convey. 6 science fiction films, *Equilibrium*, *Dredd*, *Cloud Atlas*, *Fifth Element*, *Logan's Run* and *Aeon Flux* are identified and transferred to the fifth phase.

In the fifth phase of the investigation beginning from Chapter 5, the selected 6 films are explored separately to reveal their spatial and theoretical references to contemplate the future of urban design from cinematic spaces. It is focused on how these films convey futuristic design ideas in addition to which clues of urban design they present. To understand how urban design clues are conveyed in the films, film tempo (average shot length) and proportion of scenes that present the urban design characteristic are referred to as supplementary aspects to be combined with the qualitative analysis of the cinematic spaces. To reveal which urban design clues are hidden in the cinematic spaces, scene by scene exploration is conducted with cinemetrics. It is decoded how these films portray various urban design characteristics of city elements, relying on the Lynch's image of the city. Squares, central meeting areas, city centers, streets, pathways, roads, other transportation lines, urban organization, site characteristics, buildings, man-made structures and activities are explored from futuristic urban settings in the cinematic spaces. Each films are reconsidered with which urban design concepts they adapt. It is concluded that 10 design concepts of Totalitarian Architecture, Natural Surveillance System proposed by Jane Jacobs, Acupuncture Urbanism developed by Sola Morales, Radiant City developed by Le Corbusier, Resilient City Concept, Collage City by Rowe and Koetter, Domed City by Fuller, Garden City Movement by Ebenezer Howard, Brutalist Architecture and City Beautiful Movement are adapted in these films. Based on the relationship between the films' release and concept's active period, it is revealed that film's adaptation of urban

design concepts, movements and approaches provide evident clues to discuss the future of urban design.

In the conclusion part, the thesis contribution to strengthen the link between the science fiction works and the future of urban design is emphasized. This chapter addresses the research questions and denote final remarks to be explored in further studies. Referring relationship between futuristic urban settings in science fiction films and the futuristic cities in the real world, it suggests that the futuristic representations of cities in the cinematic spaces are linked to the existing cities while the future of cities is linked to their futuristic representations in the films. Based on the outcomes generated from this thesis, it is believed that it contributes to strengthen the link between science fictional works particularly conveyed through cinematic spaces and the future of urban design via instrumentalization of cinematic space.





KENTSEL TASARIMIN GELECEĞİNİN SİNEMATİK MEKÂNLAR ARACILIĞIYLA DEĞERLENDİRİLMESİ: BİLİM KURGU FİMLERİ ÜZERİNDEN BİR KEŞİF

ÖZET

Gelecek üzerine çalışmalar, geçmişten ve bugünden farklı olarak bu andan sonra ne olacağıyla ilgilenmektedir. Tüm olası senaryolar içinden tercih edilen gelecek senaryosunu elde etmek için gelecek üzerine çalışmak önem arz etmektedir. Kentlerin geleceği üzerine yapılan çalışmalar incelendiğinde kent ve kent yaşamının umutsuz bir vaka olarak görüldüğü ortaya çıkmaktadır. Birçok kent sosyal, ekonomik, çevresel, yönetişimsel ve diğer pek çok önemli konuda çeşitli sorunlarla karşı karşıyadır çünkü kentleşme kontrolsüz bir hızda ve biçimde tüm dünyayı etkisi altına almıştır. Mevcut kentlerin bugün bile karşılaştığı zorlukları düşündüğümüzde, kentlerin geleceği üzerine çalışmak günümüzde giderek daha fazla önemli hale gelmektedir. Öte yandan, kentsel mekânların geleceğini aktaran pek çok çeşitli görseller/imgeler/tasvirler üretilmektedir. Sinema, çeşitli fütüristik kentsel imgeleri filmler yoluyla aktarması ve kitlesel olarak tüketilen bir sanat eseri türü olması dolayısıyla bu konuda önemli bir rol oynamaktadır. Özellikle bilim kurgu türündeki filmler, çeşitli sinematik mekânlar aracılığıyla kentsel mekânın geleceğini etkili bir şekilde tasvir etmektedir.

Bu tez, kentsel tasarımın geleceği üzerine yapılan çalışmalara katkı sunmak amacıyla fütüristik bilim kurgu filmlerinden ipuçları ortaya koymayı amaçlamaktadır. Fütüristik bilim kurgu filmleri aracılığıyla aktarılan olası gelecek kentsel mekânlar ile gelecekte olması tercih edilen mekânlar arasındaki ilişkiye dayanarak bilim kurgu filmleri analiz edilmiştir. Bu analizde, sinematik mekânlarda aktarılan kentsel tasarımın gizli/görünmez ipuçları ve bilim kurgu filmlerinin farklı kentsel tasarım yaklaşımlarını nasıl uyarladığı/sunduğu ortaya çıkarılmıştır. Bu tez, sinematik mekânların kentsel mekânların geleceğinin tartışılmasında nasıl araçsallaştırılabileceği üzerine bir yaklaşım önerisi sunmaktadır.

Bu analizi gerçekleştirmek üzere tez çalışması iki teorik bölümü içerecek şekilde düzenlenmiştir. 2. Bölümde kentsel tasarım alanında kentlerin geleceğinin nasıl kavramsallaştırıldığı, 3. Bölümde ise şehrin sinematik temsiliinin nasıl ortaya konduğu aktarılmıştır. Tezde vaka çalışması olarak bilim kurgu filmlerinin analiz edilmesinde toplam beş etaptan oluşan iki aşamalı bir süreç takip edilmiştir. Dört etaptan oluşan araştırmanın birinci aşaması 4. Bölümde aktarılmıştır. Bu bölümde, kentsel tasarımın geleceğine ilişkin mekânsal ve teorik referansları değerlendirmek üzere 70 bilim kurgu filmi ele alınmıştır. Birinci aşamanın sonunda, ele alınan bütün filmler kategorize edilmiş, gruplandırılmış ve orta vadeli bir gelecek zamanda fütüristik şehri dünyada etkili bir şekilde tasvir ettiği belirlenen 6 film belirlenmiştir. 5. Bölümden başlayan analizin ikinci aşamasında, belirlenen 6 film sinemametrik (*cinematics*) yöntemi kullanılarak analiz edilmiştir. Sinematik mekanlardan seçilen görseller ve sahneler kolaj, yan yana koyma (*juxtaposition*) ve üst üste koyma (*superposition*) yoluyla

yeniden ele alınarak fütüristik bilim kurgu filmlerinde tasvir edilen kentsel mekan ve tasarım öğelerinin tartışması yürütülmüştür.

Yukarıda belirtilen amaç ve yönetime dayanarak, ikinci bölüm kentlerin geleceği üzerine çalışmada önemli kavramları sunmaktadır. Teknoloji, moda ve sağlık çalışmalarının yanı sıra kentsel tasarımda gelecek tanımlarına başvurarak farklı alanlarda geleceğin nasıl kavramsallaştırıldığı ortaya konmuştur. Ayrıca, bu bölümde bilim kurgu (*science fiction*) ve kurgusal tasarım (*design fiction*) gibi temel kavramlar tanımlanmaktadır. Bilim kurgu ve bilimsel gerçeklerin (*science fact*) bir araya gelmesiyle ortaya çıkan kurgusal tasarım konseptinin, kentlerin geleceğinin sinematik mekânlar aracılığıyla incelenmesinde uygun bir yaklaşım olduğu belirtilmiştir. Kurgusal tasarım yaklaşımında kentsel mekânın diegetik temsiliinin önemi vurgulanmıştır. Ayrıca, bu bölümde kentsel tasarım mesleğinde kentlerin geleceği üzerine geliştirilen farklı yaklaşımlar ve öneriler sunulmuştur. Gelecekteki kentsel mekânın tasarımını ele alan bu öneriler üç ana bölüm altında gruplandırılmıştır: (I) kentlerin geleceğini geçmişten referans alarak tasarlamak, (II) gelecekteki kentleri mekândaki belirsizliğe bir çözüm olarak tasarlamak ve (III) politik figürlerin fütüristik kent imajına etkisini ele alarak gelecek kentleri değerlendirmek. Bu bölümde, bu yaklaşımlarının hiçbirinin tek başına kentsel tasarımın geleceğini ele almada etkili olmadığı sonucuna varılmıştır.

2. Bölümde kentlerin geleceğini kentsel tasarım çalışmaları üzerinden ele aldıktan sonra, 3. Bölümde sinema alanındaki çalışmalara değinilmiştir. Bu bölümde, sinemanın kentlerde üretilen ve tüketilen bir kitle iletişim aracı türü olduğuna ve mekânın sinematik temsiliinin çeşitli izleyicileri sinema turisti olarak nasıl çekebileceğine değinilmiştir. Ayrıca 3. Bölüm, sinematik mekânın film çalışmalarında nasıl tanımlandığını ve mekânın sinematik temsiliinin kentsel mekânı analiz etmek için nasıl uygun bir materyal olduğunu ortaya koymaktadır. Bu bölümde çekim (*shot*), sahne (*scene*) ve kadraj(*frame*) gibi temel sinema terimlerden bahsedilmektedir. Mekânın temsiliinde mimari ve sinematografik özelliklerin bir arada aktarıldığı bir temsil yöntemi olarak sinemametrik (*cinematics*) sunulmuştur.

Tezin vaka çalışması, 4. ve 5. Bölümde toplam beş etapta yürütülmüştür. İlk etapta, ilgili disiplinlerde mekânın temsili hakkında en çok atıf alan filmlerden 70 fütüristik bilim kurgu filmi seçilmiş ve bir film havuzu oluşturulmuştur. İkinci etapta, film havuzundaki filmler, kentsel tasarımın geleceğine yönelik verdiği referansları keşfetmek üzere incelenmiştir. Kentsel tasarımın geleceği için mekânsal referanslar içeren filmler tekrar ele alınmış ve konsept çizimlerle desteklenmiştir. Üçüncü etapta, film havuzundaki bütün filmler, daha önce 2. Bölümde aktarılan mekân konseptleriyle bağdaştırılmıştır. Araştırmanın dördüncü etabında, filmler konu aldığı gelecek zaman ve aktardığı görsel içeriğe göre sınıflandırılmıştır. Orta vadeli gelecekte (2050 ile 2425 arasında) ve dünyada geçen filmlerin araştırmanın sonraki aşamalarını yürütmek için en uygun filmler olduğu belirlenmiştir. Seçilen 6 film (İsyan, Yargıç Dredd, Bulut Atlası, Beşinci Güç, Hayal Şehir ve Aeon Flux) beşinci etaba aktarılmıştır.

5. Bölümden başlayan analizin beşinci etabında, seçilen 6 filmin her biri, kentsel tasarımın geleceğini sinematik mekânlar üzerinden tartışmak için, aktardıkları mekânsal ve teorik referanslar açısından ayrı ayrı analiz edilmiştir. Bu filmlerin kentsel tasarıma dair hangi ipuçlarını sunduklarının yanı sıra bu tasarım fikrini nasıl ilettiklerine odaklanılmıştır. Sinematik mekânların nasıl aktarıldıklarının analizinde, filmin temposu (ortalama çekim uzunluğu) ve kentsel tasarım karakteristiğini aktaran sahnelerin toplam süresinin filmin uzunluğuna oranı değerlendirilmiştir. Bu verilerin

sinematik mekânın yorumlanmasında tamamlayıcı yönleri ortaya konduğu vurgulanmıştır.

Ayrıca beşinci etapta, sinematik mekânlarda hangi kentsel tasarım ipuçlarının saklı olduğunu ortaya çıkarmak için sinemametrik ile sahneler üzerinden bir analiz yürütülmüştür. Bu filmlerin meydanları, merkezi buluşma alanlarını, şehir merkezlerini, sokak ve caddeleri, diğer ulaşım hatlarını, mekânsal organizasyonu, binaları, diğer yapıları, kentsel alanlardaki faaliyetleri ve çeşitli kentsel tasarım öğelerini nasıl tasvir ettiği ortaya çıkarılmıştır. Her bir filmin, hangi kentsel tasarım yaklaşımlarını nasıl adapte ettiği açıklanmıştır. Filmler tarafından adapte edilerek sinematik mekanlara entegre edilen şu kentsel konseptlere ulaşılmıştır: Totaliter Mimarlık, Jane Jacobs tarafından önerilen Doğal Gözetim Sistemi, Sola Morales tarafından geliştirilen Akupunktur Kentler, Le Corbusier tarafından geliştirilen Işıltılı Şehir, Dayanıklı Şehir Konsepti, Rowe ve Koetter tarafından geliştirilen Kolaj Şehir, Fuller tarafından tasarlanan Kubbeli Şehir, Ebenezer Howard tarafından ortaya konan Bahçe Şehir Hareketi, Brutalist Mimarlık ve Güzel Şehir Hareketi. Filmlerin yayın tarihi ile her bir kentsel tasarım konseptinin aktif olduğu dönem göz önünde bulundurularak, filmlerin bu konseptleri uyarlamasında kentsel tasarımın geleceği için orijinal ipuçları sağladığı ortaya çıkarılmıştır.

Sonuç bölümünde, bilim kurgu eserleri ile kentsel tasarımın geleceği arasındaki bağı güçlendirmeye yönelik tezin katkısı vurgulanmıştır. Bu bölümde araştırma soruları tartışılmış ve ileriki çalışmalarda göz önünde bulundurulabilecek hususlar belirtilmiştir. Bilim kurgu filmlerindeki fütüristik kentsel ortamlar ile gerçek dünyadaki fütüristik şehirler arasındaki ilişki vurgulanmıştır. Sinematik mekanlardaki şehirlerin fütüristik temsillerinin mevcut şehirlerle, şehirlerin geleceğinin ise filmlerdeki fütüristik temsilleriyle bağlantılı olduğu öne sürülmüştür. Bu tezden elde edilen sonuçlara dayanarak, sinematik mekânların araçsallaştırılması yoluyla kentsel tasarımın geleceği üzerine yapılan çalışmalara katkı sunulduğuna inanılmaktadır.



1. INTRODUCTION

The future is one of the basic concepts of life, representing what comes next, different from the past and present. Studying the future has no end since there is always *a new future* as time passes. We live in the future of the last century and the past of the coming century. Although the definition of the future is put forth in dictionaries, the thinking about and expectations from the future change over time. Throughout time, methods of looking at the future are diversified from predicting to inventing (Batty, 2018) and from envisioning to forecasting (Wachs, 2001, p. 368). In ancient times, future predictions were solely attributed to supernatural rules. People believed that they lived a future predetermined by superhuman powers. (Reeves, Goulden and Dingwall, 2016, p.7). Later, when the future is recognized as manageable with human power and teachable in the schools (Dunmire, 2010), the future concept enters into the operational process. Developments in science, art and technology have facilitated a multiplicity of future visions.

Looking at the different futures, the images of the future city have also changed over time. Approaching the future as a design problem (Reeves, Goulden & Dingwall, 2016), the visions of the city are presented as an island of a democratic society (Goodey, 1970, p.18) or a machine-like moving city around the world (Riley et al., 2002, p.54), or a flying city suspended in the air (Dunn, Cureton & Pollastri, 2014, p.83), or underground city drilled on earth or a satellite city orbiting around the world. The future is referred to as utopian, dystopian or in-between place over and over. Studying the urban future has been referenced to learnings from the past, given that the future city already lies in the present and past city (Lynch, 1972; Venturi, 1977). In other studies, the precision of urban future vision has been rewritten by technological advancements and computer-aided tools. The trends in the images of the future city become objects of speculation, politics and manipulation (Maze, 2019; Wachs, 2001, pp. 371-372). The cities have always been found challenging to cope with the future. A few future visions have been accomplished, but a lot of them have already failed.

Although studying the future has pushed its boundaries over time, many existing cities lack suitable urban designs that meet the needs of the present and future society. Most cities sit on the archeology of future studies but are incapable of addressing the future. It is becoming more important to keep up with the speed of technology, changing demographics and the needs of cities. Although urbanization rates increase astronomically in the world, urban infrastructure cannot effectively answer the drivers of the future. How to design a future city that is satisfactory in equity, governance, resilience and aesthetics is a key concern in the contemporary urban design agenda.

Envisioning the urban future takes on another dimension in the contemporary world with mass production and consumption of futuristic urban images. The early examples of mass media that convey the future urban image are found in pulp infrastructure. The distribution of futuristic designs in periodic magazines and books has broadened the horizons of future studies. Moreover, taking advantage of the digital age, a new branch in artworks becomes available in the study of future and envisioning urban design: cinema. As a visual art based on a succession of images at high speed, cinema enables portraying urban future through cinematic spaces that have never been achieved before. As both are rooted in the art of space, cinema and architecture, share similar concerns about future urban design. The futuristic urban visions conveyed through cinematic spaces are exposed to a larger group of interest compared to those studied by architects, planners and designers in professional practice. Architects and designers are occupied with increasing numbers in cinema as required for the portrayal of cities in various cinematic worlds.

The futuristic urban visuals depicted in the cinematic spaces become a separate field in cinema and urban studies. *Metropolis*, released in 1927, is one of the early examples of a feature-length science fiction film (Copperman, 2019), and many films have emerged visualizing futuristic urban settings from various perspectives. The entire work in the film industry since 1927 has been the collective history of urban visions in cinematic spaces, particularly in the science fiction (sci-fi) genre. Sci-fi films that take place in the future enable diegetic representation of urban space so that we can obtain clues of urban design based on the rules of cinematic worlds. The cinematic space can be evaluated as a performance stage of futuristic urban design settings where it is realized with all means of expression within a fictional setting.

Studies exploring the intersection of cinema and architecture suggest that the traditional representation of architectural space can be reconsidered by utilizing the movement in cinema. (McGrath and Gardner, 2007). Once architecture and urban design are becoming more and more disengaged from traditional representations, the representation of urban space is gradually shifting into cinematic spaces. It can be stated that the bonds between the city's representation in futuristic films and the future of urban design practices become stronger. The exploration of urban space from cinematic spaces offers a helpful perspective for the future cities since the cinematography offers contextualizing the urban design. Urban designs conveyed in futuristic science fiction films enable observers to discuss the consequences and impacts of the design before its realization.

1.1 Aim and Research Questions

Defining sci-fi films as a medium for representing future cities, this study initially asks what if sci-fi films are treated as a *tool* for the future of urban design. This study aims to reveal the possible clues for the future of urban design portrayed through the futuristic science fiction films. In the exploration of cinematic spaces, science fiction films are not considered as predictors of urban design but rather as facilitators to contemplate the possible futures given in different cinematic worlds. The thesis adopts a perspective that links the future of urban design to cinematic spaces, emphasizing how cinematic spaces convey futuristic urban design settings. The research questions are given in Figure 1.1.

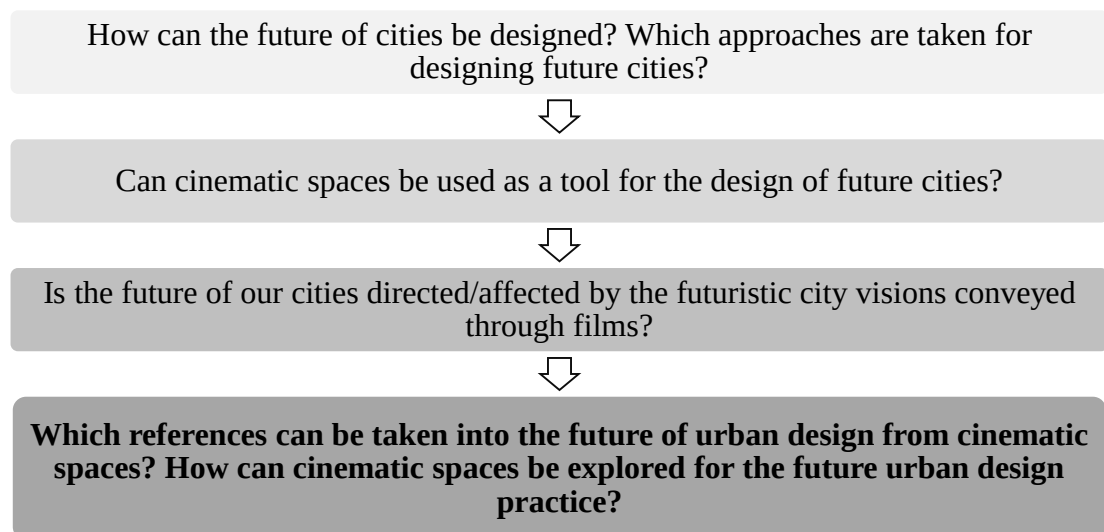


Figure 1.1 : Research questions

1.2 Scope of The Thesis

To strengthen the relationship between urban space and cinematic space in the context of urban design in the future, this thesis includes how futuristic thinking is relevant to design studies, which perspectives are available in urban design about future cities, how these perspectives are linked to the cinema in the selected sci-fi films and which clues can be extracted from these films regarding their potential lead to the future of urban design. The thesis is comprised of six chapters (Figure 1.2).

In Chapter 1, an introduction is given about how cinematic space is linked to the future of urban design through science fiction films. Aim, research questions, scope, methodology and limitations of the study are outlined in this chapter.

Chapter 2 focuses on urban design studies that explore future cities. It discusses major genres in designing urban futures and defines basic terms such as science fiction and design fiction. The relevance of science fiction works to future studies is explored, referring to major concepts in shaping the future of urban design. This chapter provides a theoretical framework for futuristic urban design concepts, referring to various examples. It emphasizes how the future is grounded on past experiences, how the future ambiguity on space is answered in urban design practice and how political motifs are related to futuristic urban images. It is suggested that design fiction, which is a research method in the design discipline based on exploration of the future cases upon a prototyped product, can be an inclusive perspective in urban design in envisioning the future from cinematic spaces.

Chapter 3 explores the relationship between cinema and city and emphasizes how cinematic space is linked to the urban space. It focuses on the commons in representation of space between cinema, architecture and urban design fields and introduces space concepts in urban design and cinema. This chapter suggests that cinematic space can be explored as prototypes of futuristic urban designs through diegetic representation of urban space. The potential of cinematic space in discussing the future of urban design by means of its representation is put forward. Cinematics is introduced as a method to explore cinematic spaces, relying on an advanced drawing system. Basic cinema terminologies linked to the representation of space, such as shot, scene, average shot length (ASL) and frame, are introduced in this chapter.

Chapter 1:
Introduction

Introduction

Aim	Scope	Methodology
Research Questions	Limitations	

Chapter 2:
Approaches to the
Future of Urban
Design

Genres in Designing
Urban Future

- Defining basic terms about
the future from literature

Science Fiction
Design Fiction

Concepts of Future Space
in Urban Design

- Reading of urban design
examples and grouping them
according to how the future
idea is conceptualized and
envisioned

Future as Originated from Past	
Future Design to Deal with Ambiguity	
Future Design as Politics	Design Fiction

Chapter 3:
Cinema in the City:
Cinematic Space and
Relevance to Urban
Design

Space Concepts and Analysis
in Urban Design and Cinema

- Defining basic relationship
between urban space and
cinematic space

Urban Space	Cinematics
Cinematic Space	

Chapter 4:
Urban Gaze in
Science Fiction
Films

Envisions from Cinematic
Space for the Future of Urban
Design

Set Time	Shot Length & Transition
Set Location	Scene Color

Case Study Stage 1

Phase 1

- Creating film
pool from 70 sci-fi
films which are
repeatedly cited

Phase 2

- Visualising
urban concepts
in the sci-fi
films

Phase 3

- Mapping 70 sci-fi
films' relevance to the
concepts of the future
space in urban design

Phase 4

- Classification of
films according to the
time & location taking
place in the film

Chapter 5:
Trends in
Envisioning the
Future of
Urban Design

Cinematics of Urban Design
Elements Presented in the
Reduced Group of 6 Sci-fi
Films

Function	Camera Movement
Organization	Scale and Depth

Case Study Stage 2

- Reducing film
group into 6 films

Phase 5

- Visualization by Cinematics
- Drawing by collage,
superposition and juxtaposition

Chapter 6:
Discussion &
Conclusion

Conclusion

Figure 1.2 : Framework of the thesis.

Chapter 4 introduces the case study of science fiction films. In this chapter, a pool of 70 films released between 1927 and 2024 is generated to extract clues from futuristic urban design settings. Different cinematographic features in representation of urban space such as color, cadrage, camera movement and shot length are emphasized in characteristics of the cinematic space. Selected scenes from the films that depict futuristic urban design concepts spatially are converted into ideal representations. Also, each film is explored with relevance to the concepts of the future space in urban design. Urban design concepts, movements and approaches referred in science fiction films and spatial and philosophical references within the cinematic spaces are investigated. Here, attention is given not to rate the film's effectiveness, success or failures about the future idea it conveys or the psychological impact of the film on the viewers. It is rather concentrated on reading the indicators of urban design setting in the films, based on the idea that each film represents a prototype of urban designs that we can contemplate possible urban futures today. Moreover, the films are grouped according to time and visual content. A film matrix is generated to explore presentation patterns of futuristic urban design settings in the cinematic spaces. At the end of this chapter, the film pool is reduced to 6 sci-fi films: *Equilibrium*, *Dredd*, *Cloud Atlas*, *Fifth Element*, *Logan's Run* and *Aeon Flux*.

Chapter 5 investigates the selected 6 films that depict future cities as the continuation of the world's civilization and take place in the mid-term future. The selected 6 films are explored with cinemetric drawings, a drawing system relying on techniques of collage, superposition and juxtaposition to reveal the futuristic design concept film conveys. This chapter explores which clues can be obtained from the cinematic spaces, which urban design concepts, approaches and practices are adapted into the cinematic spaces and how these adaptations contribute to the urban design agenda in future studies.

In Chapter 6, the findings of the study are discussed and research questions are addressed. The contribution the thesis to the urban design literature is put forward and final remarks are given for further studies.

1.3 Methodology

The exploration of science fiction films is conducted in two stages in Chapter 4 and Chapter 5 (Figure 1.2). The first stage of investigation is related to decoding the

selected 70 science fiction films and their spatial and theoretical references to the future of urban design through cinematic spaces. This first stage is comprised of 4 phases. In the first phase, the film pool is created from the most cited futuristic science fiction films in architecture and urban design literature in the representation of space. In the second phase, the films that carry a spatial reference to the future of urban design are converted to ideal drawings to discuss the spatial references within the selected cinematic spaces. In the third phase, 70 science fiction films are mapped according to the concepts of future space in urban design to reveal their theoretical connection to the future urban design practice. In the fourth phase, all films are classified according to future time, location and the visual content that they convey. A film matrix is generated to reveal the film's links to the future of urban design. At the end of the first stage, 6 science fiction films are selected to be explored scene by scene.

In the second stage (see Chapter 5), selected 6 sci-fi films are focused on and explored in the last phase. In the fifth phase, cinematic spaces are visualized with cinematics. Drawing by collage, juxtaposition and superposition is conducted to discuss the future of urban space and design elements portrayed in the sci-fi films. The films are explored scene by scene to discuss the urban design characteristics of cinematic spaces. Each of the 6 films is decoded to reveal the clues of urban design by referring to the concepts, movements and approaches in the urban design profession.

1.4 Limitations of The Study

All science fiction films referred in this thesis are included if they are accessible through any film streaming platform or personal archive. The films that are not accessible during conducting the study, such as *World without End* directed by Edward Bernds, *Jetsons: The Movie* directed by William Hanna and Joseph Barbera, or *Dark Metropolis* directed by Steward St. John are necessarily excluded from the scope of the research.



2. APPROACHES TO THE FUTURE IN DESIGN

When looking at the approaches in the urban design field to designing future cities, it is essential initially to understand how future notion is grasped. Berardi states, “The future is not a natural dimension of the mind. It is a modality of projection and imagination, a feature of expectation and attention, and its modalities and features change with the changing of cultures” (2011, p. 24-25). Although the definition of the future is known, that is, time to come, the perception of the future changes over time and by the cultural context.

When approaching future studies from a broader perspective, there are conflicting opinions about whether the future can be predicted. Echoing the words of Nobel prizewinner Denis Gabor, “the future cannot be predicted, but futures can be invented”, Michael Batty, a professor of planning at University College London, claims that the long-term future is more predictable than the short term future since long-term future enable us to look in a broader perspective that can transform what was impossible before into possible. He asserts that short-time prediction unconsciously requires looking at the past to extract some references while long-term prediction is freed from the binds of the past (2018, pp.1-3). Batty continues with another approach on short-term and long-term prediction. According to him, long-term prediction can be considered more possible than short-term prediction, evaluating the speed of change we encounter and the unpredictability of the inventions. He says that “we will never be able to predict what we invent” (Batty, 2018, p.x), so long-term prediction is clarified as problematic.

The future perception is conceptualized by individuals and parties differently. It is claimed that even the socioeconomic status of individuals affects the construction of the future image in their minds (Antonopolis and Chen, 2020). To exemplify the effect of age and experience on the conception of the future, *Tomorrowland* can be cited. In the film’s opening scenes, the main character, Frank Walker says, “When I was a kid, the future was different” (Bird, 2015, 00:02:23). Different conceptions of the future by different professions are also available. For instance, the future of economics is studied

basically in the short-run and long-run achievements. Short-run economics is related to the fixation of at least one factor of production, while long-run economics is associated with all factors of production that can possibly change (Kyer and Maggs, 2006, p.235). In the fashion industry, George B. Sproles, a professor of textile, fashion and interior design at University of Arizona, identifies two terms in future studies considering the product life cycle. According to him, long-run trends are identified with decades and centuries, while short-run trends are related to months and years (Sproles, 1981). Michio Kaku, a professor of theoretical physics at the City University of New York, claims three phases in his book while discussing the future of science and technology: the near future (the progress until 2030), the mid-century (between 2030 and 2070), and the far-future (between 2070 to 2100) (Kaku, 2012). According to another work by public health professor Trevor Hancock and futurist Clement Bezold in health science, the future of health studies can be investigated in three terms: short-term (1-5 years), mid-term (5-20 years) and long-term future studies (20-50 years). They suggest that the short-term future is created by the already-taken decisions, while the mid-term and long-term future will be the outcomes of present choices and decisions to be taken. They also highlight that it can be very helpful to overview the science fiction literature for surprising and dramatic changes waiting ahead in future studies beyond the next 50 years (Hancock and Bezold, 1994, p.24). According to another study by the United Kingdom (UK) Government Office of Science (The Foresight Programme, 2016), future studies in UK city planning are categorized under three groups, similar to Hancock and Bezold's suggestion. It is suggested that short-term (1-5 years) and medium-term (5-25 years) studies are effective for the probable and plausible futures; yet, long-term future studies can only be considered as aspirations headed by the road maps (Figure 2.1). Besides, the study clarifies future city planning beyond the next 25 years as challenging (The Foresight Programme, 2016).

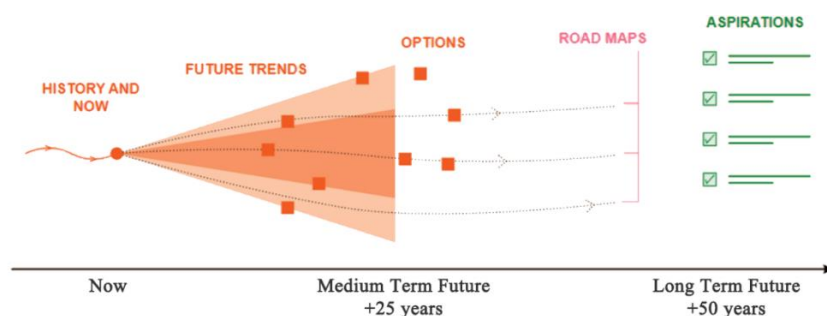


Figure 2.1 : Future studies in city planning (The Foresight Programme, p.27).

In the thesis, outcomes by artificial intelligence are also explored in the conception of the future. As an answer to the prompt of “How many years from now do you think *the future* will be?”, ChatGPT generated a text indicating three phases of the future: near future (10-20 years), mid-future (50-100 years) and far-future (200-500 years). It is also indicated that the most influential change could be experienced in the next 50 to 100 years (OpenAI, 2024).

As summarized in Table 2.1, every faculty of life approaches the future from a specific perspective. How the future is conceptualized is an inevitable course of discussion in the history and future of urban design. The conceptualization of the future idea in design changes in relation to the time, space, culture, technology and politics, just as our perception of the future changes. These futuristic concepts are presented as fantasy worlds, manifestos, artworks, urban fictions and so on.

Table 2.1 : The conception of the future in different fields (generated from Kaku, 2012; Sproles, 1981; Hancock and Bezold, 1994; The Foresight Programme, 2016; OpenAI, 2024).

Future Studies in Different Fields	Near Future	Mid-term Future	Far-away Future
Science and Technology	20 years	20-60 years	End of 21 st century
Fashion	Months / Years	-	Years / Centuries
Health studies	1-5 years	5-20 years	20-50 years
City planning	1-5 years	5-25 years	25 - beyond
Text generated by ChatGPT	10-20 years	50-100 years	200-500 years

2.1 Genres in Designing Urban Future

In early examples, futuristic urban images are presented as utopias. The utopian concept identifies an ideal city and society of the future. The dystopian approach, on the other hand, is the opposite of the utopian approach in envisioning the future. It is stated that dystopia is an appealing genre in the expression of future concerns, especially in the face of technological developments (Ünver, 2020, p.96). Utopia presents the ideal city while dystopian futuristic works see through pessimistic lenses and portray war, disease, fear, death, poverty, violence, crime and other negative aspects of life. Both utopia and dystopias are the oldest genres in discussing the future of cities and they have been explored in many pioneering works in the literature so far.

The utopian and dystopian approaches in future studies can be related to fantasies or fictions. Fantasies are imaginary settings based on supernatural rules. The fantastical features applied in the fantasy genre are not expected to be responsible for science or realism. On the other hand, fiction is imaginative inventions of things, places, persons, or concepts that are untrue but open to discussion based on scientific knowledge. Fictions can be placed between fact and fantasy as they can be possible futures (Figure 2.2). To exemplify, *Lord of the Rings* is an example of a fantasy book, whereas *1984* is an example of a fiction book.

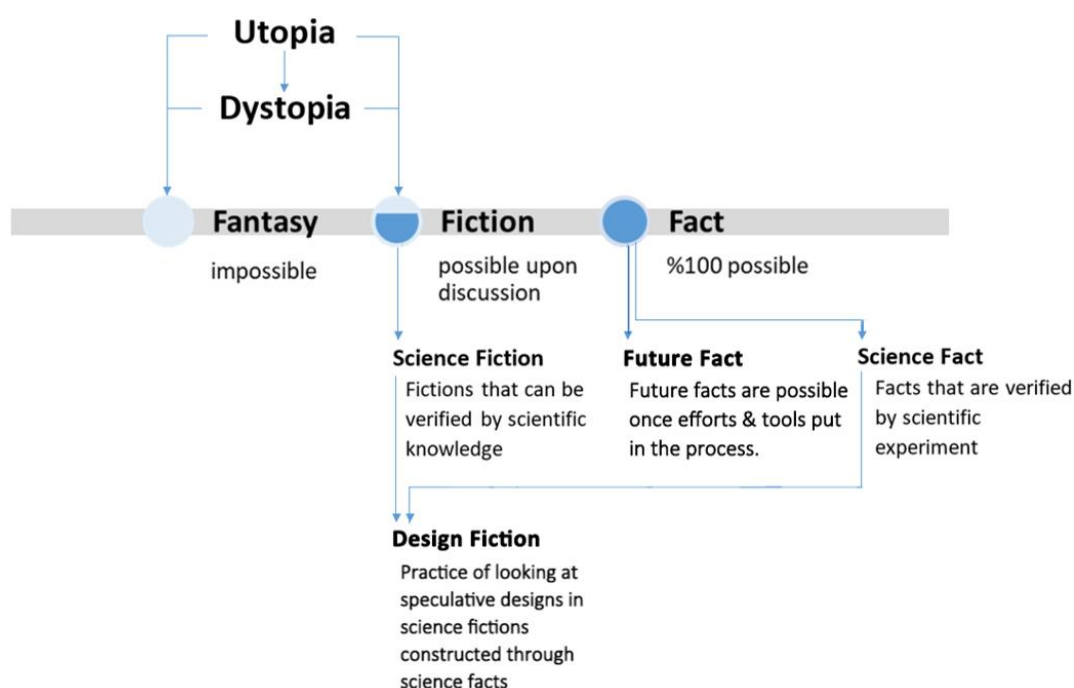


Figure 2.2 : Fundamental terms in the exploration of the future (the author).

Facts are ultimate possible events or states primarily related to past and present studies. In general acceptance, future studies do not deal with facts since facts are subject to scientific realism. For instance, a phenomenon may become a fact when it is realized, tested and (ap)proved. However, Odia suggests an alternative way of considering *future facts* once the future is “planned and determined-to-achieve events, coupled with machineries put in place to achieve them” (2013, p.251). Future facts exist once the future is not only predicted but also dedicated with supportive tools in the way of meeting the predicted future. In summary, what creates the future fact is the efforts put into the process to realize the imagined future. There is still an ambiguity in the process whether future facts can evolve into science facts or not. Science facts, however, are the type of facts that cannot be discussable in future studies. Science facts are verified

facts by experiments conducted through scientific rules. As future events cannot be experimented with in a classical scientific approach, then science facts are only applicable to present or past events.

As a sub-genre of fiction, science fiction (sci-fi) embraces the imaginaries with scientific and technological knowledge. Especially after modernization and technological advancements, the urban future has been presented massively through the science fiction genre. Picon and Faciejew (2017) explain that science fictional imaginaries are characterized by a blurry context and lack of details explicitly to enable possible discourses of thinking and these missing details of the science fiction images, as similarly applied in the utopian works, are what make them real in the audience's mind by avoiding insignificant points that may spoil the reality (p.95-98). The sci-fi genre breaks into other sub-genres especially in the film industry. As sci-fi works are fed by scientific knowledge, new sub-genres emerge as a result of emerging scientific achievements. Also, the new themes and popular culture generate various sub-genres over time. The most popular sci-fi genres in contemporary works are apocalyptic, post-apocalyptic, steampunk, cyberpunk and space opera.

As another term referred in future studies, design fiction emerged *accidentally* by sci-fi writer Bruce Sterling in 2005 (Lindley and Coulten, 2015). Julian Bleecker, an artist and technologist, says, “Design fiction is the practice of creating tangible and evocative prototypes from possible near futures to help discover and represent the consequences of decision making” (Near Future Laboratory, 2022). He defines design fiction as a mixture of science fact and science fiction (Figure 2.3). According to Bleecker, facts of science and fictions of science are born from the same root: idealization and materialization of the information (2009, p.6). In fiction, the information becomes imaginaries of the future, and in science, regimes of scientific information are explored. Fiction contains the information generated by science, and the ideals of the fiction feed science. Bleecker suggests that “science fiction is the imagination and science fact is the conclusion to this imagining” (2009, p.26).

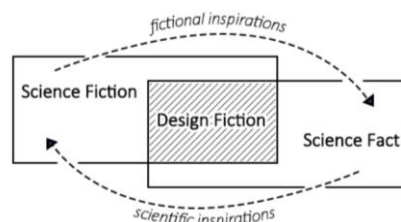


Figure 2.3 : Definition of design fiction (inspired from Bleecker, 2009).

Further, Bleecker (2009) highlights that science fictional elements can turn into science facts once they are well-supported and organized with a scientific basis. *2001: A Space Odyssey* is a sci-fi film released in 1968 and screenplays a space travel in 2001. It is stated that the film production phase took four years since the detailing and finishing of the pre-production, production and post-production of the film were conducted by technicians who were experts such as rocket scientists (p.21-22). Bleecker as cited in Lightman states that

2001 is no mere science-fiction movie. In truth, to be really accurate, it is more like 'science-fact' simply extended a few decades into the future. In his quest for complete authenticity in terms of present and near-future technology, Kubrick consulted constantly with more than thirty technical experts and the results are an accurate forecast of things to come. (2009, p.21)

What is outstanding about design fiction, considering all other genres mentioned above, is that it is constructed through the design discipline. It includes the design of *diegetic prototypes* to think about the future in a speculative way. It introduces the designed product to the audience and enables interaction and information-sharing with the audience. It uses the power of science fiction media to open up various fascinating envisions of urban future (Hales, 2013, p.2) and conveys a temporal future that has an effect on the audience (Hales as cited in Massumi, 2013, p.5). Design fiction can be defined as a collaborative work of media to reconsider possible futures in the urban design field.

2.2 Concepts of The Future Space in Urban Design

Keeping in mind that every faculty of life approaches the future from a different perspective, this section aims to overview concepts of the future space in urban design in an alternative reading of futuristic urban designs. A few previous studies can be initially mentioned in the exploration of the future city concepts and retro-futuristic images of the cities. For instance, Austrian architect Günther Feuerstein (2008) provides a stroll in visions of urban imaginaries created between 16th and 20th centuries, systematized with author selected times and locations. In his book, he explores more than 500 illustrations of urban fictions and provides a key chart showing the time and place configurations in urban fictions. According to him, places of urban fictions are grouped as no place, fictitious spaces in mainland, fictitious spaces in

island, world locations that still exist and world locations that no more exists. Also, the time in urban fictions are grouped as unspecified future, near but unspecified future, near future, distant but specified future and distant future (Figure 2.4).

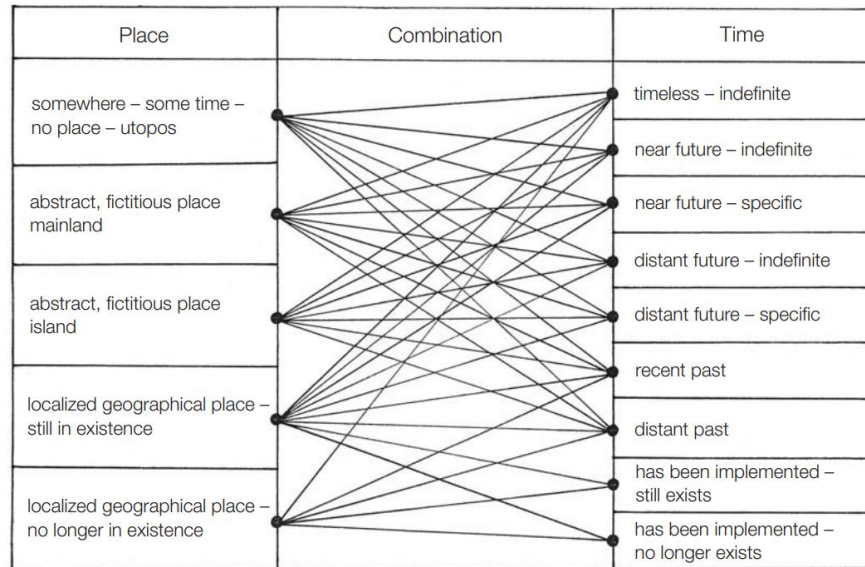


Figure 2.4 : Different time and space combinations in urban fictions (Feuerstein, 2008, p.10).

In 2014, a report developed by the Government Office of Science in the UK provided a visual history of urban futures by exploring 96 cases from the last 100 years. It is explained that the report is “concerned with how future cities have been visualized, what these projections sought to communicate and why” (Dunn, Cureton, Pollastri, 2014, p.5). The report is organized into seven chapters. The first chapter explores the impact of popular culture on urban visions. The second chapter is about the representation of futuristic urban imaginaries in various media. The third chapter searches for the context of the visuals. The fourth chapter looks at the technological effects on the urban future, while in the fifth chapter, the social discourse of the futuristic visuals is explored. In the sixth chapter, the computer technologies are focused and in the final chapter, the report focuses on the selected futuristic visuals of UK cities. At the end of the study, it provides a taxonomy of the concepts related to the future cities over time. In this inventory work, the most referred urban design concepts in future studies are put forward according to their formation in time (Figure 2.5). According to this taxonomy, The Garden City Movement is the most active concept of all time. In contrast, concepts such as Cognitive City, Haptic City, Spectacle City and Do It Yourself (DIY) City appear in short periods. The Smart City concept is indicated as the last concept developed in the 2000s (Dunn, Cureton, Pollastri, 2014).

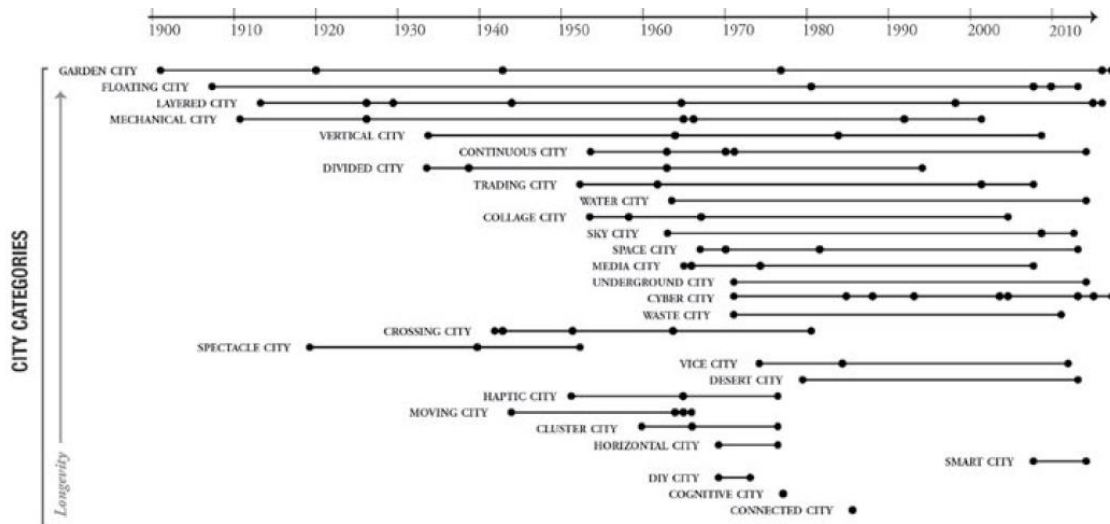


Figure 2.5 : A taxonomy of future city categories (Dunn, Cureton, and Pollastri, 2014, p.126).

In another report provided by the Government Office of Science, how the future city terminology has been changed in English language is investigated. The study underscores how wars, economics and information technologies have affected the future city language over time. It categorizes calls for future cities into four key conceptions of success: environmental, social, economic and governance (Table 2.2). Also, the report highlights the geographical trends in different future city concepts. For instance, it suggests that “eco cities has endured most in China and the Middle East, while smart cities have been widely accepted in Europe and North America” (Moir, Moonen and Clark, 2014, p.78). It is stated that such various conceptualizations of future cities are required since every city is unique in one sense (Moir, Moonen and Clark, 2014).

Table 2.2 : Conception of future cities in English language (Moir, Moonen and Clark, 2014, p.12).

Environmental	Social	Economic	Governance
• Garden Cities	• Participative Cities	• Entrepreneurial Cities	• Managed Cities
• Sustainable Cities	• Walkable Cities	• Competitive Cities	• Intelligent Cities
• Eco Cities	• Integrated Cities	• Productive Cities	• Productive Cities
• Green Cities	• Inclusive Cities	• Innovative Cities	• Efficient Cities
• Compact Cities	• Just Cities	• Business Friendly Cities	• Well-Run, Well-Led Cities
• Smart Cities	• Open Cities	• Global Cities	• Smart Cities
• Resilient Cities	• Livable Cities	• Resilient Cities	• Future Cities

In the book *A Visual History of Future*, American architect and academician Donna Goodman (2008) surveys for visuals of the future proposals beginning from the 20th century in architecture, planning, design and cinema via evaluating socio-technological eras chronologically. In the book, the future concepts are grouped into six chapters considering the technological advancements in history (Figure 2.6). In the initial chapters, she introduces the visuals from the machine age separately in Europe and America. She highlights how the future idea changed after the Renaissance in Europe and how the architects and planners focused on the ideal city concepts. In the next chapter, she evaluates how automobiles affected the futuristic city visuals between the 1920s and 1960s until Lewis Mumford and Jane Jacobs changed the way of looking at cars. In the Space Age Chapter, she highlights how science fiction changed the concept of the future beginning in the late nineteenth century. In the Media and Information Age Chapter, she mentions the impact of televisions on changing culture from verbal to visual origin. She discusses the effects of easy access to information facilitated by computers in the late nineteenth century. In the final chapter, she highlights the increasing awareness of the environment, ecology and eco-friendly concepts in visions of the future city (Goodman, 2008).

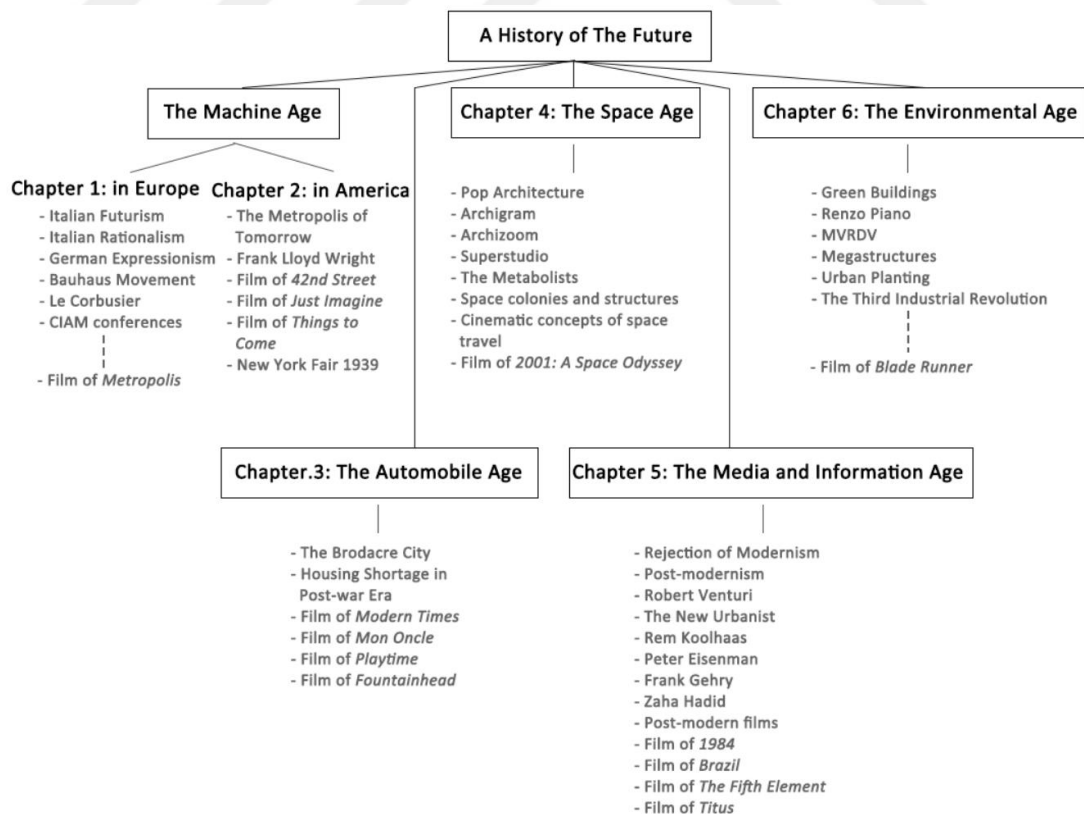


Figure 2.6 : Selected topics in *A Visual History of Future* (generated from the Goodman, 2008).

Another study is provided as a book chapter by Michael Smyth, James Auger and Ingi Helgason, a group of professionals from the design interaction department. They summarize speculative urban design proposals from the New York World Fair held in 1939. They highlight how the imaginaries about the future have changed by changing agendas like the Second World War, the first space travel in 1961 and the pandemic in 2020. It is claimed that future visions created in the 1960s and 1970s continued to affect contemporary futuristic visuals until the 2020 pandemic (Smyth, Auger and Helgason, 2021).

Following a reading of previous works on futuristic urban visuals and concepts, this thesis provides an alternative reading. How the future is conceptualized and envisioned in urban design is grouped under three sections referring to various theoretical and practical examples. Section 2.2.1 examines the effects of experience and past on designing future cities. The changing paradigm shifts are explored about the idealization of the past in the construction of futuristic designs. Section 2.2.2 concentrates on the notion of future in designing cities. It explores how the uncertainty caused by studying the future is associated with different design approaches in envisioning future city. In Section 2.2.3, the known futures for designing future cities are explored. It is argued that the design of future cities cannot be separated from politics since both design and future studies are political practices in the first place. Political powers and motifs in creating the futuristic images and political critique of futuristic images are given in this section.

2.2.1 Designing for the future originated from past

Modern architecture is a movement that emerged in the 1920s, affecting the areas of architecture, painting, sculpture and art. The primary motivation of modernist architects was to leave behind the old and traditional approaches in architecture to welcome new practices invented through advancements in technology and engineering beginning from the 19th century (Rowe, 2011). The beginning and ending eras of the modern architecture movement are breaking points in urban history since it is heavily criticized for failing to complete its aims by encouraging a split from the past. The effects of the modern architecture movement are still visible today, considering its utopian approach. At the same time, it reminds us not to leave the past behind with

many failing designs, created by disregarding traditional approaches in architecture and urban design.

For the first time in 1954, urban design was accepted as a separate discipline after an international conference at Harvard University. Existing urban problems inherited from the previous implementations, especially from the modern architecture movement, and these problems transcending multi-professional areas have led to the proposition of a new discourse in urban studies. An urgent interference was required since cities have become more and more polluted, crowded, decayed and segregated. Urban planners, urban designers and architects concentrated on the unsettling conditions in cities and studied how these unsettling conditions can be eliminated rapidly with given energy, sources and opportunities.

Besides, it should be noted that cities are always in flux. Needs, desires and problems in the city are changing over time. The urban environment has to be so designed that it fixes past issues, protects antiquity, sustains the quality of urban life corresponding to the contemporary needs and supports a ground for a future change. It can be stated that the main motivation of future studies in urban design is slightly switched from *how to detect and eliminate the problem* concept to *how to prevent the problem from occurring* concept. The first induced a reading of the past for the future and the second gave rise to urban models developed for future projections.

2.2.1.1 The ancient concept of the studying future: the advantage of past and tradition

Smith and Hein (2017) mention a practice inherited from the past and will continue in the future: referencing the past. They stated that even before “planning history” emerged, politicians, architects and rulers took advantage of past knowledge for present concerns. Throughout time, urban physical layouts, design concepts and principles have been studied by numerous professionals in numerous locations around the world. In pre-modern societies, the past reference is used to sustain ruler ship and adhere to the religious proclaims, while in modern societies, the past is analyzed more for ethnic solidarity and nationalism (Smith and Hein, 2017, pp.109-120). Analyzing the old city is one of the antique pillars in the urban history to structure the present and the future city. Urban planning and design norms have established guidelines for many contemporary cities.

Lewis Mumford's book *The City in History* explores several urban civilizations and combines a diverse range of evidence with modern cities. In his book, Mumford emphasizes that the ancient city represents a variety of positive means, such as effective cooperation of men, communication and transportation networks and justice in the mixed populations of the cities, in addition to darker aspects such as war and slavery (1961, pp. 568). He states that all these means "have accompanied the city through most of its history" and "both the positive and the negative aspects of the ancient city have been handed on, in some degree, to every later urban structure" (1961, p.569). According to him, the material and spiritual substance of the city transmitted to the newer concepts in the evolution of the city. Besides, he mentions the paradigm shift in the purpose and concept of the city in the mid-20th century. He mentions how the form of the traditional city changes due to the emergence of new forces, how the urban central core is demagnetized and how new regional mosaics begin to start due to suburbs turning into conurbation. As a response to all these changing patterns of cities, he invites urban planners to incorporate lessons mastered into the new concepts of the city (1961, p.487). While blending these learnings into new city concept, he also presents a framework relying on human factors. According to him, we need to invest in giving people purpose, broadening their horizons, increasing cosmopolitanism and preserving the collective memory to make the city flourish again (Gander, Giraldeau, Humble, 1963). According to Mumford, new city forms are laid on the heart of the traditional city. He suggests, "The heart of the traditional city (...) will not disappear. In the city to come, the old currents will flow in two directions: feeding the new as well as drawing on its resources" (Gander, Giraldeau, Humble, 1963).

When the urban design profession was officially established in the mid-20th century, the initial attempt was to look at the past and to concentrate on the present conditions since it was commonly agreed in those days that cities were suffering that never been experienced in history. Emerging city concepts due to changing paradigms in the city were associated with the older cities. For instance, Kevin Lynch and Lloyd Rodwin write about how urban design plans insistently stick to the present and past. It is explained that "plans and dreams have usually been aimed at solving problems of the present or at inducing a return to some image of the past (...). Only rarely do we find

a contemporary plan that anticipates the future with pleasure” (Lynch and Rodwin, 1961, p.10).

According to the mainstream design in the 20th century cities, the past was attributed as good, pleasant and preferable while the present and future are attributed as patients that can only be cured by the learnings from the past. The professionals focused on exploring historical knowledge and structuring new tools, methods and approaches to understand the classical cities so that these classical norms and urban design principles could be adapted to present and future cities as an immediate response (Figure 2.7). For instance, Kevin Lynch’s pioneering approach, which describes paths, edges, districts, nodes and landmarks (1960), has been used as a base for cognitive and legitimate analysis of cities in diagnosing existing urban design problems. As an example of another study, Rob Krier sticks to the history and traditional understanding of urban space and systematically reveals the concepts in the organization of urban space by looking at various historical urban spaces (1978). Another professional re-inventing the past, Roger Trancik (1986), clarifies the reasons of urban design problems of that time and points out the past for an escape from these problems in his book *Finding Lost Space: Theories of Urban Design*. He asserts that

(...) in order to find the answer, we should closely look at the traditional city (...). We need to return to theories and models of urban space that worked in the past and to develop a design vocabulary based on these successful precedents for today’s cities. (Trancik, 1986, p.19)

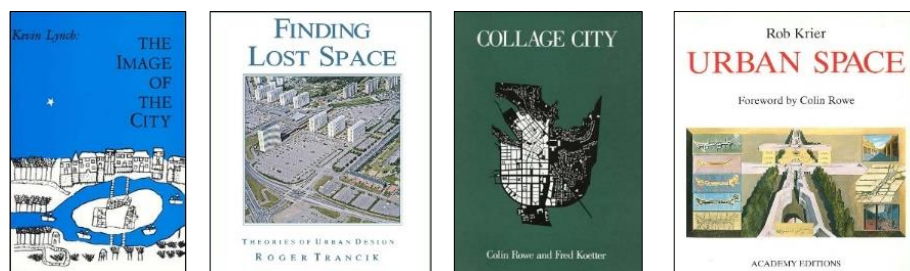


Figure 2.7 : Books published between 1960 and 1986 that define the mainstream design principles from mid to late 20th century in urban studies (left to right Lynch, 1960; Trancik, 1986, Rowe and Koetter, 1978; Krier, 1979).

In defining future cities, there is another concept of the city where past, present and future times exist simultaneously. Richard Rogers mentions the harmony of contrasting elements and explains the potential of “building of different epochs, each one being an expression of its time” (1988, p.875). Furthermore, Rowe and Koetter

propose a groundbreaking reading of a city that brings traditional and modern cities together in the concept of a collage city. According to them, the city is always in an eclectic state, evolving from a traditional city into a modern city with urban elements added to each other over time (1978). They define collage city as “an approach in which objects are conscripted or seduced from out of their context, is—at the present day—the only way of dealing with the ultimate problems of, either or both, utopia and tradition” (Rowe and Koetter, 1978, p.144).

The modernist approach of breaking links to the past evolved into the post-modernist approach by claiming that bonds to the past should not be broken but instead should be used in a creative way. Robert Venturi, one of the representatives of the post-modern movement, claims that the future already exists “in the reality of the present” (1977, p.14). He suggests that the need for studying the past can never end. In his book *Complexity and Contradiction in Architecture*, he underscores how to explore the historical character of the buildings and notes that rediscovery of the past can only be retaken with new sensations of the present rather than imitating the past (1977, pp.13-14). Moreover, Rem Koolhaas criticizes the alliance between European functionalists and American post-modernists in the prediction of future architecture and their inclination “to pose the issues of architecture in traditional terms once more” (1979, p.140). He suggests that this alliance should be left behind so that the future of architecture can go beyond predictions (p.140).

Approaches admiring the past have gradually accumulated over time and developed into movements. New Urbanism is an urban design movement officially formed in 1993 at the Congress for the New Urbanism. It defines a set of urban design principles based on premises of the past in creating the future city. This neo-traditional planning of cities ensures walkable, livable and interlinked design in order “to construct the future based on nostalgic visions of the past” (Cuthbert, 2007, p.184) (Figure 2.8). Marshall (2003) highlights how the New Urbanism has changed the paradigm “from imaginative visions that stir debate to innovative methods that challenge conventional practice” (p.189). In contemporary studies, New Urbanism movement is anymore found as an outdated concept while evaluating the contemporary problems of the cities. Still, Garde evaluates that New Urbanism is promising for our future cities when combined with present day problems such as climate change, changing daily habits and technological developments (2020).

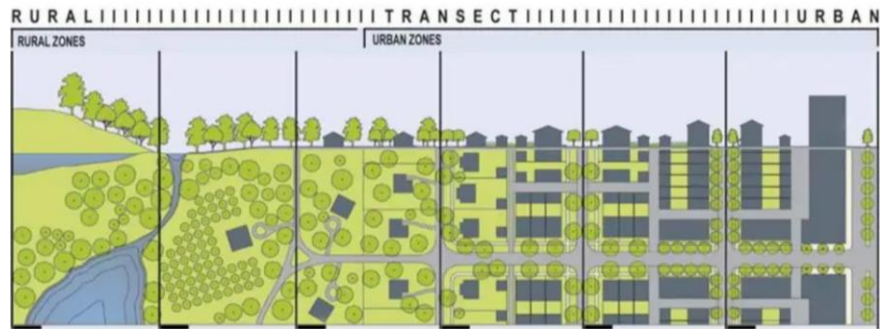


Figure 2.8 : New Urbanism concept diagram (Url-24).

There are a lot of learnings that need to be extracted from the past to achieve a better future. It is a fact that learning from and referencing the past for the constitution of the present and future ideas has never met its end. Today, many futuristic urban designs are evaluated as valuable when traces of tradition and past are readable; however, there is a blurry point about what tradition really means and how to define it. Moor asks whether tradition is an “architectural style, a set of immutable principles, an aesthetic pattern book or an evolutionary process of re-using what has been found to work well while replacing that found lacking or redundant” (2006, p.7). Also, according to Lynch, there is no single definition of the past as he suggests that past is determined relatively by the present and future. In his book *What Time is This Place*, it is noted that

Past, present, and future, then, are created together and influence one another. (...) That the vision of the future is affected by our perceived past seems obvious to us, but that the reverse is also true is more surprising. The perception of the present is strongly affected by both past and future and in turn influences what is remembered or foreseen. (1972, p.124)

This thesis neither intends to answer the Moor’s question of tradition nor extend Lynch’s definition of the past. However, melting all of them in the same spot, it can be alternatively said that even those who can remember the past in designing future cities might still face with an ambiguity due to multiple approaches to the past, tradition and classical norms. This could explain why some futuristic urban design proposals fail even when given past references.

2.2.1.2 Designing smart cities as a way of knowing the future

Changing primary concepts of life, especially since the beginning of the 19th century, also resulted in changing the meaning of the future. Mechanization, industrialization

and rational judgment diversified the modernist way of thinking. Approaching the future of urban design through references obtained from past knowledge and tradition has evolved to using *data* from the past. Reeves, Goulden and Dingwall mention the paradigm shift in understanding the future. According to them, the future was a notion that could only be known by gods and those who had spiritual access to divine knowledge. However, in modern societies, the future has been accepted as controllable by humans and accountable based on calculations (2016, p.7). Dunmire highlights the pragmatic function of the modernist understanding of the future (2010). He mentions that pre-moderns look at the present and bind to the status-quo explanations of the future, while moderns get a “constructive habit” (Dunmire, 2010; Dunmire as quoted in Wells, 2010, p.244). According to constructive habit, the future develops from consecutive events and becomes scientifically created through the norms of historical development and laws of science (Dunmire as cited in Heller, 2010). According to constructive habit, a futurist who is well capable of analyzing history scientifically in cause-effect relationships can “foresee the future as he could predict the result of a scientific experiment” (Dunmire as quoted in Glasser, 2010, p.243). Moreover, Flechtheim, a German political scientist and futurist, used the term *futureology* for the first time in history in his book published in 1966 to indicate that studying the future is similar to other sciences like biology, sociology and anthropology (Sardar as cited in Flechtheim, 2010; Sardar as cited in Malaska 2010, p.178).

In addition to Dunmire’s stress on the scientific basis in future studies, Reeves, Goulden and Dingwall (2016) mention pragmatic projection whereby the future is constructed “by employing detailed knowledge of the past” (p.8). They emphasize that pragmatic projection is employed to explore “what could be designed” using past knowledge (p.8). According to them, this process “relies on the construction of a singular, predictable pathway into the future that is predicated on historical developments and perceived trends” (p.14). It defines the pathways for future design through “drawing a line from past to future” (p.14).

In the literature, using future predictive models in urban studies is promising. For instance, Ficetola et al. (2010) study on land use projection and the accumulation of invasive species in Northern Italy for the next 10 years. Guerrina, Conti, Minuto and Casazza (2016) state that the endemic species of *Berardia subacaulis* will be endangered in the coming 35 years in the South-West Alps by employing distribution

models. Based on projections of data-driven models, Ortiz, Mustafa, Rosenzweig, and McPhearson (2021) assert that the surface temperature will increase between 0,76 - 9,76 °C in New York City by the end of the 21st century. As a common ground of such studies, past information becomes inputs and the possible future scenarios and projections become outputs of computer models. Even further studies explore the precision of these projections in achieving the preferable future scenario.

The basis for knowing the future from past knowledge is the organization of the parts and systems to achieve a greater futuristic vision. Considering the complexity of the urban systems, computers are helpful in the exercise of such system construction. In contemporary urban design practice, the future of the cities is not separable from computer-aided applications. For instance, geographical information models that emerged in the late 1990s enabled the multi-layering of digitalized locations to conduct thematic analysis. These digital patterns of cities facilitate the analysis of future cities particularly in sustainability studies (Figure 2.9).

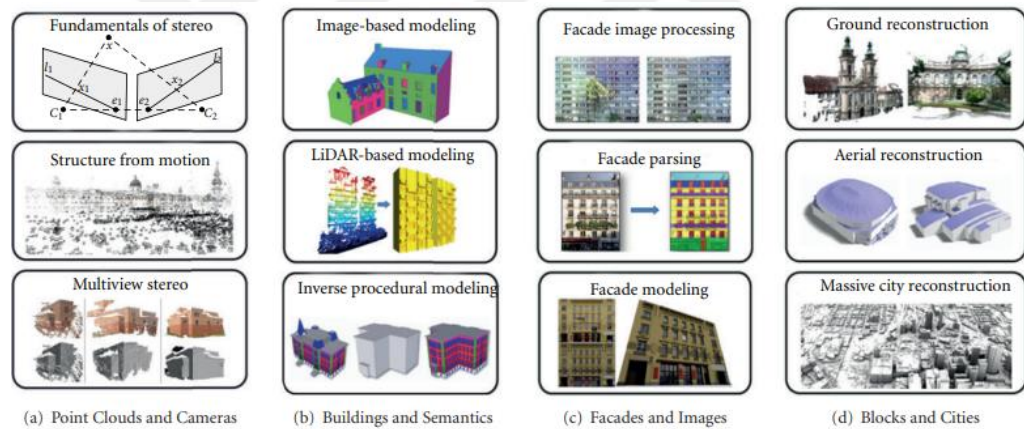


Figure 2.9 : Examples of digitization of urban elements (Aliaga, 2012, p.14).

According to Moir, Moonen and Clark (2014), the idea of digital city has lost its attention in the 2000s with the emergence of the smart city concept (p.14). The smart city is a concept developed as an urban planning, management and design strategy, described as “the science fiction of the past and reality of the present” (Komalpreet, Buşa and Cuc, 2024, p.69). It aims to benefit from technology in every aspect of life including urban life and experience. Su, Li and Fu (2011) explain that by making use of sensors placed in streets, buildings, supply networks, transportation systems and every inch of the city, the city becomes digitized. After the data is perceived from all sensors, it is transmitted to a data collection or information center through a network. In the final phase, the collected data is processed with intelligent technologies such as

cloud computing (pp. 1028-1029). All of these phases combined “can make the future world increasingly appreciable and measurable, increasingly interconnection and interoperability and increasingly intelligent” (Su, Li and Fu as cited in Liu and Hou, 2011, p.128).

Computer-aided design and future models in urban design enable to prevent the problem from occurring, to employ what-if scenarios (Figure 2.10) and to provide immediate responses to the needs. The benefits of these models in the constitution of future urban design systems are numerous; however, there are also counter-views. For instance, these *smart* systems have led to the loss of humanist factors in the urban design process. The precise calculations of computer models and simulations have been preferred over the human ability and experience in contemporary practices. Also, these systems lack responsibility for failures most of the time. When a future scenario/design projected through a computer model is somehow found ineffective, incorrect or irresponsive, it is attributed to that “computers are insufficiently powerful, data sets are too small, and algorithms are not sophisticated enough.” (Reeves, Goulden and Dingwall, 2016, p.8). Also, Sandoval as cited in Jacobs (2016) suggests that none of such computer models and simulations fulfill the future urban design requirements due to multiple dynamics in the city. She states that

any attempt to mathematically model an urban system, even as small as a single park, is inherently flawed, as the number of variables are too numerous and intricately related to each other to give an accurate picture of reality and future reality. (p.126)

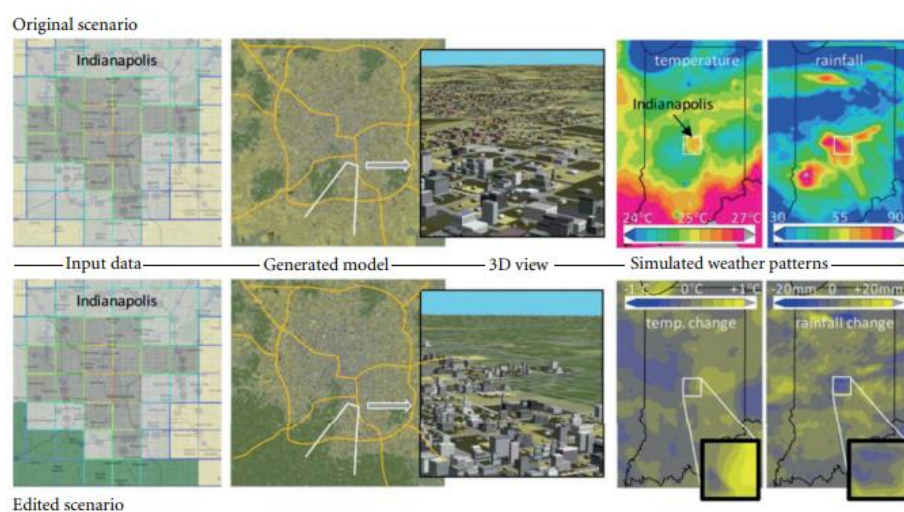


Figure 2.10 : Optional development scenarios for Indianapolis by measuring impacts of a possible park (Aliaga, Vanegas, Lei & Niyogi, 2013, p.273).

2.2.2 Dealing with the future ambiguity in urban design

The second major concept of the future space in urban design is related to the future ambiguity since urban design of the future is also urban design of the uncertainty. As time changes, people change; they are born, age and move in and out. Trends, technology, demands and needs change. Also, as time changes, space changes. It decays, erodes, dissolves and recreates. The speed of change in cities is getting out of control especially after industrialization. After the 1980s, globalization has led to the rise and fall of many cities as a result of these changing dynamics. The future can be defined as a problematic notion due to ambiguity in the cities. In this case, an urban design proposal for the future should accommodate room for dynamism, changing patterns and speed of urban life.

The city is where rigidity and elasticity occur simultaneously: it is constructed with rigid materials like concrete, steel and glass. It is also expected to be spatially and philosophically elastic to adapt to the level of change. The increasing stress between urban rigidity and urban elasticity in the face of change constitutes different concepts of future urban space. If the urban system is organized to respond to the changing space requirements by adding new spaces to the existing city, it would eventually be a never-ending urban design around the world. On the other hand, if the urban system is organized to respond to changing space requirements by providing temporary solutions within the urbanized lands, it would be an example of temporary urban design. This section introduces how the future ambiguity of urban space is conducted with never-ending or temporary urban design approaches.

2.2.2.1 Never-ending urban design

It is a fact that a non-adapting design cannot stand long. It needs to be reset, adjusted and adapted over time to cope with the changing urban dynamics. In 1959, Doxiadis introduced the concept of Dynapolis, which was derived from the words *dynamism* and *polis*. He mentions that man cannot live in the old city anymore due to the lack of sufficient conditions. He underlines that existing cities should be planned, allowing dynamism and growth naturally over time (1960). He asserts that

Yes! The proper name for the city of the future, is Dynapolis, city, which in contrast to the static city of the past, will possess the of dynamic development.

That is, the freedom to develop freely and naturally along a planned and predetermined course (1960, p.13)

In addition to Doxiadis's Dynapolis, there are also urban designs developed to deliver an adaptive state to cities. For instance, the British avant-garde group Archigram proposed an adaptive city model of Plug-in-City in 1964. The proposal is based on a grid structure that enables unlimited space configuration. New cities can be constructed interlinked with the existing city via bridges, elevators, roads, and pipes (Figure 2.11). The project proposed for London to extend over Liverpool, Paris and the rest of Europe (Smyth, Auger & Helgason, 2021, p.60) has never been realized.

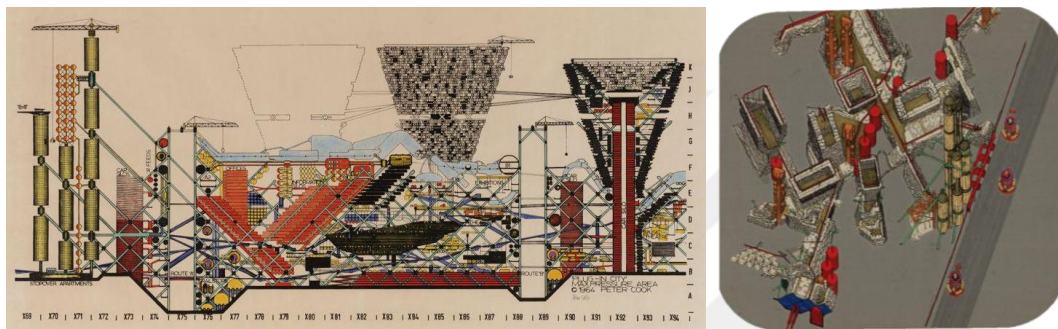


Figure 2.11 : Plug-in City by Archigram (Url-25; Url-26).

No-stop City is another expandable city model proposed by Archizoom, a group of Italian Architects in 1966. As its name indicates, it suggests a never-ending city model as required by the changing social dynamics of the inhabitants over time. Smyth, Auger & Helgason stated that No-stop City is more like a techno-utopian city model presenting how a “user-negotiated” and “co-created” city would be in the future rather than a blueprint design (2021, p.59). It is aimed to replace physical limits in the old city with a new model enabling the programming of exterior spaces around the city over time (Varnelis, 2006).

Another example is The Continuous Monument by Superstudio, designed in 1969 for New York to extend “over the entire world they could” (Riley et al., 2002, p.72). Wherever the building extends to new spaces, it is designed with the same type of façade, material and configuration: reflective façade, modules in cubes and edges at the right angle. It represents a complete domination of human power over nature and a testimony of the unification in architectural design (Figure 2.12). Members of Superstudio explain their ideal future as “We believe in a future of ‘rediscovered’ architecture, in a future in which architecture will regain its full power, abandoning all

ambiguity of design and appearing as the only alternative to nature” (Superstudio, di Francia, Magris, Magris, Frassinelli, Natalini, 1973, p.28). They respond to the ambiguity of future design by identifying a set of architectural principles in the city’s configuration.



Figure 2.12 : The Continuous Monument by Superstudio (Url-27; Url-28; Url-29).

These examples of Plug-in City, No-stop city, including The Continuous Monument and Tokyo Bay Plan by Kenzo Tange in the 1960s, were designed in a way that led to large consumption of land due to mega-cities being created on top of or adjacent to each other. These designs are futuristic design proposals in which uncertainty of future demands and dynamism are accommodated by adding more and more structures. Notably, the lack of environmental and engineering concerns of these proposals might be why none have been constructed. It is ironic that these designs are futuristic proposals of their time without clearly denoting what the future consequences would be. Yet, they still draw inspiration in envisioning many futuristic urban designs today. Plug-in City, No-stop city and The Continuous Monument are examples of the same trend of futuristic utopian megastructures that became visible in the 1950s, flourished in the 1960s and ended in the 1970s (Deyong, 2002). In the contemporary urban design agenda, the adaptability of urban design proposals is evaluated by how they respond to changing social, economic and environmental dynamics as a whole.

2.2.2.2 Temporary urban design

The physical adaptation of the urban systems over time can also be addressed with temporary designs. Here, the uncertainty of the future is canceled by the short-span proposals. These proposals are open to readjustments in time when the urban space is expected to adapt. These readjustments can be changes in use, function, scale as well as changes required by the social context. The projected time span of the temporary design proposals might range from daily, weekly, seasonal to yearly periods according

to the scale and context of intervention. In this section, futuristic temporary urban designs are discussed as a response to the future ambiguity in the urban space.

The urban spaces evaluated with temporary designs might be streets, squares and other public areas exhibited every day, or rather might be vacant, neglected or underutilized spaces in the urban fabric, waiting for revitalization and reclamation. The buildings can be re-programmed and urban elements can be partially or entirely moved, replaced and rearranged in temporary designs. One of the early examples of The Palm Tree Island (Oasis) Project by Hans Rucker in 1971, however, aims to create an illusion of an island at the horizon of a motorway (Figure 2.13). With the use of pneumatic systems for the creation of the illusion, the perception of the space is altered for temporary urban aesthetics (Dunn, Cureton & Pollastri, 2014, p.83).

Another outstanding work by Archigram responds to mobility and change by introducing the walking city project (Figure 2.13). The project aims to create an idealized metropolis that is movable over the earth and water. These walking cities can respond to the different needs by dislocating the urban infrastructure. Riley et al. (2002) explain the walking city project as follows:

Ron Herron (...) created his Walking City out of an indefinite number of giant roaming pods containing different urban and residential areas. The pods could be connected by retractable corridors and, together, form a conglomerate metropolis. This literally mobile and indeterminate architecture was not so much a serious proposition for a structure as a commentary on the way in which change dominates every aspect of the modern city. (p.54)



Figure 2.13 : At left, Palm Tree Island (Oasis) by Hans Rucker (Dunn, Cureton & Pollastri, 2014, p.83). At right, Walking city by Archigram (Url-30).

Temporary Urbanism, Do It Yourself (DIY) Urbanism, Urban Acupuncture or Tactical Urbanism are contemporary concepts that emerged especially after the 2000s, developed for design and management of urban spaces for experimental and temporal

use. Madanipour highlights the creative potential that temporary urbanism holds. According to him, experimental temporality in urban space is a catalyzer of change and boosts innovation by creating and breaking down time and urban space. Furthermore, the experiential potentials created by temporary uses enable the articulation of space into the future (2017, Chapters 6 and 7). It is also stated that “the future is hard to envision and even harder to believe. Experiential futures allow us to time travel and temporarily be part of that distant possible reality” (Dunagan, et al., 2019, p.67). Bishop and Williams explain the temporary design as follows:

(...) temporary activity represents a reaction to a world where the future is more uncertain and less secure, and a response to rapid economic, societal and technological changes that are shortening the present into smaller and smaller time frames. (2012, p. 213)

As a principle of temporary urbanism, the present time is the focus in the decision making. The design proposal is developed upon the temporal needs of time to provide solutions, particularly at low cost, without eliminating future designers to propose their present-time designs so that possible uncertain conditions of the future do not threaten the design. Contrasting to the never-ending urban design approach, here, the uncertain and changing condition of the future space in the city is managed within the already-urbanized sites.

There are also some criticisms raised for temporary urbanism by scholars. Madanipour suggests (2017) that the temporary urbanism concept is “a sign of fleeting fashion into consumerist society” (p.2); Steven and Dovey (2023) indicate the long-term unexpected impacts of temporary designs that are not studied systematically, may end up with gentrification (pp. 1-2); Bragaglia and Rossignolo state that temporal use of space may exploit the land financially. According to them, a temporary city is a Trojan horse that supports neoliberal policies for the benefit of a small group (2021). Turku, Kyrönviita, Jokinen and Jokinen (2023) question lasting impact of temporary designs when temporary solutions are expected to create change in the future (p.2).

2.2.3 Politics of the future in urban design and politics of urban design in the future

Urban studies are related to many disciplines in addition to planning and design. Since urban space is a spatial-political product, the imaginaries about the future of urban

space can also be discussed with political assets. To exemplify how political powers are related to envisioning the future of urban design, the futurism movement and its relation to the futurist city can be discussed.

To begin with, Italian theorist Filippo T. Marinetti is accepted as the father of futurism as he uses *futurism* for the first time in history in his manifesto titled *The Founding and Manifesto of Futurism*. Futurism is an art and political movement characterized by speed, technology, machines, violence and war. It was born in Italy and spread over the world, affecting a wide range of cultural areas including painting, literature, sculpture, architecture and music. It was centered around the rejection of everything that belonged to the past and supporting industrial and modern ways of living. In the futurist city, it is required to “demolish museums and libraries, fight morality, feminism and all opportunist and utilitarian cowardice” (Marinetti, 2009, [1909]). The futurism movement defines the futurist city as “an immense and tumultuous shipyard, agile, mobile and dynamic in every detail” (Sant’Elia, 1914). The futurist city is put forward with Citta Nuova (New City), designed by Antonio Sant’Elia. Citta Nuova is characterized by a lack of ornaments, monumental buildings, bridges for vehicular transportation and building facades with a few details (Figure 2.14). It adopted new materials and synthesized them with the simplicity of the structures (Notaro, 2000, p.164). According to Notaro (2000), these drawings “inspired an imagery that has characterized much of our century's debate about the future” (p.163).

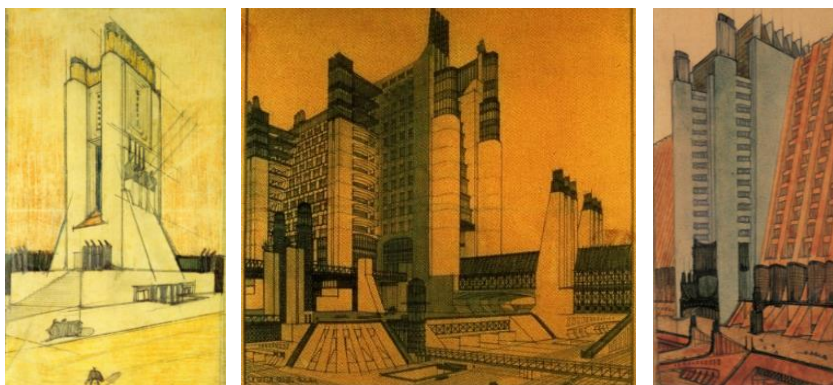


Figure 2.14 : Citta Nuova drawings by Sant’Elia (Url-1;Url-2; Url-3).

Bowler indicates the strong relationship between The Futurist Manifesto and the Italian political climate at the beginning of the 20th century, particularly Italian fascism. He points out that The Futurist Manifesto was a catalyzer and “aestheticization” of the fascist regime in the very beginning (1991, p.776). Sardar as cited in Bells states that it is unfortunate to call contemporary works futuristic because

of this connection (2010, p.191). However, later “it is explored a disjuncture between the stated goals of the Futurists and their wholesale embodiment in works” (Bowler, 1991, p.777). Ialongo also highlights that the fascist elements are not evident in the majority of the futuristic works; instead, fascism is related to other events in the 20th century, such as the world wars, colonialism and political repression (2016, p.307).

The Futurism Movement emerged as a result of the political climate in Italy during the early 20th century. There are also other instances that can be discussed to emphasize how future vision and the cities of the future are affected by different occasions, such as the World Exhibitions (The World Expo) and The World Fairs. The World Expos are the “Economical Olympics” organized by government or designated organizations where participants showcase their cultural, scientific, technological and industrial advancements that contribute to a better future (Xue, Chen and Yu, 2012, p. 746). The World Fairs and Exhibitions are reconsidered as global platforms where plural voices are put forward in the statement of future perspectives. The first World Expo was held in 1851 in London and especially early American Expos are indicated as representing a “liminal stage” offering an “opportunity to regroup and rethink the world” (Sneltvedt as cited in Susman, 2018, p.47). World's Columbian Exposition, known as the Chicago Exposition in 1893, is defined as one of the concrete examples of this representation.

Chicago Exposition was designed in the city's lakefront area by Daniel H. Burnham and Frederick Law Olmsted. The fair's buildings are characterised by Beaux-Arts architectural features, white plaster and marble material, promoting the name the White City (Figure 2.15). At the opening of the Expo, President Grover Cleveland pushed a button to release the magic of the electricity and to bring life to the White City with engines and steam whistles. Sneltvedt (2018) emphasizes that White City's glowing with the power of the electricity enabled “an enactment of the future in full-scale, which in turn allows for its re-imagining”. According to Brodt (2023) “Westinghouse Electric (...) had influential experiences at the fair that shaped the future of each for years to come” (p. 130). The lighting of the buildings in the exposition also relied on Nikola Tesla's endeavour and displays of Tesla's work showcased a vision of the electrical future (Brodt, 2023, p.84-85) (Figure 2.15).

The World Fairs and Expos are not only organizations generated in a collaboration of different groups of the society including scientists, architects, engineers, etc. but also invite communities from different places to observe and showcase different envisions

of the future. Indeed, new urban visions and planning movements flourished from The World Expo's creative atmosphere. To exemplify, City Beautiful is an urban political movement emerged as a product of the Chicago Exposition in 1893.

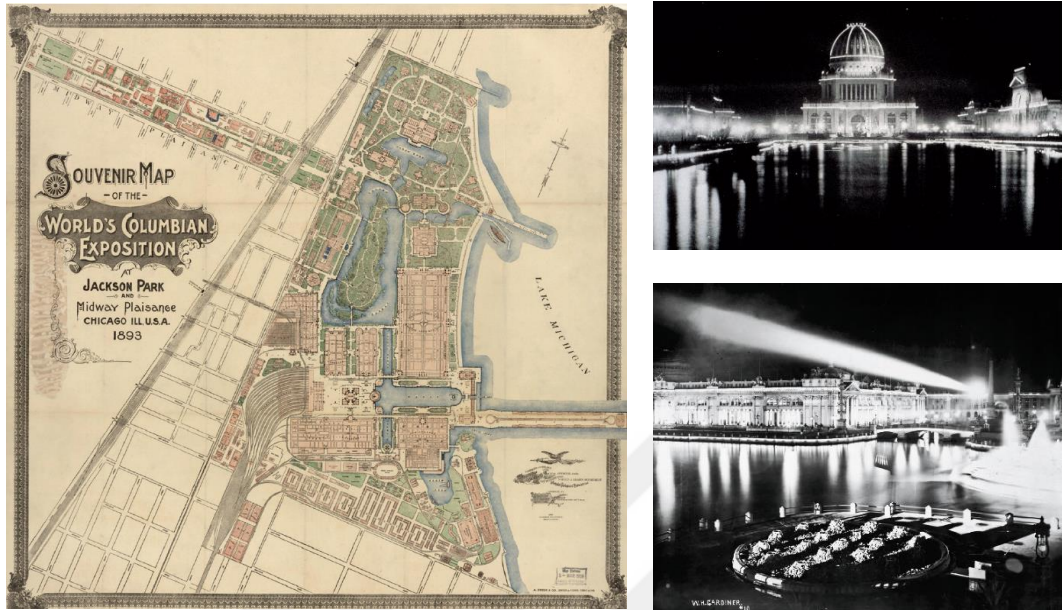


Figure 2.15 : At left, Chicago Expo's plan, and at right, a night views from the Expo showing General Electric' lighting the White City (Lobell, 2022; Url-32).

In contrast to use of modern styles in presenting America's future in the Century of Progress, Chicago Exposition was adopting Beaux-Arts architecture to link the United States to the enduring legacies of ancient empires for demonstration of the American power (Brodt, 2023, p.172). Features of the Beaux-Arts and neoclassical architecture in the White City, which were adopted by the City Beautiful Movement, were employed to promote a social reform (Gassner, 2021, p.1108). White City provided “a grand and beautiful environment for visitors to encounter the otherwise monstrous machinery that powered the Industrial Revolution” and “a reorientation of public thought and action toward urban beauty” (Brodt as cited in Doenecke, 2023, p.4; Gassner as cited in Wilson, 2021, p.1108). City Beautiful movement relied on the beautification of cities to correct social disorder in the urban areas.

In addition to socio-technological visions of the future, corporate futures can be discussed as an impact of the World Fairs. Smyth, Auger and Helgason suggest that behind the spectacle designs and technological developments showcased in The World Fairs, there is an encouragement to manipulate exhibition visitors toward corporate visions of an ideal future (2021, p.29). Better future visions in “the service of American

corporate capitalism” can be explored with the New York World Fair held in 1939 (Smyth, Auger and Helgason, 2021, p.31).

At the New York World Fair, Norman Bel Geddes designed Futurama sponsored by General Motors Corporation. Sticking to General Motors’s motivation of selling more cars, Futurama displays a city model of the future (for the year 1960) where two-level streets and super-highways are designed to allow cars to enter and exit the highways without reducing speed (Smyth, Auger, and Helgason, 2021, p.31) (Figure 2.16). It is stated that “General Motors is telling us what they expect from us: we must build them the highways so they can sell us the cars” (Smyth, Auger, and Helgason as cited in Doctorow, 2021, p.31). The New York Fair was held approaching the end of the Great Depression and visitors were fascinated by Futurama, which portrays the city of the future as better than present (Smyth, Auger, and Helgason, 2021, p.31). In the end, many elements of the model turned into a reality, for instance, traffic solutions as similarly shown in the Futurama were accepted by the US government by the 1950s (Maffei, 2018, p. 156). Futurama generated a social consciousness with the image of car-dominated future city during politicians and planners were seeking ways of funding transportation systems with public resources (Ellis, 2005, p.60).



Figure 2.16 : Photos of Futurama (Dunn, Cureton & Pollastri, 2014, p.42; Smyth, Auger & Helgason, 2021, p.30; Ellis, 2005, p.57).

Apart from the future visions manipulated by corporate organizations, the effects of different strategies in expressing ideas about the future can be explored by looking at two professionals working in the same era and similar fields. Both Lewis Mumford and Norman Bel Geddes were influential representatives in the 1940s especially regarding the American transportation policies. Ellis indicates two different styles that they adopt in their expression of idea: Bel Geddes suggests “to invest huge sums in an elaborate public infrastructure for motor vehicle travel” whereas Mumford supports “redirect our resources toward the construction of compact transit- and pedestrian-

orientated landscapes” (2005, p.52). Ellis further states that contemporary American cities became versions of Bel Geddes’s Futurama, while Mumford’s works had a limited effect on the American post-war landscape (2005, p.65). Ellis attributes the reason why Bel Geddes's strategy was more influential than Mumford’s strategy to the form of expression Bel Geddes adopted. He states that

Bel Geddes believed that the public had to actually see future alternatives in model form in order to understand and embrace them. (...) Mumford, by contrast, relied primarily on the written word to carry his message and, although his observations were frequently vivid and compelling, they were never translated effectively into patterns, codes and regulations for practising planners and architects. (Ellis, 2005, p.65)

In addition to the Ellis’s stress on the strategies of representing the future ideas, Sneltvedt draw upon Hannah Arendt's political “thinking on the relationship between invisible imagination and public world” (2018, p.47). Relying on Arendt’s reification concept, he argues that the World Fairs, with it’s a full scale environment of sociotechnical imaginaries, provide “a materialization of what is privately imagined in order for there to be publicly performed visions of desirable futures” (2018, p.49). He suggests that constructing an artificial environment, similar to a microcosm that brings visitors together in a temporary settings of the World Expo’s, serve as an effective foundation for establishing a collective public consciousness on the imagined futures (2018, p.49).

Based on the Ellis’s and Sneltvedt’s emphasis, it can be stated that urban future visions that are more visualized, shown and modeled, especially if these models allow users to experience the futuristic idea, it becomes more effective in conveying the vision compared to those conveyed through words only. This opens up a new discourse in the study of urban futures especially conveyed through visual media.

In addition to impact of political motifs and social consciousness generated by different political actors on futuristic visions, futuristic visions can also be politically critiqued. To begin with the political critique of the future image, political forces that create futuristic images can be mentioned. In the 1930s, H.G. Wells proposed that a person can be educated to professionalize in the rational construction of the future emphasizing that futurology is a scientific area within the future studies (Dunmire as

cited in Wagar, 2010, p.243-244). However, this is associated with the sweeping away of future prediction from communal concerns into concerns of an elite group, and eventually caused the loss of a “pluralistic and democratic vision of the future in 1970s” (Dunmire as cited in Sardar, 2010, p.246). It is stated that the future is any more “flat, ahistorical, non-philosophical accumulation of computer printouts” (Dunmire as cited in Dolbeare and Dolbeare, 2010, p.247). Eventually, the future visions become “generally accepted idealistic images” (Dunmire as cited in Polak, 2010, p.246). It is stated that the modern understanding of the future, that is, the future can be controlled by humans, has led to the creation of a consciousness that “those who control images of the future may control reality itself” (Dunmire as cited in Bell, 2010 p.245). In this case, privatization and singularization of the future images threaten the politicization of the future space considering the power of different actors that create the future visions.

Another point of view in envisioning the future of urban design is clarified by Maze. According to her, it is a political act to identify what is the present and what is the preferable envision of the future (2019, p.24). She also mentions that once the future is created scientifically, some concepts cannot be known by measurement and experiments, such as “socio-cultural practices, psychological and biophysical dynamics, and socio-ecological events” (2019, p.25). She suggests that futuristic visions somewhat lack social dimension once they are generated from measurements and highlights the importance of the qualitative assets in future envisioning.

2.3 Design Fiction: Diegetic Representation of Urban Space and The Future of Urban Design

Futuristic urban imaginaries and visions are topics in urban design in addition to other fields such as media. Especially in sci-fi futuristic films, cityscape and architecture, which are artworks in the worlds of imagination, present many clues to discuss the future of urban design. It is clear that experiences of urban space in the real world and sci-fi films are explicitly different cases but Sterling emphasizes how the gap between the sci-fi works and real works is gradually closing. This section discusses design fiction as a method of looking at the future of urban design in the science fiction genre. Sterling starts to question why futuristic objects within the science fiction genre are so poorly designed. Later, he confronts the fact that science fiction is a form of art that

serves the audience, while design (especially industrial design) is commodified for the clients. He suggests that until the invention of the Internet, none of the designers attempted to deal with science fiction, and none of the science fiction writers tried to expertise in ergonomics, material science and rationalism. However, once the Internet entered into our daily lives, clients of industrial design and audiences of science fiction became unified as Internet users. With the help of the Internet, search engines and easy access to information with a single click, design theory has become closer to science fiction (Sterling, 2009). Here, the film industry should note the birth of search engines in the 1990s to take a closer look at the representation of urban space in films. Ever since the 1990s, the realistic representation of urban design and architecture in cinema enables “seamless transitions between live and modeled modes of representation” (Boake, 2007, p.2) thanks to technological developments of our age.

Design fiction, previously introduced in Section 2.1, is defined in the collaborative studies on science fiction and science fact. It deals with what optional cases would be or could be, rather than the real cases (Markussen and Knutz as cited in Simon, 2013, p.232). It is defined that design fiction is concerned with cases that are too far from the current trends and too close to the reality of the present (Markussen and Knutz as cited in Grand and Wiedmer, 2013, p.232). Design fiction as a methodology for studying alternative cases can be evaluated with diegetic representations of urban spaces to discuss the future of urban design.

In film-making terminology, diegetic is defined as “everything belonging to the fictional world of a film that the characters themselves experience and encounter” (Filmmakers Academy, 2021). Diegetic sounds, settings and spaces in the film are experienced by the actors; however, non-diegetic background music and sound effects are generated mainly in the post-production process. Considering diegetic representation in the screenplay with a design fiction approach, Bleecker explains that (2009) various *diegetic prototypes* of the products are exhibited with storytelling in the films and these diegetic prototypes enable the experimental use of scientific products in the fictional worlds to overview possible impacts in the real world. It refers to the filmic production of things before the laboratory production (p.39). Design fiction enables us to reconsider science fiction works as future prototypes where futuristic urban design settings are conveyed through storytelling. It provides an overview of different design settings before their realization. Bleecker as cited in Kirby states that

(...) cinematic depictions of future technologies are actually “diegetic prototypes” that demonstrate to large public audiences a technology’s need, benevolence, and viability. Diegetic prototypes have a major rhetorical advantage even over true prototypes: in the diegesis these technologies exist as “real” objects that function properly and which people actually use. (2009, p.39)

Merging Kirby’s diegetic prototypes in futuristic sci-fi films and Sterling’s explanation of commons between the sci-fi genre and design, it can be stated that urban design settings portrayed in futuristic sci-fi films enable us to discuss possible futures. According to Boake (2007), “there are great opportunities to exploit the potentials of film in order to enhance the critical dialogue regarding visions of architecture of the past and future” (p.1). He highlights that exploring existing “ready-made” portrayals of science fiction films can even be used for educational purposes to discuss both past and future worlds even though none of them are “academically designed” (p.4-5). Abohela and Ward (2023) mention the instrumental use of cinema and state that “film provides a testing ground for innovative visions and it is the realm in which a different approach to the art and practice of architecture can be realized” (p.79).

2.4 Chapter Evaluation

In this chapter, it is discussed (I) how the future is defined in different fields, (II) how the future space is conceptualized in urban design field and (III) how representation of city in different media such as cinema can be evaluated to contemplate the clues of futuristic urban designs.

Studying the urban future is firstly related to how the future is defined. There are multiple definitions stating when it is near future, mid-future and far-future in different studies from health to technology. These definitions range from 1 year to 50 years. However, it should be noted that these future time references are identified based on the efficiency and effectiveness of the professional approach they are based on. For instance, in the urban planning and design, designing beyond the next 25 years is indicated as challenging (The Foresight Programme, 2016). But, when it is attempted to contemplate the future of urban design from the outside of the urban design field, such as cinema, designing beyond the next 25 years can be explored.

Moreover, major genres in designing the future have been enriching more due to technological developments such as the invention of automobiles and the Internet, global issues such as climate change and pandemics, and new explorations such as space travels and inventions. The emergence of new genres, such as apocalyptic, post-apocalyptic, space opera, cyberpunk and many others, exemplify the multiplicity in envisioning the future of urban design.

In the urban design field, genres (conceptualizations) of the future space are also diverse. Referring to various examples from urban planning, architecture and urban design, in this chapter, these conceptualizations are squeezed into (I) designing the urban future referencing to the past or (II) processing the past information (data) for enhancements in the future settings, (III) never-ending state of urban design that turns cities into megalopolises with indefinite urban peripheries, or (IV) establishment of temporary urban designs in the existing urban fabric to deal with the future and changing needs and (V) political actors affecting the futuristic visions of urban design, or futuristic urban imaginaries (re) structuring the political motifs (Figure 2.17). Reading these conceptions of the future space in the urban design provides a theoretical framework for studying the future of urban design.

Going beyond the urban design field to discuss the future of urban design is also practical. Cinema, for instance, presents a convenient platform to discuss the future of urban design with the diegetic representation of urban space. These cinematic representations of city have their roles in the scenario: they either act like a background, like a leading role or in-between. These representations convey the unspoken features of the urban setting such as where the character lives and what lifestyle the character has, what urban design principles are and which theoretical references can be traced. Also, it can be stated that cinematic representation of the city also has a role in the real life through a diegetic reading of urban space. It enables an overview of other possible realities from fictional worlds in an alternative timeline (Figure 2.18). In this case, an exploration of futuristic urban design settings in cinematic spaces opens up a new branch of studying the future of urban design.

Given the theoretical framework for future studies in the field of urban design and potential of cinema in representation of futuristic urban settings, it can be summarized that there are various approaches in urban design such as future modeling, forecasting, prediction, etc. in future studies originating in qualitative and quantitative

perspectives; however, in the exploration of clues of urban design from cinematic spaces, qualitative perspectives serve an efficient framework in order to decode the insights from the cinematic spaces rather than statistical evaluation.

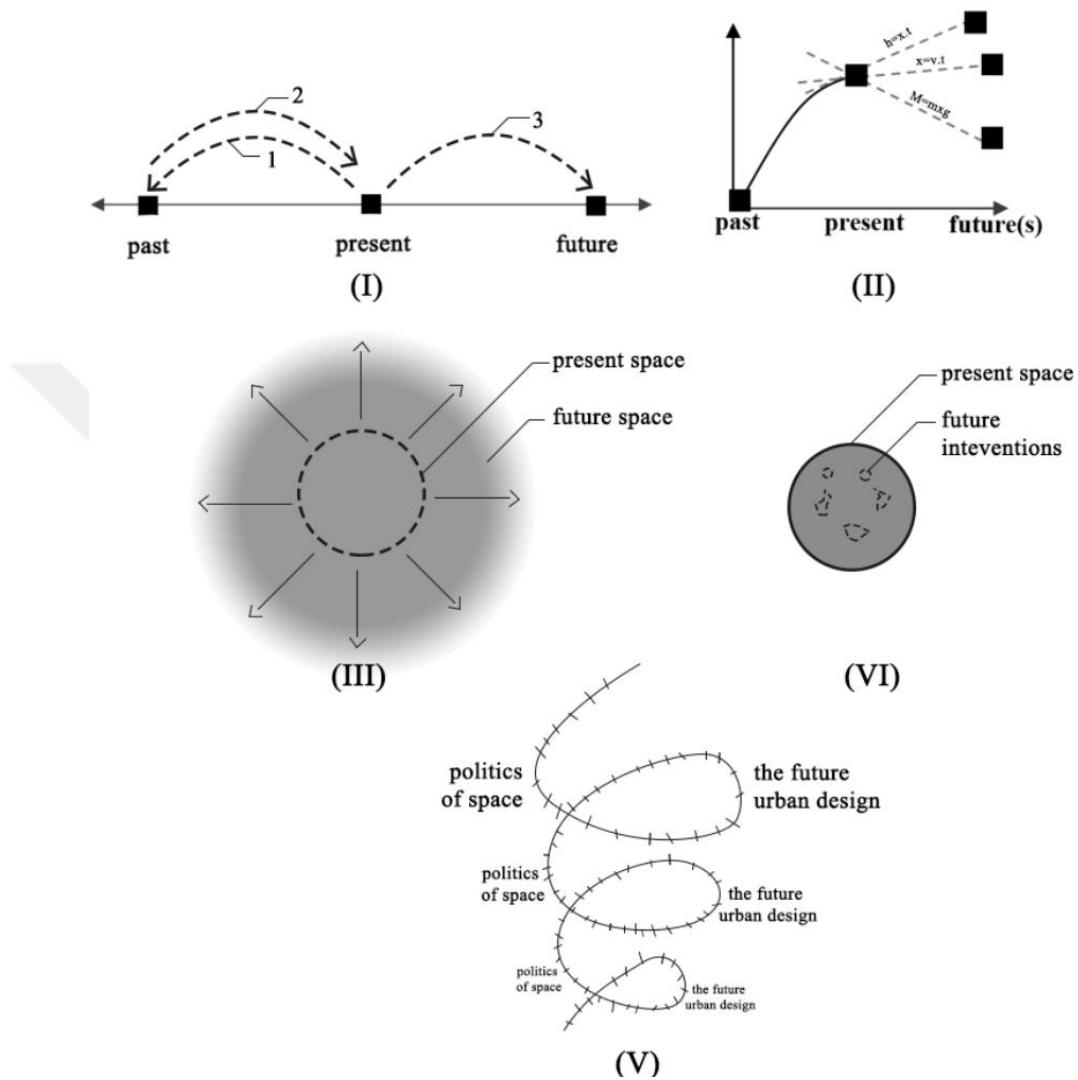


Figure 2.17 : Sketches by the author to idealize the conceptualization of the future space in urban design.

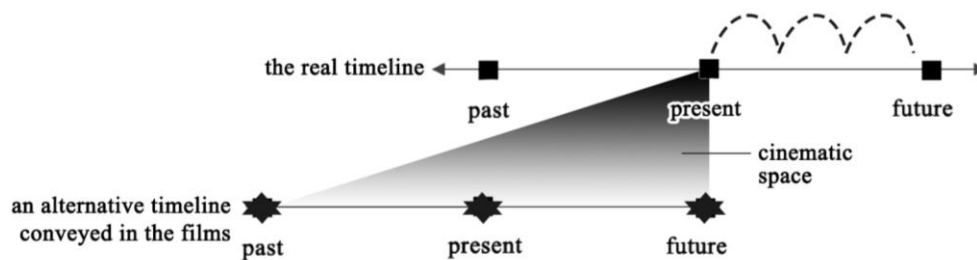


Figure 2.18 : Diegetic representation of the urban space conveyed through an alternative timeline and its effect to the future of urban design (sketched by the author).



3. CITY IN THE CINEMA: CINEMATIC SPACE AND RELEVANCE TO URBAN DESIGN

Films occupy a significant portion of the media products consumed by people. Films are the most influential media type compared to other forms, even though their history goes back less than 150 years. In the entertainment industry, the birth of cinema is rooted in the industrial revolution and mass production. In the area of moving pictures, one of the first initiatives realized when the zoetrope was invented in 1833 (Figure 3.1). The main ideology of this device was a rapid succession of images inside a revolving drum to imitate the motion effect on the human eye. In 1839, negative photographs were copied to paper to project them into a clear surface. In 1887, Emile Reynaud invented another machine similar to a zoetrope which also enabled the projection of moving pictures and made these pictures viewed along with public performances. When the Lumiere Brothers invented a projection system in 1894, they were asked to generate shorter and cheaper films than Thomas Edison and they introduced the cinema eventually into the commercial world. Moving pictures did not become a popular form of media all of a sudden. A lot of effort was put into this journey by many people and organizations. What has been achieved along this journey has contributed to today's cinema, television, video games and other visual media.



Figure 3.1 : Porpoise strip created for zoetrope (Url-9).

Films have always played a crucial role in architecture and urban design. Early examples showing the relationship between cinema and city can be exemplified by how theaters affected urban fabric in the 20th century cities. Between the 1910s and 1940s, small theaters were transferred into movie palaces (or picture palaces) to handle large audience in demand and new places in film exhibition market were introduced to the urban fabric. The architecture of theatre buildings enabled public gatherings in a dark and controlled environment, cutting all possible distractions away from the viewer (Kaes, Baer & Cowan, 2016, pp.174-175). The façade of the building was

characterized by massive advertisements to catch audience's attention (Herzog, 1981) (Figure 3.2). Even in contemporary “media cities”, public space is re-defined partly by the physical and immaterial spaces portrayed through digital screens (McQuire, 2006). Later, when television was popularized in the 1970s, watching a film became a domestic activity and movie theaters slightly lost their importance and closed (Thompson and Bordwell, 2013, p. 606). Theatre buildings evolved into complex and multifunctional structures to serve for multiple ways of entertainment and leisure time activities at the times the audience was not attending the film exhibition. The film exhibition places affected the cities physically due to space requirements of audience and film producers.



Figure 3.2 : At left, Photo of Rex Cinema in Paris 1950s (Url-8). At right, exterior view of a building for film promotion in 1939 (Url-7).

The effects of globalization on the film industry enabled easier distribution of films over national boundaries. The context depicted within the film has become easily accessible to the world audience. Visitors outside the country have been attracted to explore locations and destinations depicted in the most exhibited films. Film-induced tourism led to the commodification of places and created places as objects of consumption (Roesch, 2009, p.60). As an example of the cine-tourist's contribution to economic and cultural contribution to the real locations, Bolan and Kearney (2017) mention *Lord of the Rings*, and its contribution to New Zealand's global recognition as it is called *Middle Earth* in the film. It is stated that the direct revenue created by *Lord of the Rings* trilogy is \$32.8 million New Zealand Dollars 3 years after the film's release and it is expected to be more than 10 times greater in the next decade (Bolan and Kearney as cited in Buchmann, 2017, p.2150).

The places exhibited in the film also create new possibilities in design thinking. The place and time configurations conveyed through the cinema have enabled architects and urban designers to overview and develop insights into these portrayals. For

instance, *Blade Runner* is one of the most exhibited dystopian sci-fi films taking place in the future of Los Angeles and it has a respectful impact on urban planning discourse as explained as follows:

In February, 1990, at a public lecture series on art in Los Angeles, three out of five leading urban planners agreed that they hoped someday Los Angeles would look like the film *Blade Runner* (...) It has become a paradigm for the future of cities, for artists across the disciplines. (Kitchin and Kneale as cited in Klein, 2001, p.25)

In the contemporary world, cinema is a type of mass-visual media production. The visuals and images conveyed through films are available to everyone from almost all over the world and these visual contents have an undeniable impact on the audience. We can exemplify how visual content may affect the present actions by referencing stories from *Minority Report* and *Tomorrowland*.

The film *Minority Reports* takes place in the year 2054. In the film, the pre-crime US police department benefits from the visuals of the near future in order to prevent all murders from occurring. One day, while police officer John Anderton is analyzing the visuals as usual to prevent murders, he discovers that he will be the murderer of Leo Crow in the next 36 hours. What is interesting for Anderton is that he has no reason to murder Crow as he has no clue who he is. In the end, Anderton could not help himself to escape from the crime scene since he begins to rationalize the murder in his mind by gathering small pieces together. Anderton becomes so determined to be the murderer of Leo Crow just as shown in the future visuals. He diverts the present to the way of visualized future.

In another film *Tomorrowland*, a secret alliance of scientists, including Thomas Edison and Nicola Tesla, creates another dimension of *Tomorrowland*, a city of the future. *Tomorrowland* is superior in technology, inventions and robotics and is free from political obstacles. One of the inventions in *Tomorrowland*, the monitor, enables to predict the future. It visualizes when the world ends with a big apocalypse. The signals from the monitor broadcast these apocalyptic future visuals to the world audience to warn and make people stop ruining the world. However later, it is understood that the machine works like a self-fulfilling prophecy and works on convincing the people that there will be a big apocalypse rather than warning them. David Nix, leader of

Tomorrowland, explains why the monitor shows the futuristic apocalyptic visuals as follows:

(...) The only way to stop it [the apocalypse] was to show it. To scare people straight. (...) But how do you think this vision was received? How do you think people responded to the prospect of imminent doom? They gobbled it up, like a *chocolate éclair*. They didn't fear their demise, they repackaged it. It can be enjoyed as video games, as TV shows, books, movies. The entire world wholeheartedly embraced the apocalypse and sprinted to-wards it with gleeful abandon. (...) In every moment, there is the possibility of a better future. But you people won't believe it. And because you won't believe it, you won't do what is necessary to make it a reality. So you dwell on this terrible future, and you resign yourselves to it. (Bird, 2015, 1:42:47)

All of these examples, Los Angeles being expected to be similar by urban planners to *Blade Runner*, Anderton facing the future as visualized by the police department in *Minority Report* and the whole world being dazzled by the future visuals created by the monitor in *Tomorrowland*, point out the power of the visuals and concepts we are consuming through the media today. The spread of futuristic envisions through films also results in the mass spread of ideas and the facilitation of a shared imaginary of the future. In this case, the future concepts conveyed in cinematic space and the references that can be taken from cinema are significant discourses in future studies.

Reconsidering the essential relationship between the cinema and the city, the following sections introduce cinematic space in envisioning the future of urban space. Section 3.1 describes the space concepts in cinema, architecture and urban design referring to urban design and cinema theory. It introduces how cinematic space is represented in comparison to urban space. Section 3.2, concentrates on how representation of space in cinema and architecture converges to uncover and multiply the potential of space. The method of cinematics to explore film characteristics, cinematic space and cinematographic features is introduced.

3.1 Space Concepts in Urban Design and Cinema

The city is where cinema is always demanded, produced and consumed. Gold highlights that it is not a coincidence that big film production studios are born in cities

like Los Angeles, New York, London, Paris and Rome where urban linkages are dense (2001, p.338). Abbas also underlines that cinema would be hard to exist once the urban experience is left out (Krause and Petro, 2003). The unbreakable bonds between city and cinema can be evaluated with the space. Both cinema and architecture are structured mainly around the concept of space. A following overview of theories on urban space and cinematic space is introduced to demonstrate the unbreakable bonds between city and cinema.

Architecture is an ancient art of creating space where human desires and necessities are met. Many experts have studied the concept of space as it transcends multiple disciplines. Newton clarifies space as absolute space, disregarding the motion among subjects within that space, whereas Leibniz defines space from the relativity approach, that is, based on the positions and locations of subjects given in the space (Arthur, 1994). In addition to Newton and Leibniz's definition of space, Rob Krier concentrates on the physical attributes, compositions and morphology of urban space. In his pioneer work, he develops an inventory of the concepts of urban space by looking at several historical urban layouts (1979). In his experiential work, he concentrates on selected urban frames and tries to analyze them in a topological way.

Since the beginning of film theory in the 19th century, the concept of space has been at the center of discussions by many scholars. As mentioned, cinema is a product of successive frames presented on a surface. This essential but practical definition leads us to understand what cinematic space is. Space in cinema is described as a dynamic frame where the subject is placed (Roesch, 2009, p.63). In this case, every successive image that positions the subject is a cinematic space. Just as Krier uses *urban frames* to analyze spaces, a film is also constructed from frames. For instance, Krier uses the selected urban frames to analyze different design configurations while Ross analyzes the selected frames from *The Battle of Algiers* to explore the camera movement in the scenes showing Algeria, a European neighborhood and the Kasbah (Krier, 1979; Ross, 2016) (Figure 3.3). These cinematic spaces create another unit of cinematic form: the shot (Figure 3.4).

There are also other definitions of cinematic space put forward. Rohmer's description of cinematic space lies in the collaboration of time and space. According to him, time provides the spatial dimension to the cinematic space. Grosoli defines cinematic space as what goes beyond the corners of the frame from its center (2018, pp.53-57). In

geographical film research, Aitken and Dixon summarize the early attempts to define filmic space. Filmmakers utilize cinematic landscapes either as (I) a medium that mediates socio-cultural knowledge, (II) an actor, for instance, presenting the city-scape in grey tones to denote city dilapidation, or (III) a work that constructs actions, characters and narrative. According to them, filmic space is a part of the cinematic landscape or *mise-en-scene*. The filmic space is a frame zoomed-in cinematic landscape. It presents various shooting and camera techniques, such as panning, tilting and tracking (Aitken and Dixon, 2006, pp.326-331). Aitken and Dixon further mention the potential of film geography on socio-cultural discourse (2006, p.332). The film enables reading of socio-cultural geography that informs culture, art, politics, technology and so on due to its potential and ability to represent, research and teach (Lukinbeal and Zimmermann, 2006).

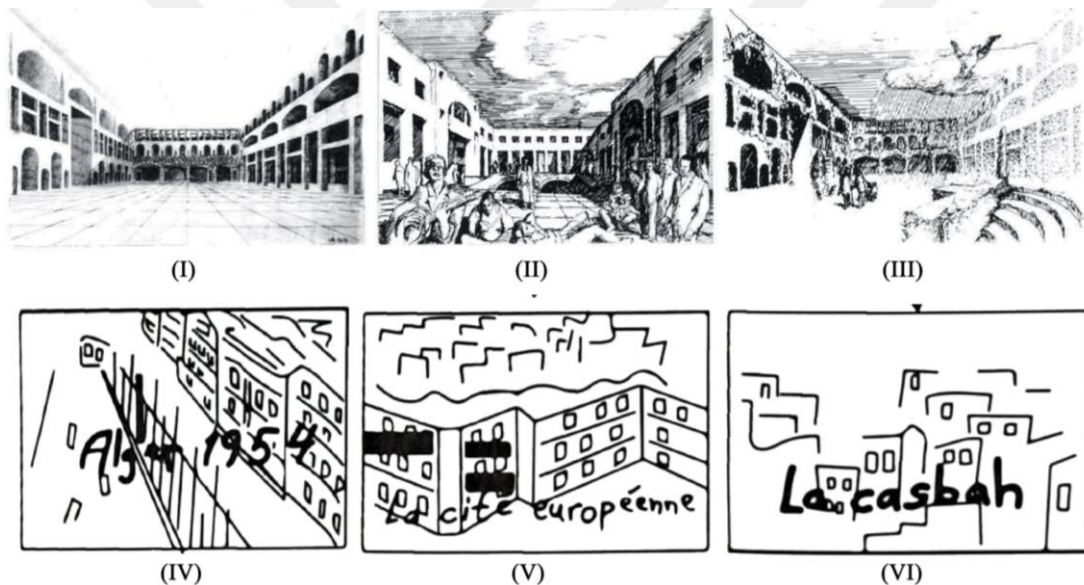


Figure 3.3 : Above, configurations in a square with (I) different facades, (II) arcade with narrow columns and (III) overgrown plants (Krier, 1979). Below, shots from *The Battle of Algiers* showing (IV) Algeria, (V) a European neighborhood and (VI) the Kasbah (Ross, 2016).

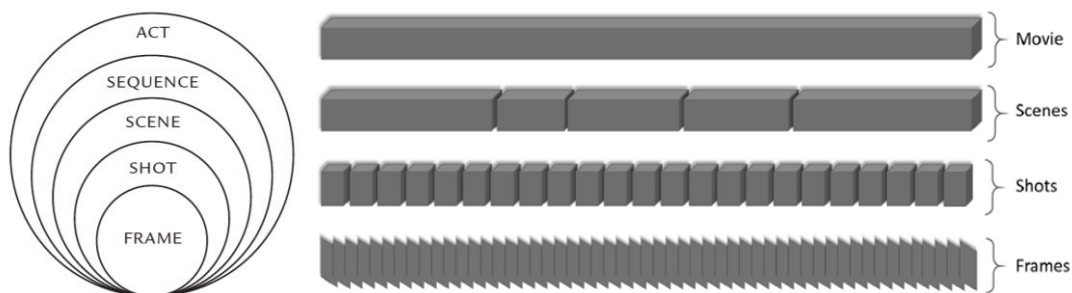


Figure 3.4 : At left, the nested holarchy of units of cinematic form (Kaplan, 2013). At right, hierarchical structure of a film (Haq et al., 2019).

According to Escher, cinematic space is created whenever a figure or camera in the film crosses over cultural and social borders such as gender, race and linguistic restraints. Crossing over such borders and breaking taboos provide room for new discussions, thus enabling a discourse of cinematic spaces that contributes to society's change, development and transformation (2006, pp. 309-309). Escher's stress exemplifies the power of cinematic space by means of the cultural entity it carries to change the norms of society for a better future condition.

Film geography studies explore the spatiality of film elements within sociocultural geography; however, no study has been found that presents the visual connection between the cinematic space (frame or *cadrage*) and geographical space from a design perspective. Also, it is found that film geography focus on the realms of present and past knowledge while exploring the cinematic space. Future studies in film geography are also a not-yet-discovered area. It might be because film geography is based on a geographic realism *of* given references for the constitution of the socio-cultural information, whereas future studies require a particular reading of what would be in the future *in addition to* given references.

3.2 Exploration of Cinematic Space through Cinematics

Commons between cinema, architecture and urbanism have enlarged possibilities to look toward these disciplines from marginal perspectives. The dialectical relationship between architecture and cinema has enabled creative discourses to investigate space. Several methods have been developed to explore cinematic space in architecture and cinema. Advancements in computer technologies, combined with studies in cinema and architecture, have significantly facilitated the establishment of cinematics (Figure 3.5).

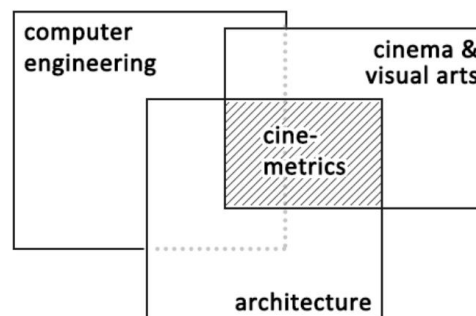


Figure 3.5 : Cinematics in relation to architecture, visual arts and computer engineering.

This section introduces the method of cinematics through examples in architecture and visual arts. Section 3.2.1 presents how cinematics has emerged in filmmaking history and contributed to the architectural analysis of space. Section 3.2.2 introduces how cinematics is utilized for the visualization of cinematographic features.

3.2.1 Representation of space and moment in cinematics

Sergei Eisenstein was a Soviet architect and filmmaker who worked particularly at the intersection of architecture and film. He was occupied with how the presentation of space is lacking in architecture. By using the technique of montage, which is juxtaposition and superimposition of images, he proposed a reading of space “as a starting point to overcome traditional and static conceptions of the image and representation of space” (Stierli, 2018, p.182). In breaking the static convention of architectural entities, Eisenstein emphasizes similarities between theory of montage and the perception of urban space along a travel route (Figure 3.6). According to Eisenstein, the space can be conceived through what a moving observer sees and this “entails the principle of montage for production of meaningful sequences of images” (Stierli, 2018, p.183). By montage, cinema has achieved what architecture is missing: “the total representation of multidimensionality on two-dimensional surface, through intervals of particular spatial and visual impressions” (Hsueh as cited in Eisenstein, 2011, p.133). The principle of montage allows the observer to have a unique gaze in which dispersed elements of reality are juxtapositioned for observer’s perception without observer to mobile (Eisenstein, Bois and Glenny, 1989, p.111). Eisenstein’s tool of montage later enabled not only advancements in film production techniques but also a representation of space in architecture. In conceptualizing images along a line of travel, Eisenstein is influenced by drawings of Auguste Choisy, who explores Ancient Greek architectural elements along a travel route (Figure 3.7).

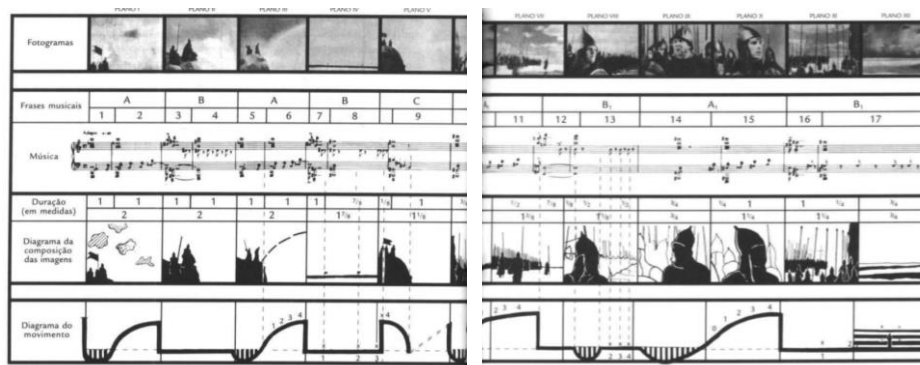


Figure 3.6 : Graphic representation of film montage (Eisenstein, 2002, pp. 112-113).

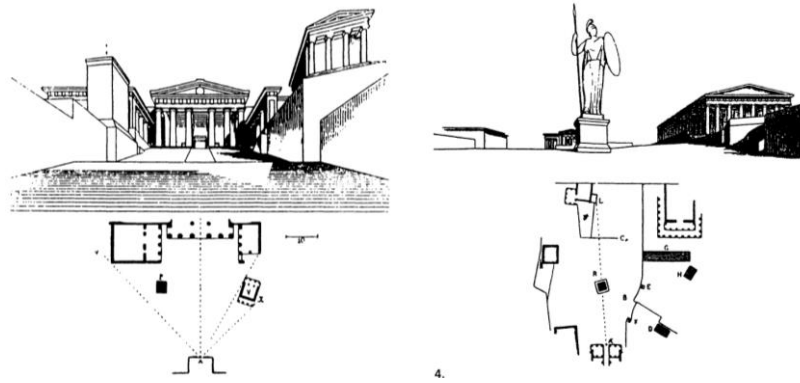


Figure 3.7 : Perspective drawings by Auguste Choisy that demonstrates the area of vision in plan and elevation from the eyes of traveler (Choisy, 1899, pp. 414-415).

A prevalent example of montage in cinema can be found in film posters. Selected scenes are juxtapositioned on the film posters to convey the first impression and general idea to the audience who have not viewed the film content yet. From a very standing point in front of the film poster, the audience is attracted by the expression of the film content abstracted by a principle of montage (Figure 3.8).



Figure 3.8 : Film posters created with photomontage. At left, *Metropolis* (Konstantinowitsch, 1927). At right, *Logan's Run* (Url-4).

According to Neumann (1996), the exploration of the films from the architectural point of view is achievable when certain points of the film are disregarded. He suggests that analyzing the film requires to stand in a specific space and moment in the cinematography rather than concentrating on the overall production. He says, “we have to stop the film, so to speak in order to study frame enlargements or stills or rewind the film to see a specific scene several times” (p.9). Similarly, McGrath and Gardner (2007) highlight “to find duration by stopping, sorting and assembling the less certain world of moving images in an open, changing world” (p.15) in order to uncover the possibilities not only of “movement between drawings but of drawings that move” (p.9). According to them, approaching cinematography as a tool extending the capabilities of architectural drawing is achievable by “freez(ing) the moving image

and index(ing) carefully” to see “how different kinds of moving images are constructed” (p.33).

McGrath and Gardner (2007) refer to philosopher Henri Bergson’s understanding of life. According to Bergson, we live in frames that are framed out of a matrix of space and time or “matter-flux”. Matter-flux has no boundaries and our experiences are formed as they are materialized out of matter-flux. People live in selected frames of matter like film shots. They state that “a single film is not entire world” but rather an “assemblage of framed moving segments from a larger whole” similarly, “your day is a framed moving section from the whole of matter flux” (p.42). Framing matter-flux is essential since “we are incapable of perceiving, never mind remembering all the sensory information that bombards us daily” (p.42). They claim that framing of matter flux is necessary for humans to live just as filmmakers shoot films and architects draw (p.46). They suggest that the traditional ways of architectural drawing, such as perspective and orthographic drawings, should be reconsidered as they are static and lack movement presentation. They propose a new method in architectural drawing, cinematics, that goes beyond the static understanding of the surroundings (Figure 3.9). Hsueh (2011) suggests a rethinking of architecture and city as “shifting from part to whole, from object to relationship, from measuring to mapping, from content to pattern, from quantitative to qualitative, and from isolated objects to contextual relational fields” (p.134). In need of these qualities of drawing, cinematics is defined as “a post-perspectival, cinematically inspired drawing system that encourages a way of working that is multilayered and multiscalar, responding to the complexities of contemporary life and the city” (McGrath et al., 2009, p.63) (Figure 3.10).

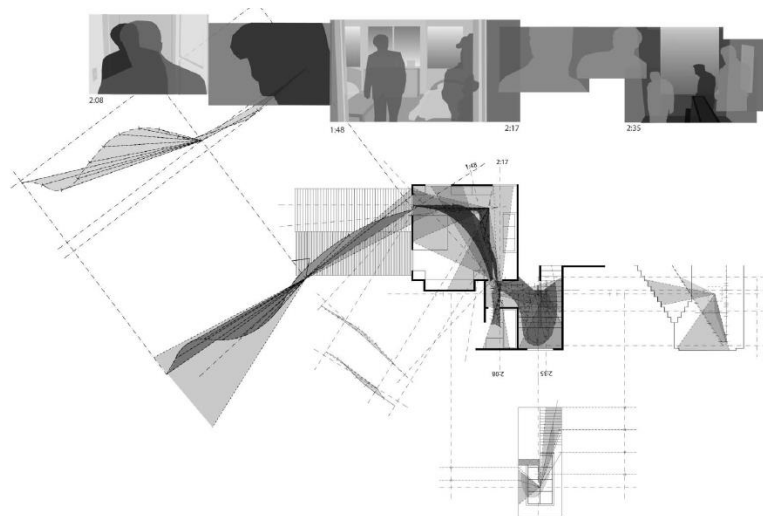


Figure 3.9 : Cinematics of space (McGrath and Gardner, 2007, pp. 210-211).

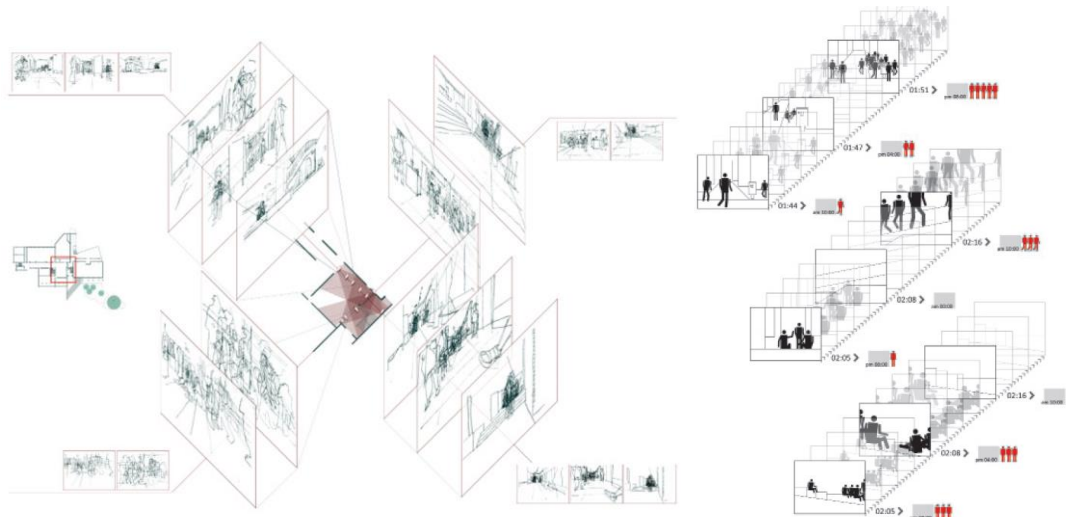


Figure 3.10 : At left, drawings to capture movements in a public space. At right, drawings as moving steps for staircases (Hsueh, 2011, p.135).

3.2.2 Alternative ways in exploring cinematic space

Besides McGrath and Gardner’s methodology of visualizing architectural space, which is rooted in Eisenstein’s principle of montage, cinematics is another technique crossing the boundaries of the computer engineering discipline. Cinematics is defined as one of the efficient tools in media content visualization and converting film inputs into quantitative entities. Cinematics, especially when combined with computer-aided systems, aims to establish a common ground for exploration of cinematography, film structure, shot transition, camera movement and theme to compare among other films (Figure 3.11).

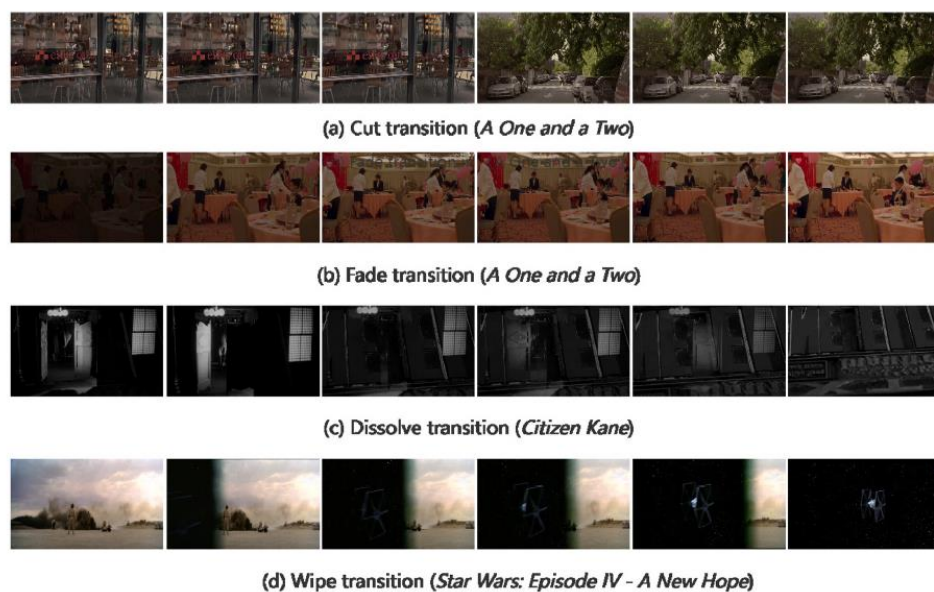


Figure 3.11 : Types of shot transitions (Li et al., 2024).

Taskan as cited in Thompson (2011) states that the statistical analysis of films was studied in the 1920s for the first time by Georg Otto Stindt (p.20). Stindt compares German and US cinema and explores that the number of shots increases toward the end of the film in US films, while it is reverse in German films (Thompson, 2005, p.117). After Stindt's analysis, Barry Salt is indicated as the founder of the statistical style analysis in films. Salt (1974) argues that different styles between directors can be reconsidered by exploring average shot lengths (ASL) and camera movement. He clarifies that these features can be used in “the discussions of the singularities of content as well as of form in a director's work” (p.14). He analyzes hundreds of films from various genres and directors. He highlights the instrumentalization of the film's content in the constitution of the director's style in cinematography. Salt runs his analyses on printed copies of film with a synchronizer and other viewing tools. However, over time, various tools have been developed in the extraction of film statics. With the introduction of computer-aided programs in the 1980s, Salt further examines thousands of American and European films (O'Brien, 2018, p.150). O'Brien (2018) highlights that the statistical analysis of films (cinemetrics) does not provide a holistic evaluation of the film but, reveals supplementary aspects to be considered with other qualitative inputs. He believes that metric analysis of films enables many perspectives to explore the films to stimulate discussion (p.151-152).

In the 2000s, the exploration of film data became available to every Internet user. In 2006, Yuri Tsivian developed an interactive website called cinemetrics for the extraction of film statistics by its viewers. After introducing basic terms about how to extract the data from the films, Tsivian's website enables online visitors to create their statistical film data and to contribute larger data sets developed by other visitors (Figure 3.12).

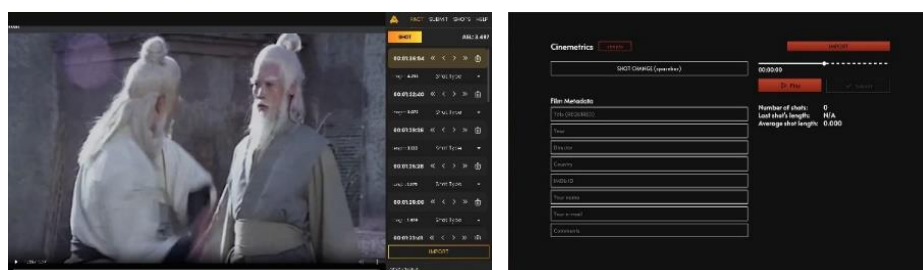


Figure 3.12 : Cinemetrics measurement tool developed by Tsivian (Url-6).

Calculation of average shot length is available today by using various tools. There is particular software developed for film statistical studies. Li et al. (2024) propose the

measuring and visualizing movie data, in order to reveal the characteristics of films and to create a visual “fingerprint” for them. Information such as the editing structure, color, speech or motion are extracted, analyzed and transformed into graphic representations so that movies can be seen as a whole and easily interpreted or compared side by side. (Url-5)

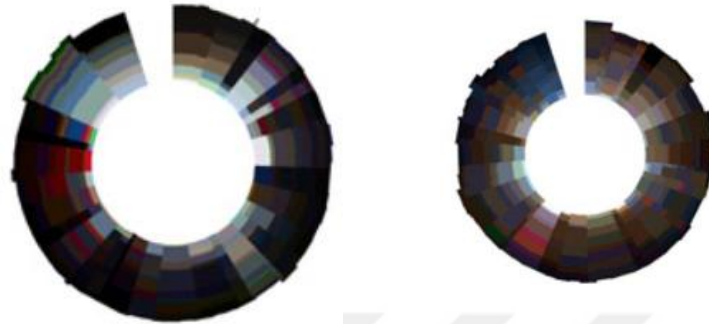


Figure 3.15 : The visual fingerprints of *2001: A Space Odyssey* (at left) and *The Shining* (at right) by Brodbeck (Url-5).

3.3 Chapter Evaluation

After establishing that the future of urban design can be explored through diegetic representations of futuristic urban settings in cinematic spaces, Chapter 3 is divided into the construction of a theoretical framework in cinema in the exploration of urban space from cinematic spaces. In this chapter, (I) the relationship between urban space and cinematic space and (II) how cinematic space can be explored are introduced referring to cinematics, as an advance drawing system to stimulate the discussion on the presentation of space.

Space is an essential concept both in cinema and architecture. Space in cinema is related to the representation of spaces in cinematographic and aesthetic ways, whereas space in architecture is also responsible for functional organization. The potential of cinematic space to speculate, criticize, inspire, reflect, predict and shape the urban/architectural space is revealed in many studies (Ahmadi, Eghbali and Karimi, 2024). On the other hand, cinema is a type of mass media exhibited worldwide. To exemplify the power of cinematic spaces in the representation of urban settings, cine-tourism can be referred to. Several audiences who review the places conveyed in the cinematic spaces, are physically attracted to these places to explore. There is an economic division in most countries resulting from cine tourists.

As discussed in this chapter, the potential of cinematic space can be explored through cinematics. Exploration of futuristic urban settings from cinematic spaces using cinematics can be reconsidered to discuss the clues of future urban design conveyed in the cinema. Cinematics open up new discourses to explore space and cinematographic features. According to McGrath and Gardner, cinematics offers an advanced drawing system that traditional architectural drawings are incapable of representing (2007). Cinematic drawings explore cinematic space to reveal clues about the urban space using the montage technique. Besides, cinematics is defined as the extraction and visualization of the cinematographic features, the mainly film's visual characteristics. O'Brien emphasizes that cinematographic features, obtained through a quantitative approach, should be combined with qualitative approaches to achieve more comprehensible results (2018, p.151-152). He asserts that the statistical analysis of the films reveals only supplementary aspects that should be considered with qualitative aspects.



4. URBAN GAZE IN SCI-FI FILMS DEPICTING THE FUTURE OF URBAN DESIGN

Gaze in art and visual culture is defined as *looking* at a visual material in a particular way that what is seen interacts with who sees it. The term encapsulates what is visualized (theme, color, assembly, etc.) and who sees it (gender, age, background, etc.). The gaze theory is grounded on the fact that the persona feels a certain pleasure in looking at the visual. In addition to visual arts, the gaze theory is emphasized in other fields. De Certeau defines the term planner's gaze in *Practice of Everyday Life* to indicate a certain way urban planners look at the urban fabric. Later, Mazzucotelli gets inspired by De Certeau's variation and uses the term *urban gaze* for the representation of cityscape in popular media, including film, music and art that carries knowledge about the city (Mazzucotelli, 2019, p. viii-ix). Based on Mazzucotelli's definition, in this chapter, the urban gaze is reconsidered in science fiction films, conveying futuristic urban settings. Exploration of sci-fi films is conducted in five phases (Figure 4.1).

In the first phase, a *film pool* including 70 sci-fi films is generated as repeatedly cited works in architecture, urbanism and design fields in discussing architectural and urban space. The film pool is generated based on such terms: (I) All films take place in the future by the time of release or are based on unspecified future times. (II) All films are selected from the sci-fi genre. (III) No distinction is made between trilogy, sequels and single films. Remade films are also considered while generating the film pool.

In the second phase, films are explored in their cinematic worlds to "re-discover" their point of view about the future of urban design. It is found that some films provide plenty of details about the cities with maps, visuals and background philosophies. In contrast, some films point out shallow indicators related to urban design. The films that convey a futuristic urban design idea spatially comprehensible and holistic are transferred into ideal drawings to contemplate clues of urban design (See Section 4.1). In these drawings, the future city depicted in the film is converted into drawings to

highlight important design remarks. These idealized cinematic spaces reveal a multi-perspective approach to discussing the future of urban design.

In the third phase (see Section 4.2), films are reconsidered to find their relation to the urban design theory. Films are explored to contemplate the clues of the urban design based on the given theoretical framework given in Section 2.2.

In the fourth phase, the films are evaluated regarding the time and location that they convey (see Section 4.3). This phase provides a classification of the films. At the end of the fourth phase, a film matrix is generated from the third and fourth phases of investigation (see Section 4.4).

In the fifth phase (see Chapter 5), six science fiction films are focused on exploring (I) *how* futuristic urban design elements are depicted in the film and (II) *which* clues can be extracted from cinematic spaces. In the search for how the visual content (futuristic urban setting) is conveyed, average shot length (ASL) and the proportion of scenes that portray urban design characteristics are investigated. ASL is calculated by dividing the total length of the film by the total number of shots. In this thesis, ASL values are obtained from Kokeš's archive and an online database that includes Salt's archive. Also, the proportion of scenes depicting urban design characteristics and elements is obtained by dividing the total length of these scenes into the film length. While evaluating film length, the film's opening and closing credits are subtracted since these parts do not convey any visual content. Scenes that portray squares, central meeting areas, city centers, streets, roads, pathways, other transportation and access lines, city's organization, site characteristics, public areas, buildings, facades, monumental buildings, furniture and other man-made structures are considered referring to Lynch's concept of the city image and its elements. The distribution of these scenes throughout the film is visualized in charts. Besides, the film's visual content and cinematographic features (color, etc.) are investigated with cinemetric drawings. Urban design concepts conveyed in cinematic spaces are explored with drawings generated by juxtaposition, collage and superposition. While exploring which urban design elements are expressed in the film, diagrammatic and concept drawings are generated from selected scenes shot in medium, long and extra-long views. Which urban design concepts, movements and approaches are traced and how these concepts are adapted in the films is discussed. The relationship between the presentation of urban design elements and cinematographic character is explored.

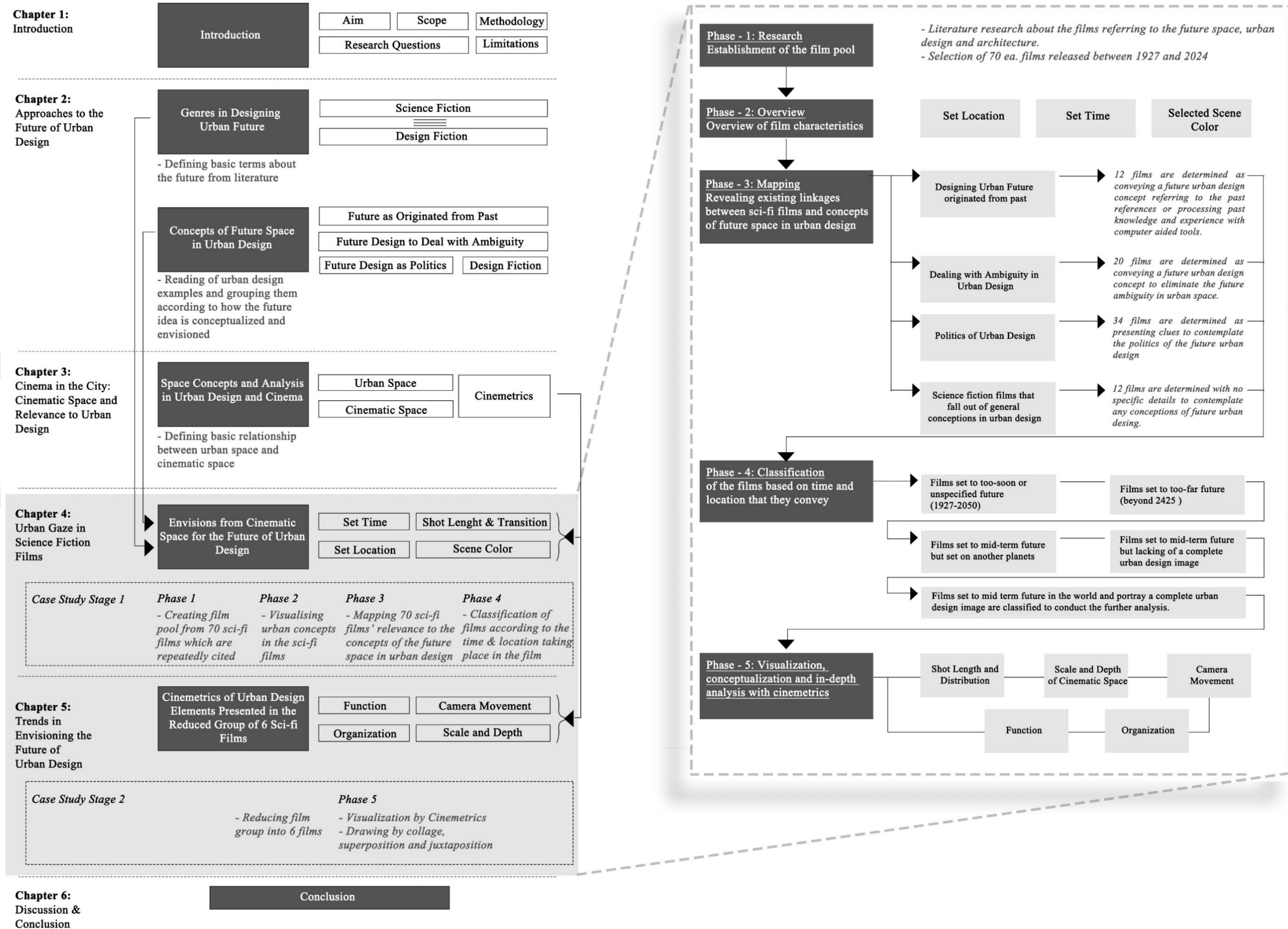


Figure 4.1 : Case study flow chart.



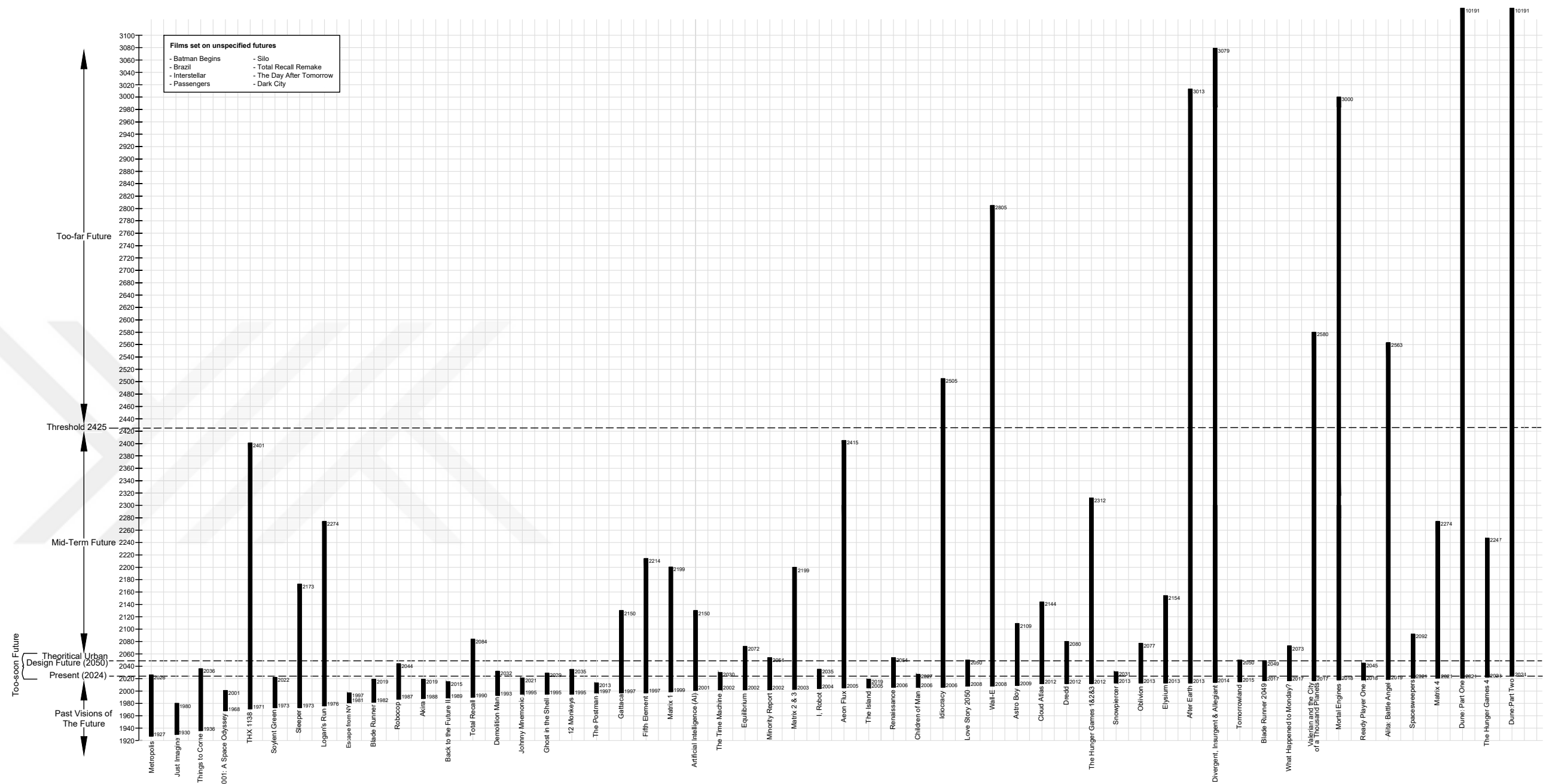


Figure 4.2 : Release and set years of the films^{1,2}

¹ Please see Section 4.3 for the explanations of too-soon future, mid-term future, and too-far future.
² This figure is generated from Appendix A. Please see Appendix A for other details about the films.



The film pool comprises films released between 1927, the release year of feature-length science fiction film *Metropolis* (Copperman, 2019), and 2024, the year this thesis was submitted (Figure 4.2). While exploring the film pool whether the future cities in the films are fictional places or geographical places, it can be said that the majority of future cities can be geographically referenced by existing cities (Figure 4.3). For instance, *Equilibrium* takes place in the fictional city of Librium, while *Blade Runner* is based on Los Angeles, a geographical place in the real world. On the other hand, *Artificial Intelligence (A.I.)* portrays a mix of fictional and real places. In the film, Manhattan is submerged due to water level rise, while Rouge City is created from scratch for entertainment and nightlife in the future.

The film pool consists of works from many countries, but most films are produced by the United States of America (US). The US is followed by the United Kingdom (UK), France, South Korea, Japan, etc. Figure 4.4 illustrates all countries of origin in the film pool. Investigating the countries of origin is significant to understand the geo-politic powers in envisioning the future through sci-fi films. A cinephile who watches the selected 70 films is exposed to the cinematic settings generated mostly by the US.

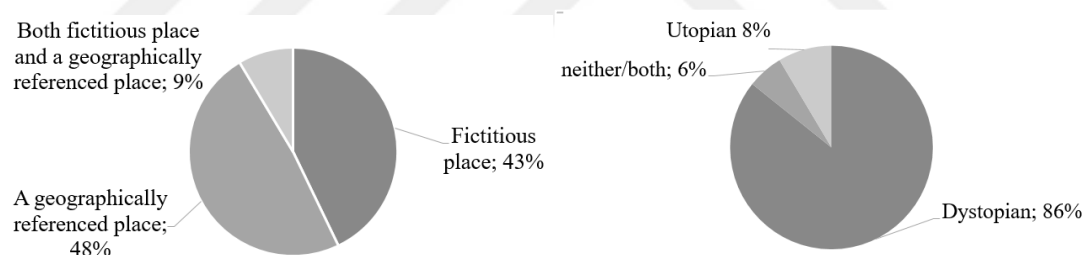


Figure 4.3 : At left, futuristic cities' characteristic. At right, film genre distribution (both generated from Appendix A).

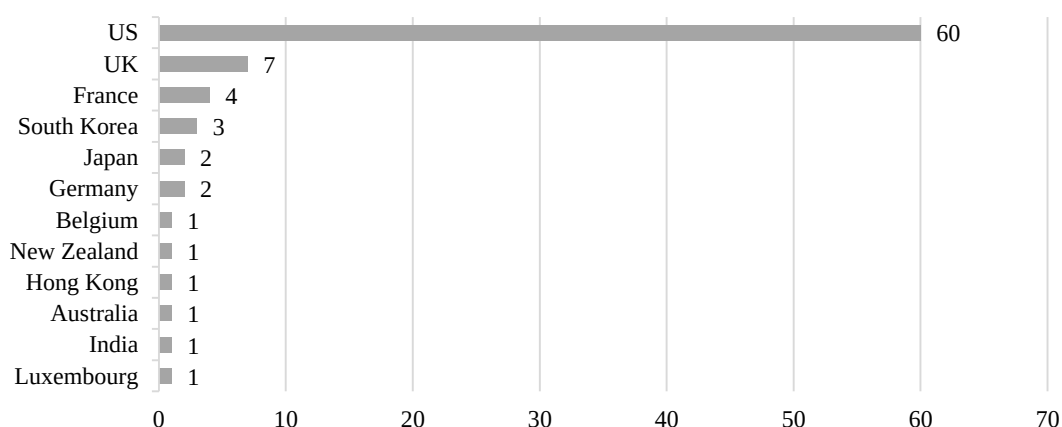


Figure 4.4 : Countries of origin in the film pool (generated from Appendix A).

As another characteristic of the film pool generated, the majority of the films are from the dystopian genre (Figure 4.3) due to the mainstream in the film industry; that is, dystopia is more popular and appealing to the audience than utopian settings. Since most films are dystopian, the color themes mostly appear in darker and colder shades. However, if a specific scene that portrays the future city is considered, lighter and warmer colors are used. In the film pool, films such as *Metropolis*, *Just Imagine* and *Things to Come* are shot in black and white due to technological constraints in the early filmmaking era. Besides, according to the Internet Movie Database (IMDB) ranking, the film with the highest rank is 8.7 points (*Interstellar*,) while the lowest rank is 2.6 points (*Love Story 2050*) in December 2024. Figure 4.5 visualizes the color regime of the selected scenes from the films combined with IMDB ratings while Figure 4.6 shows the colors of a selected scene depicting a futuristic urban design setting.

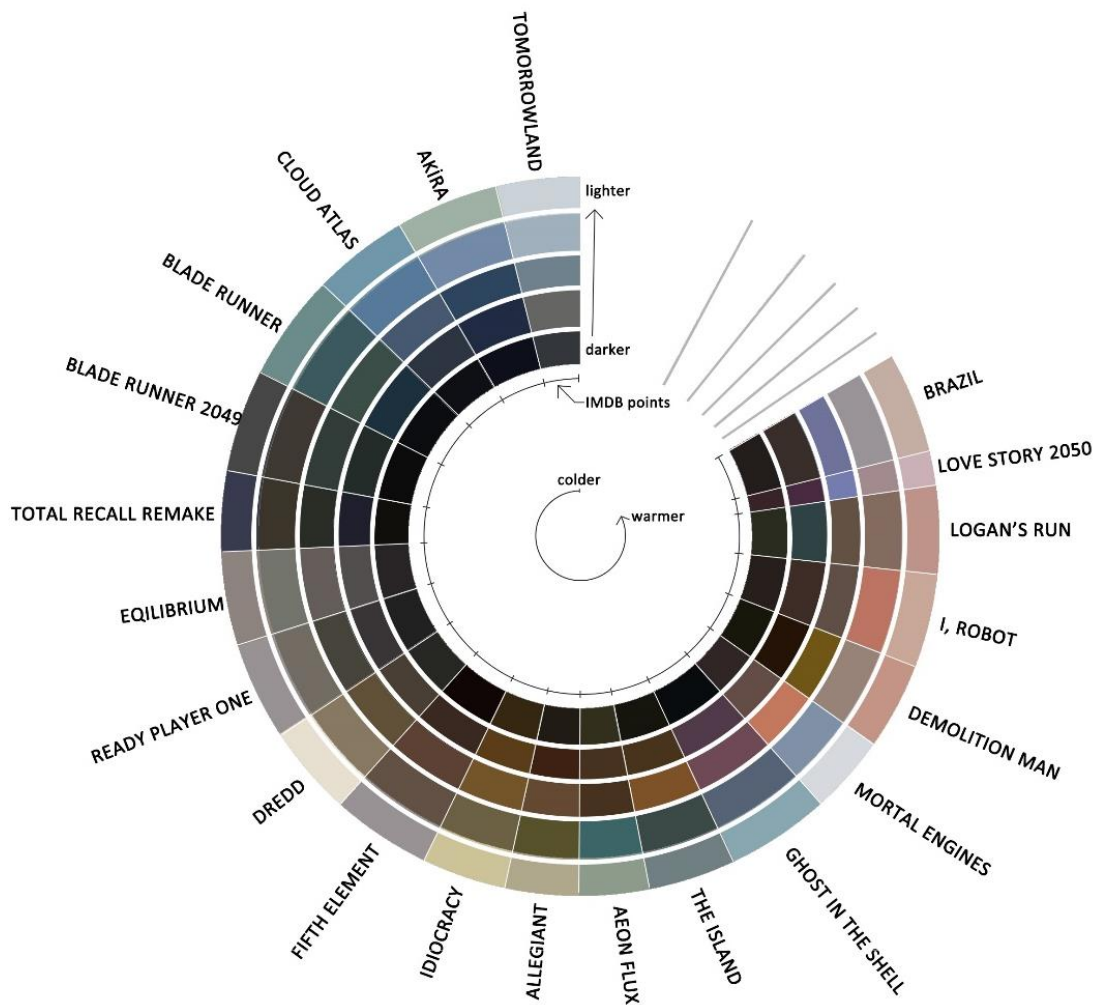


Figure 4.5 : Colour chart of selected sci-fi films with IMDB ratings (developed from Figure 4.6 and Appendix A).

BLADE RUNNER 2049



CLOUD ATLAS



BLADE RUNNER



TOTAL RECALL REMAKE



AEON FLUX



AKIRA



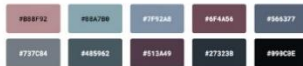
BRAZIL



EQUILIBRIUM



GHOST IN THE SHELL



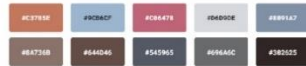
LOGAN'S RUN



READY PLAYER ONE



MORTAL ENGINES



FIFTH ELEMENT



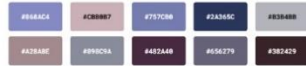
IDIOCRACY



DREDD



LOVE STORY 2050



TOMORROWLAND



DEMOLITION MAN



THE ISLAND

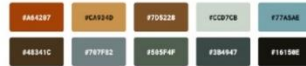


Figure 4.6 : Colours of selected scenes that depict futuristic urban settings.

After all films are reviewed, it is understood that all future urban settings are different from each other by means of filming techniques. Referring to Aitken and Dixon's types of cinematic space (2006), the futuristic urban space has been seen in films as a background, a leading character, or a combination of the two. For instance, in *Akira*, the city silhouette appears as a background in almost all scenes, while in *Batman Begins*, the city is the leading actor in cinematography. Also, cadrage (framing) and camera angles are diverse in the films. The longer view shots in the films, the wider they can portray urban design and city organization (Figure 4.7).



Figure 4.7 : Different shot types and changing visual contents (Url-15).

Also, different camera angles in the flow enable viewers to move in the cinematic space and facilitate understanding of the cinematic world. For instance, as indicated in Figure 4.8, (I) an aerial shot in *What Happened to Monday* introduces the city's organization. (II) An extreme long shot from a high angle in *Idiocracy* presents how the urban fabric is structured. (III) Urban characteristics are expressed in another long shot from eye level in *THX 1138*. (IV) Besides, an example of a long shot from a low angle in *Brazil* demonstrates the buildings from human scale.

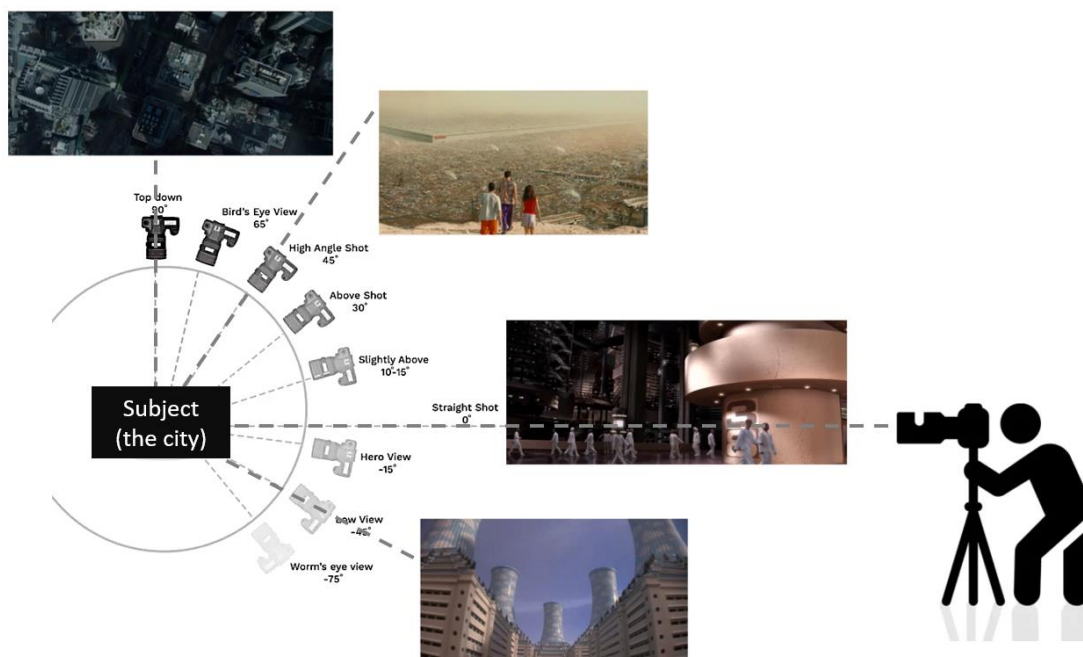


Figure 4.8 : Different camera angles (developed from Url-31; Judge, 2006; Wirkola, 2017; Lucas, 1971; Gilliam, 1985).

Also, longer scenes (in seconds) depicting the future city facilitate the exploration of the cinematic space. According to the studies, if the duration of the shot is long, the audience's participation in the film increases since the scanning behavior of the eye becomes easier (Gannon and Grubb, 2022). The depth of the cinematic space can be more comprehensible by the audience in long shots. Based on Barry and Kokeš's database, the highest average shot length (ASL) is calculated for *2001: Space Odyssey*, while the lowest ASL is calculated for *Dark City* in the film pool (Salt, n.d.; Kokeš, 2024).³ The ASL values is significant especially for the first time viewing but in this study, the films are paused and reviewed repeatedly to avoid missing details due to low ASL (or too short shots).

Besides, the film's portrayal of future urban space is determined by display settings of resolution and aspect. The higher the resolution, the higher the number of pixels in the visual material. High-resolution films enable the viewer to catch the sharp details of the visual content, while low resolution creates blurry points in detailed investigation. The aspect ratio also determines the visible area of the display. An image displayed on a 16:9 screen enables to investigate what is displayed wider compared to 4:3 ratio (Figure 4.9). In contemporary filmmaking techniques, the most common display preferences by the filmmakers are summarized as standard definition (SD), high definition (HD), full HD, quad HD and Ultra HD (4K) (Figure 4.10). In the film pool of investigation, the display resolution of films ranges from SD to Ultra HD and the aspect ratio ranges from 1:1 to 16:4. It is important to note that whatever the film's resolution is, the monitor has its own resolution setting, too. For instance, if a film is in 4K quality but viewed through a full HD monitor, the display would not be precisely in 4K resolution and decreased to the capacity of the monitor. In this study, all films are viewed through a monitor with a 1920x1080 full HD display resolution.

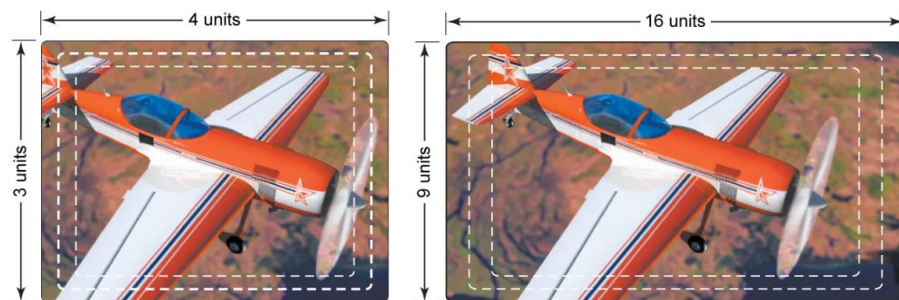


Figure 4.9 : A visual content displayed in 4:3 SD and 16:9 HD (Url-16).

³ Please see Appendix A for a complete list of ASL values obtained from various resources.

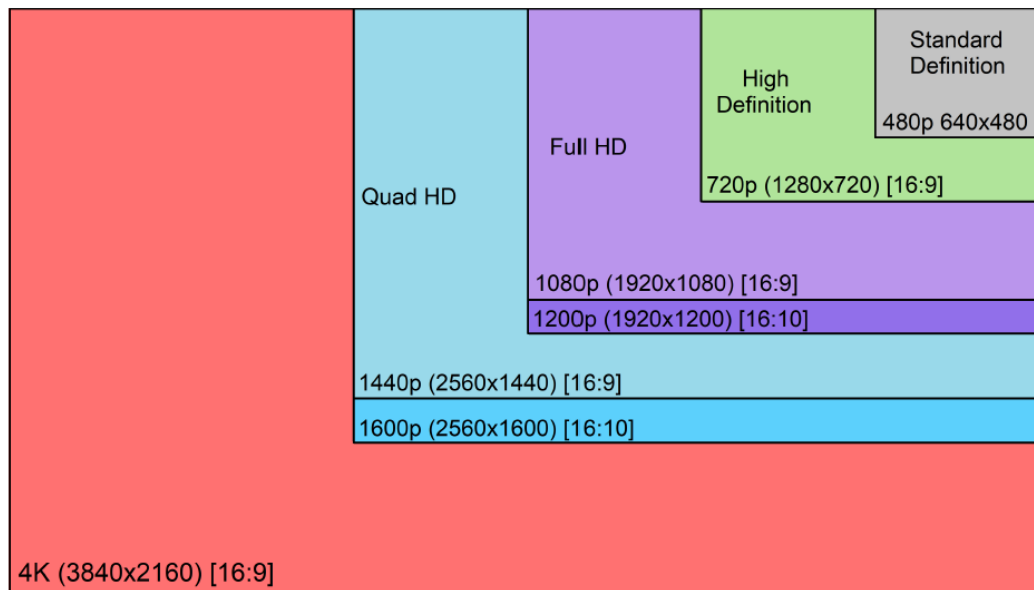


Figure 4.10 : The common display preferences (Silva, 2021, p.28).

4.1 Spatial References in Sci-Fi Films for The Future of Urban Design

Having said that, there are various display settings available in the film industry that affect the detail and display area in the visual content, in this study, the film's most ideal scene that portrays a futuristic urban design idea spatially comprehensible is cut to 1:1 display ratio (Figure 4.11). Investigating through the most basic display setting creates a common ground for discussing spatial clues of urban design from cinematic spaces. Taking this display setting as a starting point, the *science fictional settings* depicted in the films are elevated to the *design fictional settings* when evaluated from the urban design field. It should be noted that these idealized drawings of design fiction are constructed not only from a selected scene in the film but also from all other background information and hints conveyed in the film. These idealized drawings of the future urban designs are a product of auditory and philosophical references conveyed in the films in addition to visual content.

In constructing these idealized drawings, the drawing technique is chosen as off-scaled section or elevation drawings on a white background. Particular attention is given to idealizing underground spaces, surfaces and sky (if any). The shared continuous level of ground with a thick black line and shading of below-ground levels in grey facilitate the reading of the drawings with respect to basic drawing techniques in urban design.

The implications of idealized drawings suggest an alternative gaze to the science fiction films from an urban design perspective. The first example of a dystopian

futuristic science fiction film, *Metropolis*, portrays a future urban setting with numerous clues. The *Metropolis* comprises upper and lower cities corresponding to the class stratification in the society. The upper city utilizes multiple levels of transportation. Inspired by the real New York City in the 1920s, *Metropolis* appears with a loss of human scale. *Just Imagine* is also inspired by New York City but differs from *Metropolis* in multiple ways. In *Just Imagine*, the city is in a utopian setting, characterized by cars flying like flies in the air, buildings symmetrically designed and urban mass aligned to cardinal directions. *Just Imagine* does not present any clue if there are any underground spaces.

The idea of an underground city is also portrayed in *Things to Come*. A utopian city of *Every Town* is portrayed as a depiction of the world in an after-war state. It is built as a silo centered around a public courtyard. The courtyard enables the visual interaction between the different levels of the city. The vertical transportation in *Every Town* is provided by tube elevators, while the horizontal movement is facilitated by bridges. At the heart of the central courtyard, the biggest square of the city, where inhabitants can gather, is located. In *Every Town*, green infrastructure is supported by artificial lighting that imitates sunlight in underground spaces.

In *Akira*, Old Tokyo City is presented as an abandoned land, while the post-war city Neo-Tokyo is an artificial island created at Tokyo Bay. Neo-Tokyo is connected to the mainland by various bridges across the Bay. The mass of this new city is designed in an organic form, which is mainly determined by the outline of Tokyo Bay. Another distinctive urban characteristic presented in the film is the public use of bridges between buildings, terraces and rooftops of high-rise buildings. The use of neon lights in exterior scenes is also distinctive while evaluating the urban life. In another animated film, *Ghost in the Shell*, some parts of the future city of New Port are visualized as submerged underwater due to environmental problems. Some streets are completely shown as water canals, similar to today's Venice. In both *Akira* and *Ghost in the Shell*, the human scale is lost. Yet, distinctively in *Ghost in the Shell*, there is a softer use of color palette. In *Blade Runner*, on the other hand, to protect the future of Los Angeles from rising sea level, a giant wall is constructed at the seashore. Super high buildings in *Blade Runner* are similar to the ones shown in *Akira* and *Ghost in the Shell*. However, the color palette in *Blade Runner* is darker since the film is in the

dystopian genre. The Asian-like cityscape is common in the films *Akira*, *Ghost in the Shell* and *Blade Runner*.

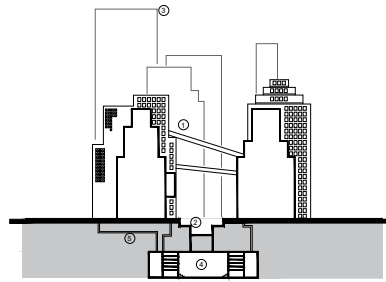
In *Mortal Engines*, an after-war state in which almost all cities are destroyed is depicted. The film depicts London as the most iconic and powerful future city. The city moves on wheels all around the world. In another film, *Tomorrowland*, the iconic representation of the city continues. Inspired by the Disney EPCOT project, it is characterized by high-rise buildings in strange forms constructed in an alternative universe. The future city in *Allegiant* from *Divergent Trilogy* also represents buildings in strange forms; yet distinctively, this time, the city is separated from the exterior environment with high-rise walls. Outside the city walls, the environment is visualized as decayed red lands, while inside the walls, urban life flourishes in productive green lands.

It is possible to draw detailed inferences about the urban setting of the future Columbus depicted in *Ready Player One*. The city is portrayed as lacking in infrastructure. In the film, each householder is responsible for providing their own water, electricity and air conditioning systems. The cityscape is dominated by individual water storage silos, power cables running around buildings and air conditioning units at facades. Moreover, vertical access to the housing units at upper levels of the container city is provided with narrow staircases or fireman poles.

Lastly, in *Astro Boy* and *Alita: Battle Angel*, the future cities are portrayed as suspended in the air. In *Astro Boy*, there is even no physical connection between the lower city on the ground and the upper city in the sky, while in *Alita: Battle Angel*, massive cables are running between upper and lower cities. The supporting cables in *Alita: Battle Angel* provide the necessitated utilities to the upper city from the lower city and structurally hold the upper city where it stands. As a common point in these films, sky cities dispose of garbage uncontrollably to the cities on the ground.

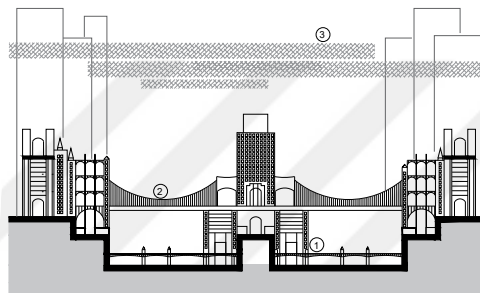
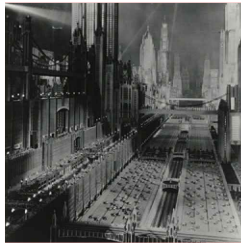
In conclusion, there are various urban design settings that are depicted in detail in the selected sci-fi films and these settings portray several urban design clues and inspirations for studying the future of urban design. All these futuristic settings conveyed in cinematic spaces combined with the storytelling and cinematographic features enable us to observe and evaluate different configurations of urban designs within their cinematic worlds.

Metropolis (Lang, 1927)



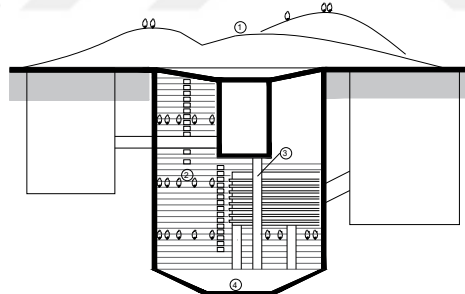
- **Dystopian setting** inspired from New York city
- ① **Bridges between buildings** on upper level for railway transportation
- ② **Street level transportation** compromised of **three levels**: pedestrian level, automobiles and railway transportation
- ③ **Super high structures** on surface where upper class can only live.
- ④ **Underground city** for the workers.
- ⑤ The connection between upper city and underground city only available by **elevators and technical ductworks** for fresh air
- **The highest building** in the Metropolis is **Babylon** where the ruler lives.

Just Imagine (Buttler, 1930)



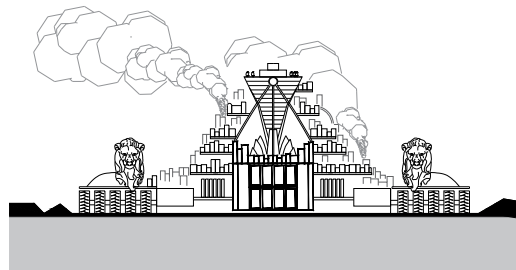
- **Techno utopian setting** inspired from New York city.
- ① Transportation routes are well established in **cardinal directions** and almost perfectly **symmetrical**.
- No clue found if there are **any underground settlements**.
- ② **Multi level of transportation** with bridges over bridges.
- ③ **Flying cars** dominates the air view.
- **Level of structural details** on bridges, roads and building facades is well detailed with respect to **engineering rules**.

Things to Come (Menzies, 1936)



- **Techno utopian setting** inspired from New York city.
- ① **Whole future city is constructed underground as silos** connected to each other where the surface is devoted for the natural land and some other technical buildings required for travel to the space.
- ② Sunlight is recreated underground.
- ③ **Pointy tress** are the only greenery.
- ④ The vertical transportation in the underground city is provided with **transparent pedestrian elevators**.
- ⑤ The central base of the underground silo city is the **biggest urban square**.

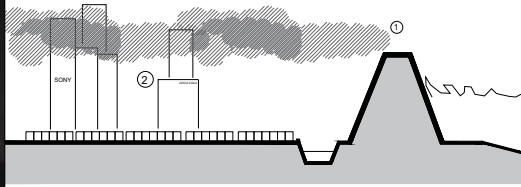
Mortal Engines (Rivers, 2018)



- Whole city is constructed from the **remains of the old London city** from the 21st century.
- It is a **giant machine city walking on tiers**. There is a continuous noise and smoke in the city resulted by the motor power.
- All other cities and towns in the Europe becomes moving (traction) cities.
- It adopts **Municipal Darwinism** approach, that is, stronger cities beats and conquers smaller week towns for continuation of their existence.
- Whole urban infrastructure is also **movable and adaptive** to the case of instant needs.

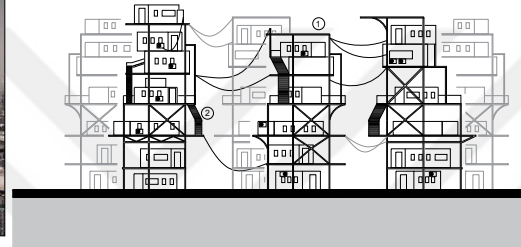
Figure 4.11 : Idealized drawings of urban design and characteristics from cinematic spaces

Blade Runner (Scott, 1982)



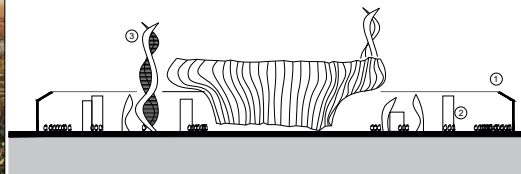
- ① The future Los Angeles city is **protected from flood** with a wall at the sea shore area.
- The future city is **constructed upon the old city**.
- **Super high buildings** dominates the urban skyline.
- There is an extreme level of **environmental pollution**.
- ② The future city is constructed on top of older city. The future of Los Angeles is characterized by **super structures**.

Ready Player One (Spielberg, 2018)



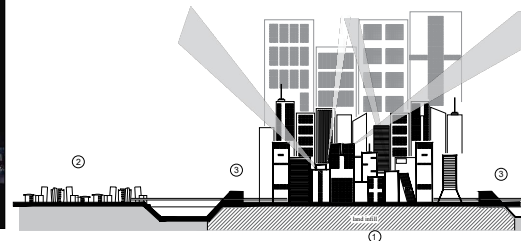
- The future Ohio city is a temporal **container city**.
- ① As **no urban infrastructure** provided centrally (water, electricity, heating, ventilating, sewage, etc.) every container household has its own solutions.
- ② Vertical movement in the city is provided by **exterior staircases and poles**.
- **Drones for transportation** of small packages (pizza delivery, etc.) creates a visual disruption.
- **No green infrastructure**.

Allegiant (Schwentke, 2016)



- ① The city is surrounded with **high walls** for protection from the exterior wild life.
- In urban design there is **balanced use of greenery areas** with built areas.
- ② The buildings are presented as **high rise** to enable minimum building coverage at street level.
- The urban mass has a **perfect circular outline**.
- ③ The most modern buildings are more concentrated **at the center of the city**.

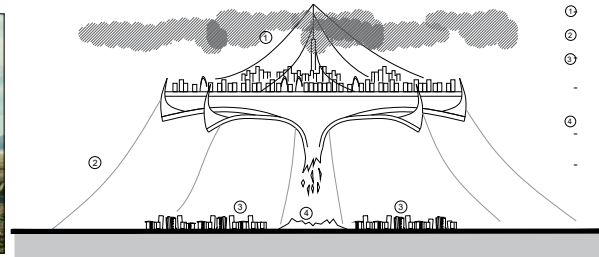
Akira (Ottomo, 1988)



- ① Neo Tokyo is constructed on **land infill** in the Tokyo Bay.
- ② Old Tokyo city is presented as an **abandoned land** while the post war city of Neo-Tokyo is connected to the **mainland with various bridges**.
- The mass of Neo Tokyo is considered as **organic**, mainly determined by the outline of the Tokyo Bay.
- There are presented public use of **bridges** between buildings and terraces or **rooftops** of high rise buildings.
- ③ Neo Tokyo is surrounded by **flood control walls**.

Figure 4.11 (continued) : Idealized drawings of urban design and characteristics from cinematic spaces

Alita Battle Angel (Rodriguez, 2019)



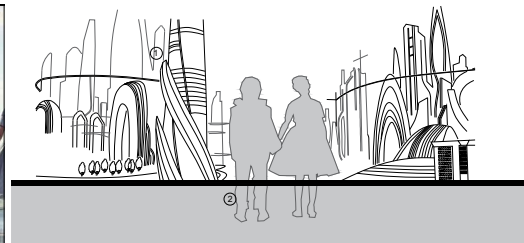
- ① Sky city of Zalem is the **last surviving city** after "The Fall" in the 23rd century.
- ② Zalem is dependent to surface city of Iron with its **supply chains**.
- ③ Iron city is based on mostly **remains of the old city** where Zalem is an engineered city **suspended in the air**.
- ④ Anyone is **not allowed** to enter from Iron city to Zalem.
- Zalem city's trash is directly disposed to the center of Iron city. Mechanics living in the Iron city **recycles** the trash as an economical activity.

Ghost in the Shell (Oshii, 1995)



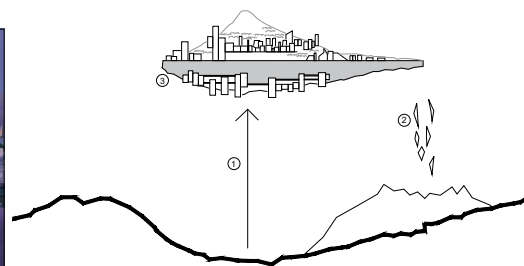
- New Port city is constructed along with the **old city remains**.
- Due to sea level rise, most of the parts in the old Tokyo is **submerged**.
- Old city infrastructure is **heavily corrosive**.
- Higher and habitable parts of the old Tokyo city is connected to the New Port city with **wide bridges of transportation**.

Tomorrowland (Bird, 2015)



- Tomorrowland is created at the world but in **another physical dimension**. It is inspired from Disneyland EPCOT project.
- In urban design, it is made use of **greenery and water surfaces** in harmony on the street level.
- ① All of the vehicular transportation routes are **elevated from the street level**.
- ② Building and landscape designs with **curved edges** is distinctive.

Astro Boy (Bowers, 2009)



- ① Future Metro City is constructed on Sophia Mountain once it is **elevated from the surface to the air**.
- ② The **trash** of the Metro City is **disposed** to the world directly. The world turns into with mountains of trash.
- ③ Metro city is suspended on the air with **no physical connection** to the surface. Both surface and underneath of Sophia Mountains are utilized as an urban space in Metro City.

Figure 4.11 (continued) : Idealized drawings of urban design and characteristics from cinematic spaces

4.2 Reading of Sci-Fi Films with Concepts of The Future Space in Urban Design

In the film pool, not all films portray a spatial futuristic urban setting that can be transferred into idealized drawings. Many films are found relevant to explore the future of urban design based on their theoretical references. Previously, the concepts of future space are explained in 4 major groups:

- 1) Designing urban future by gathering references from the past
 - by referencing to the antiquity as a philosophical escape (Section 2.2.1.1) or
 - by creating the future based on past evidence utilizing computer-aided tools (Section 2.2.1.2),
- 2) Approaching urban future as a design problem due to that
 - the space cannot be easily alterable to changing conditions physically, leading to designing new spaces that never end (Section 2.2.2.1) or
 - the future is an undetermined notion by time, thus requiring temporary solutions in urban space (Section 2.2.2.2),
- 3) Futuristic urban designs as being political products (Section 2.2.3)
- 4) Approaching urban future with design fiction through diegetic representation of urban space in sci-fi films (Section 2.3).

In this section, the design fiction approach is presented as an embracing approach to the rest. Each film is explored in relation to the concepts of the future space in urban design, and these relations are mapped (Figure 4.12). As seen in Figure 4.12, 3 major and 15 sub-approaches are identified while exploring the future cities in the selected films. These sub-approaches are the use of past elements from older cities, smart future cities, smart cities in other planets, techno-supported cities, future cities where old and new cities are adjacent, future cities created by merging cities, future cities overflowing to the other planets, temporary configurations, temporary settlements, use of infrastructure in the benefit of authorities, totalitarian cities, accepting the city in a hopeless image and future cities in other planets. Some films are indicated with more than one future concept. For instance, *Mortal Engines* appears three times on the map as (I) it uses past elements from older cities, (II) it presents alternatives for temporary configuration of urban space, and (III) it is based on a future case that geo-political borders become meaningless. In Figure 4.12, films indicated in italics are to be discussed in Chapter 5 as per the methodology of the study.

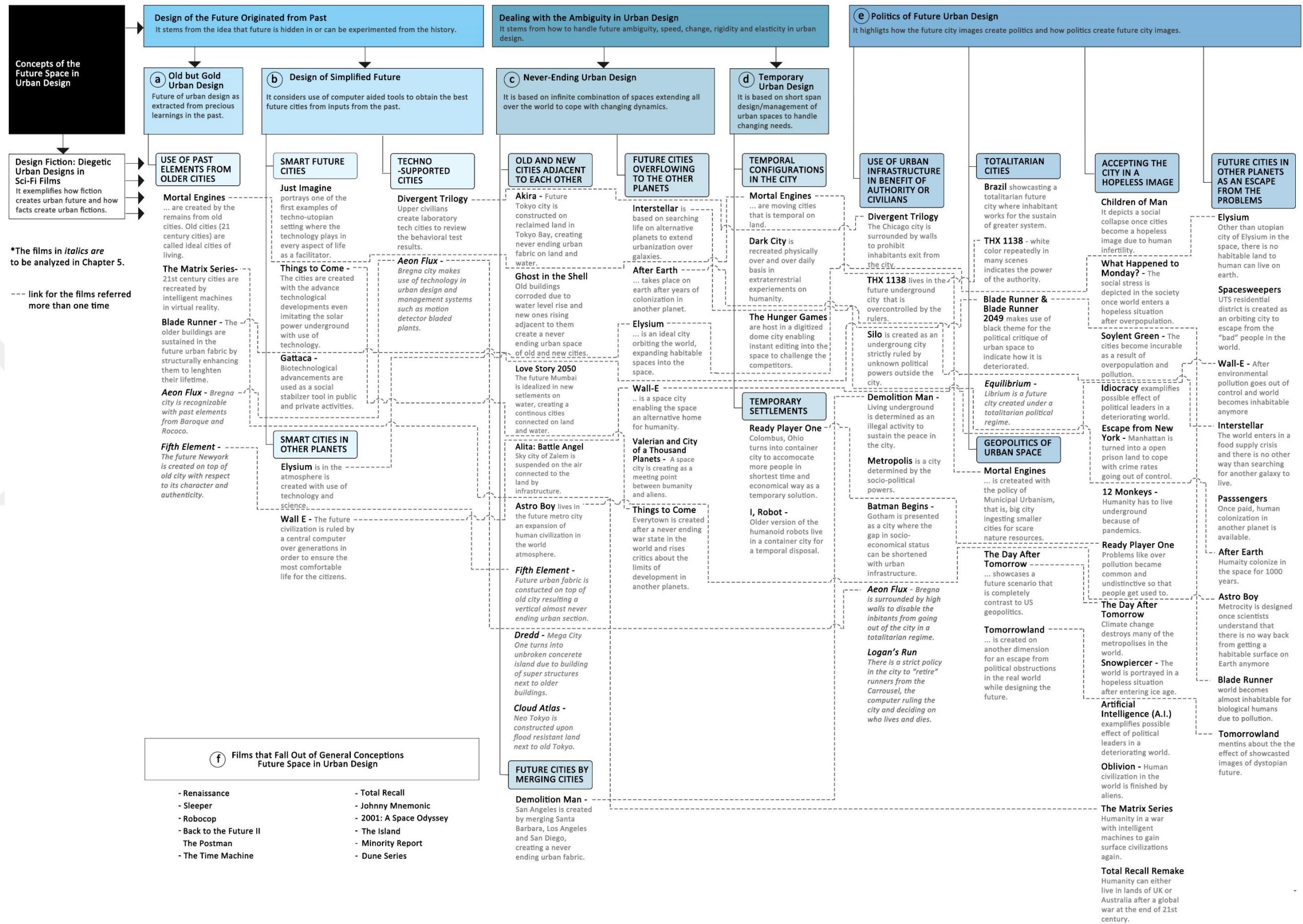


Figure 4.12 : The blue map of films showing their relation to concepts of the future space in urban design.



As seen in the left corner of the blue map (Figure 4.12), several films are indicated as irrelevant to the concepts of future space in urban design. This is either the result of filming technique or disregarding details about future city and design in the cinematography, intentionally or unintentionally. For instance, *Renaissance* is an animated black-and-white film, and it is hard to read and interpret urban design characteristics from the film due to the high contrast of the scenes. In another film, *Sleeper*, the main character is put in a preservation capsule until he is awakened 200 years later to spy on the government. The film extensively portrays indoor environments, so it is found irrelevant to the concepts of futuristic urban space. In the film *Robocop*, a deathly injured policeman is turned into cyborg police by scientists to increase security in Detroit before the future city project of Delta City is initiated. In the film, a concept model of Delta City appears a few times, but no relevant details are found to discuss the future city. In either *Back to the Future II*, *The Postman*, or *The Time Machine*, the scenes are very limited and present scarce depictions of the future settings to discuss the concepts of future space. In *Total Recall*, the scenes showing the urban design in the world and the Mars colony are also very limited. Similarly, the *Dune Series* lacks scenes showing the future of urban design. In *Johnny Mnemonic*, the main character uses his brain to transfer data from Beijing to Newark, but the portrayal of these future cities is not conveyed in detail. *2001: A Space Odyssey* does not present any depictions of the future city. In *The Island* and *Minority Report*, none of the portrayals of the city are characterized as futuristic designs, apart from a public metro traveling on the air in the future New York City or horizontal movement of cars in the future Washington Metropolitan Area. As explained above, these films are excluded from the next phases of the investigation.

Before moving on to the next section, it should be noted that films are not productions that only convey visual material. In addition to visual material, films are products of many cinematographic features such as the director's artistic perspective, lighting, sounds, music, dialogues between characters, etc. These cinematographic features can also be explored to reveal which futuristic urban settings are conveyed in cinematic spaces. Although this thesis is structured on a research methodology mostly based on the exploration of the film's visual content in qualitative ways, it is possible to state that the other cinematographic features have great potential to explore in further studies.

4.2.1 The future visions created by the past urban elements

As explained in Section 2.2.1, there is an undeniable link to the past, tradition and experience while imagining the urban future. Sometimes reference to the past could be based on physical designs or sometimes it could be a philosophical connection. Here, the portrayal of urban designs in sci-fi films are discussed associated with the past and tradition. Cinematic spaces that convey a reference to the past and tradition and that is based on smart and techno city approaches are explored.

Use of past elements from older cities

Mortal Engines is a film that depicts the stress between Western Walking Cities and Eastern Static Cities after the world was destroyed by war in the 21st century. The Walking Cities (Traction Cities) are described as machine-like predatory cities moving on the Earth. These Walking Traction Cities are distinguishable by the fact that they are solely constructed from the remains of 21st century cities. In the film, there is a continuous search team dedicated to finding old machines, technologies and tools so that they can learn from them or re-function them for further benefit. There is an appreciation and admiration for the pre-war cities of the 21st century. Some recognizable elements in London Traction City are St Paul's Cathedral as a governor building, red telephone boxes and clock towers as urban furniture and the London Eye as an infrastructure for connecting the upper city to the lower places. In the film, there are also other types of civilizations such as air heaven (on the air), cellular city (on the water) and the static city of Shan Guo. Shan Guo City is located in Asia and adopts a traditional way of living similar to 21st century cities.

Shan Guo is organized with the limits of the topography (Figure 4.13). It benefits from the strategic locations hidden in natural landscapes. It lies down on hilly topography in harmony within its surroundings. The city is protected from all other Eastern civilizations of Traction Cities with a great wall. In the film, Shan Guo City is presented as an ideal place to live in a peaceful environment. It is stated that Traction Cities are unqualified in sustainability, while the traditional city of Shan Guo is the best place to live in the future. Both the re-function of old city elements in London Traction City and the appreciation of traditional way of living in Static city of Shan Guo support the case that the future city is a reconstitution from old tangible and philosophical learnings.

Blade Runner provides another perspective on how to upgrade the older buildings in the future of Los Angeles by structurally reinforcing them. In the film, it is understood that the load-bearing capacity of the older buildings is enhanced by engineering applications when new spaces are constructed on top of the building, rather than demolishing them to construct new buildings from scratch (Figure 4.13).

Another film series, *The Matrix*, takes place in a dystopian world ruled by intelligent machines. Intelligent machines use bio-organisms (humans) as a source of energy. During the mass production of humans, intelligent machines benefit from virtual realities to sustain human life basics. 21st century US cities are chosen to be virtually realized since it is when the big apocalypse has not happened yet (Figure 4.13). The humans living in *The Matrix* are repeatedly exposed to this older city setting without realizing it. Like *Mortal Engines*, *The Matrix* makes use of the old urban setting from the 21st century since it is accepted as ideal in the future.

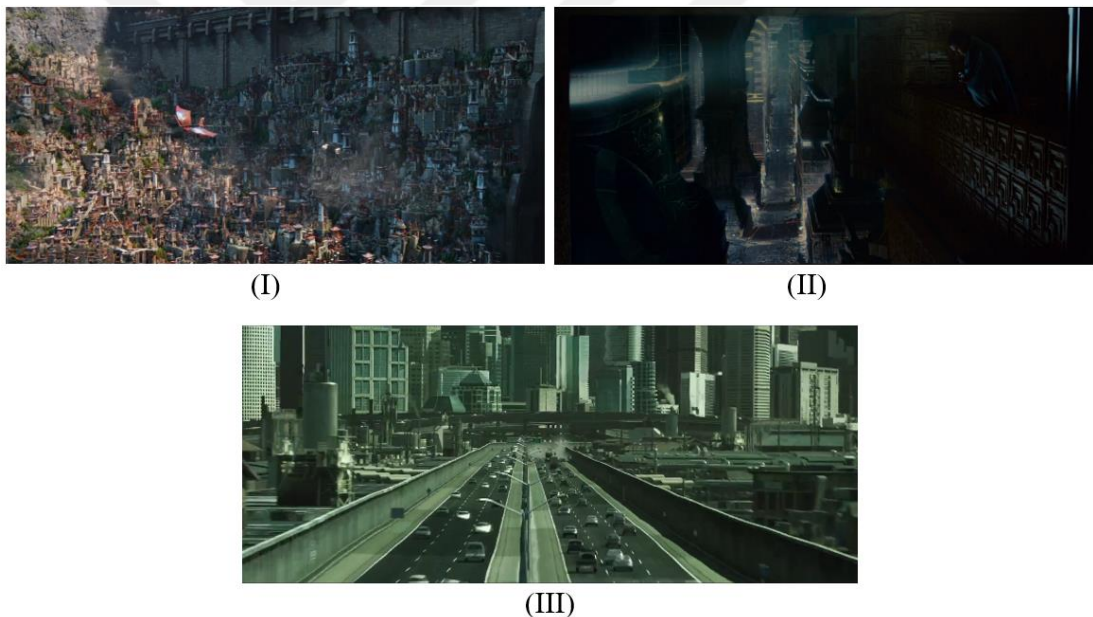


Figure 4.13 : (I) Shan Guo in *Mortal Engines* (Rivers, 2018), (II) Old buildings from *Blade Runner* (Scott, 1982) and (III) 21st century city from *The Matrix Series* (The Wachowskis, 2003).

Smart future cities

One of the films that come forward in the discussion of using past knowledge and experience with technological advancements is *Just Imagine*. In the film, the future city is portrayed with high-tech developments. It portrays one of the first examples of techno-utopian settings where technology is a facilitator in every aspect of life. In the

film, a man dying from a lightning strike in 1930 is revitalized in 1980. Even though he is fascinated by automatic cafeterias in the streets and the sky full of flying cars, he wishes to be given the good old days from the 1930s (Butler, 1930, 00:25:08) as he cannot cope with incredible change in 50 years.

In *Things to Come*, future cities are portrayed as located underground. According to its story, technology evolves to such a point that sunlight is created in indoor spaces so that humanity does not need to live in the open air anymore. In another film, *Gattaca*, a combination of genetics and technology in a future city setting is solid. It displays a world in which social status is determined by genetics. In *Gattaca*'s world, where to live, where to work and many other public activities are assigned based on human genetics. Although there is no complete urban image of the future urban design, the idea of genetics as a social stabilizer in the future society is staggering in *Gattaca*. Keeping in mind that the smart city concept developed in the 2000s in urban studies, the cities in *Just Imagine*, *Things to Come* and *Gattaca* premise the early portrayal of future smart cities.

Smart cities in other planets

Other sci-fi films that promote techno-cities of the future based on traditional understanding of life are *Elysium* and *Wall-E*. Although they are not fictionalized in the world, the future cities in these films are based on the basic concept of smart cities driven by technology. In the future city of *Elysium*, it is made use of robotics, so that citizens can be revitalized after death. In *Wall-E*, the space station is ruled by a central computer for generations to ensure the most comfortable life for the citizens. Both the central computer in *Wall-E* and the intelligent robots in *Elysium* contribute to sustaining human life on other planets with respect to the cultural entities of humanity. These examples are settings where traditional lifestyles are supported by a smart city approach (Figure 4.14).

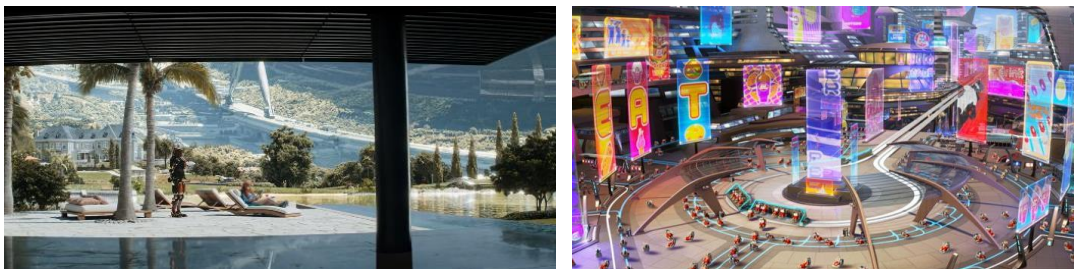


Figure 4.14 : At left, a housekeeper robot working in *Elysium* (Blomkamp, 2013). At right, a square dominated by service robots in *Wall-E* (Stanton, 2008).

Techno-supported cities

In *Divergent Trilogy*, the future of Chicago is designed as a socio-genetics experimental city. It is stated that after genetics are extensively altered in previous ages to benefit from superior powers, the experimental cities are required for the ultimate search for pure genetics (Schwentke, 2016). The more authorized cities running these tests in Chicago use high-tech instruments. Examples of these high-tech tools in the city are air exhausters that can expose chemicals to inhabitants to wipe away their memory and surveillance systems of audio and video recording. These remote control and management elements are purposefully hidden in the urban design so that citizens can not notice them.

4.2.2 The future cities depicted as never-ending and temporary designs

Following the theoretical concepts explained under Section 2.2.2, here the films are explored according to whether the future cities they portray are never-ending designs or temporary designs. The following films portray either never ending urban designs, referring to vertically or horizontally never-ending state of urban designs in new lands, or temporary urban designs in existing urban areas addressed for the temporal needs.

Old and future cities adjacent to each other

The first film to mention the portrayal of urban designs that are based on never-ending urbanism is *Akira*. It introduces the future city of Neo-Tokyo constructed on reclaimed land from Tokyo Bay when old Tokyo was destroyed after the Third World War in 1988. Construction plans at Tokyo Bay are not a new approach found in this film. Referring to the plan proposal by Kenzo Tange, an urban development at Tokyo Bay on a linear arterial system was firstly suggested to deal with overpopulation in Tokyo in the 1960s (Figure 4.15). Tange's main motivation was to answer the needs of the modern era, especially after the Second World War, with a new city structure that makes use of communication systems as a force of development (Lin, 2007). Similarly, in *Akira*, transportation and urban networks play a crucial role in Neo-Tokyo. Botoman indicates how Neo-Tokyo has evolved from Tange's utopia "into a chaotic, unstable military state as the skyscrapers keep getting taller" (2017). It can be clearly stated that *Akira's* producer team does not put Tange's works out of consideration since another building (spiritual leader Miyako's Temple) is found in the *Akira* manga inspired by Tange's proposal of National Gymnasia next to the Meiji Shrine (Tagsold, 2023).

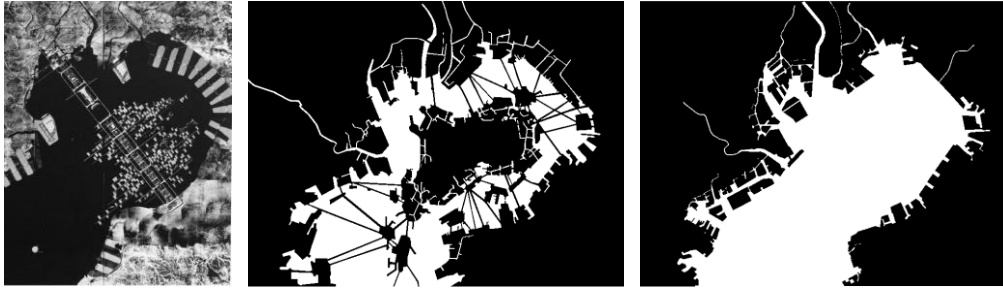


Figure 4.15 : At left, Kenzo Tange's plan proposal for Tokyo in 1960 (Lin, 2007). In the middle, Tokyo Bay as portrayed in *Akira* for Neo-Tokyo 2019, (developed from Otomo, 1988, 00:01:13). At right, the actual Tokyo Bay in 2019, (developed from Google, n.d.).

The Neo-Tokyo city is presented in almost every frame of the film, either as a background or a leading figure. Continuous images of the city fill all of the cinematic space in a way that there is even no room for the sky. While watching the film, there is no escape from the city. The continuous urban images presented are found parallel to the approach that the future of urban design never ends. The never-ending urban character is presented horizontally developing on earth and water, and vertically in the cityscape dominated by high-rise buildings.

Another animated film, *Ghost in the Shell*, is also critical considering the future urban design practice with no ends. Here, the future fictitious city of New Port is portrayed as a place where old buildings and new buildings are adjacent. However, most old buildings are left to their own fate and cannot be used anymore due to the water level rise. Corrosion and material decay are explicitly portrayed in the film at older buildings. It is understood that the urbanization principles in the future city of New Port do not consider the rehabilitation of these older buildings but rather leaving them as they are and jumping into new unconstructed fields. There is a never-ending urban land in New Port where old and new buildings are adjacent but are discriminated by corrosion level.

Similar to Neo Tokyo in *Akira*, Mumbai is portrayed with new settlements floating on water in *Love Story 2050*, creating a never-ending urban design on land and water (Figure 4.16). On the other hand, in *Alita: Battle Angel* and *Astro Boy*, future cities expand to the settlements suspended in the air. Being dependent on the mainland, the sky city of Zalem in *Alita: Battle Angel* and The Metro City in *Astro Boy* are physically connected to the mainland with infrastructure, creating urban design character

expanding vertically. These settings demonstrate the idea that the future city is built adjacent to the old city, either horizontally on land and water or vertically on air.

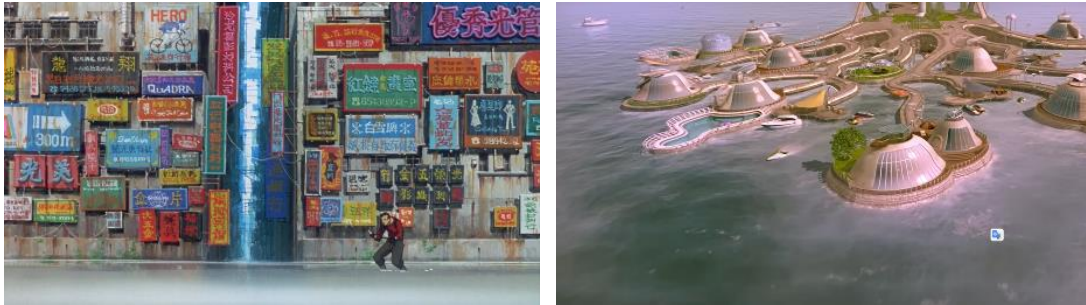


Figure 4.16 : At right, building deterioration in *Ghost in the Shell* (Oshii, 1995). At left, the extension of city over water in *Love Story 2050* (Baweja, 2008).

Future cities merged

The concept of never-ending urban design reveals in *Demolition Man* as an alternative configuration of urban space created by merging. According to the film, San Angeles Metropolitan Area was created once Santa Barbara, Los Angeles and San Diego merged in 2011 after a big earthquake in 2010. Here, a future megalopolis is created to handle the consequences of the big catastrophe. Since there are no scenes from all three regions in the film, it remains unclear whether defining the metropolitan area serves as a binding factor in urban design. San Angeles Metropolitan Area is rather portrayed as an example of governmental and administrative unit.

Future cities overflowed to other planets

Furthermore, there is another group of films that the never-ending urbanization goes beyond the limits of the world. In *Interstellar*, a specialized team of astronauts searches on six different planets for potential human colonization since the world is no longer inhabitable as a result of pollution. In *After Earth*, *Elysium*, *Wall-E* and *Valerian and a City of Thousand Planets*, the demonstration of urban settings spreading into other planets and space colonies is the ultimate point reached in the never-ending urban design approach for the future setting.

Things to Come raises the first of its kind approach to the future cities overflowing to other planets. It highlights the insistent desire of humanity to search for other planets and space colonization for future habitats. In the closing scene, after the first rockets are launched to investigate new places in the space, the main character indicates that there is no way other than conquering the space for the ultimate progress of humanity.

Temporal configurations in the city

There are other films based on temporary infrastructural configurations in the future city. As mentioned previously, *Mortal Engines* is centralized on the moving city concept. The city can move anywhere in the world for temporal occasions of needs. The moving city concept is not a new approach to the future cities as it was previously introduced by Archigram in the 1960s. Archigram's proposal is based on the adaptive state of the city allowing for attachment and detachment of spaces for change, but in *Mortal Engines*, the city infrastructure is also moving (Figure 4.17). It is astonishing to witness the structural change of Salthook's central bazaar area, one of the small moving towns presented in the film, to take precautions for warfare. Besides, *Dark City* represents another physically changing city. According to its story, aliens physically reconfigure city infrastructure every midnight to try experiments on humanity. The time span for the physical urban change for Salthook's bazaar area in *Mortal Engines* is one week, and for *Dark City*, it is one day.

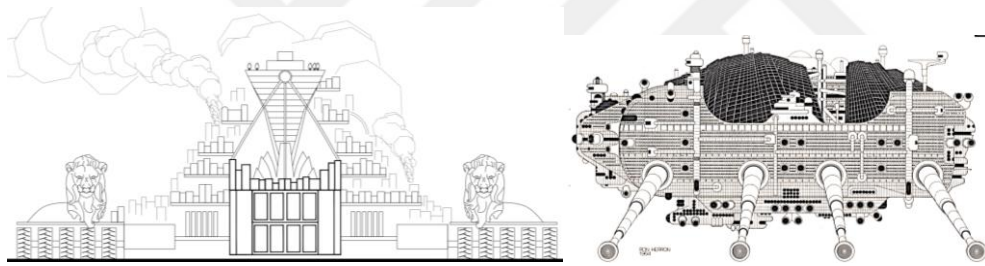


Figure 4.17 : At left, a moving city in *Mortal Engines* (developed from Rivers, 2018) and at right, a moving master vehicle-habitation by Archigram (Url-17).

The temporary configurations in the future cities get more advanced and digitized in *The Hunger Games* series. In the film, the future US city of Capitol organizes an annual competition of The Hunger Games among 12 districts. Here, the setting of Hunger Games is a temporal digitalized space enabling instant editing into the space to challenge the competitors (Figure 4.18). These temporal settings of future cities in the films are examples of space adjusting to different needs at different times.



Figure 4.18 : The setting of *The Hunger Games* and its adjustment by technicians (Ross, 2012).

Temporary settlements

Other films have been found that represent temporary settlements on a neighborhood scale. For instance, the future of Ohio in *Ready Player One* is designed to deal with overpopulation in a rapid way with low-cost solutions. The Stacks is an example of a container city of temporary settlements. The container city of Ohio 2045 is presented as the most developing place so physical infrastructure and housing demand could only be dealt with in a container city. There is another container city found in *I, robot*, but this time not for humans but rather for intelligent robots. Old versions of the intelligent robots (NS-4) are stored in a primitive container city at the urban peripheries. Here, the old robots prefer to live in this container city as a part of the greater robot community, just as humans would prefer to be a part of a greater social unit.

4.2.3 Politics of space in sci-fi films

As introduced previously under Section 2.2.3, political critique of futuristic urban designs can be associated with sci-fi films. In this study, a great number of sci-fi films are explored to discuss the political motifs, actors and critiques in their portrayal of the future cities.

Use of urban infrastructure for the benefit of greater authority or civilians

Designing urban infrastructure to determine who disobeys the rules, even sometimes in unethical ways, is very common in sci-fi films. Here, urban design becomes a tool to ensure the political stability. In *Divergent Trilogy*, the experimental city of Chicago is remotely controlled and surveyed by greater authorized cities. To enable the remote control, it made use of specific urban infrastructure such as air exhausters being placed in and around buildings to expose certain chemicals and clear the inhabitants' minds.

Moreover, surrounding the city with great walls, as seen in *Divergent Trilogy* to impose that there is no way out of the future city, is another outstanding theme of the greater authority. If the city is built underground, as can be seen in *THX1138* and *Silo*, then going up to the surface is prohibited even without reason. In *THX1138*, urban life is strictly regulated for the citizens to stay in the underground city, promoting that citizens leaving the city shell would die. In *Silo*, the whole narration is based on the stress between living in the underground city of *Silo* without questioning and having sympathy for the world on the surface. Besides, if the city is built on the surface,

underground becomes where only nonconformists live, so it is not *advised*, as seen in *Demolition Man*. In *Demolition Man*, the great megalopolis of Los Angeles, San Diego, and Santa Barbara is designed to sustain peace by abandoning unhealthy and immoral ways of living, but a group of protests (called scraps) who are against living healthy, sterile and moral life, choose to live underground to escape from this compulsory way of living. In *Metropolis*, the effect of the political actors shaping the future city is more evident. In *Metropolis*, the city is divided into upper and lower levels, which are physically separated and have no visual contact. The upper city is where the rulers and bourgeois live, while the lower city is where the workers live. The controversy between upper and lower cities corresponds to the social classes in the city. Moreover, the loss of human scale in the upper city, the massiveness of the buildings, and the hard landscape create a disturbing overall image. This disturbing image of the authority is strengthened by the lights and shadows, creating contrasts on the surfaces. Hageman explains that city visuals in *Metropolis* are purposefully created as both complete and incomplete. They are complete as it appears that city works in the given visual with harmony; but they are also incomplete as all views are only partial and have indefinite boundaries. This implies there is no way out of *Metropolis* when the audience attempts to complete the missing views out of a given sight (2012, p.59). In contrast to *Metropolis*'s urban structure that promotes the class stratification by dislocating the society in upper and lower cities, the rulers of Gotham City in *Batman Begins* aim to eliminate the decaying status of the city by bringing people from different socio-economical groups. A continuous train line across Gotham City is constructed to physically connect the upper and lower social classes. It portrays an example of how decisions made about urban infrastructure, such as transportation lines, can be used as a tool for socio-spatial regulations in the city.

In all these examples, the urban design elements are utilized for the benefit of greater authority. Surrounding the city with great walls to prevent inhabitants from running from the city in *Divergent Trilogy*, forbidding going to the surface in underground cities of *THX1138* and *Silo*, and forbidding going down to the underground spaces in *Demolition Man* exemplify the use of city elements and design features to stabilize the inhabitants for the benefit of greater authority. Also, in *Metropolis*, the city is organized according to upper and lower social classes by placing them in upper and

lower cities. *Batman Begins*, on the other hand, uses urban infrastructure for the benefit of the civilians to overcome the decaying social environment in Gotham City.

Totalitarian future cities and designs

Aside from the design of urban infrastructure to sustain political stability, the overall urban atmosphere as a demonstration of a political regime is another feature found while analyzing the politics of space in sci-fi films. Especially in future cities depicted under totalitarian regimes, such as *Brazil* and *THX1138*, there is an insistent use of specific colors. Buildings and open spaces shown in sandy yellow in *Brazil* indicate the unification of urban design due to the singularity of the political assets. In *THX1138*, the single use of white color repeatedly in many scenes indicates the power of the authority in eliminating identity to alter the perception of the space (Çalgıcı, 2016). Additionally, *Blade Runner* and *Blade Runner 2049* use a black theme to indicate how the future Los Angeles City is deteriorated, polluted and decayed (Figure 4.19).

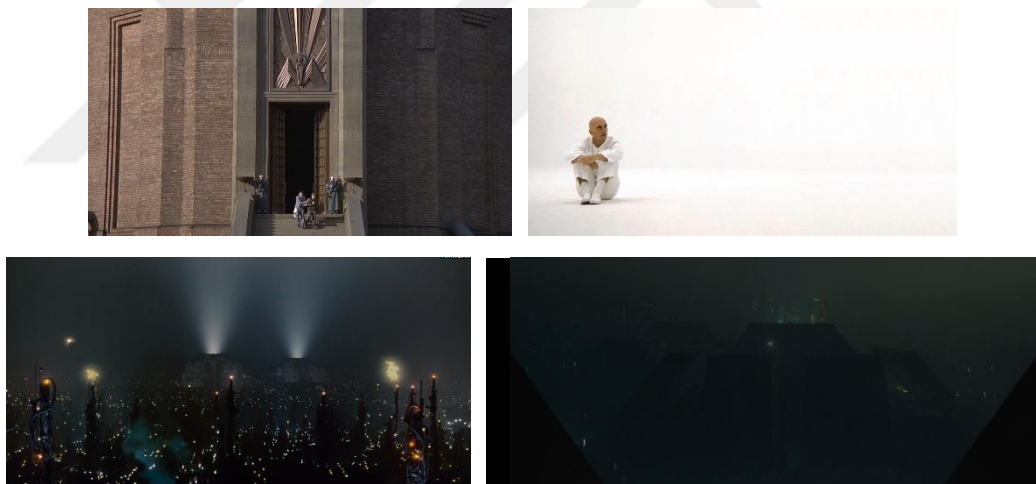


Figure 4.19: Use of different colours in the sci-fi films as an indicator of political idea (Gilliam, 1985; Lucas, 1971; Scott, 1982; Villeneuve; 2017).

Geopolitics of future urban space

Another point that can be drawn for the politics of urban space in the selected futuristic sci-fi films is the representation of geopolitical powers. For instance, *Mortal Engines* exemplifies how British politics over ruling the world alters in a post-apocalyptic state. According to the film, all cities are devastated after the global war and adopted Municipal Darwinism as a principle for the cities' survival mechanism. According to this principle, Traction Cities can move on the earth as giant machines, ingesting

smaller moving cities to benefit from their natural resources. London is presented as the biggest Traction City. The stress between the London Traction City and the static Asian city Shan Guo can be read through the British traditional political regime changing from colonization into digesting nations. In the *Mortal Engines* world, London attempts to digest the smaller nations instead of colonizing. Also, *Mortal Engines* portrays a state where there are no more geopolitic powers since national borders have already disappeared due to physically moving cities.

Another film, *The Day After Tomorrow*, shows how the traditional political approaches can turn upside down in future cities. In the film, US cities face a sudden climate change and enter an ice age and all inhabitants need to be evacuated immediately. As Lukinbeal and Zimmermann (2006) mention in their film geography studies, it is noteworthy in the film to see a lot of illegal American immigrants being shown as forcefully entering Mexico, in contrast to American geopolitics of 21st century trying to get rid of Mexican illegal immigrants.

Tomorrowland, on the other hand, is based on the protestation of the political obstructions in the present real world while designing for the future. The film refers to difficulties in designing future cities, so the ideal city of *Tomorrowland* is constructed on another dimension secretly by scientists. One of the characters in the film explains where *Tomorrowland* is as follows:

Have you ever wondered what would happen if all the geniuses, the artists, the scientists, the smartest, the most creative people in the world decide to actually change it? But where? Where could be even such a thing? They need a place free from politics, bureaucracy, distraction and greed. A secret place, where they could build every day to crazy enough to imagine. (Bird, 2015, 00:40:59)

Accepting the city in a hopeless image

Another aspect of the political critique of urban space while discussing the future of urban design is the view of accepting the world/city in a hopeless image due to problems in demographics and environmental pollution. According to *Children of Man*, humanity goes infertile for no reason, leading them to a global civil war and depression. It depicts the UK's future cities deteriorating from the inside once the social system collapsed due to population problems. In contrast, according to *What Happened to Monday*, the world suffers from overpopulation as a side effect of

consuming genetically changed organisms. In the film, social stress is depicted in the society once it is understood that the government puts newborns into eternal sleep as a population control policy. In another film, *Soylent Green*, world's future is again depicted as overpopulated and polluted. But this time, only the elite can buy natural food while the rest of the society has no option other than consuming *Soylent Green*, manufactured from human flesh. In *Idiocracy*, there is an ironic way of looking at pollution as it results from ineffective decisions by unqualified people. In *Escape from New York*, increasing crime rates can no longer be handled by the government, so all of Manhattan is turned into an open prison island surrounded by walls. In *12 Monkeys*, people have no other chance than to live at a distance from each other in caged underground spaces since 99 percent of humanity dies after a pandemic. In the background of *Ready Player One*, it is said that problems like pollution have become common and undistinctive so that people get used to them rather than concentrating on how to solve them.

Similarly, in another group of films, the future cities are depicted in a hopeless image resulting from forces outside human control, such as invasion by aliens and acts of god. In *The Day After Tomorrow*, climate change becomes no more manageable and destroys many of the metropolises in the world. In *Snowpiercer*, to fix global warming problems and to normalize the climate, a chemical gas developed by scientists results in entering into an ice age. In *Artificial Intelligence (A.I.)*, Manhattan City is submerged under water due to sea level rise and abandoned as it is for its own fate. Also, in some other films, the world is destroyed by the outsiders. In *Oblivion*, humanity loses in a war with aliens. The natural resources of the world are abused by the evil extraterrestrials. In *The Matrix Series*, this time, humanity loses in a war with intelligent machines. Humanity has no other choice than to live in the unqualified underground cities of Zion or Io. In *Total Recall Remake*, the only habitable surfaces in the world are the UK and Australia after the Third World War since the end of the 21st century.

All these films, accepting the city in a hopeless image, are based on the destruction of the world after a series of catastrophes. The urban settings in these films are noted to be avoided rather than to be focused on while extracting design clues for the future of urban design. Alternatively, these sci-fi films can be reconsidered to take necessary precautions against negative but possible futures in urban studies.

Future cities in other planets as an escape from problems

Some films portray alternative civilizations in the space for an escape from the world's hopeless case. For instance, *Elysium* is an ideal utopian satellite city created outside the world atmosphere. In this film, the world suffers from overpopulation, disease, pollution and poverty, while the *Elysium* is where the future of the bourgeoisie lives. In *Spacesweepers* the UTS residential district is created as an orbiting city where only selected *good* people are allowed to live. In *Wall-E*, after environmental pollution goes out of control and the world becomes uninhabitable in the 22nd century, humanity is evacuated to a space city ruled by computers and robots. Similarly, in *Interstellar*, the world enters into a food supply crisis due to over-pollution and there seems to be no other way than searching for another galaxy to find our new inhabitable planets. In *Passengers*, a group of people are transferred to planet Homestead II for colonization. In *After Earth*, humanity leaves the world to colonize in Nova Prime space colony and the world is left for its fate for 1000 years. In *Astro Boy*, Metro City is designed once scientists understand there is no way back from uninhabitable conditions in the world anymore. In the cult film *Blade Runner*, the world becomes almost uninhabitable for biological humans due to environmental and social problems.

All these films based on alternative lives in cities outside the world can be closely considered in the urban design field. There are a lot of clues that can be extracted from futuristic cities depicted at space colonies and other planets. On the other hand, these films are based on cities outside the world to escape from the problems in the world. The world suffers from over-pollution, overpopulation, social crisis, etc. and the world image is accepted with all these negative aspects. It can be argued that adherence to certain dystopian scenarios insistently makes them come true in the end. In this case, the effect of repeated negative futures about our cities on social consciousness in the urban design field can be overcome by focusing on images with promising futures in the world so that the future city that is satisfactory in equity, governance, resilience and aesthetics is achieved. In coming phases of the research, the thesis proceeds with the selected films depict future cities as the continuation of the world's civilization.

4.3 Classification of Sci-Fi Films According to Time and Content

As stated in Chapter 2, the conception of the future changes according to the topic of the investigation. It is also noted that concentrating on the future of urban design

beyond the next 25 years is challenging (The Foresight Programme, 2016). This means if an urban design project is initiated in the year this thesis is published (2025), it would propose a design for the goal year of 2050 as required by the professional approach. Yet, since this thesis is not an urban design proposal but instead searching for clues of futuristic urban settings from sci-fi films, the theoretical future is conceptualized as starting roughly 25 years after this thesis is published. The urban imaginaries in sci-fi films depicting before 2050 can be discussed to explore the accuracy of the film's future vision, and this discussion can be a possible research topic in another study. In this respect, films that are set earlier than the year 2050 or unspecified futures are excluded from the next phases of the investigation.

Also, as mentioned, discussing the long-term future involves a variety of dynamics that are difficult to consider in professional practice (Batty, 2018). For instance, portrayals of a thousand years later in the films are a far-away future from which to extract clues for the future of urban design. Accordingly, these films set in a far-away future are excluded from the next phases of the investigation.

When retro-future, unspecified future, near future and far-away future depictions in the films are excluded, the mid-term future can be reconsidered to proceed with the exploration of sci-fi films (Table 4.1). After determining the mid-term future as ideal to conduct the exploration of sci-fi films in the thesis, the films falling in this group are also classified according to their content. As it is concluded from the politics of future urban design, there are two opposite portrayals for the future cities: (I) accepting the future of world cities as a hopeless case, escaping to the other planets and designing the future cities from scratch in other planets (II) and portrayal of world's cities as still inhabitable in the future whatever the challenging conditions are. In this thesis, the focus has been on depictions of life still continuing in the world's cities. According to this, films set in the mid-term future and also set on other planets are excluded.

Table 4.1 : The conception of the future in the study of sci-fi films.

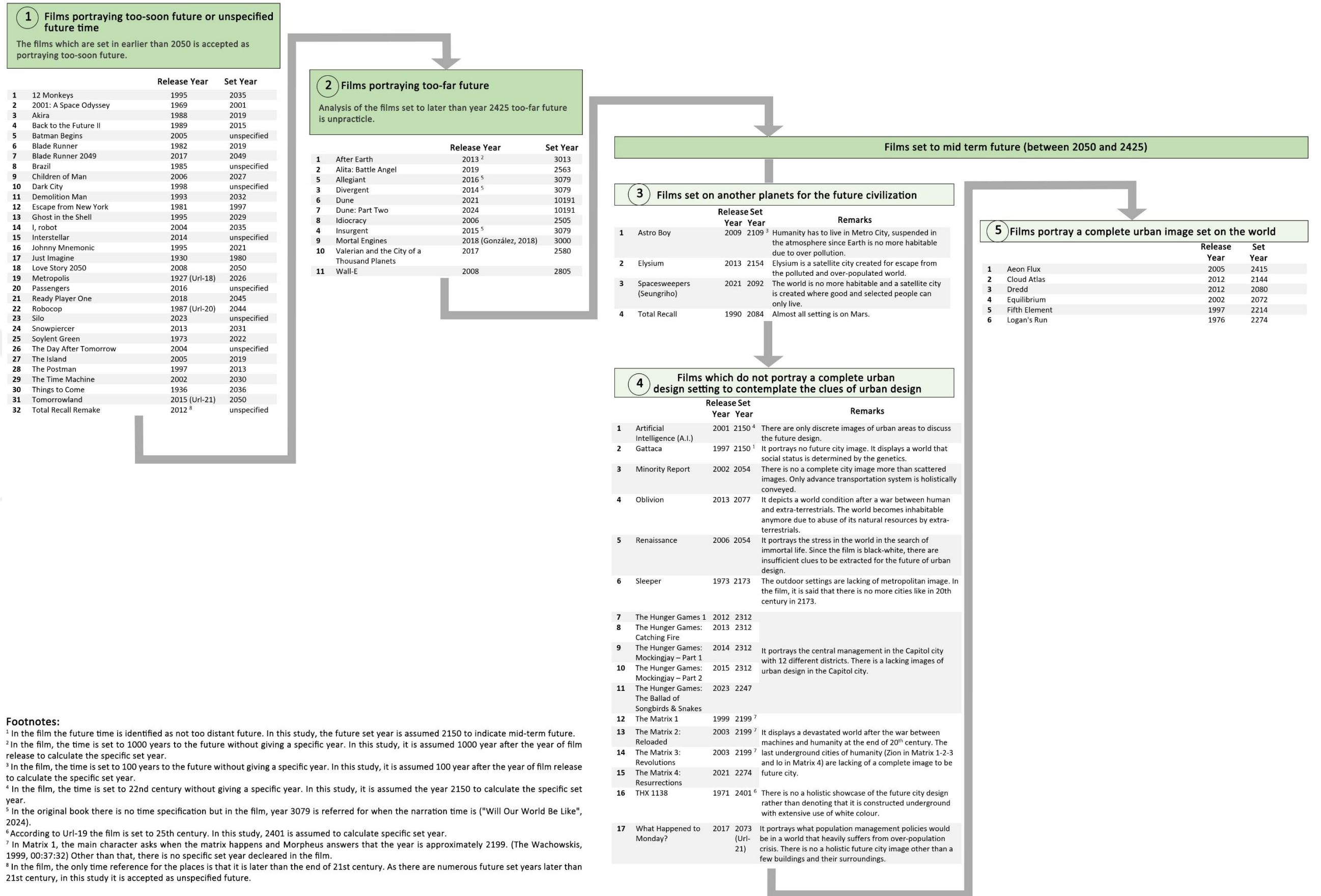
Retro-Future	Near Future	Mid-term Future	Far-away Future
Depicting earlier than 2025	25 years (2025 - 2050)	25 to 400 years (between 2050 and 2425)	Beyond 400 years (2425 +)

Also, the classification of the films set to the mid-term future is made according to their visual content. As stated previously, in some films, intentionally or

unintentionally, details about the future city elements and design are disregarded in the cinematography, while some other films enable the image-making of the city. In this thesis, the city images in the films are explored to understand which urban design details and characteristics they depict. According to Lynch (1960), the image of the city relies on a two-way relationship between the city and the observer. He states, “the environment suggests distinctions and relations, and the observer (...) selects, organizes, and endows with meaning what he sees” (p.8). Similarly, as explained earlier, McGrath and Gardner highlight Henri Bergson's understanding of the life that we live in perceived frames extracted from the space-time matrix. They explain that the filmmaker also arranges selected frames from the space-time matrix (2007). Xue, Chen and Yu (2012) suggest that media as a builder of the city image “might play an important role in the cognition of city image by observers (i.e., the audiences)” (p.748). Based on the argument that cognition of the city is available from the media (films), this thesis explores images of the future cities in sci-fi films to contemplate the clues of urban design from cinematic spaces.

Lynch defines city image elements in five categories: paths, edges, districts, nodes, and landmarks. Relying on the Lynch categorization, while exploring urban design clues in cinematic spaces in the further steps of the investigation, buildings, facades, open spaces, squares, streets, highways, silhouettes, furniture, landmarks, districts and other urban design elements are investigated. Also, it is identified that the film should represent a complete urban image and multiple futuristic urban elements/characteristics that enable the exploration to be conducted holistically. The films that do not portray such visual content in the futuristic urban settings are excluded in the further steps of the investigation.

As a result of mapping of films in accordance to their clues about the concepts of the future space in urban design (Figure 4.12) and classification of films according to the time and visual content in (Figure 4.20), 6 films, *Equilibrium*, *Dredd*, *Cloud Atlas*, *Fifth Element*, *Logan's Run* and *Aeon Flux*, are focused on in the further steps of the investigation since (I) they are set in the mid-term future, (II) they portray futuristic urban settings with several city elements and (III) they are urban design images based on in the world civilizations. These films are explored with cinemetric drawings in Chapter 5.





4.4 Chapter Evaluation

This chapter explores the selected sci-fi films in accordance to the conceptualization of the future space in urban design.

12 films in the pool are discussed with a physical or philosophical connection to the older cities. In the theoretical framework, it is underlined how architects and planners reference the older times for a better future idealization. For instance, modern period architects pay attention to the classical urban design norms to take references for the future. At the end of the investigation of selected futuristic sci-fi films, a similar approach is found, but this time, the films set in the future recall the 21st century cities as ideal urban designs in the future.

Moreover, it can be stated that before the smart city approach developed in the 2000s, there are films released in the first half of the 20th century that portray what a smart city looks like. Besides, the films released after the smart city concept appeared portray mostly the smart city concepts switching from world locations to other planets and space colonies.

Another 20 films in the pool are explored about how the ambiguity of the future is handled by either never-ending designs or temporary designs. It can be stated that the horizontally and vertically endless state of the future cities portrayed in the sci-fi films over land and water is found similar to the concepts of the future space in urban design field.

In searching for clues for political motifs in the selected sci-fi films, 34 films are critiqued. The majority of this group is formed under the approach that the future city is in a hopeless situation due to demographic problems, environmental issues or acts of god. At the same time, it is noteworthy that the majority of these films also promise a fresh start on other planets and space colonies so that several urban design references can be drawn.

Also, in this chapter, the films are classified according to time that they depict based on four time phases: retro-future, near future, mid-term future and far-away future.

To explore sci-fi films, a film matrix is generated from mapping films according to the concepts of future space in urban design in Figure 4.12 and classification of the films according to time and visual content in the Figure 4.20 (Figure 4.21).

Classification of Films in Green Table According to their Time and Location (Content)

		①	②	③	④	⑤	Total Films
		Retro Future / Near Future	Far-away Future	Mid-Term Future but Imagining on Other Planets	Mid-Term Future but Incomplete Spatial Setting	Complete Spatial Setting set to Mid-Term Future	
Blue Relation Map of Films to the Concepts of Future Space in Urban Design	a Old but Gold Urban Design	- Blade Runner	- Mortal Engines		- The Matrix Series	- Aeon Flux - Fifth Element	5
	b Design of a Simplified Future	- Just Imagine - Things to Come	- Divergent Trilogy - Wall-E	- Elysium	- Gattaca	- Aeon Flux	7
	c Never-ending Urban Design	- Interstellar - Things to Come - Demolition Man - Ghost in the Shell - Love Story 2050 - Akira	- After Earth - Wall-E - Valerian and the City of a Thousand Planets - Alita: Battle Angel	- Elysium - Astro Boy		- Fifth Element - Dredd - Cloud Atlas	15
	d Temporary Urban Design	- Dark City - Ready Player One - I, Robot	- Mortal Engines		- The Hunger Games Series		5
	e Politics of the Future Urban Design	- Brazil - Batman Begins - Silo - Interstellar - Passangers - Blade Runner - Blade Runner 2049 - Metropolis - Demolition Man - Escape from NY - 12 Monkeys - Soylent Green - The Day After Tomorrow - Tomorrowland - Snowpiercer - Total Recall Remake - Children of Man - Ready Player One	- Mortal Engines - Divergent Trilogy - After Earth - Wall-E - Idiocracy	- Elysium - Spacesweepers - Astro Boy	- What Happened to Monday? - Artificial Intelligence (A.I.) - THX1138 - The Matrix Series - Oblivion	- Aeon Flux - Logan's Run - Equilibrium	34
	f Films that fall out of the General Conceptions of the Future Space in Urban Design	- Robocop - The Island - 2001: A Space Odyssey - Back to the Future II - John Mnemonic - The Postman - The Time Machine	- Dune Series	- Total Recall	- Minority Report - Sleeper - Renaissance		12
Total Films		32	11	4	17	6	

Figure 4.21 : Film matrix generated from Figure 4.12 and Figure 4.20.

According to the film matrix generated, the following remarks can be listed:

- As denoted in group a-3 in the matrix, none of the films that depicts a future setting in other planets and space colonies in the mid-future is found with physical urban design elements from old cities. This can be evaluated with sci-fi film's considering logistical constraints in transporting older city elements to other planets.
- The use of technology in smart city concepts is found in each group from near future to far-away future as denoted in groups b-1 through b-5.
- Also, temporary urban designs do not appear in films set in the midterm future except for *The Hunger Games series* in group-4, keeping in mind that

temporary urban design in *The Hunger Games series* is generated through augmented reality.

- Once group d-3 is investigated, it is reasonable to obtain the result that none of the temporary urban design solutions appear in the films that portray the future cities in other planets and the space colonies since the temporary urban designs are based on existing urban fabric with quick and affordable solutions to the changing needs.
- Referring to the political critique of urban space in futuristic sci-fi films, many films set in the near and retro futures can be discussed, as seen in group e-1.
- Besides, a large group of films set in the near and retro futures is found irrelevant to any concepts of the future space, as seen in group f-1. As mentioned previously, this results from disregarding the urban design details in the film's cinematography, intentionally and unintentionally.

The films set in the mid-term future with a complete urban design image are denoted in groups of a-5, b-5, c-5 and e-5. These films are explored with cinematics in Chapter 5.



5. TRENDS IN ENVISIONING THE FUTURE OF URBAN DESIGN

This chapter explores the selected 6 sci-fi films *Equilibrium*, *Dredd*, *Cloud Atlas*, *Fifth Element*, *Logan's Run* and *Aeon Flux* to contemplate clues of urban design from cinematic spaces. These selected 6 films are released between 1976 and 2012 and portray futuristic urban design settings between 2072 and 2415 (Figure 5.1). It is focused on how futuristic urban design elements are portrayed and which clues can be extracted from cinematic spaces.

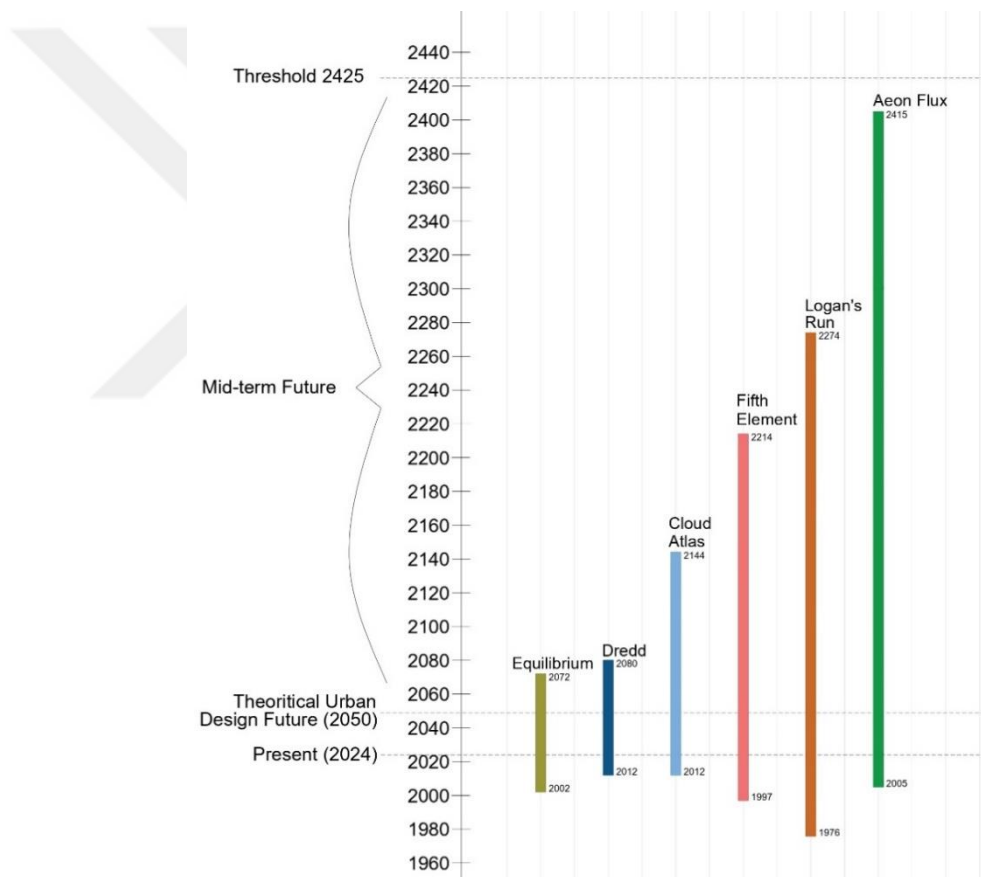


Figure 5.1 : Release and set years of the selected 6 films.

As noted in Section 3.3, the exploration of sci-fi films statistically might be used as a supplementary approach while conducting the research and these supplementary data should be combined with qualitative approach in order to obtain more comprehensible results (O'Brien, 2018). In this case, this chapter begins with exploring the supplementary aspects, to be later combined with the exploration of films scene by scene with cinematic drawings.

5.1 Cinemetrics of The Future Urban Spaces in Sci-Fi Films

The selected 6 films are reviewed to explore the hidden clues of urban design within their context. Firstly, average shot length (ASL) values are studied. According to archives of film theorists, *Logan's Run* has the longest ASL with 4.95 seconds, compared to the rest of 5 films, while *Aeon Flux* has the shortest ASL (Table 5.1). Note that these values are generated by the professionals for all scenes in the film. When a selected group of scenes that portray urban design characteristics is focused, it is revealed that scenes portraying urban design characteristics have longer ASL in 3 films, *Equilibrium*, *Dredd* and *Logan's Run*, compared to the ASL calculated by professionals (Table 5.1). Keeping in mind that longer ASL enables better comprehension by the viewer, the audience of these films is given more time to explore the futuristic urban design setting compared to other scenes. On the other hand, the other 3 films in the analysis (*Cloud Atlas*, *Fifth Element* and *Aeon Flux*) are characterized by shorter ASL in scenes that convey urban design characteristics compared to other scenes in the film (Table 5.1). This is because *Cloud Atlas*, *Fifth Element* and *Aeon Flux* are based on urban design settings with a high-tempo chase between the characters.

Table 5.1 : Comparison between ASL and length of scenes showing urban design characteristics

Films	ASL (in seconds)	Length of Scenes that Convey Urban Design Characteristics ⁴
Equilibrium	2.84 (Salt, n.d.)	↗
Dredd	3.6 (Kokeš, 2024)	↗
Cloud Atlas	3.1 (Getlík, 2024).	↘
Fifth Element	3 (Kokeš, 2024)	↘
Logan's Run	4.95 (Salt, n.d.)	↗
Aeon Flux	1.96 (Salt, n.d.)	↘

Distribution of the scenes that portray futuristic urban design elements (such as squares, central meeting areas, streets, roads, pathways, site characteristics, buildings, facades, monumental buildings, furniture, etc.) and futuristic urban settings is also important to explore how futuristic urban images are transferred in the film to the audience. The distribution of these scenes is shown in the following Figure 5.2.

⁴ “↗” indicates that the scene is longer than the ASL values calculated by scholars while “↘” indicates that the scene is shorter than the ASL values calculated by scholars.

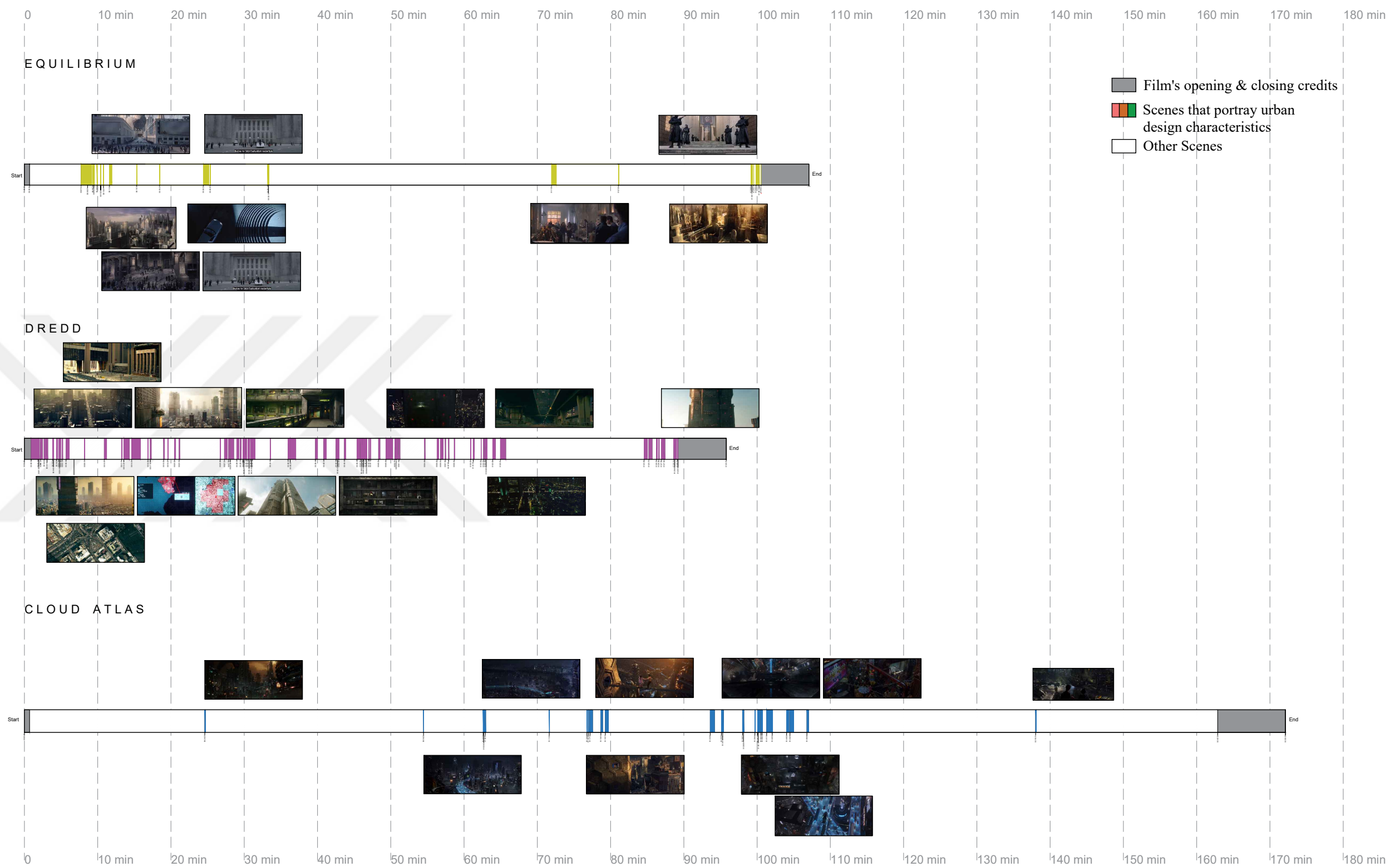


Figure 5.2 : Distribution of scenes that depict futuristic urban design settings in 6 films



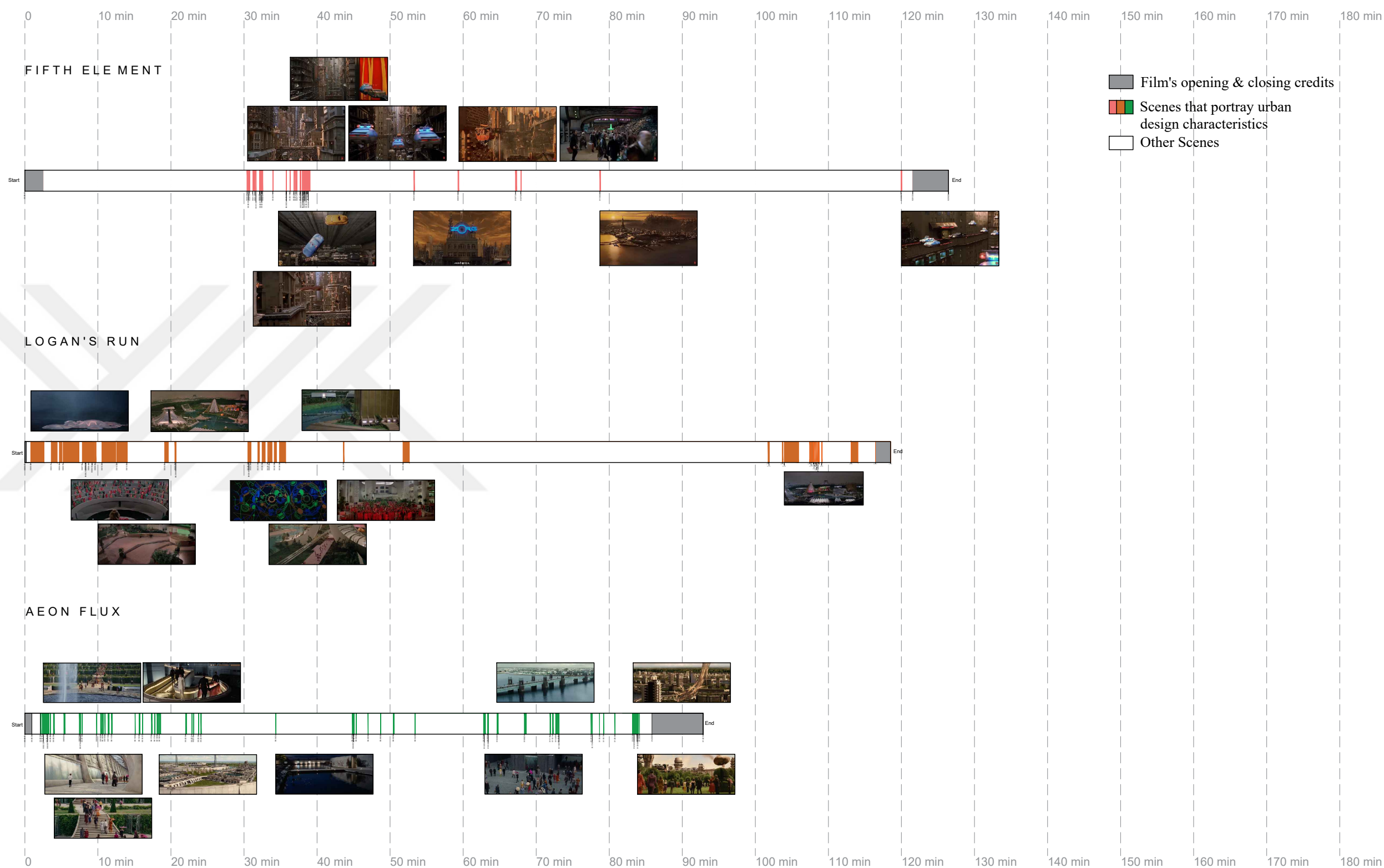


Figure 5.2 (continued) : Distribution of scenes that depict futuristic urban design settings in 6 films



Decoding the film scene by scene reveals each film's properties about how urban design features are conveyed. In *Equilibrium*, the major urban design concept is introduced mostly in the opening scenes with bird's eye views. Also, similar scenes are concentrated in the closing part of the film. The difference between urban design settings in the opening and closing parts is that the first introduces how the city is organized by the totalitarian regime, while the second portrays the destruction of the city when the central regime falls. This distribution pattern of scenes can also be explored in *Logan's Run*. *Logan's Run* begins with an introduction to urban character, spatial organization and urban design features. In the closing part, similar scenes are portrayed again. Yet, this time, inhabitants escape from the city due to the destruction of the city and the fall of the ruler intelligent machine. These before-city-fall and after-city-fall portrayals of the city at the opening and closing parts of the films are the first pattern of scenes explored in *Equilibrium* and *Logan's Run*.

In *Cloud Atlas*, the distribution of scenes that depict the urban design setting is more widespread since the film comprises five different stories. The number of scenes portraying the future city (Neo Seoul 2144) is more limited compared to other films investigated. Especially for *Cloud Atlas*, futuristic urban settings are used as reminders of the story while moving back and forth between five stories in the film. This results in a relatively even distribution of these scenes even though the number of scenes is limited. Moreover, in *Fifth Element*, the story takes place on another planet in almost all of the film's second half. That's why the scenes in the futuristic urban design setting (South Brooklyn 2214) are concentrated particularly in the film's first half.

In *Dredd*, the Peach Trees neighborhood is where the story is mainly revolved around. Since the story is based on a continuous chase between Judge Dredd and a group of criminals in Peach Trees neighborhood, almost all of the scenes take place in public areas and a majority of these scenes portray several clues about the urban design features. Similarly, the story is focused on an assassin trying to understand the main motivation of Bregna city's existence in *Aeon Flux*. There is an even distribution of the scenes that portray clues of urban design due to the high tempo pursuit between assassins and city council of rulers in *Aeon Flux*.

After exploring how futuristic urban design settings are portrayed in the films referring to the selected scenes' distribution patterns, the proportion of the length of the scenes that urban design characteristics are portrayed to the overall film length is focused. In

this aspect, the length of the film's opening and closing credits are subtracted from the film's length since these parts are ineffective in transmitting urban design ideas visually (Figure 5.3). It is achieved that *Dredd* exhibits the highest proportion of 18.92 %. This means that for approximately 11 seconds in a minute, the viewer can observe the futuristic urban design setting in the given cinematic space. *Dredd* is followed by *Logan's Run* with 15.27 %, while the lowest proportion is calculated for *Fifth Element* with 1.89 % (Figure 5.4).

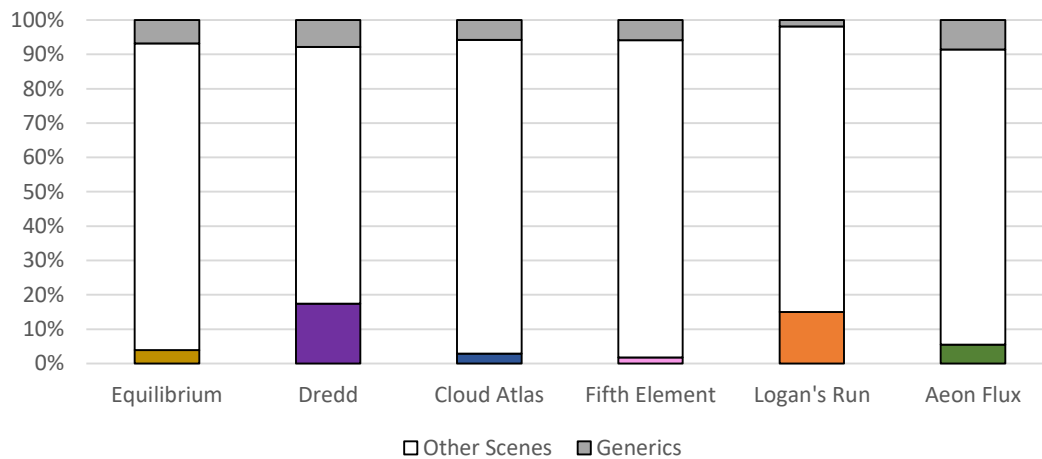


Figure 5.3 : Graphs showing distribution of scenes that depict futuristic urban settings.

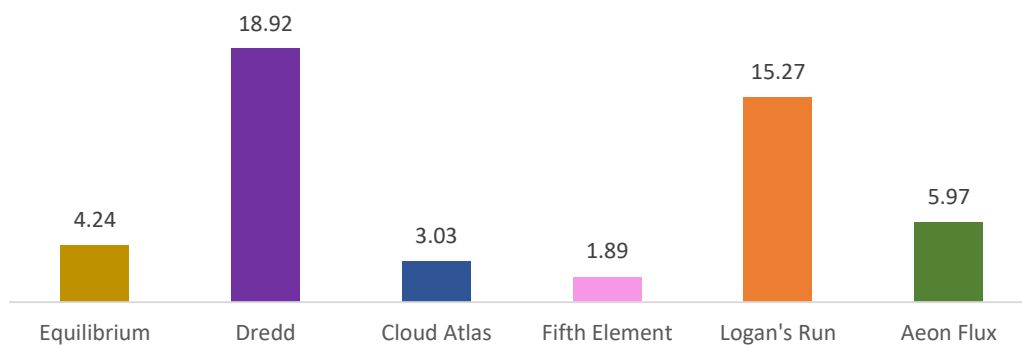


Figure 5.4 : The proportion of scenes that depict futuristic urban design settings (%).

Based on the aspects revealed about *how* futuristic urban design elements are portrayed in the film, it can be stated that the portrayal of futuristic urban design settings changes according to film's theme and cinematographic features. After noting these evaluations as supplementary aspects to be considered, the following section focuses on *which* urban design clues can be extracted from the cinematic spaces. The films are explored according to the time they portray, which means the film that portrays the soonest future comes first: *Equilibrium*.

5.1.1 Equilibrium

Equilibrium is a sci-fi action film released in 2002. It depicts a fictional city of Libria governed by a totalitarian regime in 2072. According to its story, Libria is created after the 3rd World War in the 21st century. The founders of Libria describe human senses such as love, anger and hate as reasons for the war, so sensing in this city is prohibited. It is compulsory to take drugs for all of the citizens to cancel human senses. Anything that may possibly make inhabitants sense is also illegal in this city. That is why the overall urban atmosphere in Libria is isolated from different colors and textures which may potentially lead inhabitants to sense. In the film, the urban spaces are portrayed from the eyes of the main character, John Preston. At the beginning of the film, when Preston takes his drugs as usual, he sees the city in a cold color palette. The repetitive and single use of concrete grey in exterior environments parallels to the search for *equilibrium* in society. When Preston quits the drugs, for the first time, he witnesses the beauty of sunset in the cityscape. The color palette immediately changes from cold to warmer colors (Figure 5.5).

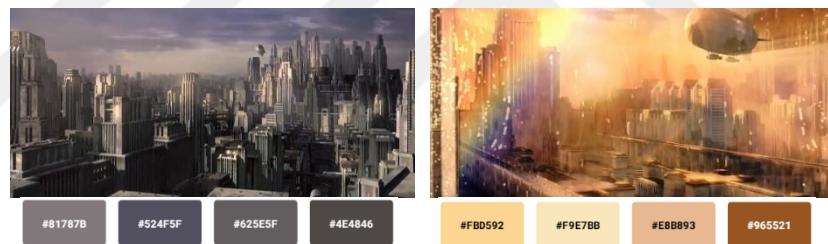


Figure 5.5 : The cityscape shown in cold and warm colors from the eyes of John Preston before and after he quits the medication (Wimmer, 2002, 00:09:08 & 00:33:21).

To describe the future city of Libria, it can be firstly stated that it is surrounded by walls that separate Libria from the older city. These surrounding walls are checkpoints between the older city and the new city of Libria. The physical connection between Libria and the old city is provided by a crossing over a bridge between two layers of city walls and through a city gate. Designing the city walls in two layers and entering the city through monumental gates recall the urban design of classical times. Besides, the older city is represented as almost destroyed and abandoned (Figure 5.6). The transition between old and new cities is available only for those with permission from the central city council. The connection to old habits and traditional ways of living that may remind human senses is discouraged by the central regime in Libria by cuts any physical interaction with the old city.

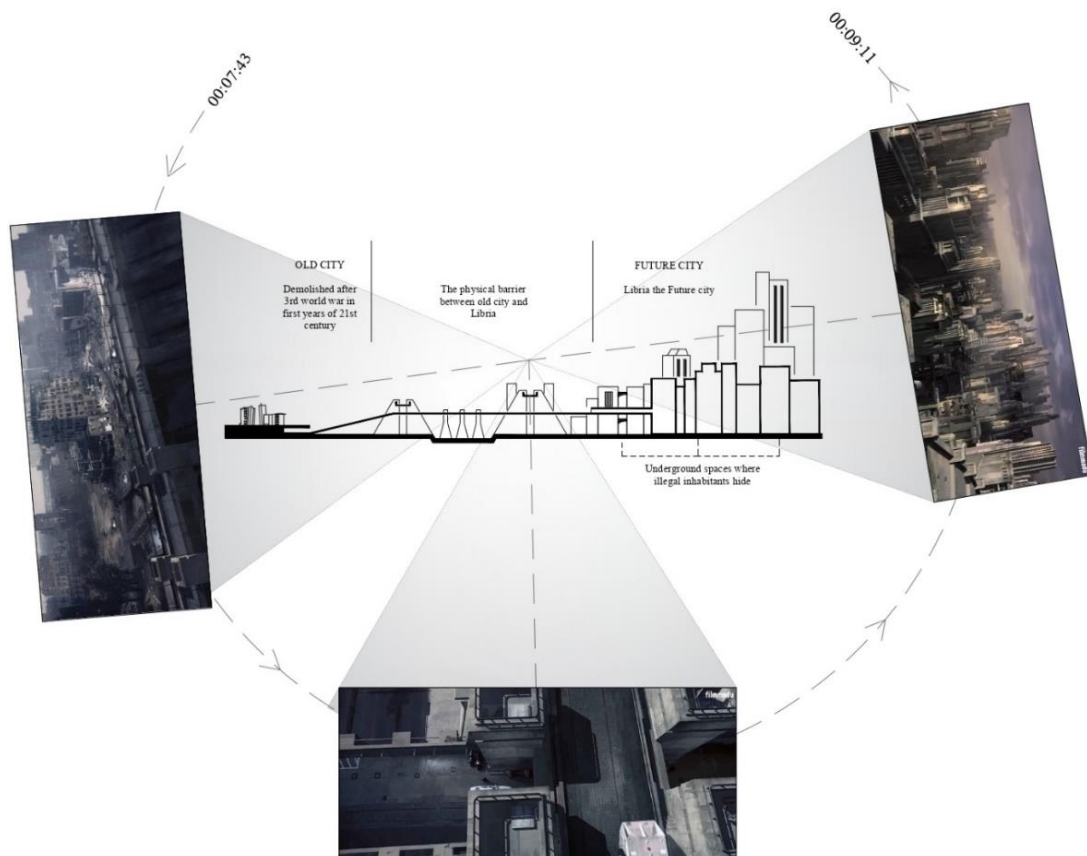


Figure 5.6 : Libria's cityscape and organization in *Equilibrium*.

In Libria, the power of a totalitarian regime is portrayed in the cityscape with high governmental buildings, as it is similarly seen in *Metropolis*. From the perimeter to the city center, the morphology of the city becomes impressive with superstructures, bridges going in and out of buildings and order in city organization. It is understood from the film that the bridges facilitate pedestrian movement in the upper levels of the city. Also, another bridge for the metro is portrayed. When looking from the top of the city walls to the inner city, ground level is not visible, which can also be discussed for *Fifth Element* and *Cloud Atlas*. The building facades in Libria are explicitly organized in a single identity to demonstrate the singular and totalitarian approach in the city. The function of the buildings is not distinguishable from the exterior due to the use of the same façade characteristics. The cityscape lacks advertisement boards, colorful surfaces and distinctive facades. As Neumann suggests, once the film is stopped and rewound over and over to understand the cinematic space (1996, p.9), it is understood that there are inner city gates that distinguish the urban fabric according to their uses. The overall atmosphere of Libria can be characterized as a lack of aesthetics and singularization in design. (Figure 5.7).

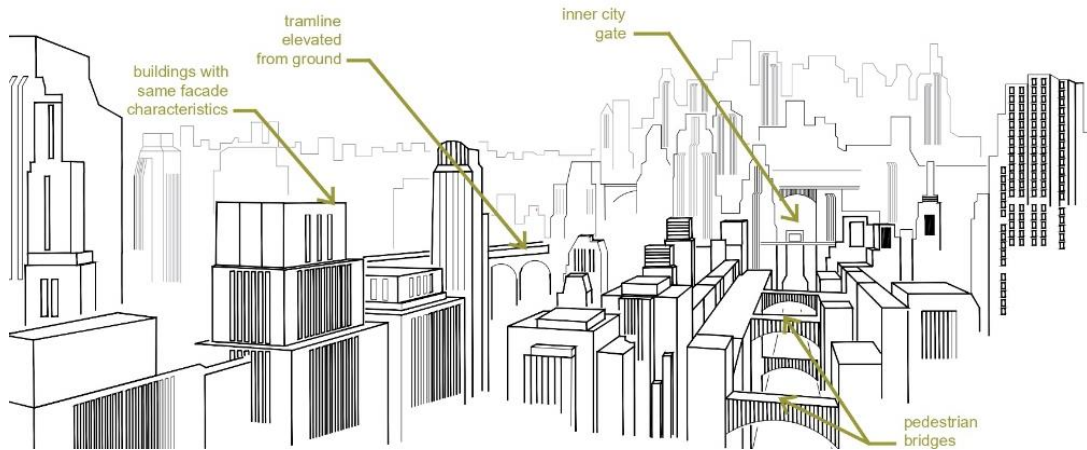


Figure 5.7 : A view from top of city walls to the inner Libria in *Equilibrium* (developed from Wimmer, 2002).

Another noteworthy point is underground spaces in Libria. In the film, a group of people opposing the totalitarian regime, known as *Underground*, gathers in underground spaces to continue with their illegal activities such as listening music and collecting artworks. Distinctively, these underground gathering spaces are not portrayed as sewage lines, metro tunnels or storage areas that can be seen in *Demolition Man*. Instead, they are represented in a better atmosphere. For instance, the use of natural light filtering through the pavement into these underground spaces suggests that these gathering spaces have existed since the day Libria was constructed (Figure 5.8). Although it is not explicitly stated in the film, it can be assumed by looking at the design of these underground spaces that even though the totalitarian regime aims to destroy the underground, it might be the one that supports it in the first place.



Figure 5.8 : At left, underground spaces in *Equilibrium* (Wimmer, 2002, 01:09:41). At right, the schematic presentations of underground spaces (the author).

In the film, three scenes from public and open sites of Libria are repeatedly shown: (I) a square where inhabitants cross daily, (II) a meeting area where the ruler delivers a speech to the society and (III) an open training area where government agents practice

marital arts (Figure 5.9). In these scenes, the urban design elements are precisely aligned with symmetry and characterized by a selective use of gray tones. Although Libria is characterized by high-rise buildings, all of these spaces are designed with respect to human scale. Furthermore, all of these cinematic spaces are portrayed as mirrored along a central vertical axis. Another common point between these spaces is their way of presentation with camera movements. The camera remains still in all of these scenes, similar to techniques used earlier in *Metropolis*. This enables the viewers to take their time to comprehend depth of the space. Another noteworthy detail is the parsimonious use of urban furniture and physical design elements in Libria. Other than essentials such as ruler's portrait in the square, seating units in meeting areas, signage, street speakers and city pennants, there are no additional physical elements or furniture in the public open sites (Figure 5.10).

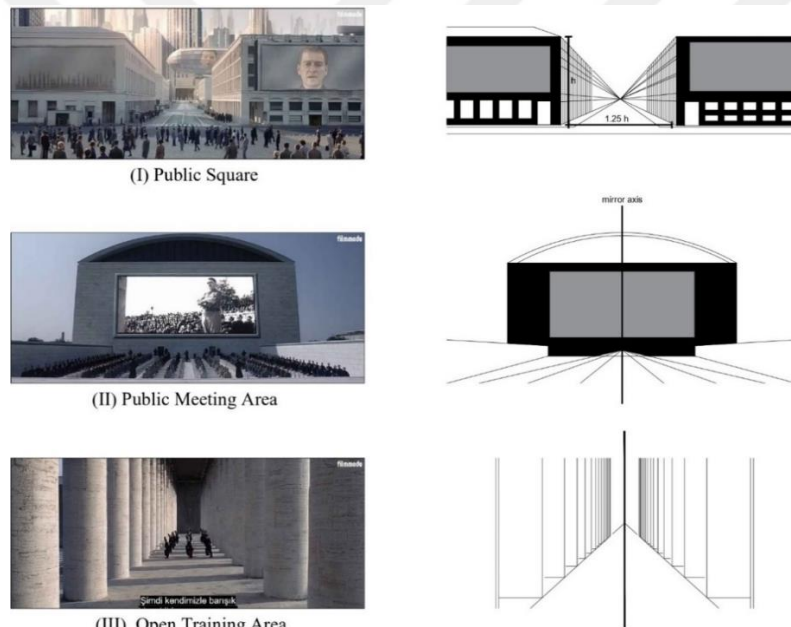


Figure 5.9 : At left, open spaces in *Equilibrium* (Wimmer, 2002). At right, the schematic presentations of open spaces (the author).



Figure 5.10 : The design elements and furniture in *Equilibrium* (Wimmer, 2002).

The film's structure alternates between the contrasting settings of Libria and the older city (Figure 5.11). In detail, the story does not take place exclusively in either Libria or the older city. Instead, there is a tension between the concepts of new and old cities,

portrayed through transitions of spaces within the narrative. The tension reaches its peak when John Preston, the most trusted representative of the Libria city council, decides to sense again. By the end of the film, Libria is destroyed by Preston in collaboration with the underground.

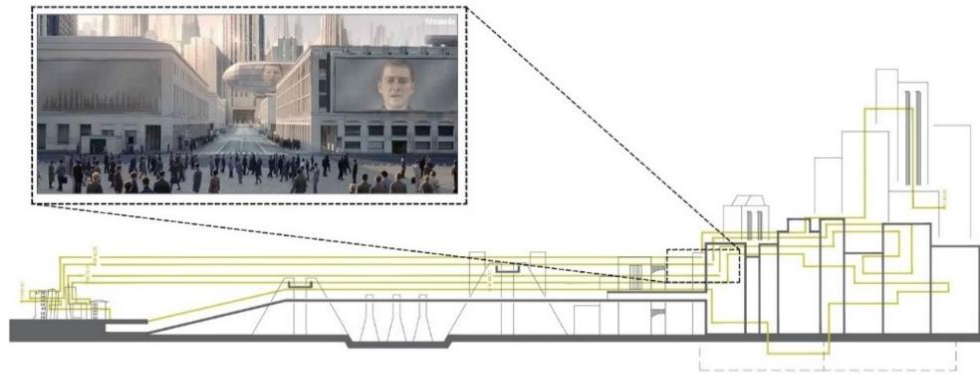


Figure 5.11 : Flow of the story in *Equilibrium*'s urban setting.

In Libria, the concept of an "equal city" is predicated on the strict enforcement of equality among inhabitants, regulating their lives and thoughts to eliminate any differentiation. This enforced equality concept extends to the city's architectural design to suppress individuality. However, by the end of the story, the narrative demonstrates that relying on ultimate equilibrium as the central principle of urban mechanisms, achieved through the singularization of personas, is fundamentally flawed.

Although Libria is a portrayal of a future setting from the year 2072, the fall of totalitarian regimes is dated to the last century, with exceptions such as North Korea (Figure 5.12). In contemporary urban studies, the concept of an "equal city" has shifted significantly. It emphasizes an equitable treatment for all inhabitants, regardless of their age, gender or socioeconomic background. An equal city has evolved from the singularity within urban mechanisms to fostering diversity and offering a multitude of options.



Figure 5.12 : At left, a public area in Libria where ruler has speech (Wimmer, 2002, 00:09:21). At right, Pyongyang downtown where North Korean leaders are presented (Url-10).

5.1.2 Dredd

The second film of investigation is *Dredd*. It was released in 2012 and takes place in 2080. Unlike *Equilibrium*, *Dredd* is based on a geographically defined setting. According to its story, the future city of Mega City One emerges from merging today's Boston, Washington DC and New York. Mega City One is divided into six regions: East, West, South, North, Central and The Finger. Each region is comprised of several urban sectors. Mega City One is surrounded by great walls separating the city from the surrounding radioactive wastelands. In the film, urbanization is stuck behind the walls of Mega City One.

Within this concrete and confined landscape, there are huge buildings designed to accommodate inhabitants on a neighborhood scale. These vertical neighborhoods, particularly designed to address overpopulation, rise to 200 storeys and accommodate over 70000 citizens each (Figure 5.13). Intervening into only strategic locations to answer the needs of citizens resembles the concept of urban acupuncture, which employs targeted interventions to address critical urban needs. Urban acupuncture is a strategy to revitalize small-scale urban spaces that are important locations but decayed within the urban fabric by making pinpoint interventions. Acupunctural urban designs, a term first coined by Spanish architect Solà-Morales, mostly centered around developing projects in public spaces quickly by overriding long approval processes required by centralized decision-making bodies (Hemingway and De Castro Mazarro, 2022). The approach is based on creative designs developed through community involvement at the local level. It relies on the triggering effect of intervening into small public spaces on broader urban systems and mechanisms (Lastra and Pojani, 2018). In *Dredd*, different from its professional definition, urban acupuncture is applied to generate more sites of housing and urban facilities (schools, theatre, health cabinets) rather than public spaces. The urban setting in the film prioritizes the functional contribution of super high neighborhoods to alleviate the challenges of the overpopulated city rather than providing creative solutions. This is evident in the absence of well-designed urban elements such as decorative facades, urban furniture, or creative public spaces. The focus remains entirely on practicality, providing housing and essential facilities in the city. A detailed comparison between the urban acupuncture strategy and its adaptation in *Dredd* is given in Table 5.2.

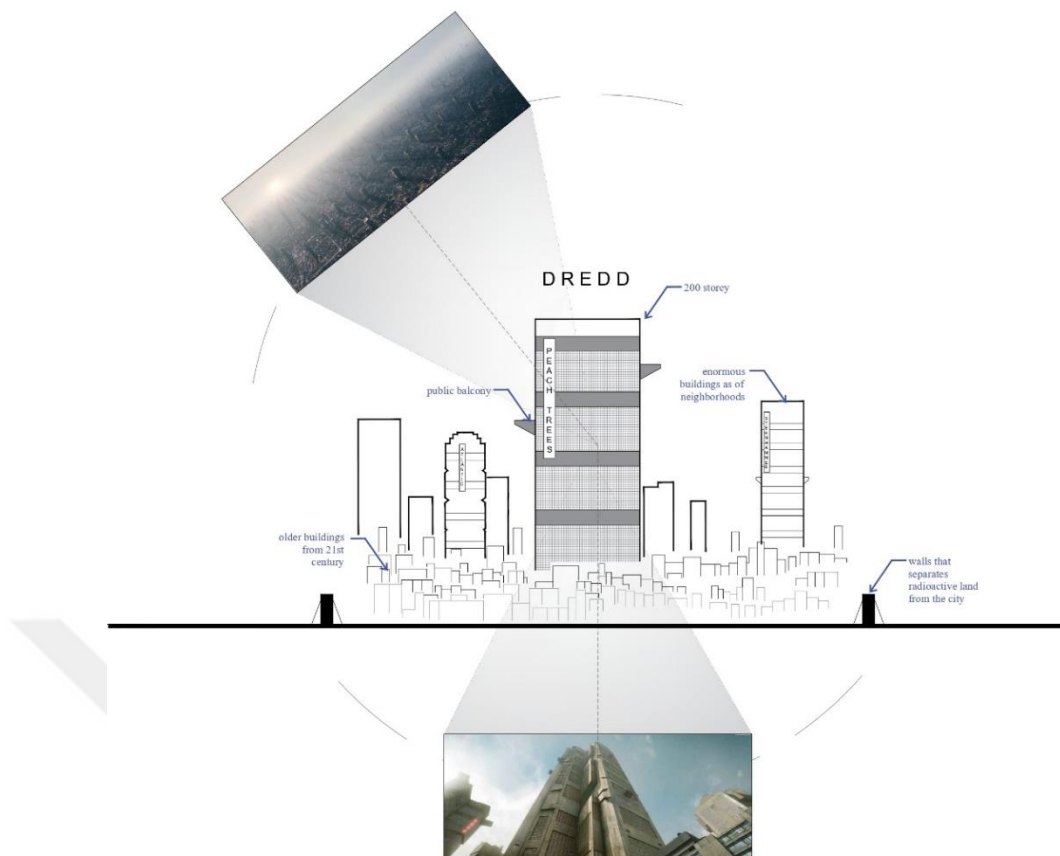


Figure 5.13 : Mega City One's cityscape and organization in *Dredd*.

Table 5.2 : The comparison between the urban acupuncture strategy and its adaptation in *Dredd*.

Urban Acupuncture Strategies (Hemingway and De Castro Mazarro, 2022; Lastra and Pojani, 2018).	Adaptation of Urban Acupuncture in <i>Dredd</i>
1 Intervening in public spaces	Intervening city for the public benefit by generating more housing sites
2 Mostly refers temporary designs	It is based on a long term solution for housing
3 Small scale interventions	Large scale intervening by building super structures
4 Pin-point applications into strategic locations	Constructing point-based solutions in urban fabric
5 It aims immediate response mostly at low cost	Building new housing sites at low cost as prefabricated units
6 It supports creative and artistic transformations	More than artistic, it is based on functional use of spaces
7 It is applicable on sick, worn out or undermanaged places for urban revitalization	It aims to create new opportunities for a city characterized by overcapacity and decay

In the cityscape, older buildings from the beginning of the 21st century and new vertical superblock neighborhoods exist together. The coexistence of older and newer buildings is a common representation of future cities seen in films such as *Blade Runner*, *Blade Runner 2049* and *Ghost in the Shell*, as well as, *Cloud Atlas* and *Fifth Element*. But it should be noted in *Dredd* that the coexisting patterns of older and new city elements appear to be non-respective of each other. This means that the design characteristics of older city elements do not extend to newer vertical neighbourhoods. The vertical neighborhoods are portrayed with a standardized design that aligns closely with their function and purpose. This approach, adopting a uniform architectural style that prioritizes practicality over aesthetic is repeated in all vertical neighbourhoods.

The vertical city approach, developed by Le Corbusier at the beginning of the 20th century, is based on raising buildings to diminish building coverage to save land for greenery and public utilities. The building uses are determined by zoning plans and according to zoning principles, the center is characterized by super block offices while approaching the perimeter, the land is divided for housing sites (Fitting, 2002). When Le Corbusier's Radiant City is compared with Mega City One (Figure 5.14), it seems that the original concern of the vertical city approach turns into another case and loses its sight of saving land for greenery. As Mega City One is confined by walls, there seems no other way than to build vertically superstructures when new spaces are required in the city. Instead of dividing ground level for public uses as the original approach defines, in Mega City One, public utilities are instead distributed almost uniformly across the upper levels of the superblocks, reflecting a pragmatic but fragmented allocation of communal spaces. When these superstructures are juxtaposed with the older buildings, the result is an unbroken concrete land that dominates the cityscape.



Figure 5.14 : At left, Le Corbusier's Radiant City (Url-11). At right, Mega City One in *Dredd* (Travis, 2012, 01:28:57).

In addition to its vertical neighbourhoods, Mega City One is characterized by multi-levels of transportation roadways. As depicted in the film, when new vehicular roads

are required in the transportation system, they are built on top of older ones, creating a layered network of road systems. The aerial view of transportation nodes reveal an urban palimpsests where the traces of older roadways remain visible beneath the newer layers of transportation (Figure 5.15). Unlike many sci-fi films that envision futuristic cities with flying cars, such as *Ready Player One*, *Just Imagine*, and *Blade Runner*, in *Dredd*'s world, all spaces between buildings are allocated for vehicular access.



Figure 5.15 : Roadway system in Mega City One (Travis, 2012).

Mega City One heavily suffers from overpopulation, unemployment and high crime rates. To address high crime rates rapidly, the city relies on an elite force known as the Judges, who function simultaneously as police, judge, and executioner. These judges attempt to crime scene, pass the sentence and execute criminals on the same spot. This application is required to sustain safety and to provide a lawful city. According to the film, Peach Trees is the most criminal neighborhood within its sector. The story unfolds when a violent crime occurs in Peach Trees and Judge Dredd is assigned to resolve the issue. The story mostly takes place in different levels of Peach Trees neighborhood (Figure 5.16).

In the film, the design characteristics of the Peach Trees neighbourhood are portrayed through numerous scenes (Figure 5.17). At the street level of the neighborhood, a public square serves as a gathering point. Vehicular access is provided at the ground level regulated by a coiling door that controls entry for both vehicles and pedestrians. Pedestrian movement to the upper levels is facilitated by public staircases and elevators. On the upper levels, smaller public spaces are distributed throughout the building. These spaces are typically situated near utility areas, such as health cabinets, telephone booths, and so on. Public balconies are another type of public spaces providing access to fresh air. The building's design is centralized around a large atrium that provides daylight and air ventilation on casual days.

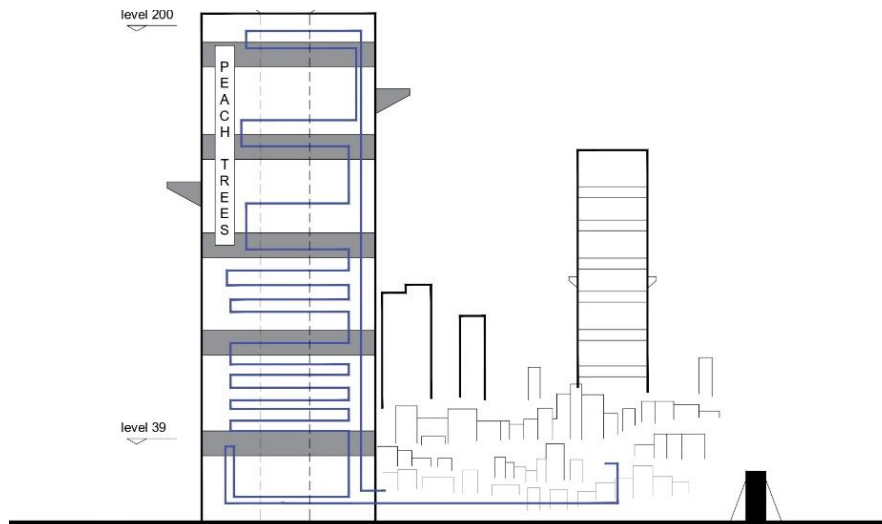
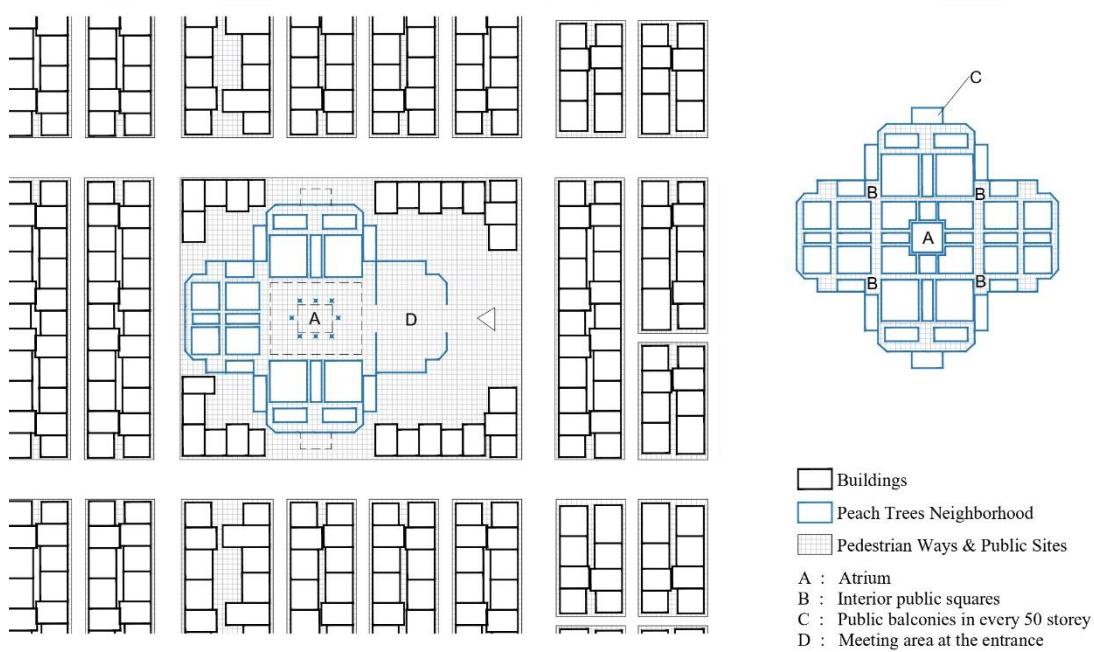
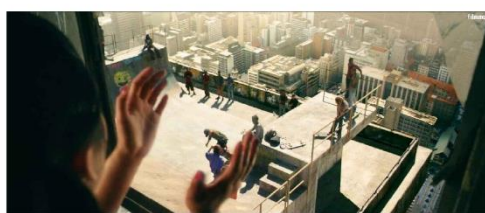


Figure 5.16 : Flow of the story in *Dredd*'s urban setting.



A



C



B



D

Figure 5.17 : Peach Trees neighborhood and public spaces in *Dredd* (developed from Travis, 2012, 00:13:46; 00:57:07; 00:15:02; 01:28:42).

Similar to other vertical neighborhoods in the city, Peach Trees neighborhood brings together all essential spaces its residents require under a single roof. These include residential areas, shopping facilities, recreational areas and urban facilities such as schools, health centers and theatres (Figure 5.18). However, the absence of greenery is a notable depiction in the film. Urban spaces are arranged vertically across different storeys and organized around a central atrium that provides visual interaction between the lower and upper levels. The visual interaction facilitated by the atrium can be evaluated with the principle of “eyes on the street” proposed by Jane Jacobs. Jacob’s concept is based on providing a natural surveillance system in the public sites, achieved by enabling people to observe and monitor by keeping eyes on the street. By this approach, a possible criminal is discouraged and put in stress by the fact that he is observed by others (Jacob, 1961). Based on Jacobs’ suggestion to deter crime in the city, the idea of central atrium in *Dredd* can be reconsidered in dealing with high crime rates in the neighborhood. The atrium space provides a visual survey area for the inhabitants from all storeys so that the criminal activities can be potentially defeated. But unfortunately, according to the story, the atrium concept could not prevent the Peach Trees from becoming the most criminal neighborhood in its urban sector.

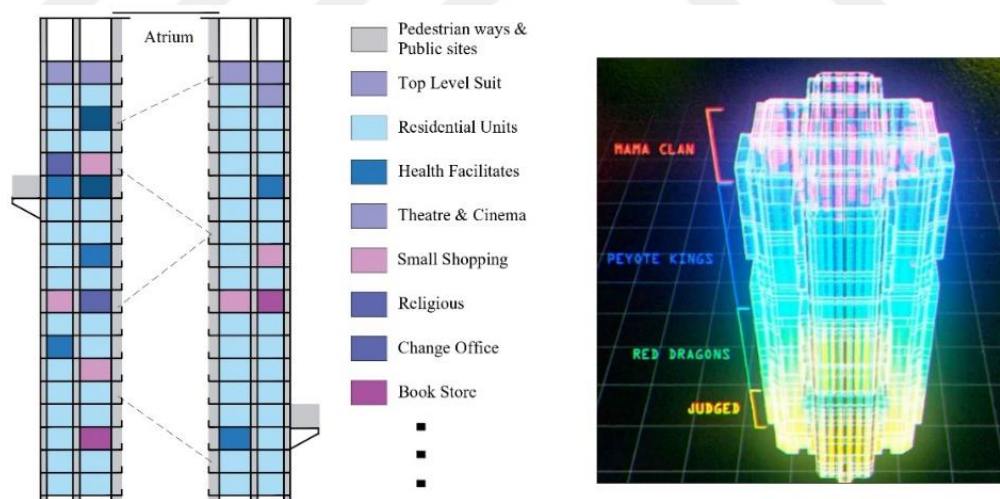


Figure 5.18 : At left, uses in Peach Trees neighborhood (the author). At right, the neighborhood’s visualization in *Dredd* (Travis, 2012, 00:19:04).

The physical elements and urban furniture portrayed in public spaces of Peach Trees neighborhood can be mentioned as (I) illuminated signboards, (II) traces of vandalism (III) wall-mounted lighting fixtures and (IV) seating elements (Figure 5.19). In the film, the physical characteristics of these items indicate that they are overused or misused and require maintenance or replacement.

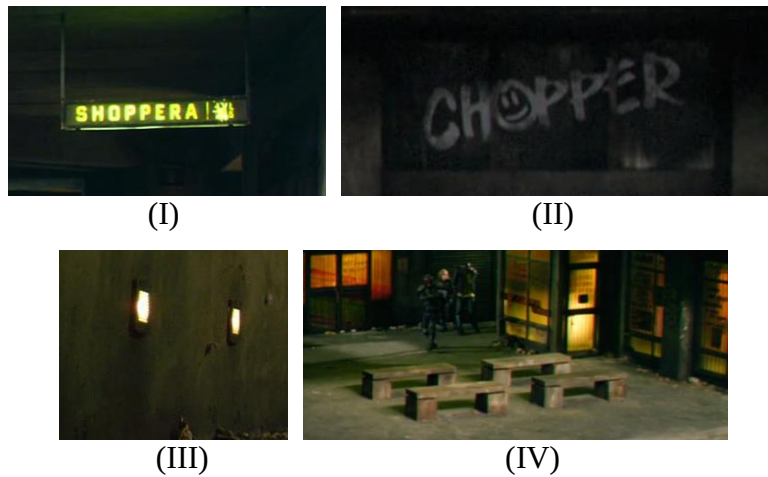


Figure 5.19 : Physical design elements in *Dredd*.

To conclude the readings from *Dredd*, the futuristic urban design setting can be evaluated with urban design strategies such as acupuncture urbanism from the 1970s, the vertical city approach from the 1930s and the natural surveillance system from the 1960s. In the film, these approaches are adapted and blended to suit the context of Mega City One. Urban design characteristics are also explored in public meeting spaces, vehicular roads, public balconies, etc. These features illustrate attempts to address urban challenges such as overpopulation, over pollution, misuse and decay.

5.1.3 Cloud Atlas

Cloud Atlas is another sci-fi film released in 2012. It is comprised of 6 different stories that take place in different years: 1849, 1936, 1973, 2012, 2144 and 2321. Two stories take place in the future relative to the film's release. The far future in the film (2321) takes place on post-apocalyptic Hawaii. In this year, the world is devastated after the *fall* and human civilization has regressed to a prehistorical state. The remnants of humanity move to other planets while the world is a place for tribes of cannibals. Since Hawaii does not provide sufficient information to explore urban design details in the year 2321, this thesis it is focused on the year 2144.

In 2144, the future of Seoul is imagined as Neo Seoul. According to its story, the future city struggles with water level rise. In the planning of Neo Seoul, there are many dam walls designed to protect the city from flood. In some instances, urban development extends to the tops of these dam walls while some city parts are already uninhabitable (Figure 5.20). As the water level continuously rises with the increasing rate of tides, parts of the older city are already submerged. The film suggests that the city has

endured significant disasters caused by changing environmental conditions. The film provides glimpses of both old Seoul and Neo Seoul, allowing for a comparison between the city's historical and futuristic states (Figure 5.21).

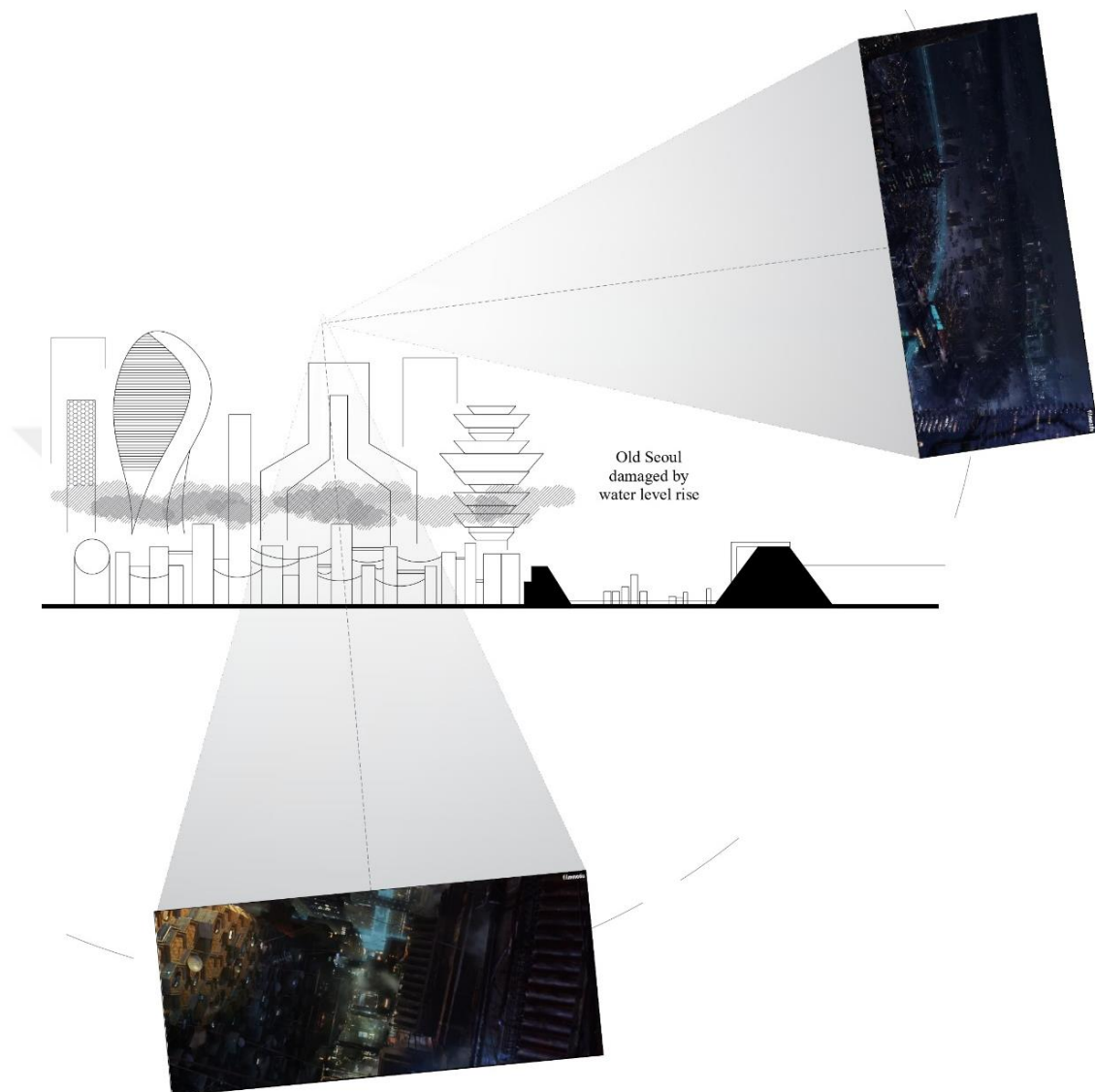


Figure 5.20 : Neo Seoul's cityscape and organization in *Cloud Atlas*.

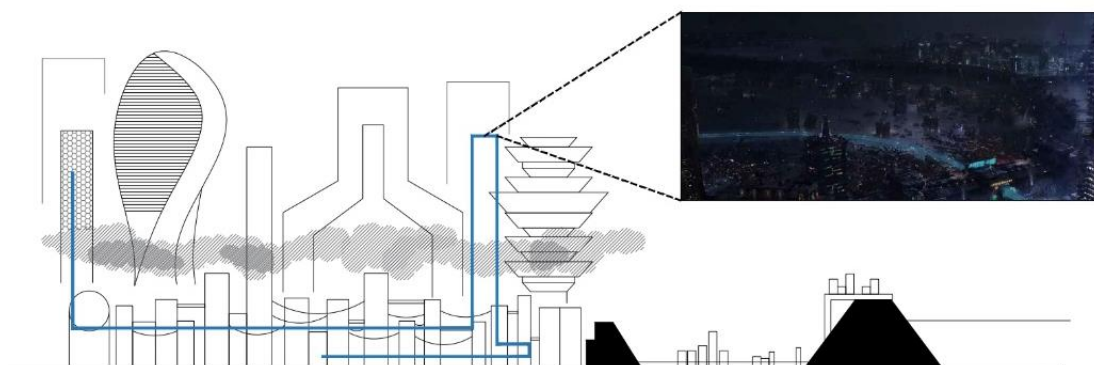


Figure 5.21 : Flow of the story in *Cloud Atlas*'s urban setting.

Neo Seoul is characterized by extra high buildings so tall that the ground level is almost entirely out of sight. Due to fact that the city is threatened by water level rise, the use of ground level is almost abandoned. Urban life is almost totally shifted to the upper city levels which are defined by high rise buildings and connections between them. Unlike the vertical urban structure of New York as depicted in *The Fifth Element* (see Section 5.1.4), Neo Seoul lacks public or open spaces in upper parts of the city. The upper city is defined entirely by freestanding buildings, eliminating the possibility of an urban discourse through public spaces.

The overall cityscape in Neo Seoul is characterized by a composition of both modern and traditional architectural details. For instance, some of the roof details in the city reflecting to traditional Korean roof structures. At the same time, there are numerous futuristic buildings that dominates urban landscape. Another dominant figure in overall urban setting is the transportation lines. The transportation vehicles are portrayed as moving along magnetized neon blue surfaces (Figure 5.22). These neon blue surfaces enable transportation in the city on multi levels without relying on conventional structural systems. The neon pathways allow vehicles to enter and exit buildings without binding to structural constraints (Figure 5.23).

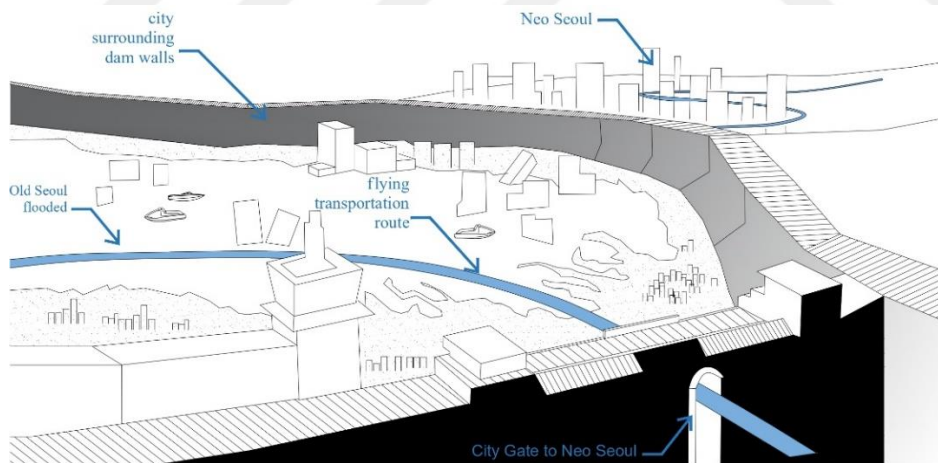


Figure 5.22 : A view of Neo Seoul in *Cloud Atlas* (developed from The Wachowskis and Tykwer, 2012).

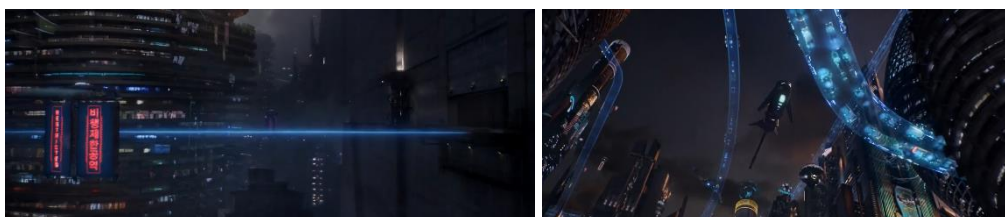


Figure 5.23 : Neon transportation routes in *Cloud Atlas* (The Wachowskis and Tykwer, 2012, 01:35:16 & 01:41:21).

Old Seoul however, is partially submerged. The sites outside the protective dam walls but cleared from the threat of rising water is portrayed as old, decayed and under-maintained. In the film, the old city is attributed with illegal activities. According to the film, old city is where *Unions*, a group of people that defends replicants' rights, is born. It is a refuge space where replicants escaped from the oppressive systems in Neo Seoul. The only public space portrayed in the film is the bazaar area located in the remnants of older Seoul. The bazaar area is characterized by low-height and traditional-style buildings, narrow streets, and an abundance of utility lines, lighting fixtures, advertisements, and signboards (Figure 5.24) .



Figure 5.24 : The bazaar area in Old Seoul (The Wachowskis and Tykwer, 2012, 01:46:58 & 01:48:55).

Referring to the overall story in Seoul 2144, there are adopted themes from other sci-fi films. In *Cloud Atlas*, public is divided into two groups: organic humans and fabricated replicants. In the film, replicants fight for the equal rights, as previously raised in *Blade Runner*. Also, the portrayal of Seoul in a dark atmosphere draws parallels to *Blade Runner*. Besides, the replicants in *Cloud Atlas* consume human flesh unconsciously, as similarly found in *Soylent Green*. In the film, these repeated themes are combined with a city resilient approach.

Environmental concerns in the planning of cities especially grow after facing the consequences of industrialization. There are emerging concepts in the global urban planning agenda that underline the significance of the resilience approach in cities. Inherited from the engineering model, the concept of resilient city refers to both preparedness to the disasters and capacity of urban systems to recover from disasters. The resilient city approach encompasses multiple dimensions, including health, economy, society, strategy, infrastructure and environment (Arup and the Rockefeller Foundation, 2019). Referring to the infrastructural parameters of a resilient city, *Cloud Atlas* provides a case study through its depiction of Neo Seoul considering its development strategies, protection measurements and transportation systems.

5.1.4 Fifth Element

Fifth Element is an action and sci-fi film released in 1997 and takes place in 2214. It portrays the future of South Brooklyn in New York together with some other portrayals of civilizations on distant planets. Although much of the latter half of the film takes place on another planet, scenes set in New York provide a rich basis to explore its urban design characteristics.

The future New York is depicted as an ever-expanding urban environment on surrounding land which was previously part of a sea bed. Unlike the rising sea levels seen in *Cloud Atlas*, the sea level falls dramatically in *Fifth Element* and old sea bed is transformed into an urbanized land for addressing the city's space requirements. The never-ending state of urban design in the film can be explored with the reclaimed lands of urbanization and super-high buildings.

In addition to city's expansion in the ground level by reclaiming old sea beds, New York is also portrayed as vertically expanding to the sky with super-high buildings (Figure 5.25). The dominant figures of extremely high buildings in the futuristic urban settings is a very common feature in sci-fi films as previously discussed for *Equilibrium*, *Dredd* and *Cloud Atlas*. However, findings from *Fifth Element* are distinguishable by depicting the city's vertical growth as an evolutionary and layered process. As new spaces for public, residential, commercial and recreational purposes are required in urban fabric, they are constructed on top of older buildings in the future New York (Figure 5.26). Each addition leveled on top of existing buildings is distinguishable by its façade characteristics such as texture, material and color.

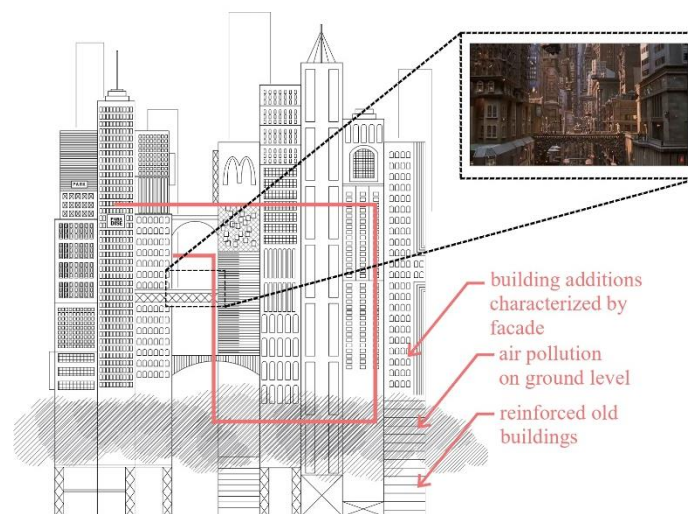


Figure 5.25 : Flow of the story in *Fifth Element's* urban setting.

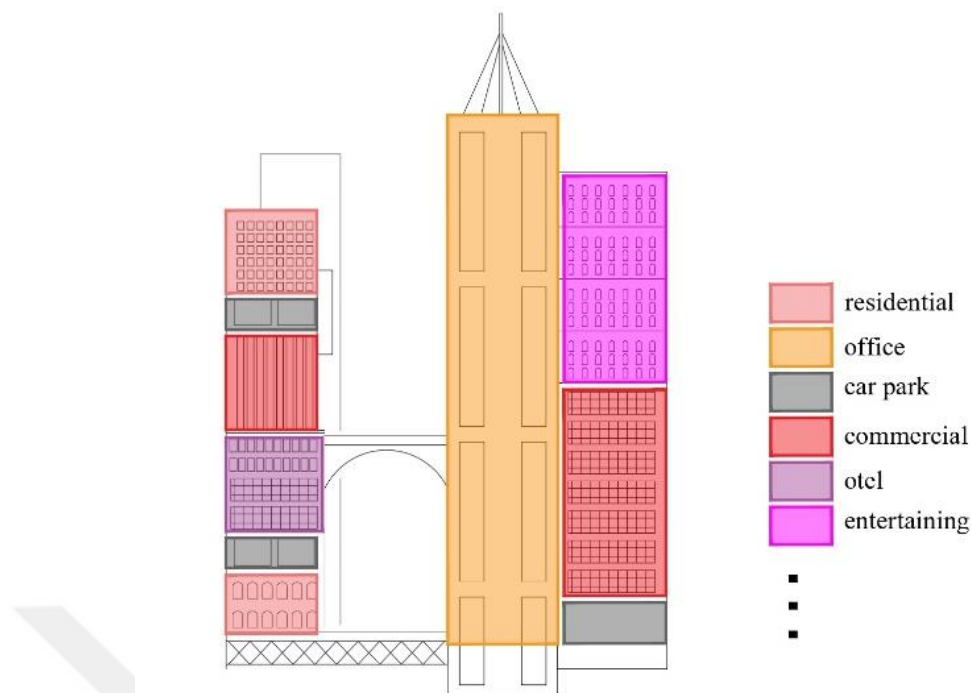


Figure 5.26 : Different building uses in *Fifth Element*.

These new city layers maintain a complementary relationship with the older building elements. Different from previous portrayals explored in this section, the future New York City in *Fifth Element* is built upon the older city in a conservative approach. The levels added to the building over time are respective to the overall appearance of the building. There is a continuous eclectic state of development in *Fifth Element*, that can be discussed with Rowe and Koetter's concept of Collage City. There are also other buildings that appear as built from scratch rather than built over time, characterized by the façade characteristics.

According to the Collage City principle developed at the end of the 1970s, the different elements, characteristics and patterns of design are accumulated in the city over time based on collage technique from visual arts. The approach allows the layering of the city to deal with changing space requirements. Instead of building from scratch as seen mostly in the totalitarian approach, the Collage City utilizes fragments of design in creating a bigger urban image (Holmik and Muminovic, 2023). It accepts pluralism as a precious setting for cities and supports the potential spaces that may appear by coexisting older and new urban patterns. The portrayal of New York City in *Fifth Element* corresponds to the definition of Collage City, considering urban layers developed with consecutive and conservative manners. Table 5.3 provides insights about how the concept is adopted in the film.

Table 5.3 : The comparison between the collage city concept and its adaptation in *Fifth Element*.

Concept of Collage City (Rowe and Koetter, 1978; Holmnik and Muminovic, 2023)	Adaptation of Collage City Concept in <i>Fifth Element</i>
 Cityscape collage by Andy Burgess (Url-12)	 New York City from <i>Fifth Element</i> (Besson, 1997, 00:30:26)
1 Instead of complete redesign, it is based on existing city with new layers 2 Both existing and new layers of the city is utilized as functional areas 3 It is based on superposition of spaces that create new discourses of space and design 4 It is a design theory of abstract spaces 5 The city is based on combination of plural approaches in design	New layers are constructed on top of existing buildings Older layers of the city are uninhabitable due to over pollution. There are public spaces designed upper level of buildings to enable pedestrian access to the buildings Rather than an abstract adaption, the collage city approach is applied with spatial references. Plural styles, principles and approaches are maintained in the city

As the urban infrastructure is laid mostly on the old buildings, these building's load carrying systems are supported on ground level by steel bracing systems to address extra weight put on the top buildings. It is shown that intermediate levels of the building are also steel supported from the exterior due to the engineering concerns. The buildings reach so high that the ground level of the buildings is no longer accessible or effectively used. The neglected use of ground level is expressed with garbage and dirt. While approaching the ground from higher levels of the city, there is a foggy climate as a result of severe environmental pollution (Figure 5.27). As previously discussed in *Ready Player One*, over pollution in the future of New York becomes so familiar that inhabitants quit to concentrate on how to solve the problem but instead leave it as it is. In the film, passengers carelessly pass by piles of garbage at a public transport center.

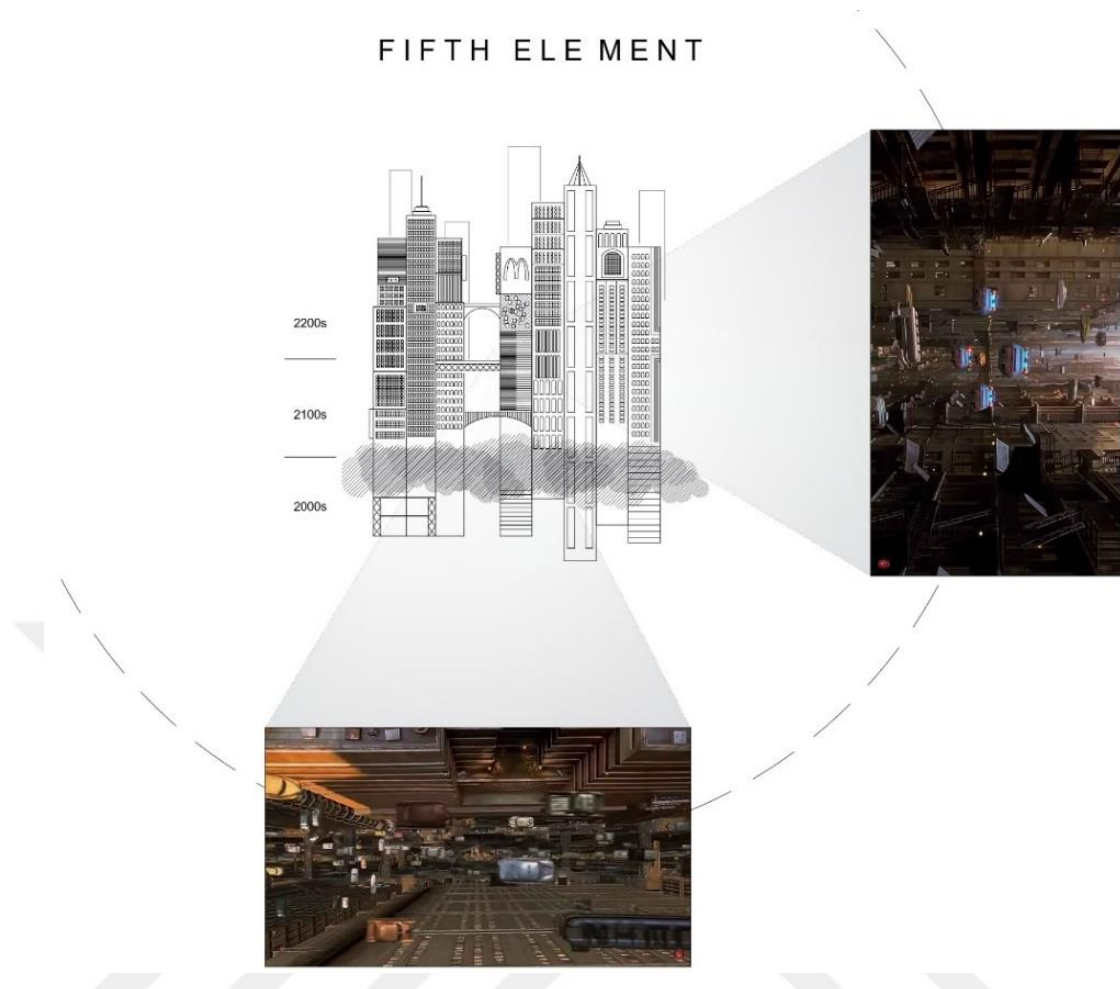


Figure 5.27 : New York's cityscape and organization in *Fifth Element*.

As there is no effective use of ground level in *Fifth Element*, the activities that are usually performed on ground level in traditional cities are assigned to the spaces at the upper levels. For instance, street food shops become flying units to deliver the food. Moreover, in order to enable the pedestrian movement in the upper levels of the city, there are numerous bridges constructed between buildings. The buildings are surrounded by side-walking areas that are connected to pedestrian bridges. Further, parking areas are strategically distributed among different levels of the city. Car-receiving pods are placed adjacent to residential units, allowing residents to enter their homes directly with just a few steps after parking their flying vehicles. Different from magnetized neon blue surfaces used for transportation in *Cloud Atlas*, the flying automobiles in *Fifth Element* are unbound by designated routes. Flying automobiles are allowed to move freely between buildings. Also, the vertical circulation between different levels of the city is facilitated by advanced railway systems. These trains are capable of traveling not only horizontally but also vertically along building façades, similar to horizontal vehicular transportation in *Minority Report* (Figure 5.28).



Figure 5.28 : Examples of vertical vehicular transportations. At left, rail system in *Fifth Element* (Besson, 1997, 00:31:29). At right, a roadway in *Minority Report* (Spielberg, 2002, 00:44:13).

In *The Fifth Element*, open spaces within the city are extremely limited since every building plot is developed into superstructures. Even major vehicular access roads are squeezed into narrow streets. Public and open spaces are mainly depicted as small-sized openings adjacent to buildings, providing limited areas for communal activity. The most repeated public spaces depicted in the film are streets, pedestrian pathways, side-walking areas surrounding buildings. The pedestrian sites are equipped with various urban design elements and furniture. To exemplify the most repeated items clocks, sculptures with ornamental details, several advertisements, signboards and lighting fixtures can be noted (Figure 5.29).

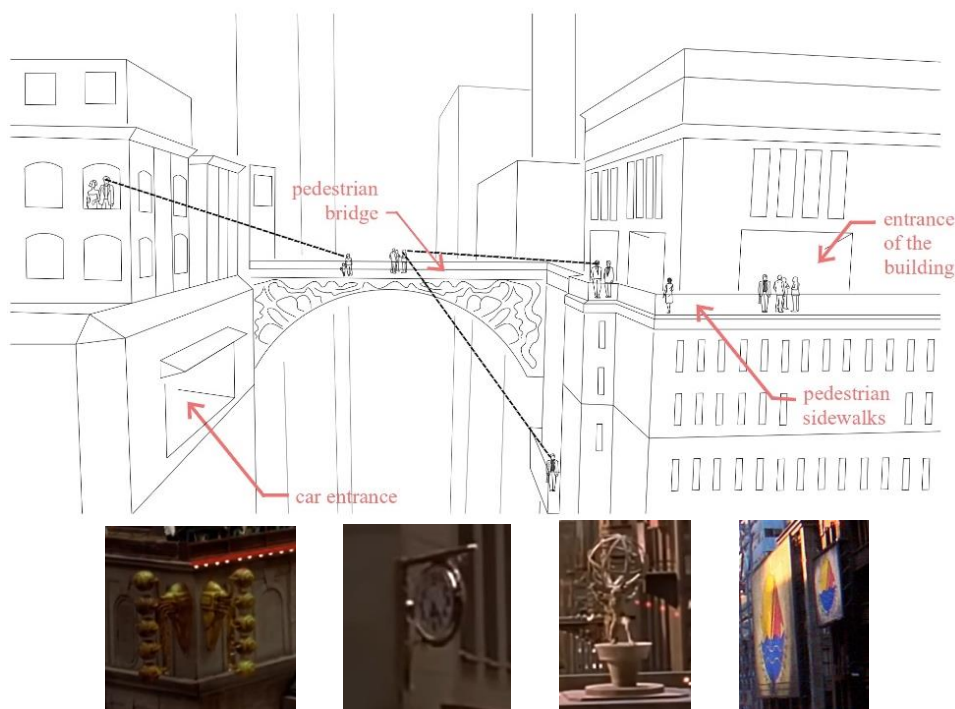


Figure 5.29 : Above, pedestrian sites at upper city levels (developed from Besson, 1997). Below, physical design elements and furniture: (I) ornaments, (II) wall mounted clocks, (III) sculpture, (IV) advertisement board on facade.

5.1.5 Logan's Run

Logan's Run, released in 1976, is set in a futuristic domed city in the year 2274. According to the film's narrative, survivors of the war and over pollution live in a great domed city located in US Oceanside. As its name refers, this future city is visualized under great domes adjoined to each other, completely isolated from the exterior environment. The domed city concept in urban history has been referred to multiple times to visualize an ideal way of living in a controlled environment. The early examples of domed cities are visualized as underwater cities. One of the most known examples of the domed city concept is proposed by Buckminster Fuller in 1960. A 3-kilometer-wide transparent dome is envisioned by Fuller to protect Manhattan from air pollution and adverse weather conditions. In early examples of domed cities, including (I) the dome over Manhattan, (II) dome over Winooski and (III) dome over Siberia, whole city is idealized under a huge singular dome on a flat topography (Lutolli, 2022). However, as advancements in engineering demonstrated the infeasibility of constructing such an enormous single dome, the concept advances to the organization of multiple domes over time. Evaluating the evolution of the concept, *Logan's Run* can be accepted as a precursor of modern applications by adopting the concept with a multi-dome configuration. Constructing a controlled environment under multiple domes was not realized until the beginning of 21st century, while *Logan's Run* visualized the concept in 1970s (Figure 5.30).

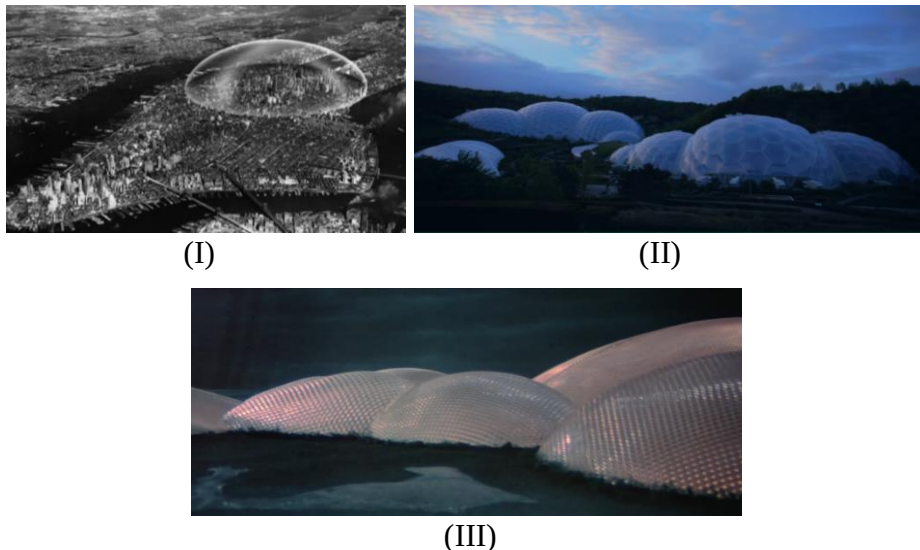


Figure 5.30 : Different domed city concepts: (I) Dome over Manhattan by Fuller in 1960 (Lutolli, 2022), (II) Eden project realized in 2001 (Url-13) and (III) Domed city in *Logan's Run* released in 1976 (Anderson, 1976, 00:01:41).

In *Logan's Run* adaptation of domed city, the main motivation behind creating such a controlled system is not protection from the harsh exterior environment as similarly found in the early domed city examples. Instead, the domes are designed to fulfil the requirements of a central intelligent computer, which governs the city to prevent inhabitants from running and to maintain the balance of the society. In the film, a group of enforcers called *sandmen* are tasked by the central computer to catch runners from the city. The story begins when Logan, one of the sandmen, is assigned to find a secret sanctuary outside the domes. While exiting the city, his journey takes him through the city's underground technical spaces such as aquafarms and ice rooms (Figure 5.31).

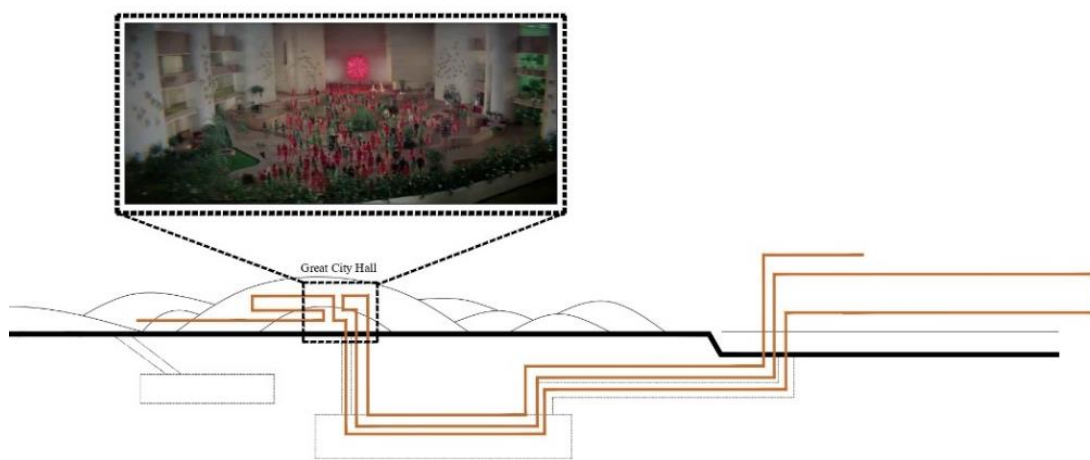


Figure 5.31 : Flow of the story in *Logan's Run* urban setting.

In the film, the city's strategic location near an ocean plays an important role. The urban systems such as electricity are powered by ocean tides, presenting a reliance on renewable energy sources to sustain life balance. Spaces below ground are strategic technical spaces to support the inhabitants living above (Figure 5.32).

At the very beginning of the film, the city is promoted as a utopia. The urban systems in this utopia are designed to keep everything basic, reasonable, and perfect while maintaining the balance of the life. However, this utopian city comes with oppression: there are numerous rules for inhabitants to obey as placed by the central intelligent computer. For instance, anyone who ages more than age of 30 is announced for death to regulate the population. For anyone who reaches to age of 30, a public celebration named Carrousel is set. Inhabitants of this city believe that Carrousel will revive them into their next life. Running from the Carrousel is not allowed and those who attempt to run are sentenced to death by the sandmen.

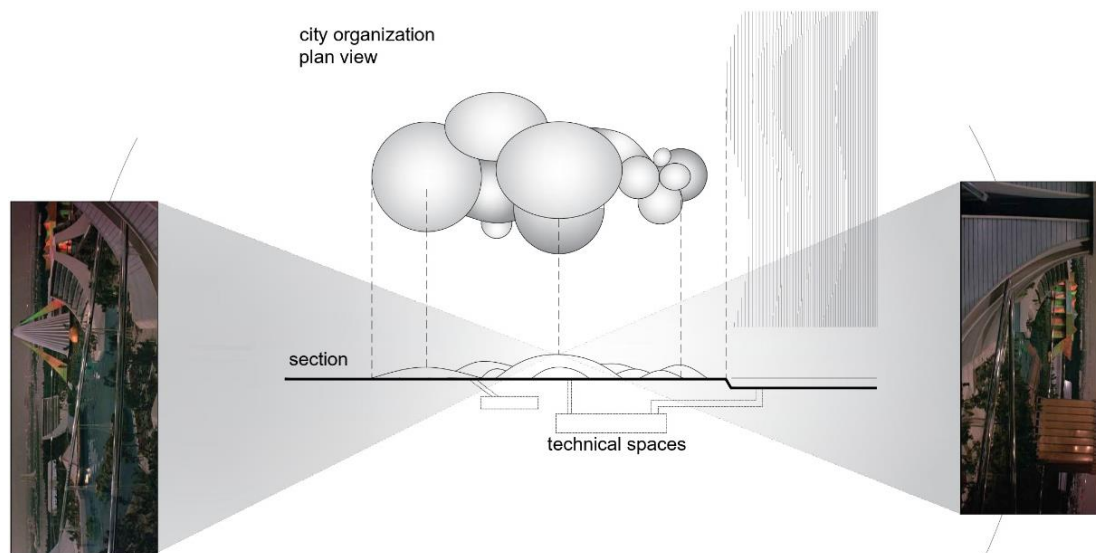


Figure 5.32 : Domed city's organization in *Logan's Run*.

The portrayal of the Carrousel ceremony in *Logan's Run* draws on the belief in life after death, a concept that dates back to ancient times. In the future domed city, this ceremony is performed in an amphitheater, a form deeply rooted in ancient architecture. (Figure 5.33). Every day, inhabitants cheerfully attend the public ceremony at the amphitheater to witness the renewal (death) of inhabitants. The amphitheater in the film has a flat ceiling, different from its classical design, reflecting the constraints of the fully enclosed urban environment under domes.



Figure 5.33 : At left, the amphitheater where Carrousel is celebrated in *Logan's Run* (Anderson, 1976, 00:06:02). At right, schematic representation (the author).

In the film, the amphitheater is accessible only by passing through the great city hall (Figure 5.34). The great city hall serves as a central hub for inhabitants before attending the Carrousel and as a transitional space for daily movement within the city. It is designed as a gallery space that provides a visual interaction across different levels. The vertical movement between these levels is facilitated by moving stairs. The ground of the great city hall is arranged on different levels, leading inhabitants to toward the amphitheater. These levels are interconnected by public staircases and retaining walls.

The aesthetic of the great hall is striking, utilizing carefully chosen design elements and furniture to create an attractive atmosphere: plantation in pots, reflective surfaces and free-standing sculptures (Figure 5.35). On the walls, there are squared-sized frames that are assumed to serve for acoustical or air conditioning purposes, arranged in an aesthetically pleasing grid pattern. There are purposefully chosen items such as sculptures, reminding the Carrousel to the inhabitants. Also, a water element is placed at the great city hall, even though it is not paid attention to in the story.

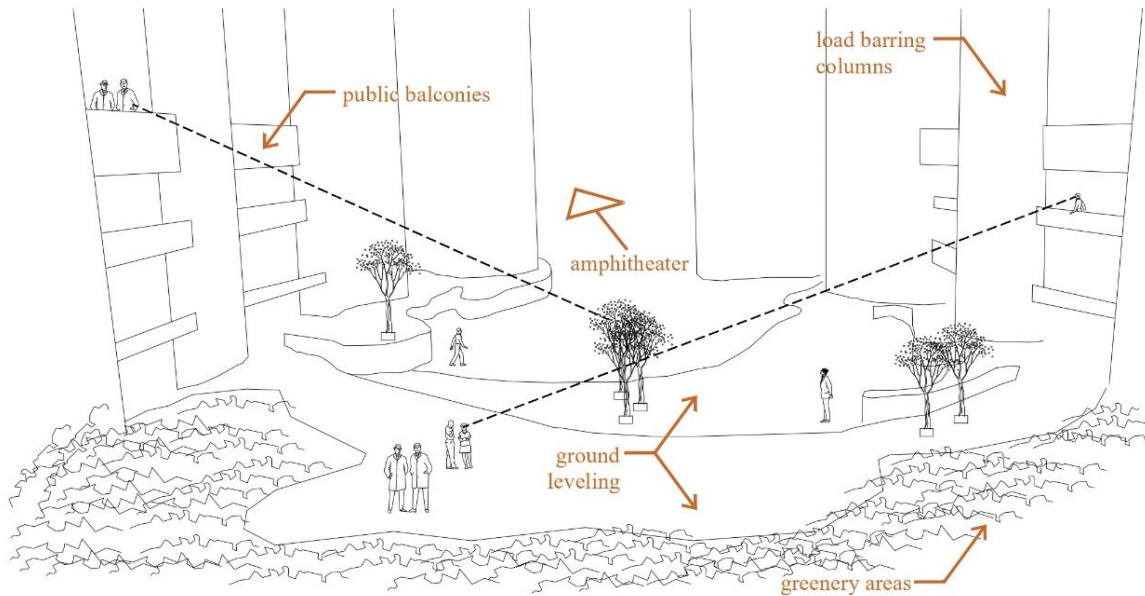


Figure 5.34 : A view of the great city hall in *Logan's Run*.

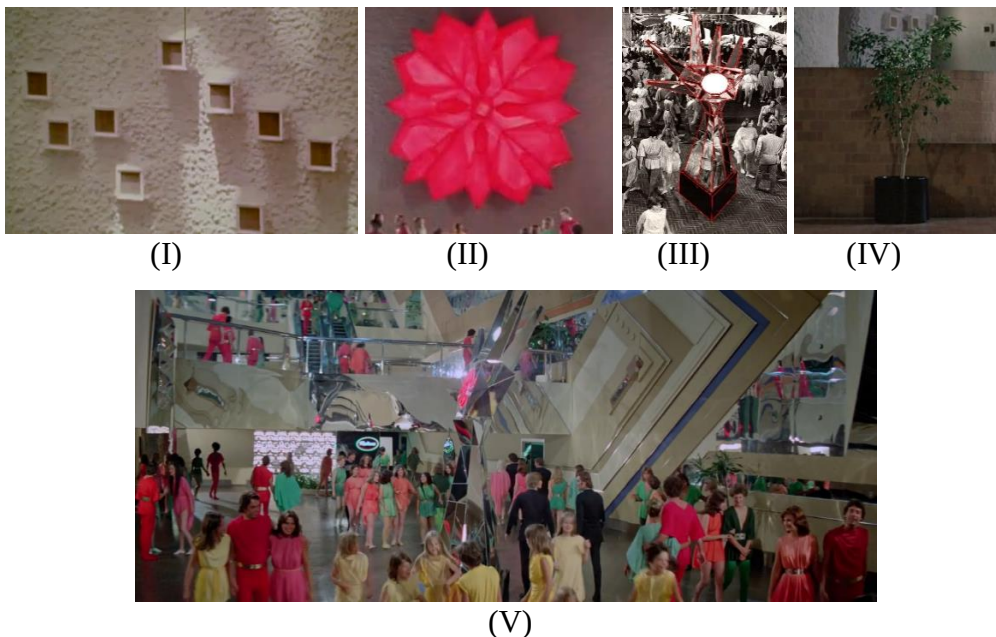


Figure 5.35 : Design elements in *Logan's Run*: (I) squared sized frames on the walls, sculptures as (II) wall mounted and (III) free standing, (IV) plants in pots and (V) reflecting surfaces.

In *Logan's Run*, open public spaces are characterized by homogeneously arranged buildings designed in various forms including pyramids. The urban landscape is dominated by water and green surfaces. The ground level is almost entirely dedicated to pedestrian movement (Figure 5.36). Pedestrian areas are well-equipped with landscaping elements. Vehicular access in the city is provided through transparent horizontal tubes elevated above the ground level (Figure 5.37). These transportation tubes are designed to enter and exit buildings, where they drop off and pick up passengers at the mid-levels of the buildings.

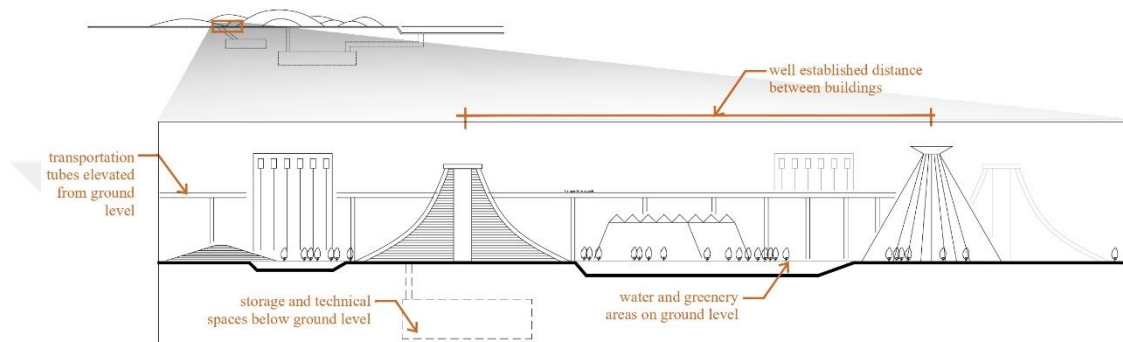


Figure 5.36 : Cityscape in *Logan's Run*.



Figure 5.37 : Pedestrian ways on ground level and vehicular access in transparent tubes (Anderson, 1976, 00:43:38).

In *Logan's Run*, the overall urban design setting is based on a portrayal of utopia with many underlying themes such as belief in life after death, acceptance of death as renewal and controlling the urban development under great domes. Besides, the city's overall aesthetic features are striking, so inhabitants have no interest in whether there is an outside world. However, at the end of the film, the city is destroyed and all inhabitants have no choice but to run from the city. *Logan's Run* is another film investigated based on the fall of the city at the end of the story in addition to *Libria* which was explored in Section 5.1.1.

5.1.6 Aeon Flux

The last sci-fi film explored in this chapter is *Aeon Flux*, which was released in 2005. The film's narration is based on a dystopian scenario where 99 percent of the world's population is wiped out after an industrial disease in 2011. According to its story, scientists could find a cure for this global virus, but as a side effect of medication, humanity has become infertile. The survivors of the disease are cloned over and over by scientists in the future city of Bregna to maintain the human life on Earth. Bregna is portrayed as built from scratch and as the last city on Earth in 2415 with 5 million inhabitants cloned as the 7th generation. The city is ruled by a council of scientists under the dictatorship of Trevor Goodchild. In the flow of the story, it is hard to locate urban design characteristics within the urban fabric since urban spaces are introduced in fragments, disconnected from the overall city image (Figure 5.38).

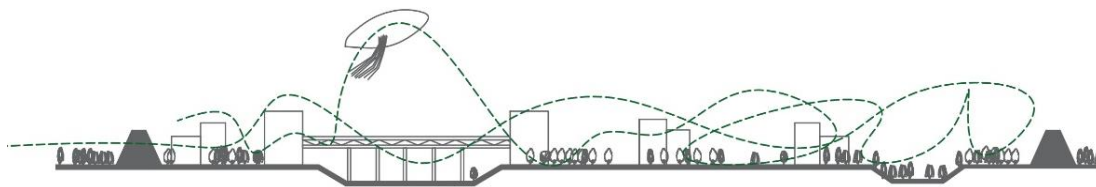


Figure 5.38 : Flow of the story in *Aeon Flux*'s urban setting.

Bregna is portrayed as a future city that is built from scratch, as seen in Libria (*Equilibrium*) and Domed City (*Logan's Run*) but in contrast to Mega City One (*Dredd*), Neo Tokyo (*Cloud Atlas*) and New York (*Fifth Element*). It is an experimental city designed to protect humanity from wild nature until the infertility problem is resolved in the city. Bregna city has an elliptical form and separated from the rest of the world by great walls. It is a self-sufficient city since outside the walls there is no civilization according to its story.

Bregna City is a state-of-the-art with its landscape design and overall urban aesthetics reminding the City Beautiful Movement. Features from City Beautiful movement, such as geometric layouts, and broad boulevards with sweeping views to create a social harmony in the built environment are also evident in Bregna city. Moreover, Bregna's landscape is characterized by homogeneously designed green and water surfaces. Water surfaces are arranged in different scales on the ground level and rooftops of the buildings, dominating the cityscape. Considering the city's depiction as a self-sufficient city and the city's overall design features, the film's background can be

explored through Ebenezer Howard's Garden City approach (Table 5.4). Howard's concept of Garden Cities is based on creating self-sustaining neighborhood units within a livable urban environment (Howard, 2003). The adaptation of the concept in the film is also based on the same principle. However, there are some exceptional differences between the original concept and its adaptation. For instance, in Bregna city there are no roadways and all of the city is pedestrian-oriented. In fact, there is not even a single vehicle seen in the film, except for a public metro and memorial airship. Further, the water surfaces in Bregna homogenously dominate the landscape with green surfaces (Figure 5.39), while there is no scheme for water surfaces in the Howard's concept. Howard's Garden City Concept is characterized by controlling and limiting urban population with green belts, while in Bregna, walls control the urban growth. A detailed exploration of the film adaptation of Garden City Concept is given in Table 5.4.

Table 5.4 : The comparison between the garden city concept and its adaptation in *Aeon Flux*.

	Howard's Garden City Concept (Howard, 2003)	Adaptation of Garden City Concept in <i>Aeon Flux</i>
		
	Aerial view of Letchworth Garden City (Url-14)	Aerial view of Bregna city in <i>Aeon Flux</i> (Kusama, 2005, 00:03:10)
1	Based on creating livable urban environment	The quality of life is increased by various urban infrastructure
2	Self-sustaining neighborhood units with 30 thousand inhabitants	Bregna is a self-sustaining city with 5 million inhabitants
3	City outer ring divided for agriculture lands	Outer land of Bregna is wild nature
4	Limiting the possible expansion of the city to outside agricultural lands	Bregna is limited by great walls which determine the contour of civilization
5	Cities in small size connected to greater system	Bregna is the last city on earth; so there is no cities in a network.

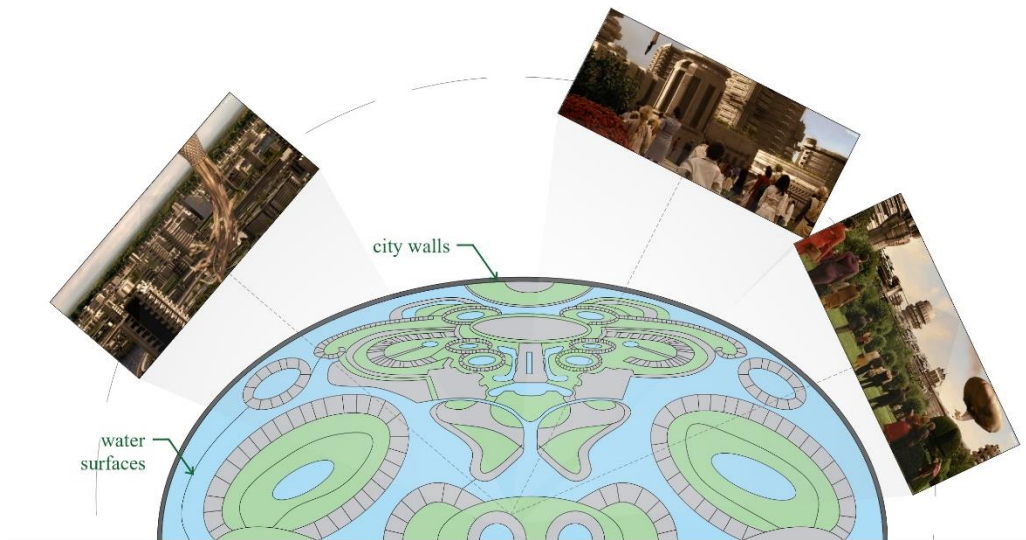


Figure 5.39 : Bregna's cityscape and organization in *Aeon Flux*.

The pedestrian-friendly city of Bregna is located on a relatively flat topography but the land is intervened at some locations to create sloping sites that offer creative solutions to the terrain. The urban green terraces where a selective use of green and water elements designed, are one of the focal points in urban design (Figure 5.40). Other pedestrian-friendly features in the city are pedestrian ways, ramps and bridges placed over water surfaces to provide access to various public spaces (Figure 5.41). Some aesthetical elements in the urban spaces are sculptures and water fountains arranged with complementary to the overall urban character (Figure 5.42). In urban design elements from building facades to urban furniture, there is explicit use of round and smooth edges. According to Rocha, the film places elements from Renaissance, Baroque and Rococo movements into a futuristic urban setting and the use of urban elements reminding past architectural movements is an uncommon pattern in most sci-fi films (2013). Blending the references from the past into a futuristic representation of the city is one of the accomplishments of the film.

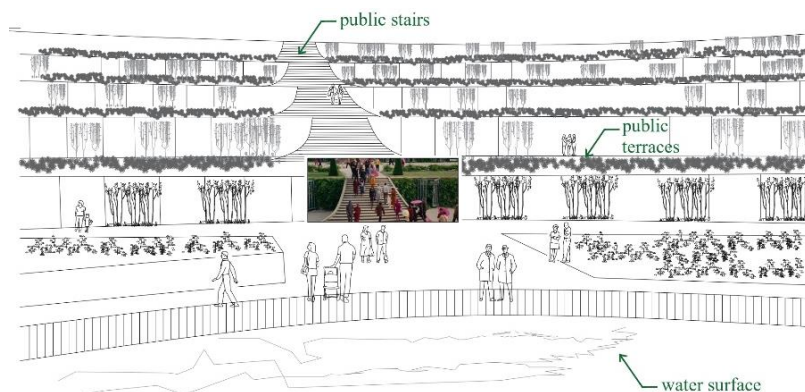


Figure 5.40 : Pedestrian green terraces in Bregna (developed from Kusama, 2005).

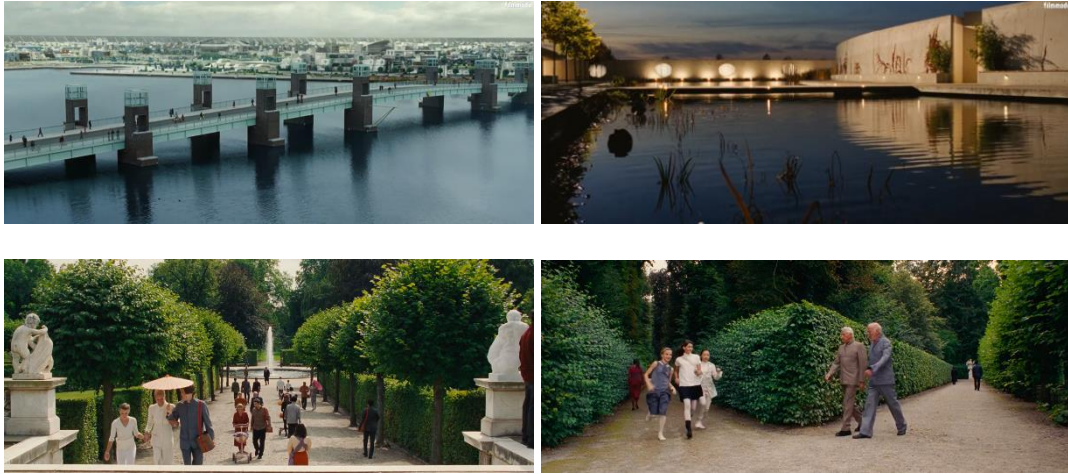


Figure 5.41 : Pedestrian ways and bridges in Bregna (Kusama, 2005, 01:04:39, 00:52:24, 00:02:24 and 00:02:55).

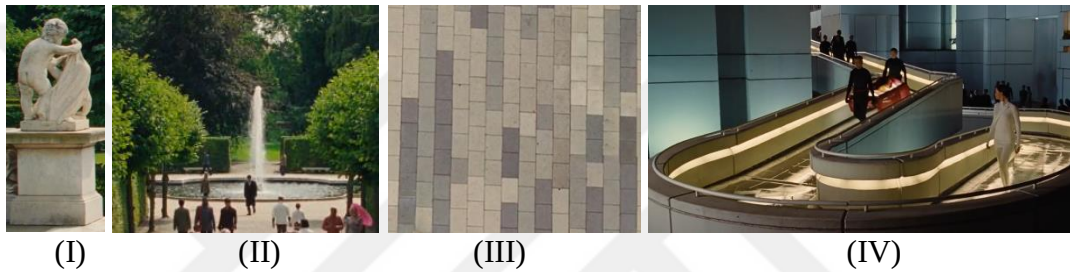


Figure 5.42 : Urban design elements in Bregna: (I) sculptures, (II) water fountain, (III) stone flooring, and (IV) ramps.

Unlike other cities explored in this chapter, Bregna's cityscape is characterized by low and medium-height buildings. The buildings are characterized by monumental character and human scale. These buildings lack ornaments and smooth edges and are built from concrete. The spaces between buildings are wide enough to place various landscaping elements (Figure 5.43). In this city, the urban aesthetic is almost derived from landscaping elements, not from the buildings, which are examples of brutalist architecture. *Logan's Run* portrays a purposefully created urban design setting to provide quality of life for its inhabitants with several urban design elements behind great city walls.

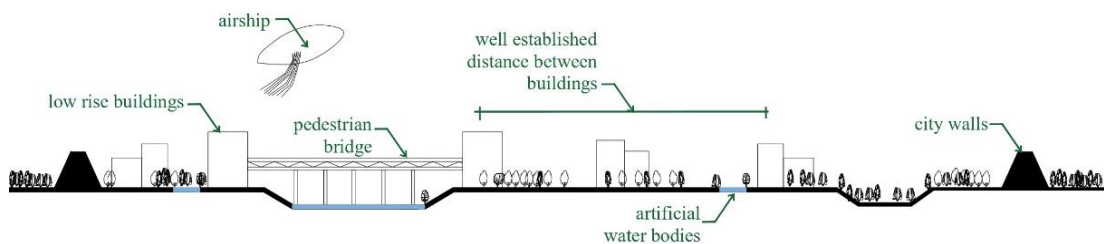


Figure 5.43 : Bregna's cityscape in *Aeon Flux*.

5.2 Chapter Evaluation

This chapter explores (I) *how* urban design characteristics are conveyed and (II) *which* urban elements are portrayed in the selected 6 sci-fi films. In exploration of supplementary aspects from cinematic spaces, average shot length (ASL) and the proportion of scenes that portray urban design characteristics are discussed. It is concluded that 3 films, *Equilibrium*, *Dredd* and *Logan's Run*, portray urban design characteristics with longer scenes, while 3 films, *Cloud Atlas*, *Fifth Element* and *Aeon Flux*, are characterized by shorter scenes of futuristic urban settings compared to ASL. Moreover, it is revealed that *Dredd* has the highest proportion of scenes that depict futuristic urban design characteristics in the film. The observer (audience) can review the cinematic space and comprehend the futuristic image more in terms of duration. Since this thesis aims only to evaluate statistical outcomes to be combined with qualitative aspects, they can be noted to be studied in more detail in further studies.

While exploring *which* urban design characteristics are conveyed in the selected 6 films, each film is decoded independently. It is studied how urban design concepts, movements and approaches are adapted into the cinematic spaces. Following concepts/projects/approaches are discussed in the cinematic spaces:

1. Totalitarian Architecture
2. Natural Surveillance System proposed by Jane Jacobs
3. Acupuncture Urbanism developed by Sola Morales
4. Radiant City Concept developed by Le Corbusier
5. Resilient City Concept
6. Collage City Concept proposed by Rowe and Koetter,
7. Domed City Concept proposed by Buckminster Fuller,
8. City Beautiful Movement
9. Garden City Movement by Ebenezer Howard
10. Brutalist Architecture

Moreover, period in which these discussed concepts were active are compared with the release years of the films (Figure 5.44). All concepts adapted into the cinematic space are revealed as existing before the film's release. Some concepts referred in the films end long before the film is released. Although the films are based on earlier design concepts, their adaptation reveals some original clues. For instance, the idea of

adjoining multiple domes as seen in *Logan's Run* had not been realized until the 2000s. Or, integrating Howard's concept into a completely pedestrian-friendly city is a distinctive contribution of *Aeon Flux*. Extending the Collage City approach into a case that urban development goes below sea level and reconsidering the eclectic state of the city with increasing levels of pollution on the ground are another aspect from *Fifth Element*. Moreover, exercise of Jacobs's principle of "eyes on the street" through an atrium space that provides visual interaction between different levels of the most criminal neighborhood in *Dredd* is another detail of unique intervention.

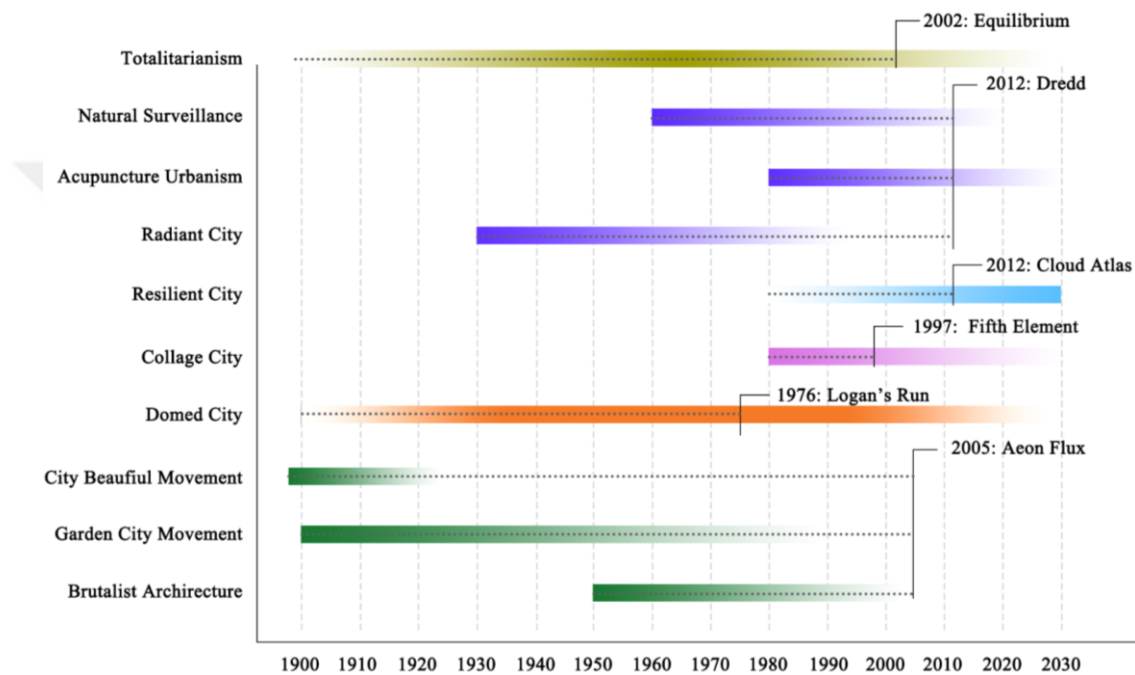


Figure 5.44 : Release of sci-fi films versus the active period of concepts adapted in the films.

In this chapter, the futuristic urban settings are decoded scene by scene to reveal the characteristics of urban design. Images of the futuristic cities in the films are explored with cinemetric drawings. Relying on Lynch's the image of city elements, clues of squares, central meeting areas, city centers, streets, pathways, roads, transportation lines, site characteristics, buildings, entrances, facades, man-made structures, urban furniture and activities in the urban areas are investigated. Table 5.5 summarizes the types of city elements extracted from cinematic spaces and supplementary aspects such as ASL and the proportion of scenes that portray urban design characteristics. According to Table 5.5, it can be said that 3 films, *Equilibrium*, *Cloud Atlas* and *Fifth Element*, come forward with having the lowest proportion of scenes that portray urban design characteristics and with partial reading of futuristic urban design elements.

Table 5.5 : Urban design concepts and elements extracted from cinematic spaces.

Sci-fi Film	The future year film depicts	City and Major Concept (s)	Relevant Future Urban Design Concepts, Approach & Theory	The proportion of scenes depicting urban design characteristics	Length of Scenes that Convey Urban Design Characteristics ⁵	Squares, central meeting areas and city centers	Streets, pathways, roads and other transportation lines	Urban organization and site characteristics: green areas, residential areas, etc. and topography, elevation	Building exteriors, entrances and facades and other man-made structures	Activities in urban areas
Equilibrium	2072	Libria - An equal dystopian city & totalitarianism	• Totalitarian Architecture	4.24 %	↗	yes	yes	partial	yes	yes
Dredd	2080	Mega City One - A lawful & vertical dystopian city	• Solà-Morales – Acupuncture Urbanism • Le Corbusier - Radiant City • Jane Jacobs – Eyes on the Street	18.92 %	↗	yes	yes	yes	yes	yes
Cloud Atlas	2144	Neo Tokyo - A flood resistant & vertical dystopian city	• Resilient City	3.03 %	↘	no	yes	partial	yes	no
Fifth Element	2214	New York - A Vertical City	• Colin Rowe – Collage City	1.89 %	↘	partial	yes	partial	yes	partial
Logan's Run	2274	Domed City - A balanced utopian city	• Buckminster Fuller - Dome over Manhattan	15.27 %	↗	yes	yes	yes	yes	yes
Aeon Flux	2415	Bregna - A Garden City	• Open spaces: Ebenezer Howard – Garden City and City Beautiful • Buildings: Brutalist Architecture	5.97 %	↘	yes	yes	yes	yes	yes

⁵ “↗” indicates that the scene is longer than the ASL values calculated by scholars while “↘” indicates that the scene is shorter than the ASL values calculated by scholars.

It can be noted for further studies that exploring the length of scenes in seconds, considering the proportions of certain scenes in the film, or the distribution of scenes along the film is inadequate on its own when considering how the film conveys the futuristic elements. There are several cinematographic features, such as sounds, music, dialogues and so on, that play crucial roles in the transmission of what is on the screen. Besides, there are many factors that influence the observer's understanding and interpretation of what is projected on the cinema screen. Although this thesis is based on decoding the visual material of selected sci-fi films to explore the insights from cinematic spaces, further studies can focus on other cinematographic feature





6. DISCUSSION AND CONCLUSION

Our existing cities are challenged with many problems that have never been faced before. Many cities are suffering from rapid urbanization, overpopulation, over-pollution, economical issues, inequality, injustice and many problems. These challenges intersect across numerous fields, such as sociology, biology, urban planning, architecture, economy, law and so on. Given that even present drivers in the city are problematic, focusing on the future of our cities becomes increasingly vital. Having said that there several drivers shaping the urban spaces, studying the future has multi-dimensions as well.

To exemplify how the future is described in future studies, Hancock and Bezold suggest a framework. They describe the types of futures as intertwined: *the probable future*, *the plausible future*, and *the possible future* (Figure 6.1). *The probable future* is described as the most likely future that may happen based on analysis of current trends and expectations. These probable futures can be *preferable* and *not preferable*. Studying *the possible future* represents the broadest category as it includes any possible case. This area allows for the exploration of even the most unlikely futures, including those depicted in sci-fi works. Besides, the type of *plausible future* is the intermediate layer between the possible and probable futures. It is a subset of possible futures that makes fair sense in the present condition (1994).

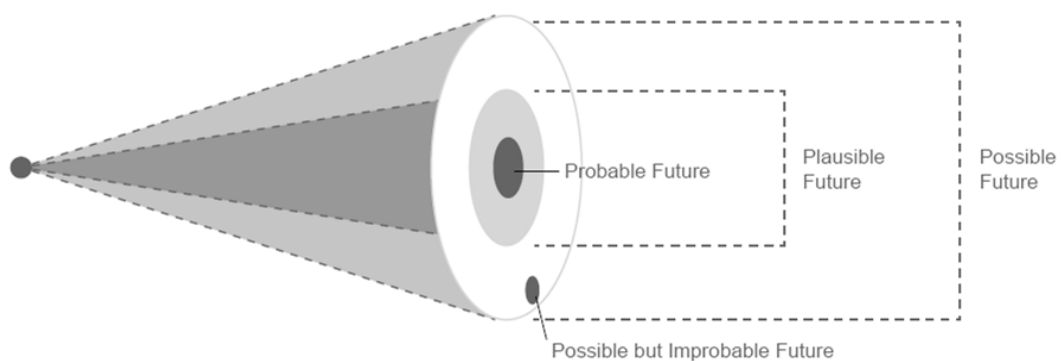


Figure 6.1 : Types of the future (The Foresight Programme, 2016).

To reconsider Hancock and Bezold's framework, the challenging dimension in future studies emerges from where the borders of the probable future, plausible future and

possible futures are drawn. In the contemporary world, the probable future is reshaped by the increasing speed of life, technological developments and high volume of information exchange. As new developments and innovations emerge, what was improbable before turns into a probable case. Once the area determined by probable futures is enlarged by several developments, it pushes the boundaries of the plausible and probable futures outward. For instance, flying cars, which were the plausible future of the last century, have become a part of the probable future of our century. Similarly, what was possible before becomes plausible in this fast-developing world (Figure 6.2). It is critical to note that probable and plausible futures are fed to the extent of the possible futures.

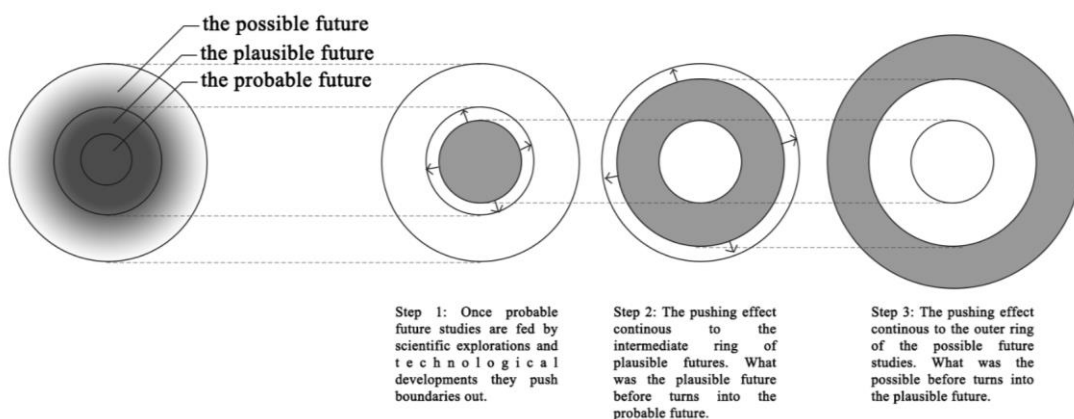


Figure 6.2 : Development in the possible, plausible and probable futures (developed from Hancock & Bezold, 1994; The Foresight Programme, 2016).

Since the probable futures occupy the possible futures in the long run, what lies in the outer ring of the possible future is significant. This indicates that the possible future of today, which is defined majorly by science fiction works, has the potential to become the probable and even preferable future over time. Despite this striking relationship between science fiction and future studies, there is not sufficient work found in the literature that underlines the importance of exploring science fiction works in studying the future of urban design.

Science fiction works included in the outer ring of the possible futures are also shaped by many parameters. These parameters go beyond the ones feeding the probable and plausible futures. The creative impact of technological developments, art movements and socio-economic reforms is higher for the construction of the possible futures compared to the probable futures since the possible future embraces creative and artistic ways of thinking. It is a fact that throughout history, the impact of technological

inventions, scientific explorations and new developments on the artistic way of thinking has been profound and undeniable. These artistic works have generated new forms of art that convert the creative idea. Among these, cinema as a visual art form become one of the most common types of mediums for conveying creative ideas.

Besides, among other types of artworks, cinema is described in a close relationship with the representation of space. Similar to the architectural concerns on space, cinema deals with the space in its cinematic world. The visuals and ideals conveyed through cinema become available to the world audience that has never been before in history. The world audience is attracted/exposed to the cinematic visuals massively. Considering the cinema as a conveyor of creative ideas especially in the science fiction genre and its concerns with the representation of space, it presents an effective tool to study the future of urban design from cinematic spaces.

Rooted in the insufficient works strengthening the link between the future of urban design and science fiction works, and cinema as a massive form of visual art that creatively conveys science fictional settings, this thesis aims to reconsider the cinematic spaces to contemplate the future of urban design. Bringing together the urban design profession and representation of space in the cinematic spaces requires two theoretical sections to discuss how the urban design profession conceptualizes the future of our cities (Chapter 2) and to discuss how to read the cinematic representation of the city in cinema (Chapter 3). In order to achieve its aim of looking at the future of urban design from the cinematic spaces, this thesis proposes an exploration of cinematic spaces from futuristic science fiction films in two stages, comprising five phases. The first stage of studying science fiction films (Chapter 4) reveals which urban design concepts are explored within the cinematic representations of future cities. Based on the discussion held at the end of the first stage, a selected group of sci-fi films are studied with cinemetric drawings at the second stage of investigation (Chapter 5).

The contribution of this thesis has three dimensions. Firstly, Chapter 2 provides an alternative reading for the concepts of the future space/city in urban design. Through several theoretical and practical examples explored in this chapter, the main concepts of the future space are put forward. While discussing these concepts, supporting and opposing ideas are given about why a specific concept would fail in the future.

The second contribution of the thesis is bringing the method of cinematics to urban design studies. According to the literature, cinematics has been used for rediscovering architectural drawing with new potentials that stimulates the movement in design (Hsueh, 2011; McGrath and Gardner, 2007) (Section 3.2.1) or used as a tool for visualizing film data (Salt, 1974; O'Brien, 2018) (Section 3.2.2). In this thesis, decoding the film scene by scene to extract which references are given in the cinematic space is applied with cinematics. Cinematics as a method for exploring cinematic spaces offers to contribute to reconsider cinematic space in urban design perspective to discuss the possible clues for the future of urban design.

The third contribution of the thesis is rediscovering the theoretical links between the selected cinematic representations of the future space/city and the future (and the history) of urban design. Based on the theoretical concepts of the future space explored in Chapter 2, this thesis underscores which design concepts are referred to the most/ the least in the cinematic representation of the future city and how these concepts are adapted uniquely in the cinematic space. The thesis offers an extended version of cinematic spaces combined with the approaches in the urban design theory.

The thesis addresses the research questions formed in Section 1.1 as follows:

Research Question #1: How can the future of cities be designed? Which approaches are taken for designing future cities?

To respond to this question, Chapter 2 introduces the concepts of the future space in urban design. According to these concepts, the approaches taken for designing future cities are formed mainly as (1) evaluating *the time* as a continuum of the past, present and future and approaching the future cities rooted in the past knowledge (Section 2.2.1), (2) evaluating *the space* as a main factor in the design of the future cities either by extending the urban space into new surrounding land uninterruptedly resulting a never-ending urban design setting or concentrating on the existing space for the changing requirements of the future cities with temporary urban design settings (Section 2.2.2), and (3) evaluating the effect of *political* actors and motifs in the form of future space and in the representation of the future space (Section 2.2.3).

It is concluded that none of these concepts are ideal conceptualizing of the future space since each of them somehow misses an important point. For instance, looking at past experiences for the construction of the future idea is problematic about the description

of the past and tradition in the first place (Section 2.2.1.1). Or, using computer programs that use past knowledge as an input and obtain the future projects as an output lacks social aspects in the design process (Sandoval as cited in Jacobs, 2016) (Section 2.2.1.2). Moreover, dealing with ambiguous future cases by creating never-ending urban design proposals lacks environmental and engineering concerns in the long run (Section 2.2.2.1). Evaluating the temporary urban designs as a solution for the rapidly changing dynamics contrasts with expecting a permanent future solution (Turku, Kyrönviita, Jokinen and Jokinen, 2023, p.2) (Section 2.2.2.2).

Research Question #2: *Can cinematic spaces be used as a tool for the design of future cities?*

To address this question, method of cinematics should be mentioned. In Section 3.2.1, an evolution from the dynamic representation of the cinematic space into the static representation of architectural space is presented. McGrath and Gardner (2007) explore new possibilities for the representation of space that traditional architectural drawing is missing. They look for ways of incorporating the cinematic space into the architectural space. They introduce cinematics as an advanced method of architectural drawing that includes the cinematic representation of space as well.

Reconsidering McGrath and Gardner's initiative for new discourses of space representation (cinematics), this thesis combines it with studying the future of urban design. In Chapter 4 and Chapter 5, based on the tense relationship between the cinematic representation of futuristic cities and the professional approaches in envisioning the future of our cities, various films are *instrumentalized* for the new discourses of studying the future of urban design. The attempt for the instrumentalization of cinematic spaces is concluded with various thematic drawings. These drawings, generated from exploring the films scene by scene have made evident what was previously invisible/hidden. Cinematics have enabled to elevate *science fictional settings* into *design fictional settings*.

Research Question #3: *Is the future of our cities directed/affected by the futuristic city visions conveyed through films?*

It is necessary to think multi-dimensionally when addressing this question. Firstly, films portray several visuals produced massively and these visuals are also consumed massively by the audience. The economic share of film viewing activities goes beyond

control, especially due to the introduction of the new streaming platforms that enable viewing a film anywhere we are. As a result of increasing film streaming opportunities, Chapter 3 discusses how the audience is increasingly attracted to the places viewed in films as cine-tourists. Before discussing if the audience is affected by the futuristic visions in the films, it is a fact that the audience may be attracted to the spaces conveyed through films and would like to be physically involved in these spaces.

Also, Chapter 4 and Chapter 5 reveal that most of the cinematic representations of futuristic cities are inspired by the existing cities. For instance, according to Rocha (2013), Bregna City in *Aeon Flux* is inspired by Brazil and according to Yuen (2007), Neo Port City in *Ghost in the Shell* is inspired by Hong Kong. The most inspirational city in the film pool appears as New York, as it draws inspiration for *Metropolis*, *Just Imagine*, *Things to Come* and many other films. So, does this mean New York is the most futuristic city ever, as it draws inspiration for many futuristic films? The answer can be yes, no or neither; but it is challenging to ask whether the cinematic representation of the futuristic cities, formerly inspired by the existing cities, is creating new inspiration/affection for the future of urban design. It is bizarre to discuss a case where the future of our cities is affected/directed by futuristic representations in the films while many of futuristic urban visions in the films are generated initially from the existing cities. It can alternatively be stated that the futuristic representations of cities in the cinematic spaces are linked to the existing cities and the future of cities is linked to their futuristic representations in the films.

On the other hand, according to another example discussed in Chapter 3, Los Angeles is expected to be similar to its depiction in *Blade Runner* by three out of five urban planners (Kitchin and Kneale as cited in Klein, 2001, p.25). This citation is essential considering by whom this expectation is formed: the urban planners. They are not ordinary people but urban planners capable of evaluating professionally and technically what they view. Even when urban planners are noted as affected by the cinematic representation of futuristic cities, we can assume that *anybody* can be affected in the real world. In this thesis, the methodology does not cover how much this affection appears or the psychological impact of the futuristic images on the audience, yet these questions can be noted for further studies.

Besides, another point needs to be highlighted while discussing the possible effects of the futuristic city visuals on the future of urban design. The film pool investigated in

this thesis comprises 70 sci-fi films and the United States of America is the country of origin for 60 sci-fi films. As indicated in Section 2.2.3, who generates futuristic urban visuals is important for politics of representing future envisions. The audience who reviews these selected 70 films is repeatedly exposed to the fall and rise of future American cities and the American way of living. It can be noted for further studies to reconsider how futuristic urban settings change in the films among different countries.

Research Question #4: *Which references can be taken into the future of urban design from cinematic spaces? How can cinematic spaces be explored for the future urban design practice?*

Based on decoding of the selected 6 sci-fi films *Equilibrium*, *Dredd*, *Cloud Atlas*, *Fifth Element*, *Logan's Run* and *Aeon Flux* in Chapter 5, several urban design clues are extracted to contemplate the future of urban design. According to their rules of cinematic worlds, films refer to various urban design concepts, methods and movements. It is concluded that rather than revealing a design concept from scratch, these films adapt an existing concept and blend it with the rules of their cinematic world: (I) *Equilibrium* combines a totalitarian city regime with brutalist building designs. (II) *Dredd* adapts Jacob's Natural Surveillance System in a unique way and combines it with acupunctural urbanism and radiant city approaches (III) *Cloud Atlas* is based on Resilient city approach, while (IV) *Fifth Element* adapts Collage City approach. (V) *Logan's Run* is another adaptation of a domed city. (VI) *Aeon Flux* adapts and combines City Beautiful, Garden City and Brutalist Architecture Movements.

Through an instrumental use of cinematic spaces, this thesis focuses on how clues of urban design are portrayed in the cinematic spaces in addition to what these clues are. The urban design clues and characteristics extracted from cinematic spaces explored in Chapter 5 can be itemized as follows:

- *Squares, Central Meeting Areas and City Centers:*

In *Equilibrium*, although the city does not respond to the human scale in scenes depicting the city from a wide angle, selected scenes showing squares and meeting areas indicate respect for the human scale in design. In the film, there are openings in the urban fabric devoted to gathering inhabitants while the city ruler has the speech over them. In *Dredd*, on the other hand, the city is

characterized by an interrupted concrete land. Public spaces appear at the entrance of the superblocks where there is a high volume of pedestrians entering and exiting the superblock. Other public sites for meetings are distributed along the vertical superblock but these areas are not open to the air.

The representations of squares, meeting areas and public centers in *Fifth Element* indicate that the use of ground level is almost totally lost. In the film, small-scale open spaces and side-walking areas are designed in upper levels of the city but these spaces are usually trans-passed for entering and exiting buildings. There are no sufficient public open spaces for gathering high volume of inhabitants. There are no squares or meeting areas demonstrated in *Cloud Atlas*.

Since urban design settings in *Logan's Run* and *Aeon Flux* are generally characterized by pedestrian-friendly environments, there are several representations of squares, meeting areas and public centers. In *Logan's Run*, all inhabitants gather in the amphitheater daily to celebrate the Carrousel. Also, the great city hall in *Logan's Run* is characterized by its respect for human scale and presenting an opportunity to have eye contact with the other levels of the city. Besides, in *Aeon Flux*, open urban spaces are majorly characterized by permeable surfaces. Green and blue landscaping features are blended to create a pedestrian-friendly environment. The films *Logan's Run* and *Aeon Flux*, which take place in the far-future (2274 and beyond), offer more livable and aesthetical urban design settings in contrast to films *Equilibrium*, *Dredd*, *Cloud Atlas* and *Fifth Element*, which take place in the near future.

- *Streets, Pathways, Roads and Other Transportation and Access Lines:*

In *Equilibrium*, elevated railway bridges are depicted as connecting buildings and serving public transport, while cars are shown moving at street level. In contrast, *Logan's Run* represents the ground level dedicated to pedestrian movement, with all vehicular access facilitated through transparent tubes between buildings at intermediate levels. Meanwhile in *Aeon Flux*, no cars are shown. Bregna city in *Aeon Flux* is completely cleared from roadways and other vehicular access lines. Focusing on the pedestrian access ways, *Aeon Flux* represents aesthetic reconfigurations of urban design settings.

On the other hand, *Fifth Element* portrays almost complete chaos in which the flying cars move rapidly in narrow openings between the buildings. There is also a vertical public metro resulted from the city's vertical development with superstructures. Additionally, the car docking pods are placed near the residential units, enabling private access to housing.

Another case drawn from *Dredd* is the vehicular roads constructed on top of older ones where each level of roadway system corresponds to the city development timeline. Palimpsest of the urban fabric can be read through multi-layers of the roadways. Besides, the pedestrian ways in *Dredd* are conveyed as distributed along the different levels of superblocks.

Cloud Atlas, on the other hand, portrays horizontal routes of vehicular access on neon blue highways. These highways are not made of solid structures such as concrete and steel, but instead magnetized fields in the air that the cars get stick to. These highways are free from the engineering constraints resulted from the flooded ground level of the city over time.

Besides, there are no cycling routes in any films, another common point between 6 sci-fi films.

- *City's Organization and Characteristics:*

Urban design settings in *Equilibrium*, *Dredd* and *Aeon Flux* are surrounded by great walls to separate the city from the outside environment. In *Equilibrium*, the city walls separate the older city from the new city, whereas in *Dredd* and *Aeon Flux*, they separate uninhabitable land from the future city. Moreover, the domed city in *Logan's Run* is completely sealed off from the exterior. In *Cloud Atlas*, there are massive retaining walls constructed as flood barriers.

In *Fifth Element*, the city is organized based on land reclaimed from old water bodies. In contrast, in *Cloud Atlas*, the rising water level is the main parameter of the city's organization.

The city is organized with great monumental gates in *Equilibrium*. Based on its story, it is assumed that these monumental gates distinguish authority zones and urban functional areas. In *Logan's Run*, the urban fabric is organized with

great domes adjoined to each other. In *Aeon Flux*, the landscape is characterized by aesthetic factors in design.

- *Buildings, Entrances, Facades, Other Man-made Structures:*

In *Fifth Element*, the building facades are characterized by different functions. Due to the eclectic design supported in the city, reading different uses of the building from its exterior and identifying which parts of the buildings are added over time is achieved. The buildings are characterized by different design approaches. Also, the older buildings are reinforced to improve the load-bearing capacity required by each addition to the building over time. In *Equilibrium*, on the other hand, all buildings are the same from the exterior. It is impossible to identify the building's function, character or time of construction from its exterior.

In *Dredd*, buildings are designed mainly addressing to the functional requirements, not aesthetics. The superblocks are constructed from prefabricated units to address the space requirements in a rapid way. In *Aeon Flux*, the buildings are characterized by order and symmetry similar to what is seen in *Equilibrium*. The features of brutalist architectural designs in *Aeon Flux* contrast with the inviting outdoor settings.

In *Logan's Run*, the buildings are characterized as high-rise, but the spaces between buildings are homogeneously arranged with different landscaping elements. The overall urban setting in the film is balanced and refreshing. Moreover, buildings are shaped in different basic geometric forms, such as pyramids. In *Cloud Atlas*, on the other hand, the basic geometric forms are left behind. The superblocks are designed based on advanced engineering solutions. There are also buildings recalling traditional architectural elements, such as Korean roof structures, blending futuristic design features with cultural references.

- *Public Activities*

Since the urban design settings in the films are living cities in their cinematic worlds, public activities in urban sites can also be explored. Basic activities such as shopping, walking, running, standing and strolling in urban spaces are

common for all 6 sci-fi films investigated. However, *Dredd* also portrays acts of vandalism and sports activities such as basketball playing and skating.

Also, in *Fifth Element*, street food places are converted into flying commercial units. In the film, a flying van approaches to the housing units to deliver the street food in private, rather than public areas. In *Logan's Run*, all city inhabitants gather to celebrate the Carousel in the amphitheater. Distinctively in *Aeon Flux*, inhabitants of different ages are shown as actively engaging with the public sites with pleasure. In *Equilibrium*, on the other hand, public activities are strictly monitored and who disorders the rules are taken by the government agents. Attending the speech of the city ruler and taking the required medicine in public are other public activities portrayed in *Equilibrium*.

To conclude, this thesis emphasis the intersection of urban design, science fiction, and future studies, opening a new perspective to explore science fiction works in discussing the future of urban design. Based on the explorations conducted in this thesis, it is believed to strengthen the link between science fiction works particularly conveyed through the cinema and the future of urban design via instrumentalization of cinematic spaces.



REFERENCES

- Abohela, I., & Ward, M.** (2023). Back to the future: The city of the future and its architecture in science fiction films. *Staffordshire University*, 69-80. <https://eprints.staffs.ac.uk/7724/1/Islam%20Abohela%20ICLAMP.pdf>
- Ahmadi, Z., Eghbali, S. R., & Karimi, F.** (2024). Architecture-city in the mirror of science fiction: beyond a literature review. *The Journal of Architecture*, 1-27. doi: 10.1080/13602365.2024.2419141
- Aitken, S. C., & Dixon, D. P.** (2006). Imagining geographies of film. *Erdkunde*, 60(4), 326–336.
- Aliaga, D. G.** (2012). 3D design and modeling of smart cities from a computer graphics perspective. *International Scholarly Research Notices*, (2012), 1-19. doi:10.5402/2012/728913
- Aliaga, D. G., Vanegas, C., Lei, M., & Niyogi, D.** (2013). Visualization-based decision tool for urban meteorological modeling. *Environment and Planning B: Planning and Design*, 40(2), 271-288. doi: 10.1068/b38084
- Allen, W.** (Director). (1973). *Sleeper* [Film]. Jack Rollins & Charles H. Joffe Productions; Rollins-Joffe Productions.
- Anderson, M.** (Director). (1976). *Logan's Run* [Film]. Metro-Goldwyn-Mayer (MGM).
- Antonoplis, S., & Chen, S.** (2020). Time and class: How socioeconomic status shapes conceptions of the future self. *Self and Identity*, 20(8), 961–981. doi: 10.1080/15298868.2020.1789730
- Arthur, R.** (1994). Space and relativity in Newton and Leibniz. *The British Journal for the Philosophy of Science*, 45(1), pp. 219-240.
- Arup & The Rockefeller Foundation.** (2019). City resilience index: Understanding and measuring city resilience index. <https://www.arup.com/globalassets/downloads/insights/city-resilience-index.pdf>
- Batty, M.** (2018). *Inventing future cities*. Cambridge, MA: The MIT press.
- Baweja, H.** (Director). (2008). *Love Story 2050* [Film]. Baweja Studios.
- Bay, M.** (Director). (2005). *The Island* [Film]. Dreamworks Pictures; Warner Bros.; Parkes/MacDonald Image Nation.
- Berardi, F.** (2011). Chapter One: The Century that trusted in the future. In G. Genosko, N. Thoburn (Eds.). *After the future* (pp. 15-68). Oakland, CA: AK Press.

- Besson, L.** (Director). (1997). *Fifth Element* [Film]. Gaumont; Pinewood Studios.
- Besson, L.** (Director). (2017). *Valerian and the City of a Thousand Planets* [Film]. EuropaCorp; TF1 Films Production; Orange Cinéma Séries.
- Bird, B.** (Director). (2015). *Tomorrowland* [Film]. Walt Disney Pictures; A113; Babička.
- Bleecker, J.** (2009). Design Fiction: A short essay on design, science, fact and fiction. *Near Future Laboratory*. https://systemsorienteddesign.net/wp-content/uploads/2011/01/DesignFiction_WebEdition.pdf
- Blomkamp, N.** (Director). (2013). *Elysium* [Film]. TriStar Pictures; Media Rights Capital (MRC); QED International.
- Boake, T. M.** (2007). Architecture and Film: Experiential Realities and Dystopic Futures. *Waterloo University*. 1-9. http://w.tboake.com/pdf/boake_arch_film_colour.pdf
- Bolan, P., & Kearney, M.** (2017). Exploring film tourism potential in Ireland: from Game of Thrones to Star Wars. *Revista Turismo & Desenvolvimento*, 1(27/28), 2149-2156.
- Botoman, E.** (2017). Mutations & megastructure: Japanese metabolism in Akira (1988). *Interiors*. <https://www.intjournal.com/thinkpieces?author=589fbf48440243c9bf365589>
- Bowers, D.** (Director). (2009). *Astro Boy* [Film]. Imagi Animation Studios; Imagi Crystal; Summit Entertainment.
- Bowler, A.** (1991). Politics as art: Italian futurism and fascism. *Theory and Society*, 20(6), 763-794.
- Bragaglia, F., & Rossignolo, C.** (2021). Temporary urbanism as a new policy strategy: a contemporary panacea or a Trojan horse?. *International Planning Studies*, 26(4), 370-386. doi: 10.1080/13563475.2021.1882963
- Brambilla, M.** (Director). (1993). *Demolition Man* [Film]. Warner Bros.; Silver Pictures.
- Brodz, Z. L.** (2023). *From the Steel City to the White City: Western Pennsylvania and the World's Columbian Exposition*. University of Pittsburgh Press.
- Burger, N.** (Director). (2014). *Divergent* [Film]. Summit Entertainment; Red Wagon Entertainment.
- Butler, D.** (Director). (1930). *Just Imagine* [Film]. Fox Film Corporation.
- Carpenter, J.** (Director). (1981). *Escape from New York* [Film]. AVCO Embassy Pictures; International Film Investors; Goldcrest Films International.
- CarpenterFan.** (2011, August 13). Escape from NY. *The University of Chicago*. <https://cinemetrics.uchicago.edu/database?search=escape+from>

- Cesak, M.** (2020, November 12). Snowpiercer. *The University of Chicago*.
<https://cinemetrics.uchicago.edu/database?search=snowpiercer>
- Choisy, A.** (1899). *Histoire de l'architecture Tome 1 [History of architecture volume 1]*. France: Gauthier villars.
- Copperman, E.M.** [elicopperman]. (2019, Jan 30). *Whenever people are asked what they consider to be revolutionary and historically significant in terms of classic cinema, one answer* [Comment on the online forum post *User Reviews.*] IMDB.
https://www.imdb.com/review/rw4615492/?ref_=tturv_perm_16
- Costner, K.** (Director). (1997). *The Postman* [Film]. Warner Bros.; Tig Productions.
- Cuarón, A.** (Director). (2006). *Children of Man* [Film]. Universal Pictures; Strike Entertainment; Hit & Run Productions.
- Cuthbert, A. R.** (2007). Urban design: requiem for an era—review and critique of the last 50 years. *Urban Design International*, 12, 177-223. doi: 10.1057/palgrave.udi.9000200
- Çalğıcı, P. K.** (2016). Çevre psikolojisi kavramlarıyla bir filmin analizi: THX 1138 [Analysis of a film with environmental psychology concepts: THX 11389]. *METU Journal of the Faculty of Architecture*, 30(2), 63-80. doi: 10.4305/metujfa.2013.2.5
- Deyong, S.** (2002). Memories of the urban future: The rise and fall of the megastructure. In T. Riley, S. Deyong., M.D. Michelis, P. Apraxine, P. Antonelli, T.D. Carlo, B. Cline (Eds.). *The changing of the avant-garde: visionary architectural drawings from the Howard Gilman collection* (pp.23-36). New York: Museum of Modern Art.
- Doxiadis, C.A.** (1960). Dynapolis the city of the future. *Ekistics*, 9(51), 5-20.
- Duffy, C.** (2021, May 5). Total Recall. *The University of Chicago*.
<https://cinemetrics.uchicago.edu/database?search=total+recall>
- Dunagan, J., Draudt, A., Hadley, J. J., Hogan, R., Murray, L., Stock, G., & West, J. R.** (2019). Strategic foresight studio: A first-hand account of an experiential futures course. *Journal of Futures Studies*, 23(3), 57-74. doi:10.6531/JFS.201903_23(3).0005
- Dunmire, P. L.** (2010). Knowing and Controlling the future: A review of futurology. *Prose Studies*, 32(3), 240-263. doi: 10.1080/01440357.2010.528921
- Dunn, N. Cureton, P., & Pollastri, S.** (2014). *A visual history of the future*. London: Foresight, Government Office for Science.
- Eisenstein, S.** (2002). *O sentido do filme [The meaning of the film]*. Rio de Janeiro: Zahar.
- Eisenstein, S. M., Bois, Y. A., & Glenny, M.** (1989). Montage and architecture. *Assemblage*, (10), 111-131.
- Ellis, C.** (2005). Lewis Mumford and Norman Bel Geddes: the highway, the city and the future. *Planning Perspectives*, 20(1), 51-68. doi: 10.1080/0266543042000300537

- Emmerich, R.** (Director). (2004). *The Day After Tomorrow* [Film]. Twentieth Century Fox; Centropolis Entertainment; Lionsgate.
- Escher, A.** (2006). The geography of cinema – a cinematic world. *Erdkunde*, 60(4), 307-314.
- Feuerstein, G.** (2008). *Urban fiction: Strolling through ideal cities from antiquity to the present day*. Stuttgart-Londres: Axel Menges.
- Ficetola, G. F., Maiorano, L., Falcucci, A., Dendoncker, N., Boitani, L., Padoa-Schioppa, Miaud, C., & Thuiller, W.** (2010). Knowing the past to predict the future: land-use change and the distribution of invasive bullfrogs. *Global Change Biology*, 16(2), 528-537. doi: 10.1111/j.1365-2486.2009.01957.x
- Filmmakers Academy.** (2021, July 16). Diegetic. In *Glossary*. Retrieved December 15, 2024, from <https://www.filmmakersacademy.com/glossary/diegetic/>
- Fitting, P.** (2002). Urban planning/utopian dreaming: Le Corbusier's Chandigarh today. *Utopian Studies*, 13(1), 69-93.
- Fleischer, R.** (Director). (1973). *Soylent Green* [Film]. Metro-Goldwyn-Mayer (MGM).
- Gander, M., Giraldeau, J. & Humble, R.** (Director). (1963). *Lewis Mumford on the City, Part 6: The City and the Future* [Film]. National Film Board of Canada (NFB).
- Gannon, E. T., & Grubb, M. A.** (2022). How filmmakers guide the eye: The effect of average shot length on intersubject attentional synchrony. *Psychology of Aesthetics, Creativity, and the Arts*, 16(1), 125-134. doi: 10.1037/aca0000315
- Garde, A.** (2020). New urbanism: Past, present, and future. *Urban Planning*, 5(4), 453-463. doi: 10.17645/up.v5i4.3478
- Gassner, G.** (2021). Aestheticizing the beautiful city: democratic politics and design review. *Urban Geography*, 44(6), 1098–1116. <https://doi.org/10.1080/02723638.2021.1874742>
- Getlík, P.** (2024, May 9). Cloud Atlas. *The University of Chicago*. <https://cinemetrics.uchicago.edu/database?search=cloud+atlas>
- Gilliam, T.** (Director). (1985). *Brazil* [Film]. Embassy International Pictures.
- Gilliam, T.** (Director). (1995). *12 Monkeys* [Film]. Universal Pictures; Atlas Entertainment; Classico.
- Gold, J. R.** (2001). Under darkened skies: The city in science-fiction film. *Geography*, 86(4), 337–345.
- González, A.** (2018, December 20). Mortal Engines: Walking cities and Steampunk world of the film by Peter Jackson. *METALOCUS*. <https://www.metalocus.es/en/news/mortal-engines-walking-cities-and-steampunk-world-film-peter-jackson#>

- Goodey, B. R.** (1970). Mapping "Utopia": a comment on the geography of Sir Thomas More. *Geographical Review*, (60)1, 15-30. doi: 10.2307/213342
- Goodman, D.** (2008). *A History of the Future*. New York: Monacelli Press.
- Google.** (n.d.). [Tokyo Bay, Japan]. Retrieved September 18, 2024.
- Grosoli, M.** (2018). *Eric Rohmer's film theory (1948-1953): from "école scherer" to "politique des auteurs."* Amsterdam University Press.
- Guerrina, M., Conti, E., Minuto, L., & Casazza, G.** (2016). Knowing the past to forecast the future: a case study on a relictual, endemic species of the SW Alps, *Berardia subacaulis*. *Regional Environmental Change*, 16, 1035-1045. doi: 10.1007/s10113-015-0816-z
- Hageman, A.** (2012). Science fiction, ecological futures, and the topography of Fritz Lang's Metropolis. *Ecozon@: European Journal of Literature, Culture and Environment*, 3, 57-73.
- Hales, D.** (2013). Design fictions an introduction and provisional taxonomy. *Digital Creativity*, 24(1), 1-10. doi: 10.1080/14626268.2013.769453
- Hancock, T., & Bezold, C.** (1994). Possible futures, probable futures. *The Healthcare Forum Journal*, 37(2), 23-29.
- Haq, I. U., Muhammad, K., Hussain, T., Kwon, S., Sodanil, M., Baik, S. W., & Lee, M. Y.** (2019). Movie scene segmentation using object detection and set theory. *International Journal of Distributed Sensor Networks*, 15(6), doi: 10.1177/1550147719845277
- Hemingway, J. M., & De Castro Mazarro, A.** (2022). Pinning down urban acupuncture: From a planning practice to a sustainable urban transformation model?. *Planning Theory & Practice*, 23(2), 305-309. doi:10.1080/14649357.2022.2037383
- Herzog, C.** (1981). The movie palace and the Theatrical sources of its architectural style. *Cinema Journal*, 20(2), 15-37. doi: 10.2307/1224831
- Holmik, V., & Muminovic, M.** (2023). Diagramming urban fragments: Collage city and the 'Vest-pocket' in the Case Study of Canberra. *Athens Journal of Architecture*, 9(2), 129-150. doi=10.30958/aja.9-2-1
- Howard, E.** (2003). Garden cities of to-morrow. *Organization & Environment*, 16(1), 98-107. doi: 10.1177/1086026602250259
- Hsueh, C. L.** (2011). From the Origin of Drawing to Cinematics. *NAKHARA Journal of Environmental Design and Planning*, 7(1), 127-138.
- Ialongo, E.** (2016). Futurism from foundation to world war: the art and politics of an avant-garde movement. *Journal of Modern Italian Studies*, 21(2), 306-323. doi: 10.1080/1354571X.2015.1134938
- Jacobs, J.** (1961). *Death and life of great American cities*. New York: Random House.
- Jo, H.** (Director). (2021). *Spacesweepers (Seungriho)* [Film]. Bidangil Pictures.

- Joon-ho, B.** (Director). (2013). *Snowpiercer* [Film]. SnowPiercer; Moho Film; Opus Pictures.
- Judge, M.** (Director). (2006). *Idiocracy* [Film]. Twentieth Century Fox; Ternion Pictures; Major Studio Partners.
- Kaes, A., Baer, N., & Cowan, M. (Eds.).** (2016). *The promise of cinema: German film theory, 1907-1933*. Oakland, California: University of California Press.
- Kaku, M.** (2012). *Physics of the future: How science will shape human destiny and our daily lives by the year 2100*. United States: Doubleday.
- Kaplan, M. A.** (2013). Integral cinematic analysis: Mapping the multiple dimensions of the cinema and the co-evolution of cinema, consciousness, culture, and society. *Journal of Integral Theory & Practice*, 8 (3&4), 255-276.
- Kitchin, R., & Kneale, J.** (2001). Science fiction or future fact? Exploring imaginative geographies of the new millennium. *Progress in human geography*, 25(1), 19-35. doi: 10.1191/030913201677411564
- Kokeš, R. D.** (2024, May 10). RDK: Film Database of Shot Counts and Average Lengths (ASL). <http://www.douglaskokes.cz/pdz/>.
- Komalpreet, K., Buşa, I. I., & Cuc, L. D.** (2024). The science fiction of the past, the reality of the present—smart cities. *Studia Universitatis Babeş-Bolyai Negotia*, 69(1), 69-84.
- Konstantinowitsch, B.** (1927). *Plakat für den Film Metropolis*. Retrieved from [https://commons.wikimedia.org/wiki/File:Boris_Bilinski_\(19001948\)_Plakat_f%C3%BCr_den_Film_Metropolis_\(1\).jpg](https://commons.wikimedia.org/wiki/File:Boris_Bilinski_(19001948)_Plakat_f%C3%BCr_den_Film_Metropolis_(1).jpg)
- Koolhaas, R.** (1979). The future's past. *The Wilson Quarterly* (1976-), 3(1), 135–140.
- Kosinski, J.** (Director). (2013). *Oblivion* [Film]. Universal Pictures; Relativity Media; Monolith Pictures (III).
- Krause, L., & Petro, P. (Eds.).** (2003). *Global cities: Cinema, architecture, and urbanism in a digital age*. New Brunswick, NJ: Rutgers University Press.
- Krier, R.** (1979). *Urban space*. London: Academy Editions.
- Kubrick, S.** (Director). (1968). *2001: A Space Odyssey* [Film]. Metro-Goldwyn-Mayer (MGM); Stanley Kubrick Productions.
- Kusama, K.** (Director). (2005). *Aeon Flux* [Film]. Paramount Pictures; Lakeshore Entertainment; Valhalla Motion Pictures.
- Kyer, B. L., & Maggs, G. E.** (2006). A note on time periods in macroeconomics. *Atlantic Economic Journal*, 34(2), 235-237.
- Lang, F.** (Director). (1927). *Metropolis* [Film]. Universum Film (UFA).
- Lastra, A., & Pojani, D.** (2018). 'Urban acupuncture' to alleviate stress in informal settlements in Mexico. *Journal of Urban Design*, 23(5), 749-762. doi: 10.1080/13574809.2018.1429902

- Lawrence, F.** (Director). (2013). *The Hunger Games: Catching Fire* [Film]. Color Force; Lionsgate.
- Lawrence, F.** (Director). (2014). *The Hunger Games: Mockingjay – Part 1* [Film]. Lionsgate; Color Force; French Tax Credit.
- Lawrence, F.** (Director). (2015). *The Hunger Games: Mockingjay – Part 2* [Film]. Lionsgate; Color Force; Studio Babelsberg.
- Lawrence, F.** (Director). (2023). *The Hunger Games: The Ballad of Songbirds & Snakes* [Film]. Lionsgate; Color Force; About Blank.
- Li, C., Lu, J., Pei, Y., Shen, Y., Hu, Y., Fan, Y., Tian, Y., Linghu, X., Wang, K., Shi, Z. & Sun, J.** (2024). PyCinematics: Computational film studies tool based on deep learning and PySide2. *SoftwareX*, 26, 101686. doi: 10.1016/j.softx.2024.101686
- Lin, Z.** (2007, Summer). Urban structure for the expanding metropolis: Kenzo Tange's 1960 plan for Tokyo. *Journal of Architectural and Planning Research*, 24(2), 109-124.
- Lindley, J., & Coulton, P.** (2015, July). Back to the future: 10 years of design fiction. *Proceedings of the 2015 British HCI conference*, Lincoln, United Kingdom, July 13-17.
- Lobell, J.A.** (2022). A Ticket to the World's Fair Excavating the hidden traces of Chicago's 1893 World's Columbian Exposition. *ARCHAEOLOGY*, 44-49.
- Longo, R.** (Director). (1995). *Johnny Mnemonic* [Film]. TriStar Pictures; Alliance Communications Corporation; Cinévision.
- Lucas, G.** (Director). (1971). *THX 1138* [Film]. American Zoetrope; Warner Bros..
- Lukinbeal, C., & Zimmermann, S.** (2006). Film geography: A new subfield (Filmgeographie: ein neues Teilgebiet). *Erdkunde*, 60(4), 315-325.
- Lutolli, B.** (2022). A review of domed cities and architecture: Past, present and future. *Future Cities and Environment*, 8(1): 9, 1–15. doi: 10.5334/fce.154
- Lynch, K.** (1960). *The image of the city*. Cambridge, Mass.: MIT Press.
- Lynch, K.** (1972). *What time is this place?* Cambridge, Mass.: MIT Press.
- Lynch, K., & Rodwin, L.** (1961). A world of cities. *Daedalus*, 90(1), 4–10.
- Madanipour A.** (2017) *Cities in time: Temporary urbanism and the future of the city*. London: Bloomsbury.
- Maffei, N. P.** (2018). *Norman Bel Geddes: American Design Visionary*. Bloomsbury Publishing.
- Marinetti, F.T.** (2009). The founding and manifesto of futurism. In L. Rainey, C. Poggi, C. Wittman (Eds.), *Futurism: An anthology*, (pp. 49–53). New Haven: Yale University Press.

- Markussen, T., & Knutz, E.** (2013). The poetics of design fiction. *Proceedings of the 6th International Conference on Designing Pleasurable Products and Interfaces*, Newcastle upon Tyne, UK, September 3 - 5.
- Marshall, S.** (2003). New urbanism: An introduction. *Built Environment*, 29(3), 188-192.
- Maze, R.** (2019). Politics of designing visions of the future. *Journal of Futures Studies: Epistemology, Methods, Applied and Alternative Futures*, 23(3), 23-38. doi: 10.6531/JFS.201903_23(3).0003
- Mazzucotelli Salice, S.** (2019). Introduction: Urban space as an interpretative gaze. In S. Mazzucotelli Salice. *The urban gaze: Exploring urbanity through art, architecture, music, fashion, film and media* (pp. vii-xii). Inter-disciplinary Press.
- McGrath, B., & Gardner, J.** (2007). *Cinematics: architectural drawing today*. Chichester, England ; Hoboken, NJ : Wiley-Academy.
- McGrath, B., Hsueh, Leun, C., Hoi Shan, P. C., Jesús Zamora, J. D., & Marshall, V.** (2009). Club cinematics: New post-perspectival design methodologies. *Architectural Design*, 79(1), 62-67. doi: 10.1002/ad.814
- McQuire, S.** (2006). The politics of public space in the media city. *First Monday* (4). doi: 10.5210/fm.v0i0.1544
- Mentz, T.** (2009, September 6). Wall-E. *The University of Chicago*. <https://cinematics.uchicago.edu/database?search=wall-e>
- Menzies, W.C.** (Director). (1936). *Things to Come* [Film]. London Film Productions.
- Moir, E., Moonen, T., & Clark, G.** (2014). What are future cities? Origins, meanings and uses. *UK Government Office for Science*. <https://assets.publishing.service.gov.uk/media/5a7ee2ba40f0b62305b83cc1/14-820-what-are-future-cities.pdf>
- Moor, M.** (2006). Introduction. In M. Moor, & J. Rowland. (Eds.), *Urban Design Futures* (pp. 1-16). Routledge.
- Near Future Laboratory.** (2022, June 21). *What is design fiction* [Video]. Youtube. https://www.youtube.com/watch?v=t_UT78JOauM&t=36s
- Neumann, D. (Ed.).** (1996). *Film architecture: Set designs from metropolis to blade runner*. Munich: Prestel.
- Niccol, A.** (Director). (1997). *Gattaca* [Film]. Columbia Pictures; Jersey Films.
- Nolan, C.** (Director). (2005). *Batman Begins* [Film]. Warner Bros.; Syncopy; DC Comics.
- Nolan, C.** (Director). (2014). *Interstellar* [Film]. Paramount Pictures; Warner Bros.; Legendary Entertainment."
- Notaro, A.** (2000). Futurist Cinematic Visions and Architectural Dreams in the American Modern (ist) Metropolis. *Irish Journal of American Studies*, 9, 161-183.

- O'Brien, C.** (2006, November 8). Just Imagine. *The University of Chicago*.
<https://cinemetrics.uchicago.edu/database?search=just+imagine>
- O'Brien, C.** (2018). Film analysis and statistics: a field report. In S. Hidalgo (Ed.), *Technology and film scholarship: experience, study, theory* (pp. 149–168). Amsterdam, Finland: Amsterdam University Press. doi: 10.5117/9789089647542/ch061
- Odia, S. I.** (2013). Are there future facts?. *IDEA - Studia nad strukturą i rozwojem pojęć filozoficznych, (XXV)*, 243-254.
- OpenAI.** (2024). ChatGPT (Oct 2 version) [Large language model].
<https://chat.openai.com/chat>.
- Ortiz, L., Mustafa, A., Rosenzweig, B., & McPhearson, T.** (2021). Modeling urban futures: Data-driven scenarios of climate change and vulnerability in cities. In Z. A. Hamstead, D. M. Iwaniec, T. McPhearson, M. Berbés-Blázquez, E. M. Cook, T. A. Muñoz-Erickson (Eds.), *Resilient urban futures*, (pp.129-144). Springer.
- Oshii, M.** (Director). (1995). *Ghost in the Shell* [Film]. Kôdansha; Bandai Visual Company; Manga Entertainment.
- Otomo, K.** (Director). (1988). *Akira* [Film]. Akira Committee Company Ltd.; Akira Studio; TMS Entertainment.
- Picon, A., & Faciejew, M.** (2017). Notes on utopia, the city, and architecture. *Grey Room*, (68), 94-105. doi: 10.1162/GREY_a_00222
- Proyas, A.** (Director). (1998). *Dark City* [Film]. Mystery Clock Cinema; New Line Cinema.
- Proyas, A.** (Director). (2004). *I, Robot* [Film]. Twentieth Century Fox; Mediastream Vierte Film GmbH & Co. Vermarktungs KG; Davis Entertainment.
- Reeves, S., Goulden, M., & Dingwall, R.** (2016). The future as a design problem. *Design Issues*, 32(3), 6-17. doi:10.1162/DESI_a_00395
- Riley, T., Deyong, S., Michelis, M.D, Apraxine, P., Antonelli, P., Carlo, T.D., & Cline, B. (Eds.).** (2002). *The changing of the avant-garde: visionary architectural drawings from the Howard Gilman collection*. New York: Museum of Modern Art.
- Rivers, C.** (Director). (2018). *Mortal Engines* [Film]. Media Rights Capital (MRC); Scholastic Productions; Silvertongue Films.
- Rocha, R.** (2013). Sci-Fi cities. In *INTER[SECTIONS] A Conference on Architecture, City and Cinema Conference Proceedings*, Porto, September 11-13.
- Rodriguez, R.** (Director). (2019). *Alita: Battle Angel* [Film]. Twentieth Century Fox; Lightstorm Entertainment; Troublemaker Studios.
- Roesch, S.** (2009). *The experiences of film location tourists*. Clevedon, UK: Channel View Publications.
- Rogers, R.** (1988). 2. belief in the future is rooted in the memory of the past. *RSA Journal*, 136(5388), 873-884.

- Ross, B.** (2016). Sinema ve televizyonda anlatım teknikleri ve dramaturji (M.K. Gerçekler Trans.) [Filmmaking: narrative & structural techniques]. İstanbul: Hayalperest Yayınevi. (Original work published 1992)
- Ross, G.** (Director). (2012). *The Hunger Games* [Film]. LionsgateColor Force.
- Rowe, C., & Koetter, F.** (1978) *Collage city*. Cambridge, Mass.: MIT Press.
- Rowe, H. A.** (2011). The rise and fall of modernist architecture. *Inquiries Journal*, 3(04).
- Salt, B.** (1974). Statistical style analysis of motion pictures. *Film Quarterly*, 28(1), 13-22. doi:10.2307/1211438
- Salt, B.** (n.d.) Barry Salt's Database. *The University of Chicago*. <https://cinemetrics.uchicago.edu/barry-salt-database>.
- Sandoval Olascoaga, C. E.** (2016). *Painting with data: from a computational history of urban models to an alternative urban computing* (Doctoral dissertation, Massachusetts Institute of Technology). Retrieved from <https://dspace.mit.edu/bitstream/handle/1721.1/106680/969231769-MIT.pdf?sequence=1&isAllowed=y>
- Sant'Elia, A.** (1914). *Manifesto dell'Architettura futurista [Manifesto of futurist architecture]*. <https://jstor.org/stable/community.16516407>
- Sardar, Z.** (2010). The Namesake: Futures; futures studies; futurology; futuristic; foresight—What's in a name?. *Futures*, 42(3), 177-184. doi: 10.1016/j.futures.2009.11.001
- Schmidt, T., El-Keilany, A., Eger, J., & Kurek, S.** (2021). Exploring computer vision for film analysis: A case study for five canonical movies. In *2nd International Conference of the European Association for Digital Humanities*. Krasnoyarsk, Russia, September 21-25.
- Schwentke, R.** (Director). (2015). *Insurgent* [Film]. Summit Entertainment; Red Wagon Entertainment; Mandeville Films.
- Schwentke, R.** (Director). (2016). *Allegiant* [Film]. Mandeville Films; Red Wagon Entertainment; Summit Entertainment.
- Scot, R.** (Director). (1982). *Blade Runner* [Film]. The Ladd Company; Shaw Brothers; Warner Bros..
- Shyamalan, M. N.** (Director). (2013). *After Earth* [Film]. Columbia Pictures; Overbrook Entertainment; Blinding Edge Pictures.
- Shulruff, T., & Wyman, L.** (2023). A Trip Through Tomorrowland: The World Expo as Futures Lab. *World Futures Review*, 15(1), 22-37. doi: 10.1177/19467567231151718
- Silva, A. F. C.** (2021). *Cinemetrics: Creative Approaches to Visualize and Analyze Movie Data* (Master's thesis, Instituto Politecnico do Porto). Portugal.
- Smith, M. E., & Hein, C.** (2017). The ancient past in the urban present: The use of early models in urban design. In C. Hein (Ed.), *The Routledge handbook of planning history* (pp. 109-120). New York: Routledge.

- Smyth, C., Auger, J., & Helgason, I.** (2021). Echoes of futures past – Speculations and fictions from history. In I. Mitrović, J. Auger, J. Hanna, & I. Helgason (Eds.), *Beyond Speculative Design: Past – Present – Future* (pp. 24-67). University of Split.
- Sneltvedt, O.** (2018). Experience the future in full-scale: Technological background relations and visions of the good society at the World's Columbian Exposition. *Technology in Society*, 52, 46-53. doi: 10.1016/j.techsoc.2017.10.001
- Spilberg, S.** (Director). (2001). *Artificial Intelligence (A.I.)* [Film]. Warner Bros.; Dreamworks Pictures; Amblin Entertainment.
- Spilberg, S.** (Director). (2002). *Minority Report* [Film]. Twentieth Century Fox; Dreamworks Pictures; Cruise/Wagner Productions.
- Spilberg, S.** (Director). (2018). *Ready Player One* [Film]. Warner Bros.; Amblin Entertainment; Village Roadshow Pictures.
- Sproles, G. B.** (1981). Analyzing fashion life cycles: principles and perspectives. *Journal of Marketing*, 45(4), 116–124.
- Stanton, A.** (Director). (2008). *Wall-E* [Film]. Walt Disney Pictures; Pixar Animation Studios; FortyFour Studios.
- Sterling, B.** (2009). Cover story design fiction. *Interactions*, 16(3), 20-24.
- Stevens, Q., & Dovey, K.** (2023). *Temporary and tactical urbanism:(Re) assembling urban space*. Routledge.
- Stierli, M.** (2018). *Montage and the metropolis: Architecture and the representation of space*. London; New Haven: Yale University Press.
- Su, K., Li, J., & Fu, H.** (2011). Smart city and the applications. *2011 International Conference On Electronics, Communications and Control (ICECC)* (pp. 1028-1031). IEEE.
- Superstudio, di Francia, C. T., Magris, A., Magris, R., Frassinelli, P., & Natalini, A.** (1973). Superstudio on mindscapes. *Design Quarterly*, 17-31. doi: 10.2307/4090788
- Tagsold, C.** (2023). Akira and the Tokyo Olympics in 1964 and 2020/21: Reading the games through manga and anime—reading manga and anime through the games. *Contemporary Japan*, 35(1), 117-135. doi: 10.1080/18692729.2023.2168840
- Taskan, G.** (2011). *Computational Abstraction of Films for Quantitate Analysis of Cinematography*. (Unpublished master's thesis). Aalto University, Finland. Retrieved from <https://urn.fi/URN:NBN:fi:aalto-201401221141>
- The Foresight Programme.** (2016). *Future of cities: foresight for cities*. UK Government Office for Science <https://assets.publishing.service.gov.uk/media/5a815343e5274a2e87dbd027/gs-16-5-future-cities-foresight-for-cities.pdf>

- The Wachowskis** (Director). (1999). *The Matrix* [Film]. Warner Bros.; Village Roadshow Pictures; Groucho Film Partnership
- The Wachowskis** (Director). (2003). *The Matrix 2: Reloaded* [Film]. Warner Bros.; Village Roadshow Pictures; NPV Entertainment.
- The Wachowskis** (Director). (2003). *The Matrix 3: Revolutions* [Film]. Warner Bros.; Village Roadshow Pictures; NPV Entertainment.
- The Wachowskis** (Director). (2021). *The Matrix 4: Resurrections* [Film]. Warner Bros.; Village Roadshow Pictures; Venus Castina Productions.
- The Wachowskis and Tykwer, T.** (Directors). (2012). *Cloud Atlas* [Film]. Cloud Atlas Productions; X-Filme Creative Pool; Anarchos Pictures.
- Thompson, K.** (2005). *Herr lubitsch goes to hollywood: german and american film after World War I*. Amsterdam, Finland: Amsterdam University Press.
- Thompson, K., Bordwell, D.** (2003). *Film history: An introduction*. United Kingdom: McGraw-Hill.
- Trancik, R.** (1986). *Finding lost space: theories of urban design*. New York: Van Nostrand Reinhold.
- Travis, P.** (Director). (2012). *Dredd* [Film]. DNA Films; Peach Trees; Rena Films.
- Turku, V., Kyrönviita, M., Jokinen, A., & Jokinen, P.** (2023). Exploring the catalytic power of temporary urbanism through a binary approach. *Cities*, 133, 104145. doi: 10.1016/j.cities.2022.104145
- Tyldum, M.** (Director). (2016). *Passengers* [Film]. Columbia Pictures; LStar Capital; Village Roadshow Pictures.
- Tyldum, M., Semel, D., Bert & Bertie, Bernstein, A.** (Directors). (2023). *Silo* [Film]. AMC Studios.
- Url-1:** <https://www.jstor.org/stable/community.16520082>
- Url-2:** <https://jstor.org/stable/community.16516438>
- Url-3:** <https://www.jstor.org/stable/community.16516404>
- Url-4:** <https://www.imdb.com/>
- Url-5:** <http://cinemetrics.fredericbrodbeck.de/old.html>
- Url-6:** <https://cinemetrics.uchicago.edu/how-to-use>
- Url-7:** <https://www.berkeleyside.org/2023/02/12/regal-ua-berkeley-closure-history-memories-legacy>
- Url-8:** <https://c8.alamy.com/comp/K369H6/rexcinema-paris-K369H6.jpg>
- Url-9:** <https://www.jstor.org/stable/community.22107052>
- Url-10:** <https://www.dallasnews.com/opinion/commentary/2017/04/18/how-information-and-technology-are-changing-north-korea/>
- Url-11:** <https://www.arkitektuel.com/ville-radieuse/>

- Url-12:** <https://www.andyburgessart.com/cityscape/>
- Url-13:** <https://www.edenproject.com/mission/architecture>
- Url-14:** https://www.archdaily.com/961275/what-are-garden-cities/608fd82ff91c816f5300014b-what-are-garden-cities-image?next_project=no
- Url-15:** <https://histoireducinema.wordpress.com/type-de-plan-et-cadrage/>
- Url-16:** <https://www.britannica.com/technology/display-resolution>
- Url-17:** <https://www.jstor.org/stable/community.14651647>
- Url-18:** <https://www.imdb.com/title/tt0017136/plotsummary/>
- Url-19:** <https://www.imdb.com/title/tt0066434/>
- Url-20:** [https://robocop.fandom.com/wiki/RoboCop_\(1987\)#cite_note-4](https://robocop.fandom.com/wiki/RoboCop_(1987)#cite_note-4)
- Url-21:** <https://urbandesignlab.in/films-to-watch-is-sci-fi-predicting-future-cities-of-the-world/?srsId=AfmBOophkvHZXz3wIQwW6N6bgLkygDIxEyNwdfRiVV5f67oBU3fAV8a0>
- Url-22:** <https://www.common sense media.org/movie-reviews/what-happened-to-Monday>
- Url-23:** <https://www.jstor.org/stable/community.38490125>
- Url-24:** <http://www.newurbanism.org/>
- Url-25:** <https://jstor.org/stable/community.14365509>
- Url-26:** <https://www.jstor.org/stable/community.14654668>
- Url-27:** <https://jstor.org/stable/community.14659787>
- Url-28:** <https://www.jstor.org/stable/community.14645193>
- Url-29:** <https://www.jstor.org/stable/community.14661115>
- Url-30:** <https://jstor.org/stable/community.30190299>
- Url-31:** <https://www.spyne.ai/blogs/product-photography-ideas>
- Url-32:** <https://www.jstor.org/stable/community.18106632>
- Ünver, B.** (2020). Distopik bilim kurgu sinemasında gelecek mekânları ve mimari öngörüler [Future spaces and architectural envisions in dystopian science fiction cinema]. *Yedi*, (24), 95-111. doi: 10.17484/yedi.730583
- Varnelis, K.** (2006). Programming after program: Archizoom's no-stop city. *PRAXIS: Journal of Writing + Building*, (8), 82–91.
- Venturi, R.** (1977). *Complexity and contradiction in architecture*. New York: Museum of Modern Art
- Verhoeven, P.** (Director). (1987). *Robocop* [Film]. Orion Pictures.

- Verhoeven, P.** (Director). (1990). *Total Recall* [Film]. Carolco Pictures; Estudios Churubusco Azteca S.A.
- Villeneuve, D.** (Director). (2017). *Blade Runner 2049* [Film]. Alcon Entertainment; Columbia Pictures; Sony.
- Villeneuve, D.** (Director). (2021). *Dune Part One* [Film]. Warner Bros.; Legendary Entertainment; Villeneuve Films.
- Villeneuve, D.** (Director). (2024). *Dune: Part Two* [Film]. Warner Bros.; Legendary Entertainment; Villeneuve Films.
- Volckman, C.** (Director). (2006). *Renaissance* [Film]. Odyssey Entertainment; Onyx Films; Millimages.
- Yuen, W. K.** (2007). On the edge of spaces: Blade runner, ghost in the shell and Hong Kong's cityscape. In S. Redmond (Ed.), *Liquid Metal: The Science Fiction Film Reader* (pp. 98–112). Columbia University Press.
- Wachs, M.** (2001). Forecasting versus envisioning: A new window on the future. *Journal of the American Planning Association*, 67(4), 367-372. doi: 10.1080/01944360108976245
- Wells, S.** (Director). (2002). *The Time Machine* [Film]. Warner Bros.; Dreamworks Pictures; Parkes/MacDonald Image Nation.
- Will Our World Be Like The Movie 'Divergent'?** (2024, October 6). Retrieved from <https://medium.com/@aarshiya06/will-our-world-be-like-the-movie-divergent-4b4109e6f411>
- Wimmer, K.** (Director). (2002). *Equilibrium* [Film]. Dimension Films; Blue Tulip Productions.
- Wirkola, T.** (Director). (2017). *What Happened to Monday* [Film]. Vendome Pictures; Nexus Factory; Raffaella Productions.
- Wiseman, L.** (Director). (2012). *Total Recall Remake* [Film]. Total Recall; Original Film; Prime Focus.
- Xue, K., Chen, X., & Yu, M.** (2012). Can the World Expo change a city's image through foreign media reports?. *Public Relations Review*, 38(5), 746-754. doi: 10.1016/j.pubrev.2012.06.013
- Zamyatin, Y.** (1993). *We* (New Edition). Penguin Publishing Group. (Original work published 1988)
- Zemeckis, R.** (Director). (1989). *Back to the Future II* [Film]. Universal Pictures; Amblin Entertainment; U-Drive Productions.

APPENDICES

APPENDIX A : Detailed list of sci-fi films.



APPENDIX A

Table A.1 : Detailed list of sci-fi films.

Film Name	Director	Film Genre	Utopia vs Dystopia	IMDB rank	Average Shot Length (ASL) in seconds	Country Of Origin	Set Location	Set Location Characteristic	A: Release Time	B: Set Time	Difference between A and B
Metropolis	Fritz Lang	Dystopian Science Fiction Silent Film	Dystopian	8.3	5.4 (Kokeš, 2024)	Germany	Metropolis	Fictitious place	1927	2026 (Url-18)	99
Just Imagine	Danid Butler	Science Fiction Musical Film	Utopian	5.3	10.6 (O'Brien, 2006)	US	New York	A geographically referenced place	1930	1980	50
Things to Come	William Cameron Menzies	Science Fiction Drama War Film	neither/both	6.6	5.62 (Salt, n.d.)	UK	Everytown	Fictitious place	1936	2036	100
2001: A Space Odyssey	Stanley Kubrick	Science Ficiton	Dystopian	8.3	13.3 (Kokeš, 2024)	US, UK	Moon, Jupiter	Fictitious place	1968	2001	33
THX 1138	George Lucas	Dystopian Science Fiction Film	Dystopian	6.6	5 (Kokeš, 2024)	US	The underground city shell	Fictitious place	1971	2401 ⁶	430
Soylent Green	Richard Fleischer	Crime, Mystery, Sci-Fi, Thriller	Dystopian	7.0	5.68 (Salt, n.d.)	US	New York	A geographically referenced place	1973	2022	49
Sleeper	Woody Allen	Science Fiction Comedy Film	Dystopian	7.1	6 (Salt, n.d.)	US	Unspecified	Fictitious place	1973	2173	200
Logan's Run	Michael Anderson	Science Fiction Action Film	Dystopian	6.8	4.95 (Salt, n.d.)	US	The city of domes	Fictitious place	1976	2274	298
Escape from New York	John Carpenter	Dystopian Science Fiction Action Film	Dystopian	7.1	11.9 (CarpenterFan, 2011)	US	Manhattan	A geographically referenced place	1981	1997	16
Blade Runner	Ridley Scot	Dystopian Science Fiction	Dystopian	8.1	5.5 (Kokeš, 2024)	South Korea	Los Angeles	A geographically referenced place	1982	2019	37
Brazil	Terry Gilliam	Dystopian Science Fiction Black Comedy Film	Dystopian	7.8	5.45 (Salt, n.d.)	US, UK	"Somewhere"	Fictitious place	1985	unspecified	-
Robocop	Paul Verhoeven	Near-Future Dystopian Action Film	Dystopian	7.6	3.7 (Kokeš, 2024)	US	Detroit	A geographically referenced place	1987	2044 (Url-20)	57
Akira	Katsuhiro Otomo	Cyberpunk Action Animation	Dystopian	8.0	3.4 (Kokeš, 2024)	Japan	Neo Tokyo	A geographically referenced place	1988	2019	31
Back to the Future II	Robert Zemeckis	Cyberpunk Dystopian Science Fiction	Dystopian	7.8	4.5 (Kokeš, 2024)	US	Hill Valley	Fictitious place	1989	2015	26
Total Recall	Paul Verhoeven	Science Fiction Action Film	Dystopian	7.5	3.4 (Kokeš, 2024)	US	Mars Colonization	Fictitious place	1990	2084	94

⁶ According to Url-19, the film is set to the 25th century. In this study, year 2401 is assumed to calculate specific set year.

Table A.1 (continued) : Detailed list of sci-fi films.

Film Name	Director	Film Genre	Utopia vs Dystopia	IMDB rank	Average Shot Length (ASL) in seconds	Country Of Origin	Set Location	Set Location Characteristic	A: Release Time	B: Set Time	Difference between A and B
Demolition Man	Marco Brambilla	Dystopian Post-Apocalyptic Film	neither/both	6.7	2.7 (Kokeš, 2024)	US	San Angeles (Santa Barbara, Los Angeles and San Diego is merged)	A geographically referenced place	1993	2032	39
Johnny Mnemonic	Robert Longo	Cyberpunk Action Film	Dystopian	5.6	3.3 (Salt, n.d.)	US	Beijing and Newark	A geographically referenced place	1995	2021	26
Ghost in the Shell	Mamoru Oshii	Cyberpunk Action Thriller Animated Film	Dystopian	7.9	3.8 (Kokeš, 2024)	Japan	Fictional New Port City in Japan	Fictitious place	1995	2029	34
12 Monkeys	Terry Gilliam	Science Fiction Thriller Film	Dystopian	8.0	5.8 (Salt, n.d.)	US	An Underground City	Fictitious place	1995	2035	40
The Postman	Kevin Costner	Epic Post-Apocalyptic Adventure Science Fiction Film	Dystopian	6.1	4.4 (Salt, n.d.)	US	St Rose Oregon	A geographically referenced place	1997	2013	16
Fifth Element	Luc Besson	Science Fiction Action Film	neither/both	7.6	3 (Kokeš, 2024)	France, US	South Brooklyn, New York	A geographically referenced place	1997	2214	217
Gattaca	Andrew Niccol	Science Fiction	Dystopian	7.7	5.9 (Kokeš, 2024)	US	Unspecified	Fictitious place	1997	2150 ⁷	153
Dark City	Alex Proyas	Neo-noir Science Fiction Film	Dystopian	7.6	1.95 (Salt, n.d.)	US	Dark City	Fictitious place	1998	unspecified	-
The Matrix 1	The Wachowskis	Science Fiction Action Film	Dystopian	8.7	3 (Kokeš, 2024)	US, Australia	Zion, underground last city of humanity	Fictitious place	1999	2199 ⁸	200
Artificial Intelligence (A.I.)	Steven Spielberg	Science Fiction Film	Dystopian	7.2	8.2 (Kokeš, 2024)	US	Manhattan, Rouge City	Both fictitious place and a geographically referenced place	2001	2150 ⁹	150
The Time Machine	Simon Wells	Post-Apocalyptic Science Fiction Action Adventure Film	Dystopian	6.0	4.11 (Salt, n.d.)	US	New York City	A geographically referenced place	2002	2030	28
Equilibrium	Kurt Wimmer	Science Fiction Action Film	Dystopian	7.3	2.84 (Salt, n.d.)	US	Equilibrium	Fictitious place	2002	2072	70
Minority Report	Steven Spielberg	Cyberpunk Action Film	Dystopian	7.6	6.1 (Kokeš, 2024)	US	Washington Metropolitan Area	A geographically referenced place	2002	2054	52

⁷ In the film the future time is identified as not too distant future. In this study, the future set year is assumed 2150 to indicate mid-term future.

⁸ In Matrix 1, the main character asks for when the matrix happens and Morpheus answers that the year is approximately 2199 (The Wachowskis, 1999, 00:37:32). Other than that, there is no specific set year declared in the film.

⁹ In the film, the time is set to the 22nd century without giving a specific year. In this study, it is assumed the year 2150 to calculate the specific set year.

Table A.1 (continued) : Detailed list of sci-fi films.

Film Name	Director	Film Genre	Utopia vs Dystopia	IMDB rank	Average Shot Length (ASL) in seconds	Country Of Origin	Set Location	Set Location Characteristic	A: Release Time	B: Set Time	Difference btw A and B
The Matrix 2: Reloaded	The Wachowskis	Science Fiction Action Film	Dystopian	7.1	3 (Kokeš, 2024)	US	Zion, underground last city of humanity	Fictitious place	2003	2199 ⁸	196
The Matrix 3: Revolutions	The Wachowskis	Science Fiction Action Film	Dystopian	7.6	3.2 (Kokeš, 2024)	US	Zion, underground last city of humanity	Fictitious place	2003	2199 ¹⁰	196
The Day After Tomorrow	Roland Emmerich	Science Fiction Disaster Film	Dystopian	6.5	4.3 (Kokeš, 2024)	US	New York	A geographically referenced place	2004	unspecified	-
I, Robot	Alex Proyas	Science Fiction Action Film	Utopian	7.1	3.07 (Salt, n.d.)	US	Chicago	A geographically referenced place	2004	2035	31
Aeon Flux	Karyn Kusama	Science Fiction Action Film	Dystopian	5.4	1.96 (Salt, n.d.)	US	Bregna	Fictitious place	2005	2415	410
The Island	Michael Bay	science Fiction Action Thriller Film	Dystopian	6.8	-	US	New York	A geographically referenced place	2005	2019	14
Batman Begins	Christopher Nolan	Action Epic Science Fiction	Dystopian	8.2	2.37 (Salt, n.d)	US	Gotham City	Fictitious place	2005	unspecified	-
Idiocracy	Mike Judge	Science Fiction Comedy Film	Dystopian	6.5	2.48 (Salt, n.d.)	US	Washington DC	A geographically referenced place	2006	2505	499
Renaissance	Christian Volckman	Animated Tech Noir film	Dystopian	6.6	-	France, UK and Luxembourg	Paris	A geographically referenced place	2006	2054	48
Children of Man	Alfonso Cuarón	Dystopian Action Thriller Film	Dystopian	7.9	-	US	London, Bexley	A geographically referenced place	2006	2027	21
Love Story 2050	Harry Baweja	Science Fiction-Romance Film	Utopian	2.6	-	India	Mumbai	A geographically referenced place	2008	2050	42
Wall-E	Andrew Stanton	Animated Romantic Science Fiction Film	Dystopian	8.4	3.9 (Mentz, 2009)	US	The Earth and Spaceship Axiom	Both fictitious place and a geographically referenced place	2008	2805	797
Astro Boy	David Bowers	Animated Space Science Fiction Film	Utopian	6.2	-	US, Hong Kong	Metro City	Fictitious place	2009	2109 ¹¹	100
Total Recall Remake	Len Wiseman	Science Fiction Action Film	Dystopian	6.2	2.8 (Duffy, 2021)	US	The United Federation of Britain and The Colony (Australia)	A geographically referenced place	2012	unspecified ¹²	-

¹⁰ In Matrix 1, the main character asks for when the matrix happens and Morpheus answers that the year is approximately 2199 (The Wachowskis, 1999, 00:37:32). Other than that, there is no specific set year declared in the film.

¹¹ In the film, the time is set to 100 years in the future without giving a specific year. In this study, it is assumed 100 years after the year of film release to calculate the specific set year.

¹² In the film, the only time reference for the places is that it is later than the end of the 21st century. As there are numerous future set years later than 21st century, in this study it is accepted as unspecified future.

Table A.1 (continued) : Detailed list of sci-fi films.

Film Name	Director	Film Genre	Utopia vs Dystopia	IMDB rank	Average Shot Length (ASL) in seconds	Country Of Origin	Set Location	Set Location Characteristic	A: Release Time	B: Set Time	Difference btw A and B
Dredd	Pete Travis	Science Fiction Action Film	Dystopian	7.1	3.6 (Kokeš, 2024)	UK	Megacity One including Boston, Washington DC and New York	A geographically referenced place	2012	2080	68
The Hunger Games 1	Gary Ross	science Fiction Dystopian Adventure Films	Dystopian	7.2	2.79 (Salt, n.d.)	US	The Capitol	A geographically referenced place	2012	2312	300
Cloud Atlas	the Wachowski s and Tom Tykwer	Epic Science Fiction Film	Dystopian	7.4	3.1 (Salt, n.d.)	US, Germany	Neo Seoul	A geographically referenced place	2012	2144	132
After Earth	M. Night Shyamalan	Post-Apocalyptic Science Fiction Action Film	Dystopian	4.8	5.3 (Kokeš, 2024)	US	The Earth and Nova Prime Space Colony	Both fictitious place and a geographically referenced place	2013	3013 ¹³	1000
Elysium	Neill Blomkamp	Dystopian Science Fiction Action Film	Dystopian	6.6	-	US	Los Angeles, Elysium	A geographically referenced place	2013	2154	141
Oblivion	Joseph Kosinski	Dystopian Science Fiction Action Film	Dystopian	7.0	-	US	The Earth	A geographically referenced place	2013	2077	64
Snowpiercer	Bong Joon-ho	Dystopian Science Fiction Action Film	Dystopian	7.1	5.7 (Cesak, 2020)	US, South Korea	Train	Fictitious place	2013	2031	18
The Hunger Games: Catching Fire	Francis Lawrence	Science Fiction Dystopian Adventure Film	Dystopian	7.5	-	US	The Capitol	A geographically referenced place	2013	2312	299
Divergent	Neil Burger	Dystopian Science Fiction Action Film	Dystopian	6.6	-	US	Chicago	A geographically referenced place	2014	3079 ¹⁴	1065
The Hunger Games: Mockingjay – Part 1	Francis Lawrence	Science Fiction Dystopian Adventure Film	Dystopian	6.6	-	US	The Capitol	A geographically referenced place	2014	2312	298
Interstellar	Christopher Nolan	Epic Science Fiction Drama Film	neither/ both	8.7	4.2 (Kokeš, 2024)	US, UK	The Earth and other planets in the space for next of humanity	Both fictitious place and a geographically referenced place	2014	unspecified	-

¹³ In the film, the time is set to 1000 years in the future without giving a specific year. In this study, it is assumed 1000 year after the year of film release to calculate the specific set year.

¹⁴ In the original book there is no time specification but in the film, year 3079 is referred for when the narration time is ("Will Our World Be Like", 2024).

Table A.1 (continued) : Detailed list of sci-fi films.

Film Name	Director	Film Genre	Utopia vs Dystopia	IMDB rank	Average Shot Length (ASL) in seconds	Country Of Origin	Set Location	Set Location Characteristic	A: Release Time	B: Set Time	Difference btw A and B
Insurgent	Robert Schwentke	Dystopian Science Fiction Action Film	Dystopian	6.2	-	US	Chicago	A geographically referenced place	2015	3079 ¹⁵	1065
Tomorrowland	Brad Bird	Science Fiction	Utopian	6.4	3.9 (Kokeš, 2024)	US	Tomorrowland on another dimension	Fictitious place	2015	2050 (Url-21)	35
The Hunger Games: Mockingjay – Part 2	Francis Lawrence	Science Fiction Dystopian Adventure film	Dystopian	6.6	5.2 (Kokeš, 2024)	US	The Capitol	A geographically referenced place	2015	2312	297
Allegiant	Robert Schwentke	Dystopian Science Fiction Action Film	Dystopian	5.7	-	US	Chicago and other techno-cities outside the city walls	Both fictitious Place and a geographically referenced place	2016	3079 ¹³	1065
Passengers	Morten Tyldum	Science Fiction Romance Film	Dystopian	7.0	3.3 (Kokeš, 2024)	US	Spaceship in the way of Homestead II colony	Fictitious place	2016	unspecified	-
Valerian and the City of a Thousand Planets	Luc Besson	Science Fiction Film (Space Opera)	Utopian	6.4	2.6 (Kokeš, 2024)	France	Alpha Space Station	Fictitious place	2017	2580	563
What Happened to Monday	Tommy Wirkola	Dystopian Science-Fiction Action Thriller Film	Dystopian	6.8	2.8 (Kokeš, 2024)	US, UK, France, Belgium	Unspecified (assumed US)	A geographically referenced place	2017	2073 (Url-21)	56
Blade Runner 2049	Denis Villeneuve	Epic Neo-Noir Science Fiction Film	Dystopian	8.0	5.5 (Kokeš, 2024)	US	California, San Diego (Çöp işleme merkezi), Greater Los Angeles	A geographically referenced place	2017	2049	32
Mortal Engines	Christian Rivers	Post-Apocalyptic Steampunk Film	Dystopian	6.1	-	US, New Zealand	London Traction City, Air Heaven, Cellular City, Static City beyond the Shield Wall	Both fictitious place and a geographically referenced place	2018	3000 (González, 2018)	982
Ready Player One	Steven Spielberg	Science Fiction Action Film	Dystopian	7.4	5 (Kokeš, 2024)	US	Columbus, Ohio	A geographically referenced place	2018	2045	27
Alita: Battle Angel	Robert Rodriguez	Cyberpunk Action Film	Dystopian	7.3	3 (Kokeš, 2024)	US	Iron city on surface, Sky city of Zalem	Fictitious place	2019	2563	544

¹⁵ In the original book there is no time specification but in the film, year 3079 is referred for when the narration time is ("Will Our World Be Like", 2024).

Table A.1 (continued) : Detailed list of sci-fi films.

Film Name	Director	Film Genre	Utopia vs Dystopia	IMDB rank	Average Shot Length (ASL) in seconds	Country Of Origin	Set Location	Set Location Characteristic	A: Release Time	B: Set Time	Difference btw A and B
The Matrix 4: Resurrections	The Wachowskis	Science Fiction Action Film	Dystopian	5.6	2.3 (Kokeš, 2024)	US	Io, underground last city of humanity	Fictitious place	2021	2274	253
Spacesweepers (Seungriho)	Sung-hee Jo	Cyberpunk Dystopian Science Fiction Film	Dystopian	6.5	-	South Korea	Mars colonization, UTS orbit city	Fictitious place	2021	2092	71
Dune	Denis Villeneuve	Epic Science Fiction Film	Dystopian	8.0	3.7 (Kokeš, 2024)	US	Dune	Fictitious place	2021	10191	8170
The Hunger Games: The Ballad of Songbirds & Snakes	Francis Lawrence	Science Fiction Dystopian Adventure Film	Dystopian	6.7	-	US	The Capitol	A geographically referenced place	2023	2247	224
Silo	Morten Tyldum, David Semel, Bert & Bertie, Adam Bernstein	Dystopian Science-Fiction TV series	Dystopian	8.1	-	US	Underground city of Silo	Fictitious place	2023	unspecified	-
Dune: Part Two	Denis Villeneuve	Epic Science Fiction Film	Dystopian	8.5	-	US	Dune	Fictitious place	2024	10191	8167



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