

Virtual and fantastic urban perceptions through cinema and their relation to contemporary cities.



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Submitted in partial fulfillment for the Masters in City and Regional Planning
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“Cinema is a matter of what’s in the frame and what’s out.”

- Martin Scorsese

“Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.”

- Jane Jacobs

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Acknowledgement

I would like to thank my option paper guide Prof. Michael Dobbins for supporting me to pursue such a vague topic for my applied research. His patience and guidance throughout the analysis; and our keen discussions helped me explore the concepts to my fullest potential while managing time and content throughout the semester.

Also, I owe a big 'thank you' to all my friends at Georgia Tech who facilitated excellent discussions and debates during the selection of different movies and literature to be included in the research.

Abstract

Our cities are constantly changing. They are the locus of all the activities that help us progress. Throughout time, cities have molded themselves to suit our needs and aspirations. Every city, modern and ancient has a set of functions and an image. The functions of the city constitute all the tangible aspects of urban living – things we can measure, classify, quantify, plan and therefore change. The image of a city, however, depends on how we perceive it (Lynch, 1960). And perception being highly subjective varies with age, gender, culture, economic status, experiences, and way of thinking. Humans, out of their quest for perfection, have always tried to modify their cities, sometimes proposing a major reconfiguration of its fabric or sometimes just a minor tweak (affecting both function and image or just one). Nevertheless, cities have always been a non-responsive canvas for people to draw on.

As we look at the evolution of cities, we find that people have always tried to control their various aspects to make them more legible or perhaps just easily modifiable. A large number of operations, numerous layers of connections, complex matrices of networks governed by a large number of people over a large time span blend together to sculpt a city. One has to wonder why still there stays a potential scope for perfection which we still haven't achieved.

There have been opportunities where certain cities were planned on a 'tabula rasa' with ideas that belonged to a handful of people; a few times maybe just one. These cities, even though not always better than contemporary cities of their respective times, were an influential niche in the field of city planning. The concept of an ideal society took roots as far back as 1500s thus pushing people to think if such a place would exist. A utopian urban setting, as it was called, has always been a curious topic played with by many literary scholars, artists and thinkers, planners and architects. With the advent of cinema and special effects in recent times, people have explored this niche many of times.

Any form of media or literature has the potential of being used as a tool to depict our perception of how we would like our cities to be; or in some cases, how we would not want them to end up like (dystopia). This gives us the freedom of testing our ideas and may help us consider which of them may actually fan out to be true. The research aims at understanding the link between our contemporary cities and the cities that we perceive through our media (movies mostly). Both cities and movies have impressions of people living in that era and thus speak to the aspirations and perceptions of what some of these ideas expect future cities to turn out as. The paper will take into consideration several comparative case studies between cities from movies and reality that can be somewhat compared as they have certain common points. The analysis will be divided roughly into two parts for sake of convenience – one looking at examples of urban concepts and comparing them to ancient cities and cities of today to understand if they relate at all and two (speculative case studies), looking at current perceptions of future urban scenarios through movies to see and gauge a possibility of what might or might not be adopted in future. By doing so, the paper will try to understand what governs these virtual perceptions and is there a way to break these factors into tangible components that could help us devise a logical plan to progress towards better cities. The paper also states a set of assumptions that the author considers while analyzing these ideas with an attempt to find common points of comparison. They have been stated in the following sections.

Problem Statement

The paper aims to answer following questions –

- Can a link be established between real cities (ancient/modern) and conceptual cities (virtual/fantastic/utopian/dystopian) to understand different/common elements of planning?
- What kind of standard set of components could be adopted or created for efficient reading of cities (old and new, real and conceptual)?
- Are there any cases where utopian/dystopian ideas or their minor aspects, for cities of the past, actually fanned out to be true in recent urban settings? How crucial were they?
- Can futuristic urban scenarios of cities shown through movies in recent times be linked to contemporary urban living in an attempt to predict the possibility of some of its aspects actually happening in foreseeable future?
- Why do we perceive such ideal scenarios? Why do these scenarios show what they show? How does it affect planners?

Assumptions / Scope

Some of the assumptions and scope limitations set for this research are stated and explained below –

- Media (scope of topic). Why only movies? - People have used literature, short stories, movies, television shows, comics, computer games etc as alternative sources for expression of free ideas. With the advancement of technology, there has been a steady rise in more sophisticated ways of practicing this free will. Out of all the media used by us, author finds movies to be most interesting. Movies have a limited span; and with advancement in digital VFX effects, it has become easy to produce tangible images of several utopian or dystopian universes based on one or several hypothetical or prospective criteria. Besides, looking into every media type would be a tedious process as books alone have so much quantity of data over time (along with different ways such ideas are dealt with) that it may confuse the reader and the purpose of the paper may become too broad.
- What kind of movies will be considered for study? Why? – Being a city planning paper, only those movies which have quantifiable and documentable evidence with regards to urban factors will be considered for study. There will be no time limit on the release dates or production of these creations as the paper seeks to understand why these ideas were perceived in the first place, what relevance they had with the existing condition then and did any of it fan out. The author declares that the paper does not necessarily limit its options to western cinema or a certain genre. The topic undertaken is vast and the scope of an option paper limits covering every interesting cinema all over the world.
- Why narrowing of scope is necessary? What can go wrong? - There is too much data, most of which is highly subjective, which uses different mediums, different ideas, with a subtle difference in how practical or relevant they are with contemporary urban conditions or how efficiently were they shown. The scale of these perceptions also varies vastly. It's easy to get lost in these overlapping or starkly different versions of utopia or dystopia as many of them talk about intangible and unquantifiable aspects of a city or society. Narrowing of scope to avoid such huge sample sets helps us understand niche ideas that may be more relevant. The broad division of data with respect to cities from old times to current and then current to the future shortens the huge sample set of examples. The author also has grouped visual impressions, social structures and concepts related to intangible aspects of a city shown through movies with respective real world cities close to the representative era. This helps in understanding the determinants enumerated and makes the comparison process more efficient.
- The movies cited in the paper for case studies etc are mostly main stream blockbuster movies. Number of sources regarding their plot and several criticisms and reports can easily be found online

and author of this paper encourages the reader to go through them. Reading the novel would help too. Most of the analysis part for these movies is based on the visualization of these ideas in the movies and therefore they may not be completely in sync with the ideas in the novel. However, the author does not wish to tweak the imagery shown in the movies or claim and change any of the visual representation. Also, the story may or may not be touched upon depending on its relevance to the research topic.

- The author realizes that covering each and every movie relevant to the topic is not possible in the given time frame (considering different genres and movie industries). The paper however, aims at developing a framework to analyze such movies rather than cover most of them.

Introduction and Methodology

‘Perception’ is a common link between cities and movies. While a city affects how we perceive it, we as its consumers affect it through our perception as well. Movies, on the other hand have made it easy for us to perceive the ‘what if(s)’ and ‘what could have been(s)’ that help us understand who we are. So, may it be cities or movies, perception can be used as a connecting link (perhaps). Interestingly, what differentiates cities from movies is perception also, rather its nature. A person’s subjective or objective thinking defines his/her perception of things (Bacon, 1974). A person’s thinking is affected by what he/she experiences. In cities that we reside in, commute, work, spend our entire lives; our experiences are overlapping and thus the perceptions are complex therefore more fine grained. Movies, on other hand, are an experience of two or three hours; a source of entertainment which people may or may not consider seriously. Thus these perceptions can be said to be relatively simple and coarse grained. To state an example, a perception based on watching movies on or based in New York City and the one developed by staying in it for some time (or for entire life) will be different. Nevertheless, these perceptions will have some connection with each other (New York City in the movies will definitely not look like Paris).

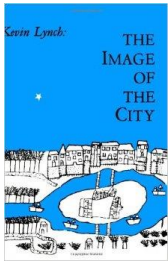
The paper aims at understanding what these connecting factors are and if they affect speculation made through fantastic/virtual urban scenarios through cinema.

The first section of the paper looks at literature relevant to the topics of reading cities and understanding movies. Each literature review of the referred source is followed by an analysis of the literature. The end of the section provides readers with a framework that enlists and differentiates several connecting factors.

The case studies take into account seminal (author’s opinion) movies and planned/unplanned cities belonging to the era around industrialization and fairly recent movies that may have a speculative futuristic urban scenario in them. The case study section will also end with a matrix of factors that could be connected to the framework developed in the literature review section.

Literature Reviews

The Image of the City – Kevin Lynch



One of the most iconic books in City and Regional Planning, the first edition was published in 1960s and it is still seen as a 'go to' book on how to understand city form and fabric by architects and planners (students and practitioners). The ease of language and the case studies included in the book make it a worthy read for a laymen citizen as well. The book is divided into five sections with the first section talking about legibility of an environment and its relation to the city image, the second is a compilation of case studies of three cities in the US over a period of five years based on data collected from the people with the help of basic sketching and mapping of the city to understand how they perceive it. Third section being the most important, states the five elements of understanding the city image and talks about their interactions, temporal changes etc. The last two sections talk more about the combined use of these elements and an ever evolving city form.

The reason for selecting this book as a primary source material was its strong base on local data. The case studies conducted in Boston, Jersey City and Los Angeles have inputs from local residents and commuters with as candid a response one can get from a daily user of the urban environment. The book tests the validity of the five elements of reading a city's image and these elements are probably the clearest derivatives of all that influences people's perception of an urban environment. Paper aims to utilize the data from the book to develop (or adopt) a set of rules or norms that makes analyzing the cities (real and conceptual) easy.

The book opens with a brief description of city design being a temporal art form; which can rarely use the controlled and limited sequences of other temporal arts like music (Lynch, 1960, p. 1). Though it may seem stable from a distance, it constantly changes its details with time in phases that exert some control over its growth and form. The concept of 'imageability' of a city is introduced in the book as something which caters to '...quality in a physical object which gives it a high probability of evoking a strong image in any given observer' (Lynch, 1960, p. 9). It speaks to those factors of a city that make it legible and this may be based on various aspects such as memory of an observer or an external agent that stands out or provides some sort of continuity to its fabric. Generally, formlessness goes against imageability as it brings with it poor orientation, dissatisfaction, lack of direction and general chaos. This explains a lot why certain conceptual cities in movies make a strong connection with the viewers while some due to lack of 'imageability' fail to do so. We must understand that this 'imageability' is not just related to physical aspects of a city, but also to social classes depicted or the form of government, or perhaps ideologies of the people depicted in the movies. So a disorganized (say formless) social structure seems chaotic to us but it does catch our attention. It also speaks to our dissatisfaction, perhaps with the existing real world structures.

As far physical perception of form is considered, the book talks about panoramic views being an engaging delight which may act as source of absorbing different elements of one's city from one place or just be amazed by the complex system suddenly made accessible for perception (say a winding road from the hills opens up to the view of the downtown below).

The book then delves into the five elements of the city which have been listed below –

- Paths – This represent the links in a city. The connections that brings things together, tying up the urban collage. A viewer or a user travels on these paths or links while perceiving other elements around him/her. The importance of a path or its relevance in a city's image depends on its frequency of use and also number of people using it. Other factors that characterize this component are width, proximity, location, façade character (boundary character), directional quality and alignment. For the

purpose of this paper, we shall consider other non physical connections of an urban environment as well. This is important because as technology progresses, we are constantly breaking the physical barriers of our cities using different paths or linkages to move knowledge, services etc. The matrix that will be created by the overlap of these physical and other forms of paths is equally relevant nowadays.

- Edges – As the title suggests, these are the boundaries or partitions in a city. These are both natural and man-made therefore both permanent and temporal. They confine the character on an area and many times are considered as barriers to connections. Some of their characteristics would be discontinuity, disruption, ‘isolating barriers or uniting seams’ (Lynch, 1960, p. 65). Similar to paths, edges too have directional properties. We must also consider the Z coordinate when it comes to overlap of edges along with the nature of an edge, whether it is a strong edge or a weak one; or perhaps a universal edge or a barrier to limited connections. There have been cases where functions and characteristics of paths and edges are interchanged or as stated for paths above are other than physical in nature.
- Districts – Areas of a unique or common character that people can experience from outside or inside. These generally are the centers of activities in a city, points or areas that are connected by paths and divided by edges. The book states that ‘the physical characteristics that determine districts are thematic continuities... consisting of texture, form, space, detail, symbol, building type, use, activity, inhabitants, degree of maintenance, topography’ (Lynch, 1960, p. 67). This in turn imprints an image on the public that may be more than just physical. A district could have its character based on other aspects like social classes, financial standards, design norms, regulated functions etc.
- Nodes – These being the junction of the connections, generally have high amount of activities around them. For the purpose of the paper, nodes will be considered for their physical, place-making characters as well as the possibility of them changing with time. As goes for paths and edges, nodes too can be segregated into hierarchies.
- Landmarks – Characterized by their uniqueness, these components are used as prominent way finders in a city. They may use discontinuity to their advantage or blend in at a certain scale but then stand out at a different one.

These five elements mentioned in the book are no doubt efficient in understanding the urban fabric. The research however, will also consider possibilities of these elements being modified, customized or changed. This would help in generalizing these components beyond their physical appearance and qualities so that they could be identified in the context of conceptual urban ideas through media.

The book does talk about interrelation of these five components and their combined contribution towards a complete urban image. The dynamic of time has also been touched by Kevin Lynch, when he talks about shifting images both from stationery places with time and for objects changing their place with time. What the author of the book calls complexes are these set of components specific to a particular case that may or may not fit perfectly into a larger whole. Sometimes perhaps standing out is what a city wants.

One very interesting paragraph from the book states that things that are considered beautiful by many are generally ‘single-purpose things’, ‘... in which, through long development or the impress of one will, there is an intimate, visible linkage from fine detail to total structure’ (Lynch, 1960, p. 91). Cities, however, are ‘multi-purpose things’. Considering how certain utopian conceptual urban scenarios have a strong impact on us (which beauty always has), the paper will look into whether limitation of purpose of a city, thereby reducing its complexity is what makes a conceptual city likable. Is that why people perceive these ideal scenarios since they are easy to perceive without their complexities as no one will end up living them?

Besides adopting the components stated above and factors besides physical appearances, certain other generalized concepts such as axis, convergence, radial progression, overlap of planes, programmable environments will also be used as part of the framework.

Cities and Cinema – Barbara Mennel



This book provides an overall connection link between urban scenarios and cities. Following a well documented timeline with extensive enumeration of examples, the book makes it easier for the reader to interpret his/her own version of the connection.

The book is broadly divided into three sections. Section I establishes the significance of the relationship between cities and cinema using three different examples in three different times – (city film in Berlin during Weimar Republic, film noir in LA and era of romantic films in Paris). Section II then turns to national and international cinema looking at production styles and movie genres from Hong Kong and film on war from Berlin, Belfast and Beirut. The last chapter in this section which is of particular importance to the paper talks about fantastic and virtual cities through movies which try to visualize utopian or dystopian urban scenarios.

Third section talks about cinematic portrayals of marginalized social groups. This part sheds light on topics related to minorities, gender bias, ethnic and social groups and how globalization has or hasn't affected movies in any way.

The book begins with an introduction to the founding myth of cinema or 'the train effect' as the author puts it. This talks about the times when silent movies were invented and made accessible to public in cafes and parlors in the late 1800s. Not that this was the first time people were introduced to moving pictures but the technique used was considered the most sophisticated then. With an attempt to capture and show movement, the short movies of this time mainly documented an activity and were titled so too. *The Arrival of a Train at La Ciotat station (1895)*, was the name of the movie and it is said that the sheer realistic perception of a train coming your way accompanied with the sounds added separately, made quite a few people faint as they watched it. Cinema during this time was seen as something bordering on the magical. Many other titles such as, *Launching of a boat (1900)*, *Exiting the Factory (1895)*, *Explosion of a Motor Car (1900)*, followed.

While describing the effect of first motion pictures on people, the writer states that "By conjoining icons of modernity – urbanity, speed, cinema and the city – in one seminal moment, the often-cited myth reproduces the story that cinema tells of itself: when the lights go off, an illusion appears and seems so real that we forget we are watching moving pictures." (Mennel, 2008, p. 2)

There have been documented cases mentioned in the book where film producers have made use of pointing out these differences between the real world and the picture projected on the wall, in one case the person is actually shown interacting with the images on the movie wall (Mennel, 2008, p. 9). This just shows how perception of motion, speed, light and sound awed the audience at its beginning. Visualization has always been a tool that humans have used to make others experience unusual scenarios which may not be possible through live plays or dramas. That's the power that this tool gave us. As the book moves from modernity to postmodernity and its influences on people, we understand that 'representation' was the sole purpose of cinema during modern movement which later became a medium to project virtual ideas of parallel and future urban scenarios through fantastic sci-fi movies like *Metropolis (1927)*.

The book as opposed to Kevin Lynch's take on physical elements and components of a city, talks more about the 'non-tangible' aspects of it. The style of architecture, use of space, angle of camera, use of lights and sound styles, acting, overacting, visual imagery all sum up together to create an

experience (tied to an image). The first three chapters of the book give cogent examples where relevant changes in the society were depicted through cinema, several times through elements of a city. The 'Modernity' movement, as one can put it, which started a period of questioning or rejection of tradition, giving importance to individualism, freedom and equality and represented a gradual movement from rural, agrarian economy to industry based market with rapid development of urban centers and increasing delights and troubles of urban life witnessed movies that used city streets as a stage for thrilling adventure and interesting encounters with strangers. Many of the movies in these times also looked at crime in the cities, anonymity, a loosening of morality, unemployment and other problems of this new changing economy (Mennel, 2008, p. 23).

Author uses the name 'city film' to describe the documentary style movies of this era which excessively projected "metropolitan motifs, motion and development" of an urban environment (Mennel, 2008, p. 22). Following are some the theories on modernity and urbanity which are stated in the book and tie up closely to one of the movie case studies explained in the later sections (*Metropolis*, 1927).

Some of the basic elements of a 'city film' were described to be abstraction, circulation, movement and monumentality. Considering the shift from rural to urban settings, the sheer change in the rate of flow of everything around an individual compared to a vast variety of things affecting his/her experience, these components do seem logical. The author quotes the work of a well known sociologist Georg Simmel named, 'The Metropolis and Mental Life (1903)' stating his observation of a stark contrast between "...quiet life in the rural communities characterized by social networks, kinship, and family (as opposed to) the quickly changing impressions of a metropolis". According to him they affected the sensory foundations of an individual's psychic life (Mennel, 2008, p. 25).

The abstraction and monumentality of an urban environment were shown by contrasting characters, for example a rural naïve character as opposes to a vile and cunning urban businessman. Movement within the city and the anonymity a faceless crowd causes was shown using an idea what has been called '*flâneur*' in the book which is essentially an ideal person of the nineteenth century who wandered the city aimlessly and sought refuge in the crowd. A certain '*blasé*' attitude was a common character trait in movies of this era, which essentially was an image of a hardened ego, unaffected by the activity around itself, a profit loss based machine-like persona. Female characters were several times used as representations of indulgence and objectivity (*Metropolis*).

A subgenre of the city film that developed in the Weimar Republic was called the 'street film'. This subgenre specifically revolved around streets as "space of random encounters, violent crimes, urban surveillance and ambiguous morality and sexuality", which were some of the cons of the emerging modernism. A stark contrast between domestic interior and urban exterior was used more explicitly.

The books then movies on to 'postmodernity' and the realm of 'film noir', a genre of films that was more darker and gritty, where urban scenarios are dangerous, where urban characters are capable of corruption, betrayal and murder.

This genre depicted the darker side of urban living. Incomplete families, weak male characters, dominant female characters capable of double crossing and betrayal were some of the main features. 'Film noir' is said to use a lot of transitional places like train station, streets and alleys (Mennel, 2008, p. 47). Probably a symbol of going somewhere better, a more perfect world devoid of dark characters and darkness within people. Out of these several darker aspects of an individual, suppressed sexuality was a prominent component expressed through these movies. Using places in an urban setting to show off this suppressed but very present sexuality by shooting scenes in a bar or a dark alley with presence of prostitutes; female characters as femme fatale who are punished at the

end for their transgressions; or constant night in the city or rain and dim lighting to express the unpredictably. The 'blasé' attitude of the protagonist was more prominent in these private-eye-ish films compared to the earlier ones.

One very interesting concept discussed by the author about this genre is the contrast it displayed between suburban and urban living, with the protagonist living a secluded, peaceful life in the suburbs away from the crime and unpredictability of the city but gradually gave more prominence to this unpredictability over the suburban calm depicting a sort of induced addiction to thrill and ever-present exposure to danger. This era spread over years before and after the Second World War and the advent of suburban living. So, this connection is an interesting observation.

Los Angeles was portrayed in many of the movies of this era probably because of its renown at that time. Postmodernism, besides this genre also saw the increase of various speculative movies that visualized immediate future of urban development and rise or downfall of urban living. One such movie '*Blade Runner (1980)*', imagined the 2019 Los Angeles amongst several others that played with the concept of time travel or visualized a futuristic scenario through films (*Back to the Future series, 1980*).

A chapter from the book talks about the 'New Wave' in French cinema which branded Paris as the city of love. This chapter touches the ideas of 'auteurism' and use of female 'flâneur'. The social aspects and religious influences in Paris from 1960 to 2003 have a major influence on this movement. On location shooting is probably one of most significant contributions of this era.

Relation to cities – Real and fantastic

Before moving on to the chapter that talks about virtual and fantastic cities in cinema, let us understand the relevance of these ideas to the research topic. It is a fact that social movements throughout history have had crucial effects on cinema, it being a medium of expression of the masses (we can argue if masses were appropriately represented but nevertheless, we can't deny cinema's role as influential media). If we look at different characteristics of the two distinct movements of 'modernity' and 'postmodernity' mentioned above, we find direct and indirect connections between them and the movies that were released around that era. Majority of these films represented the then current outlook of the society towards various issues and depicted their reactions to the changing social scenario. And that's what movies have done the best. They represent the era they were released in, at least the old movies did.

This is the reason why movies in times of modernity looked at contrast between rural and urban characters. They looked at specific norms that society had made around urban living at that time. Speed, movement and monumentality were some new qualities that people had started experiencing thanks to industrialization and modern movement. Movies around advent of postmodernity played with more realistic image of an urban life, where things went wrong and people were not perfect. This suggests a change of local perception of cities from machines of perfection to they being somewhat limited too. Cinema became more experimental and off-beat. Scope of ideas such as 'flâneur' and 'blasé attitude' was played with. This is inherent in the very ideology of postmodernism which was all about challenging the basic concepts of standardization. Post War experiences and advent of technology was a big influence that changed societal perceptions. All in all movies were the best depiction of social perceptions. And they still are.

What's interesting though in all these examples, is the fact that peoples' perception is limited by their speculative range. Movies that looked at future scenarios or dystopian paradigms did speculate fantastic things happening ahead in time but they were only so far as much out there as they could stretch the potential of (then) existing components of urban living. For example, in Ridley Scott's

'*Blade Runner*', which was released in 1980, the future (2019) urban scenario for Los Angeles re-imagines it having huge megalithic towers and flying cars. We can certainly attest to the fact that this technology won't be as common considering it was shown to be just three years from now. There must be certain common factors that were a reason for several such movies imagining use of flying cars in just 30 years. It could be the boom in automobile industry and the over dependence of American household on cars. In any case, the movie imagined a scientifically and technologically upgraded version of the existing mode. It did not go beyond the idea of using cars as a mode of transport. Instead, looking at what people would love; a hovering car that is not limited by road area and lanes and unobstructed by traffic. This is starkly contrasted by the current condition of all American cities including Los Angeles where traffic is still much real and cars aren't flying. Also, interestingly, movies nowadays look at teleportation or programmable cities which was nowhere to be found in movies thirty or forty years ago (there may be exceptions). Thus, the speculation aims at visualizing upgrades of existing technologies and theories still being limited by its scope.

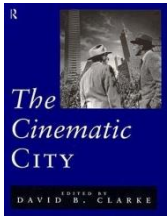
An exception to this idea would be the depiction of social structures (utopian or dystopian or just bizarre). One can find a relevant influence to the existing social structure or past 'isms' but people have been more experimental with its scope. Paper will look at it in detail further.

Fantastic and virtual cities – The author identifies two major shifts in the late twentieth century that changed the function of cities for the negotiation of utopia and dystopia in this chapter. The earlier phase that defined 'labor as modern and industrialized in a capitalist urban scenario which was in stark contrast to rural, traditional and pre-modern subsistence' and the later phase, on account of development of computer technology detached labor from the city fabric and turned it into a solitary activity (Mennel, 2008, p. 131). This phase saw the leap from analog to digital as far as conceptualization and production of movies. The notions of modernity and progress were no longer physically attached to the form of a city but were intrinsic to the character's subjectivity and virtual reality.

The author writes, "the city itself does not signify the future anymore because the futurity cannot be located in the material technological development or in the built environment. Instead these contemporary, postmodern, science fictions narrate the difficulty of distinguishing reality and representation from one another" (Mennel, 2008, p. 131). This somewhat pushed cinema to look at more complex concepts of space, time and social structures than just visual representation which was not as prominent in older movies. While quoting several examples of relevant movies such as '*Metropolis, 1927*', '*Things to come, 1936*' and '*Alphaville, 1965*', the chapter elaborates on the decrease in importance of cityscape in science fiction because visions of future became associated with more invisible aspects of technology. The '*Alphaville*', for example, makes use of (then) existing landscape in Paris but the characters are from a different time. The movie ends with a strange idea that '*Alphaville*' was never a city but a state of mind, a mental idea of perfect living. This boldly pushes the physical boundaries of a contemporary city and sheds light on new age perceptions of urban living.

The chapter then moves on to cite a few examples from the 80s, which depicted dystopian visualizations of old cities. '*The Truman Show, 1998*' is a good example of this genre which commented on dull suburban living of the 60s. The genre of 'future noir', which showed dystopian vision with specific focus on reality, virtuality, memory and subjectivity, is also an important genre. The paper later will look at two crucial examples from this genre, '*Blade Runner, 1980*', and '*The Matrix Trilogy, 1999*'.

The Cinematic City – David Clarke



This book is a collection of essays on topics related to cities and movies. Several of these essays cover the history of western cinema, topics on cinematic theory, relationship between modernity and postmodernity; and their depiction through cinema (similar to topics discussed in the previous review). Four essays are selected and analyzed in this section based on their unique points and contributions to development of connecting factors and ways of reading movies.

The **first** essay is more of an introductory one, written by David Clarke himself titled ‘Cinematic City - Previewing the cinematic city’. It broadly talks about the interrelationship of cinema and the city often quoting spaces from the two as *cinemascape* and *cityscape*. It strongly supports the idea of interrelationship between cities and cinema and their role in each other’s evolution. The essay explains that cinema introduced a change of perception among the masses. It made them aware of certain previously unknown dimensions of their urban living. This is connected to the cultural and historical shifts that came about as a result of cinema and some of them have their sources in the biological aspects of humans. A quote by Shaviro (1993) mentioned by the writer states that,

‘Cinema is at once a form of perception and a material perceived, a new way of encountering reality and a part of reality thereby perceived for the first time.’ (Clarke, 1997, p. 2)

This sentence somewhat sums up the entire essay. Two questions come to one’s mind after reading the sentence. One, who’s perception are we talking about? And two, what does it mean by a new way of encountering reality? The essay answers the former question by delving into the concept of a ‘stranger’ which is defined as an embodiment of everything that modernity through its systematic rationalization worked at annihilating. It is this ‘stranger’, an ambivalent, fleeting figure that led to the fall of modernity into postmodernity as quoted by the essay. This, points to a very important concept of balance in a cinematic city (or absence of it). Movies around the era of modernity or for that matter in any era (generally) look to provide a balanced perspective of the existing condition. Cinema around modernity aimed at showing the fast paced life of the modern city and normalizing the ‘frantic, *disadjusted* rhythms of the city’ (Clarke, 1997, p. 3). A combined effect of all the movies in an era would incline itself more towards a balanced outlook.

Imbalance in dystopian movies – The point above may not be true to the dystopian movies wherein an imbalance is more prominent and certain aspects of a city are considered constant or deteriorating while others are exaggerated. An ‘inducing effect’ by an easily relatable cinema theme is lost in dystopian concepts and the only aspect one relies on is the ‘imageability’ of the urban fabric (as per Kevin Lynch review).

The essay moves on to talk about ‘flâneur’ and (its) relation to the city which speaks to the general theme of the essay wherein intangible aspects of the relationship are elaborated on more than the physical ones. Writer affirms that it is this transversal connection between the subject and the stimuli that leads to the notion of relevant urban scenario depicted in movies rather the physicality of the city itself. Another interesting point which has also been raised in one of the other essays reviewed later from this book is the difference between what a city is and what the cinema represents (Clarke, 1997, p. 7). It is a *perspectival* representation nonetheless and is therefore not equal to the actual case. We may put it as a tainted image of the actual scenario no matter how near or far sighted it is.

The essay then provides an introduction to the chapters that follow. A well quoted essay, it takes you into the concept of the books wherein all the concepts are looked at from a cinematic point of you, giving secondary preference to cities and is therefore an interesting read.

Second essay of interest from the book is titled ‘Of plans and planners’ (written by John R. Gold and Stephen V. Ward) and it talks about the beginnings of the documentary film era, mostly after the Second World War. Though not directly related to the topic of this paper, this essay is selected to understand the role of cinema in educating the masses and thereby influencing their views. The chapter stresses on the rise of public housing projects and the need of better planned homes after the war and how all of this was propagated through documentary films, many of which showed planners and other technicians as the main characters. These films aren’t like normal cinema and one could say are exactly opposite to a movie depicting a virtual or fantastic city. This altogether different genre of films relies on spreading the truth. Much of this movement came around in 1952. The beginning of ‘auteurism’ as a result of the ‘New Wave’ in Paris (1930s) could be quoted as a contributor to these films wherein on location shooting was a necessity. This chapter enlists four different ways in which planning was projected through these movies over the span of the era by different combinations of imagery, voiceovers, enactment, etc. These are, planning as science and rationality, as social medicine, as pursuit of vision and, as wizardry (Gold & Ward, 1997, p. 66). It is important to understand that the way subject matter was handled in these movies was different and probably fine tuned to how people reacted to them. Surely, some of it was based on political and economic conditions then and not all that was true was projected. But still ideas such as planned towns, public housing plans, and neighborhood units were explained using not only two dimensional illustrations but actual practical implementation. The influence of cinema on people is the relevant factor in this essay.

The **third** essay referred from the book is titled ‘From ramble city to the screening of the eye – Blade Runner, death and symbolic exchange’ (written by Marcus A. Doel and David Clarke). This is an extensive essay that delves into Blade Runner mostly, analyzing its various aspects, its relevance to the time it was released in, its complex representation of an alternative dystopian time and space, and its use of pastiche etc. Following statements relate to the perspective representation through cinema touched upon in the first essay reviewed from this book.

‘In our engagement with the film (Blade Runner), we will insist that it is not a mirror but a screen. Cinema does not re-present, re-produce, re-play or re-reflect. Hence, as Deleuze (1986, 89) demonstrates, conceptualization should work ‘alongside’ rather than ‘on’ the cinema: a resonance rather than reflection; encounter rather than capture; invention rather than re-presentation.’ (Doel & Clarke, 1997, p. 141)

This would mean that a cinema is restricted in expressing the true case or it is not limited to expressing it since it can elaborate on aspects that could be completely impractical in reality. However, not all the factors included in such movies are unreal. Some do work in tandem with certain ideologies set in the real world. The idea that some movies express ‘what if(s)’ and some ‘what could have been(s)’ is of importance. Thus a 2019 dystopian Los Angeles is nowhere close to present Los Angeles as Blade Runner portrays a ‘will have been’ space and time (Doel & Clarke, 1997, p. 141).

Without delving much deeper into Blade Runner as a seminal movie (as the essay does), we shall look at some of the important factors that are of relevance to the paper. Several psychoanalytical theories are used to understand the space time existence of the movie, most interesting being a space time implosion – a slow decay of urban living and fabric and a pastiche of irrelevant things showing advanced decay (Doel & Clarke, 1997, p. 144). Points such as true objective of the ‘Replicants’, Rachel’s unique case, relationship between the antagonist ‘Replicant’ and Tyrell (father – son, nemesis) etc. are analyzed throughout the essay. What is of relevance to the paper is the fact that every physical aspect of the city, or the people, the way they dress, the way they talk, their demographics, their lack of expressions etc. all relate to a certain perceived visual simulation or

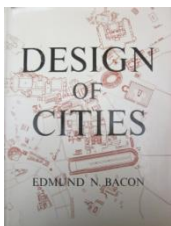
albeit a complex overlap of ideas. And this is not limited just to the physical aspects but considers physicality as one of the relevant factors. So the state of mind of the subject, the importance of other characters, the social order implied (reading between the lines etc.) are matter. That's probably the only spectrum in which a certain (close to reality) complexity can be achieved.

The **last** essay reviewed from this book is written by a well known psychoanalyst and film scholar Rob Lapsley and is titled 'Mainly in cities and at night – some notes on cities and film'. This is an interesting essay as it uses psychoanalytic view points to understand how movies and cities are related. It uses some theories from 'existential philosophy' of Martin Heidegger and some of Jacques Lacan's theories of the subject and 'the Other'. We shall look at some of the interesting concepts that may help us understand how much of the movies is representation and how much is speculation.

Heidegger's theory of Dasein, which is a German word for 'being there' or 'presence' talks about life as ruinance; where Dasein's life is not what it should be and therefore it moves towards an external Other for approval. This is not exactly similar to Lacanian subject but nevertheless, we could blend the two together to understand that the Dasein always feels as if it has been swept away; involvement is experienced as fallenness and therefore it is always ready to start working towards its repair. The essay says that, 'the happening of the city is at once a metaphor and a site of this ruinance', meaning that city as a process always veers away from the form envisaged by its creators, 'a process outrunning understanding and control, a process whose revenge upon its architects and planners undoes every dream of mastery (Lapsley, 1997, p. 186). We can assume that since this inevitable process is the subject here, are we as its consumers 'the other' or is it our absence that it craves. These ideas can further be elaborating by trying to understand 'the Other' and how it affects the subjectivity and transcendence of the Dasein.

Both this reviews above (Cities and Cinema – Barbara Mennel and The Cinematic City – David Clarke) talk about non physical aspects of the relation between cinema and cities. Former chronologically explains the evolution with cogent examples of direct/indirect connections while later talks of more abstract dependence and influence. It all goes back to perception though; what affects it, whether it is subjective or objective, whether it is exaggerated and so on. Nevertheless, these connections are important as they point to the minor difference between reality and simulation.

Design of Cities – Edmund Bacon



This book is also a well known guide for students of architecture and planning as it has numerous case studies with illustrations and sketches that explain the ideas more coherently. Written by a well known urban planner, architect and, an educator, Edmund Bacon; the book talks about space, time and movement of urban scenarios by explaining evolution of cities. The author has played a key role in development of Philadelphia over majority of his lifetime and is rightly known as the 'Father of Modern Philadelphia'. Being an architect, the author has a different (not essentially correct) way of looking at things. Through the introductory part, the writer takes us through different components of design and scale for a space. Thus a design based outlook towards cities. The reason this book is selected for reference is this design based outlook that helps us develop certain stimuli for perceptive responses from the people. This is crucial because such stimuli are all a movie has to impact people in a limited time. Other than that, the book has a vast collection of case studies related to urban evolution enlisted chronologically. The case studies stated later in the paper have used this book as the main source.

Before starting the analysis part, the book talks about different introductory concepts of understanding a space. They are discussed below.

Form, space, time and movement – The book defines architectural form as the point of contact between mass and space (Bacon, 1974, p. 16). This would essentially mean that form defines the mass in a space. Considering mass as positive as it occupies area and space as negative as it is void, a form so to speak, sets the conditions between their existences. This manifestation is perceived by us through our senses. Depending on the physical form, it could both enclose a space or be suspended in one. Therefore it could define a space or be defined by one.

If one looks at geometrical components that form a space, one finds several ways in which an enclosure can be formed. A six sided cube can enclose same volume of space as a hollow sphere but the effect is not the same. Thus the balance and interplay of space and form has impact on one's perceptions. While explaining articulation of a space, the writer says,

‘Architectural forms, textures, materials, modulation of light and shade, color, all combine to inject a quality or spirit that articulates space.’ (Bacon, 1974, p. 18)

It is this articulation that defines the use of that space or what it stands for.

This blend of form and space, some structured some imposed, should change with time in order to complement the constant flow of life and its experiences. Time could be perceived differently as one moves from a specifically designed space to a completely different one. A space could represent movement in time just by its existence as well. The example used in the book for the later is shown below.



Figure 1 ‘Noli Me Tangere’ – Sandro Botticelli, made in Florence, Photo: Philadelphia Museum of Art

‘The Botticelli painting above is a representation of time: the flow from the past is symbolized by the archway to the left, and the anticipation of the future is represented by the glimpse (through the archway on the right) of open space extending to the horizon beyond.’ (Bacon, 1974, p. 19)

For the former case, as one moves through spaces, through time, this movement will be incorporated by various sensory perceptions. Change in temperature, light settings, height or absence of a roof, change in smell, presence of hot or cold winds etc.

Thus a city is a blend of form, space which people perceive with changing time and their respective movements.

Abstraction and scale – This blend of form and space that we perceive gives us the idea of an entity, contributes to our experiences. However, each such system, let's say or a juxtaposition of forms in space can be abstracted down to its basic components. This phenomenon is explained brilliantly in the book using a painting/photograph of a Greek cityscape. The first two points of abstraction are related to the edge of a form i.e. how it interacts with the sky and the ground. The scale of the contact point/line/plane compared to the form itself and its proportion to the entire setting matter here. A cityscape also has certain points in space that could at attraction or just have lines converging towards or diverging away from them. The YZ planes of each existing form in the cityscape also acts as a basic component. The angle of a plane gives depth and dramatizes a cityscape. This brings us to the next point of detailing out the design in these dramatized depths. This gives a fine tuned feel about a form and provides stimuli to evoke responses from the masses. Later comes the difference in Z factor of XY planes which is listed as ascent and descent in the book. This provides the depth along axis perpendicular to our vision. Last two components talks about concavity/convexity and the scale with relation to humans. The former could be cited as a product of play of depths and an ascent/descent factor that gives a projected direction of certain aspects of a cityscape like, a curved road helps us understand the density and makes us curious while a straight road displays discipline. Any cityscape (real or fantastic) can be disaggregated into these abstractions easily. This provides us with standardized criteria to understand and compare any space.

As far the scale factor is considered, it matters which viewpoint a designer considers while designing a city or while shooting a movie (or even generating virtual renderings of fantastic city). Atlanta may seem to have a good grid for a first time visitor who looks at it from the sky as the plane lands, but being an actual user of the city, at ground level tells so much about the problems with the city grid in Atlanta. Thus, as put in the book, representation and realization are two different things and both should be thought about before hand as efficiently as possible.

Apprehension, representation and realization – These ideas are related to the process of ideation of a concept to its implementation into a tangible form. Apprehension here means a central idea or a concept specific to a project or to that era (if one considers architectural style). For example, total awareness of environment in medieval times, or precise concentration and emphasis of one individual at one time as in Renaissance. Converting these complex ideas into three dimensional spaces or two dimensional images may destroy some of its vital components if not done correctly (as mostly happens in movies). The realization part deals with the end product of the processes and if the idea is understood correctly by the users.

Perception – The book also elaborates on subjective perception of people. According to the author, one's perception depends on how one is (outgoing or ingrown). Each person has priority circles around himself/herself. At the center lies his/her primordial self, the honest image of one's personality (or in case of a form its true content). Depending on how the center is, the inner space (closest to the center) is influenced. This may be how a person is with his family and significant other or a space influences areas around itself. The outer space therefore is away from the center and according to me, could be interpreted as a veil of dishonesty, in case of a space, a tainted influence mixed with other factors and entities in view. These factors and their strengths determine how a person (client, planner, movie-goer) perceive himself/herself and the entity or creation it sees.

The remaining majority of the book consists of well illustrated case studies showing evolution of urban fabric and cityscape through various civilizations. Some of these case studies are used later to

compare real and virtual cities. The flow of ideas in the book is very reader-friendly and even though the writer has some very restrictive viewpoints of looking at things, they do not seem far off at all.

Urban Utopias – Malcolm Miles



The author of this book is a professor of cultural theory and is mainly concerned with the faculty of arts and it is because of this that his take on social scenarios in various urban settings are interesting. No doubt the book talks a lot about social systems in a utopian ideal and quotes examples through case studies of some utopian cities thriving currently around the world.

Utopia is intrinsically attached by a quest for perfection; something humans crave for. As put forth in the abstract of the paper, we constantly aim at achieving the perfect level of sustenance under given conditions. Utopia as a concept though, can be very subjective; the very reason why it was not selected as the main theme of the paper. It is an intentional way of life which aims for perfection in all its form. This contradicts the very basis of human nature. Imperfection is what makes us unique and therefore a utopian ideal would be starkly exclusionary unless all humans are perfectly similar. Again, one is left with several complicated questions such as whose utopia are we talking about? Who has control? Is their control? And so on.

The book is broadly divided into four parts. First part talks about literary utopias and how they are or are not related to the realizations of urban scenario. Second part talks about the evolution of city fabric with brief mentions of Garden City movement, modern movement and works of Le Corbusier and others. Third part talks more about the underprivileged side of the utopia (and certain interesting examples – ecotopia, mud architecture etc.) and the fourth part gives ten short case studies of existing utopian contexts around the world followed by a conclusion. The book is primarily referred for these case studies as they are delightfully interesting and help us understand the practicality behind a utopian ideal. We shall look at three of these case studies which are discussed in the following section.

Acrosanti, Arizona, USA – This is an ongoing, experimental, eco-city which is currently home to around 70 people. Situated on top of a hill top, this city is based on (architect) Paolo Soleri's idea termed as Arcology. The book defines it as follows, 'a methodology that recognizes the necessity for radical reorganization of the sprawling urban landscape into dense, integrated, three-dimensional towns and cities.' It essentially is a mixture of architecture and ecology and aims at having least impact on the environment around it by use of local materials, locally grown food, easy access to natural environment etc. It is said to serve primarily as a education center with its meeting place used for several workshops etc. which students and visitors attend. The architect of this city has used works such as complexity, miniaturization and frugality as some of Arcosanti's main characteristics.

The following description by Malcolm Miles somewhat comments on the limitations of an intentional society (according to me at least).

'I found Arcosanti an uncanny Utopia, a city planned in completeness in which successive dwellers might add detail but only within the confines of the original dream they are required to manufacture.' (Miles, 2008, p. 186)

So for someone who does not believe in this dream, Arcosanti has probably nothing to offer.

The settlement covers about 25 acres of land on the hill, and has a large central arena used for music and other public events, surrounded by terraces. A small library, apartments for residents, a terrace

for rooms of visitors overlooking a canyon, an open air pool, vegetable gardens and a grey water recycling pond form the rest of the city. There are facilities with kilns and casting machinery that is used to produce ceramic and bronze bells which are supposedly very expensive and main source of income for the city.

Auroville, Tamil Nadu, India – This is an international city situated in the state of Tamil Nadu, India. A city based on ideologies of Sri Aurobindo (a spiritual guru and a freedom fighter) and Mira Alfassa (The Mother), it aims to be the physical manifestation of superhuman consciousness on Earth.

Besides the information provided in the book, I personally have had the opportunity of visiting this place several times and work on my undergraduate thesis there and therefore this case study has some of those experiences incorporated as well.

The original plan of the city aims at housing 50,000 people and many of its areas currently overlap with several Tamil villages in the area. The land acquisition process is slow but on the way. The vision plan of Auoville is essentially a Galaxy Plan that has four zones of industries, houses, cultural faculties and international pavilions spread around the central green area where the gold domed temple called Matrimandir is situated. This essentially is a meditation center of sorts as Aurovillians do not believe in any religion or indulge in idol worship. The Galaxy plan was designed by a French architect named Roger Anger, but much of its design was given to him by The Mother. It is said that the design was brought to her by divine intervention in a dream.



Figure 2 Galaxy Plan Concept - Auroville, Photo: www.auroville.org

Since its inauguration in 1968, there are in all 1700 from several countries staying here as its citizens. The central green area with the meditation spaces and some of the administrative buildings like town planning house etc. with several guest houses and hostels, museums etc, currently populate the terrain. After the demise of both the spiritual creators of this city, much of the development and regulation process has slowed down due to inefficient management (my opinion). It is an architect's dream city though as one gets to build things beyond the normal bye laws of the state of Tamil Nadu. However, the Galaxy Plan has to be followed. The citizens of Auroville make use of local materials and indigenous techniques developed in its local labs for construction. A common solar kitchen cooks daily food for around 5000 people.

The entire idea is based on a person's perception about the next plane of consciousness and how it was realized through an architect's mind. So much of the living here is intentional as well. The administrative system has the main council which looks after everything after the spiritual gurus, a

town planning department that tries tirelessly to realize Roger Anger's interpretation and several other research organizations. Many of its first residents are now old and new citizens are in their 30s. It is a good city for a quite life.

Ecovillage at Ithaca, New York State, USA – This community describes itself as 'an intentional community and a non-profit educational organization...(aiming) to develop an alternative model for suburban living which provides a satisfying, healthy, socially rich lifestyle, while minimizing ecological impacts' (www.ecovillae.ithaca.ny.usa).

The idea of minimizing ecological impact in this case is not vested in simple living but use of advanced materials and techniques such as specialized solar panels, triple glazing, double walling systems etc. So the focus is more on design. A current population of about 60 houses, this city spans in an area of around 176 acres which I would say a typical suburban proportion. All the families here seem to use cars and some of them work in the city while others have local jobs outside. The city as two phases of buildings, a cohousing scheme and, an organic community vegetable farm with barn, greenhouses, poly-tunnels, space for small scale local industries, an education forum, pastures, a warm-season grasses restoration project and beginnings of a berry farm.

Considering various factors described by the writer and a general lack of sensitivity (more of a pretending façade) towards responsive living, I personally found this to be an exclusionary, white dominated, middle class enclave. A community which has so less diversity cannot possibly brag about communal living or a place where transit is absent (besides a bus) and everyone still consciously uses a car, cannot say it strives to minimize ecological impact. Using advanced techniques to tackle problems is just like putting a bandage on your wounds to stop the bleeding for now. The location, planning and implantation all matter in conserving energy. This compromise seems absent here. The writer also observed a wide range of problems among the residents regarding common areas, building design etc. which is another factor that this is just like any other community situated in a state where there isn't much going on all throughout. I personally am disappointed with it.

Other relevant points – The book also talks about several other points which are relevant ways of understanding how perceptions of a society work in case of real life utopias. Some of these combined with some of the hypotheses developed from the book are listed ahead.

Firstly, it is important to understand who has control; whether it's a person or an entity or a stringent ideology. This control may not always be direct but more of a guiding factor too. But it certainly decides the sensitivities of the community.

Real life utopia is never perfect. This is the case because it is intentionally biased on certain ideas considering them to be better than everything else. This in turn makes one restrictive.

Social structure in place should be looked at and its working should be understood. This ties up to the first point of who has control or rather whose city is it?

The writer says that for a genuinely free society, every individual should be free from inside; kind of a bottom up process where change begins at home and protrudes outwards. Equity should be intrinsic, marginalized people should be able to tackle the problems and grow. Humans should be humble.

Matrix of components for efficient reading of cities (real/virtual) –

Based on the analyses of literature in the previous section, the paper develops following matrix consisting of components/points that can be used for efficient reading of urban scenarios, both real and virtual. This is important as it provides a common base on which comparison can be made. The matrix is broadly divided into four categories for ‘aspects of interest’ (physical, non-physical, design and system based) which are quite clear in their definition. This matrix is an ongoing process and can be added with components as and when more relevant things are identified.

References	Aspects	Components/Points
The Image of the City - Kevin Lynch	Physical	<ul style="list-style-type: none"> • Paths • Edges • Districts • Nodes • Landmarks • Imageability (complexity) - single purpose v. multi purpose
Cities and Cinema - Barbara Mennel	Non-physical	<ul style="list-style-type: none"> • Direct or indirect connection to an era • Visual imagery • Attitude of the protagonist • Relevance to different film genre (noir, techno noir) • Symbolism, • Use of light/shade, angle of camera/scale of observer.
The Cinematic City - David Clarke	Non-physical	<ul style="list-style-type: none"> • Balance • Cinema as perception - representation and not a copy • Presence of 'flâneur', 'auter', 'stranger', 'subject v. other dilemma',
Design of Cities - Edmund Bacon	Design based	<ul style="list-style-type: none"> • Form • Space • Time and movement • Abstraction • Scale • Apprehension-Representation-Realization.
Urban Utopias - Malcolm Miles	System based	<ul style="list-style-type: none"> • Social structure • Presence or absence of control • Balance of power.

Figure 3 Matrix of components for efficient reading of cities

These aspects and respective components will be used in the following case study comparisons to understand if a link can be made. This is necessary to understand the level of speculations we can make while looking at futuristic scenarios presented in today's movies.

Comparative Case Studies –

This section will look at four comparative studies, each a pair of a virtual and a real city. The pairs are formed on the basis of certain common characteristics which are obvious, coupled with several similarities that have been noted by various sources online and in print.

Each study will give a basic background of the cities' conception and origins and move to descriptions pertaining to the matrix created in the previous section. A table of prominent comparison points concludes each study. Following are the four studies compiled in the paper.

- Minas Tirith (Lord of the Rings Trilogy) – North American and Indian forts
- Lake-town/Esgaroth (The Hobbit Trilogy) – Venice
- Metropolis – Paris (Haussmann and Le Corbusier)
- Blade Runner (2019, Los Angeles) – Current day Los Angeles

Minas Tirith (Lord of the Rings Trilogy) – North American and Indian forts

The Lord of the Rings Trilogy: Analyzing urban fabric of the third age of Middle Earth.

This is an epic high fantasy novel written in stages from 1937 to 1949 by an English author J. R. R. Tolkien. It is based in a fantasy world of Middle Earth with similar traits to a city before Industrialization (or at the advent of it). Magical and mythical characters populate this epic and some leaps that technology could have made, have been made by magic instead. This work has been subject to extensive analysis and criticisms for its themes and origins. It could be said that the story in the trilogy is just a part of much larger world with intermingling histories, also known as 'mythopoeia' (pending citation). One of the several analyses has mentioned Tolkien's work to be influenced by his distaste for the effects of Industrialization and experiences in WWI. This case study will look at the fabric of middle earth in general, explaining basic systems of segregation, lineage of characters with an attempt to understand how different their respective urban settings are as well. Then, the paper will look in depth at one of the cities mostly shown in the second and the third movie (third movie portraying the epic battle within and around it), design n of which has highly been looked at and commented on through local media as well. 'Minas Tirith' is the name of this city which has a weak resemblance to real world cathedral of Mont Saint-Michel in Normandy, France (movie visualization).



Figure 4 Map of the Middle Earth, Photo: The Lord of The Rings - J.R.R. Tolkien

Middle Earth - Introduction

The main setting of middle earth includes a huge spectrum of creatures and their habitats spanning from, woods to plains, lonely peaks to treacherous mountain ranges, country style small area towns to fortified, walled cities ready for battle. Following are the four main character species that populate the setting.

- The Hobbits – As someone who lead a bucolic lifestyle, these relatives of human race have country-like setting with each house having a small garden or a deck in front of it. Their settlements are hardly ever structured on a grid or pattern and are therefore mostly organically placed. They live in burrow-like houses under small hillocks which may be shared by two houses or more. An initial impression of looking at a village populated by Hobbits would be like looking at scenery with rolling hills and winding roads with horse carriages moving in and out of sight. A lot of these characteristics emerge from their mundane lifestyle where smoking pipe and drinking ale is a common past time. Peace loving creatures, they are in sync with nature and could be considered as having less impact on the surrounding environment. (Jackson, The Lord of the Rings (film series), 2001, 2002, 2003)
- The Elves – Perhaps the most interesting of the species in the epic, these are immortal creatures which are close to nature, connoisseurs of art (weaving, music, poetry), skilled at war yet love seclusion, have extensive knowledge about the world and as far as Tolkien's mythopoeia is considered have complex origins. These creatures are known for their beauty and elegance and they like to maintain a balance in the nature. The readers are introduced to the Elven city of Rivendell in the movies and the first impact of the city reminds you of paradise. Urban fabric that exhibits perfect harmony with existing nature with no barriers or limitations as far as growing vegetation is considered. Tall, slender columns with even more slender arches, intertwining with trees and winding waterfalls, with chirping of birds and whistling of tree leaves, an Elven city is a heavenly experience. One can relate it to the Baroque or Romanesque style of architecture where there is high priority on aesthetics and all the features fit together elegantly. Very few inferences regarding physical planning of Rivendell can be made based on the data available through movies, but the image does leave an unforgettable impression on one's mind. (Jackson, The Lord of the Rings (film series), 2001, 2002, 2003)
- The Orcs – These are the minions of the main villain in this epic and are primarily concentrated in the secluded kingdom of Mordor. The kingdom of Mordor perhaps is the reason why this epic was related to industrialization and its harmful effects. The main antagonist of the epic, Sauron, under the wake of his kingdom's expansion is seen to be cutting down forests and burning villages with a sole purpose of world dominion. The Orcs themselves having no quantifiable genius of any kind, are members of this stringent yet efficient system that creates cities and armies with more powerful creatures of war but have an image of chaos associated with it. Mordor is noticeably devoid of color or any ordered pattern or aesthetic appeal. The main tower (Eye of Sauron) is depiction of his dominance over the entire system and his undeniable access and unquestionable authority. Ways of the Orcs are least nature friendly as trees are the main sources of energy to run their progress. A stark antithesis to the Elven way of life. (Jackson, The Lord of the Rings (film series), 2001, 2002, 2003)
- The Humans – These are much like people that we have come across in different historical timelines. As this epic has close similarities to era before guns and ammunitions, the humans in this world are sword wielders, archers etc. riding on horses, led by kings, living in a society with social structure and so on. Two civilized kingdoms of Rohan and Gondor are a major part of this epic and many of the battles are fought in their major cities. To understand the scale of these kingdoms, one can look at 16th century Turkish or British kingdoms with knights and infantry are bare minimum use of advanced tools and techniques. (Jackson, The Lord of the Rings (film series), 2001, 2002, 2003)

These four species noticeably depict a gradual relationship as far as order of planning, organization of social classes, use of technology, disregard for nature etc are considered. Elves, no doubt, are on the extreme good side and Orcs at the other end. There have been disagreements between Tolkien and the creators of the movie regarding the visual depiction of the civilizations but nevertheless, the movies were highly acclaimed by viewers all over the world.

Relevance to real cities – Looking at the time when this epic was written, the visualizations of order and chaos through different lifestyles, physical scenarios, characters etc. are surely the work of a complex mind. However, as discussed earlier, the single-purpose scenario in this case is that stark segregation itself, which is depicted through physical appearances, traits and environments rather than complex patterns of thoughts and development visible around the author at that time. The author of this paper does not claim to assert that J. R. R. Tolkien had this in mind while writing the novel particularly, however, one cannot deny the influence.

Industrialization changed a lot of things. The way people travelled, the way in which information could be shared, the way war could be waged. Cities started getting congested and people sought to standardized measures for order as far as planning the uses were considered. Soon the rise of suburbs followed but the very idea of a mechanized lifestyle (no doubt convenient) taking over the good old fashioned bucolic way of living was suddenly in the spot light. Tolkien's middle earth is a complex mix of several characters with distinct traits etc. but each does have a single-purpose associated to it. Trains of thought such as pro-greenery (Hobbits), living in harmony with the woods (Elves), total exploitation of the sources for selfish progress (Orcs) etc. are dealt within the epic. The Humans are probably the only species less biased towards any of this and could be looked at as pro-balance. What separates this piece of literature from '*Metropolis*' or '*Things to come*', is the fact that none of it is real (not even the basic framework or the physical world) and that makes it more descriptive than speculative. The reason for selecting this movie was to look at how urban determinants have changed over time. Fortified walls and tall castles were very relevant to a city's structure as techniques of war were limited at that time. Concepts of paths, nodes, districts etc. were more separate than intermingling. Minas Tirith represents these pre-industrialization determinants very efficiently.

Minas Tirith (description and analysis) –

'Minas Tirith', also called as the 'White City' or the 'City of Kings' is the seat of the Kings and Stewards of Gondor. Known as 'Minas Anor' in the First Age of Middle Earth, it is a heavily fortified capital city which makes use of topography and levels in its planning and defense.

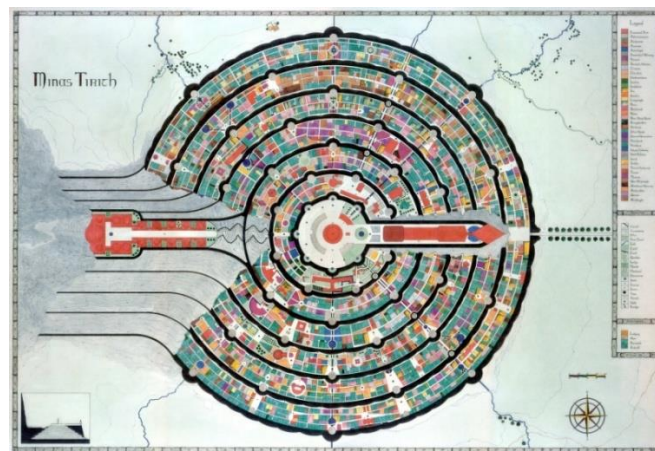


Figure 5 Plan of Minas Tirith

Set alongside a cliff, incorporating the spur of rock that juts out at its centre, Minas Tirith is divided into seven concentric layers each with a height close to 100 ft. The main gate of the city is at the centre of the first wall and has a pastured area in front of it that connects to the road going North and South. Each level is accessed by a gate which is staggered at opposite ends at successive levels. Almost 3/5th of the side of the city, when seen in plan is flanked by the cliff while the remaining 2/5th is constrained by the walls and cut in the middle by the extension of the rock. (contributors, Minas Tirith, 2015)



Figure 6 A still from the movie - The Return of the King, The Lord of the Rings, Directed by - Peter Jackson

Paths – The six levels of the city are all connected by staggered gates which are accessed through paved streets along the usable space of that particular arc. The transition from the sixth layer to the top most layer is through the mountain part that juts out which enters the grand plaza in front of the castle. Horse carts and walking being the only ways of commute, these pathways are flanked by houses on both sides (more inwards than outwards) and are not very wide.

Edges – The walls of all the layers from the edges of those particular levels with the mountain as a common edge on the other side. These edges are barriers against projectile attacks (arrows, catapults etc.) and are therefore tall. Walls have strategic placement of ramparts from where the catapults can fire at the enemies standing below them and away from the city.



Figure 7 Minas Tirith - Close View - Tolkien Gateway

Districts – The white castle at the top is the obvious focal point for the city. Compared to the vast plains around Minas Tirith, the city itself is a conical district of sorts.

Nodes – The gates between the levels, the main gate and the plaza at the top are the main nodes where most activity occurs. The plaza at the top provides a great vantage point for the king's men as it has an unobstructed view of the fields in front of it.

Landmarks – The white castle and the plaza are no doubt the landmarks of the city. The geometry and the focal points of the city give it the imageability Kevin Lynch talks about. A single-purpose city meant for defense.

One of the most important aspects of this city is its limited nature as far as expansion is considered.

The different levels house people from different social classes. The importance of these classes increases to the top. Say, more markets and working people near the bottom and knights etc. near the castle. The city however, never grows horizontally. The outermost wall acts as a crucial edge beyond which the city has no structures. Considering the increasing population in the city, the demand has to be met by infill development. This has a striking resemblance to a modern day Urban Growth Boundary as the wall isn't really a natural barrier. The seven levels also have fixed occupations associated with them. That is the levels act more as a segregation framework than connectors.

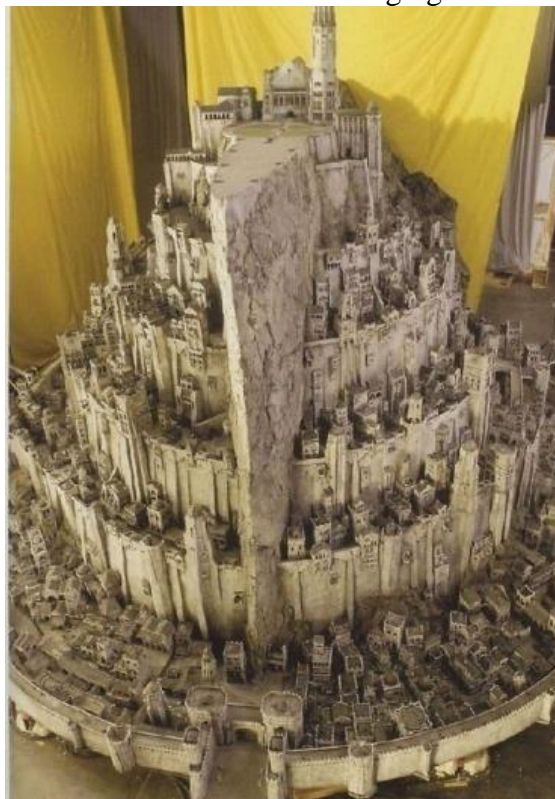


Figure 8 Model of the city, Source: unknown

North American and Indian forts –

Minas Tirith has a very close resemblance to a fort since it is designed for the sole purpose of defense. Forts could be defined as a strong, fortified place usually surrounded by walls, ditches, and other defensive works. There are two sole purposes of a fort; to protect the people inside from the invaders outside and to create a center for activity inside the walls and around its periphery. If we look at the American history, we see a varied type of forts such as military posts, fortresses, trading forts, or forts built solely for protection. Forts are generally associated with a fortified wall and its different

types are seen based on its function as stated above or the terrain it is built on. For example, many forts in India were built on mountain tops, few in shallow water or between forests etc. All of these had varying functions too. Only difference between forts in America and those India is that Indian forts generally had a king or a ruler owning the fort and all of these forts are pretty old. American history has had forts and military posts in much recent past (comparative) after the expansion in the west and so on. Also use of wood and temporary structures is a common thing in American forts whereas Indian forts mostly were made of stones (walls for sure, structure may or may not be). (Weiser, 2012)

If we look at reasons for these design components and material usage, we come across certain determinants that affected horizontal growth in those days. Remember that these were the times when remote controlled projectile missiles etc were not used in battles. An army consisted of an infantry with maximum spear throwers or archers and cavalry with the same weapons, perhaps a ballista or two. However, building fortified walls that were tall enough to block these attacks was practical, structurally and financially. Another factor was limited progress in construction techniques. Forts, before the invention of concrete, used clay mortar and other materials to fuse rocks and stones together. Higher and stronger walls had to be wider at the base because of load bearing techniques and absence of reinforced concrete and steel. Ideas such as ditches around the walls filled with water and alligators to stop the intruders from entering and secret passages that were submerged below ground or carved into the cliff were employed. These surely were amazing techniques but were limited to the determinants and logistics of battle at that time.

Indian forts have been known to have several interesting types. There are '*jal durg*' which are forts surrounded by water, '*giri durg*' which are land locked forts (generally on hill tops), '*vana durg*' which are surrounded by dense forests on all sides, '*dhanu durg*' that are basically desert forts with smaller openings, '*mahi durg*' which are earth forts generally half way below the ground level or surrounded by earthen walls and '*nar durg*' which are basically well populated forts with substantial garrison potential. Each of these forts are sad to have their advantages and disadvantages but there sole purpose was always defense.



Figure 9 Mehrangarh Fort, Jodhpur, India, Photo: Pixeldo.com



Figure 10 Murud Janhira Fort, Maharashtra, India, Photo: Tourmet.com

Unlike Minas Tirith though, these forts both American and Indian, even European for that matter generally had no restriction on expansion. So every fort within its walls had a main castle or palace for the ruler or quarters for the main governing officer. The area around it, besides barracks and stables etc. generally included small time businesses such as blacksmiths, bankers, traders, market people etc. A substantial amount of spaces were gardens and parks too. Some of these settlements including those of workers, laborers etc spilled outside the fort walls too. For forts that were on top of the mountains, generally a settlement existed at the foothills of the mountain. These basically were the people that thrived on the business that flowed from the fort and were in turn secured by the guards. Several forts in India had a fixed time when the fort gates closed for the night and people had a choice to stay in or out depending on chances of battles or good or bad weather.

This contradicts with Minas Tirith because the social structure on which it is based seems too rigid. The people as mentioned above cannot grow outside the wall and thus if density permits can set up shop inside the periphery but that too on the level that matches their social status.

Before analysis Minas Tirith's character further, let us look at an example of a monastery/city that comes closest to it.

Mont Saint-Michel – This is an island community in Normandy, France. It is located about half a mile away from land and is therefore accessible during low tides. The city bears striking resemblance to Minas Tirith because of its conical shape with the cathedral at the top and fortified walls around. These fortifications have been strategically placed since ancient times (8th century AD) and the city has been the seat of the monastery since then. The Mont remained unconquered during the Hundred Year's War and it has been used as a prison too in later era. (Office of tourism, 2010)



Figure 11 Mont Saint Michel, Normandy, France, Photo: www.cruiseeurope.com

The closest feature Mont has to Minas Tirith is its structural composition. The entire city area (island) is planned in hierarchy; starting with God (abbey and monastery) at the top then the great halls followed by stores, houses and apparently houses for farmers and fisherman outside the walls.

Important note – Minas Tirith in the novel had this feature of residences and some shops being outside the walls but the movie did not show it. This can be considered as difference of perceptions between different people.

Also, the architecture style of the Mont is close to Romanesque which also could be seen the movie adaptation of the White City.

Following table will look at some more components between the forts in general and the virtual city at hand.

	Components/Points	Minas Tirith	North American and Indian Forts
Physical	<ul style="list-style-type: none"> • Paths • Edges • Districts • Nodes • Landmarks, • Imageability (complexity) - single purpose v. multi purpose 	<ul style="list-style-type: none"> • Staggered gates and concentric pathways • Walls on different levels, mountain on one side • Entire city focuses onto the keep up top • The gates and the plaza • The Keep and plaza on the cliff • Single purpose - defense 	<ul style="list-style-type: none"> • Staggered pathways, network may or may not be present • Walls of stone or wood, moats with water around the periphery, may use natural barriers • Main palace, castle or keep • Market place, gates • Keep, castle or palace • Multipurpose – defense, trade, surveillance etc.

Non-physical	<ul style="list-style-type: none"> • Direct or indirect connection to an era • Visual imagery • Attitude of the protagonist • Relevance to different film genre (noir, techno noir) • Symbolism • Use of light/shade, angle of camera/scale of observer. 	<ul style="list-style-type: none"> • Ancient forts, Mont Saint Michel • Use of white color, geometry is accentuated • Protagonists are proud – depicts city's enduring strength • Epic fantasy • Order through hierarchy, symmetry • Huge scale 	<ul style="list-style-type: none"> • NA • Varied use of materials, depends on the type of fort and its use • NA • NA • Emblems and logos carved in the walls, use of flags and other forms of livery, order through hierarchy or horizontal segregation • Scale varies
Non-physical	<ul style="list-style-type: none"> • Balance • Cinema as perception - representation and not a copy • Presence of 'flâneur', 'auter', 'stranger', 'subject v. other dilemma', 	<ul style="list-style-type: none"> • Mostly shows relevance to battle – strategic places of offense, huge barricaded gates • Absence of detail descriptions of lives of people living in it 	<ul style="list-style-type: none"> • NA
Design based	<ul style="list-style-type: none"> • Form • Space • Time and movement • Abstraction • Scale • Apprehension-Representation-Realization. 	<ul style="list-style-type: none"> • Tall walls, white in color, conical hierarchy focusing on the Keep and the plaza up top, the cliffs stands out as a distinguishing factor • Narrow streets, spaces more elaborately planned near the top • Concentric movement • Huge scale, lack of protection from winged creatures • The areas inside the cliff/mountain not explored, located or displayed efficiently 	<ul style="list-style-type: none"> • Wall may or may not be tall, may or may not be permanent; Structures spread out • Spaces vary though limited inside the walls • Organic movement (mostly) • Generally huge • NA
System based	<ul style="list-style-type: none"> • Social structure • Presence or absence of control • Balance of power. 	<ul style="list-style-type: none"> • Feudal order • King and stewards of Gondor rule the city • Aristocratic autonomy 	<ul style="list-style-type: none"> • Design represents feudal order (Mont Saint Michel), generally same for other forts • King • Autonomy

Figure 12 Comparison based on the Matrix in Figure 3

Lake-town/Esgaroth (The Hobbit Trilogy) – Venice

Introduction to the Lake-town –

Esgaroth or the lake-town is introduced to us in the second installment of The Hobbit Trilogy (2012-14) as the band of dwarves accompanied by the hobbit are smuggled into this trading port of sorts. The study before this explains a substantial amount about the fabric of Middle Earth and this trilogy happens in the same age as Lord of the Rings, say about 70 or so years ago.

This city is basically a fictitious community of Men (Humans) situated at the western end of the Long Lake which lies close to the foothills of the Lonely Mountain. It has the vast expanse of the lake to its east followed by the Mirkwood forest. (Jackson, The Hobbit (film series), 2012, 2013, 2014)

Lonely Mountain was occupied by the dwarves for several years until it was taken by force by a deadly dragon named Smaug. Dwarves being miners were involved with trade with their folk at Iron Hills (further east) and the elves to the west and south (mostly wine). The city of Dale (in ruins after the attack of Smaug) and the port of Esgaroth were the two Human occupied towns that facilitated the trade among the dwarves and elves. Esgaroth is believed to be a city-state so is independent of Dale and a republic with no king but a master of the lake-town selected among the old and wise folks of the town. This is probably the only republic shown in Middle Earth. The coincidence that it's a trading centre (majority of middle class or bourgeoisies) is most striking.

Built using the ruins of ancient city for some of its foundations, Esgaroth has majority of its foundations as wooden pillars sunk into the bed of the lake. The entire town is made of wood and used waterways as its main mode of commute. The center of the city had a round pool like area which was a designate market place (not shown specifically in the movie). The city is mostly occupied by fisherman and connected to the western edge of the lake by a sturdy but small deck. (Martinez, 2011)

Imageability and the physical components of the city – There are certain background factors that should be considered while looking at the design and layout of Esgaroth. First, the old city might have been made of stone but the current city is entirely made up of wood probably given that it was burned down several times by the dragon and wood, even though easily catches fire, is a cheap resource material to build with. Second, there is a possibility that the version of Lake-town shown to us in the movie could be second or third generation of the town in the sense that it was built over and over again. Hence the haphazard manner of development and informal, somewhat whimsical style of building design. This is as if, architects did not design them or didn't survive after the attack(s). (contributors, Lake-town, 2016)



Figure 13 Concept art of Esgaroth from The Desolation of Smaug - The Hobbit Trilogy, Directed by Peter Jackson, Photo: Newline 2013

Water is the main mode of commute in Esgaroth and generally small gondola like wooden boats are used. It's safe to say almost every house has an entry and gondola parking/anchoring area at the foot of their structure. The waterways are narrow, except for the central one that connects the Master's house and the central market place. Other connection would include footways on wooden decks and bridges, some connected through the residences for people to move around. A particular sequence in the third movie shows one of the characters being chased by the guards skipping over the cluster of gondolas parked near a statue structure using them as connection from one walkway to another. The wooden deck or jetty that connects the western side of the town to the land is the only connection (roadway connection) into the town and it gets divided into foot ways as it enters the town.

The town is surrounded by water on all its sides which necessarily is not an edge but more of a connection (path) extension. However, there is the danger of one getting exposed after leaving the town as the rest of the lake is empty. The house of the Master and the market place are the only identifiable districts in the town. The house of the Master has a meeting place of sorts flanking one of its sides which has been shown in the movie. The houses are mostly two storied with the obvious basement/gondola anchoring area below near the water level. The waste is flushed into the water directly and no signs of organized plumbing systems.



Figure 14 Dock below the house at Esgaroth, Photo: Wordpress – A.J. Carlisle

The entire town is built on wooden sticks so that the dragon does not get a strong footing on the ground. This is kind of pointless as wooden being flammable makes it easy for the dragon to burn it. However, there is a chance that the dragon does not show up as often considering that many of the people (new generation) has not seen it and has only heard stories of its destruction. Wood being easy to construct from, I suppose it is feasible to have it rebuilt every time it has burnt down. To remind people of the dragon, the buildings (mainly the roofs) make use of motifs of the dragon. Besides this we see several places where a dragon is carved out of wood. The architecture of Esgaroth is not stylistic. With its drunken ridges and unfinished arches, the town projects the dread and trauma people have suffered through their lives. (Demosthenes, 2012)

Non-physical and design based factors – As stated above the design projects the emotions and hardships of the people. It also expresses their lack of skill. The people along with the protagonist are seen to be cautious in making decisions that could affect the well being of the city since an attack from the dragon would destroy it again.

The Master of the town is a cruel and selfish man (apparent black and white shades to characters) that does not care much about the city and ends up running away with its gold during the attack of the dragon.

The form and space distribution of the town is very dense, crowded and close to chaos. However, it relies on a very intricate system of visual corridors and physical connections. As the camera moves through the city, the feeling is that of a market place or narrow lanes in some forgotten town in a third world country. The Lonely Mountain is almost always visible in the background of the frame and that establishes the scale of the town as small.

The omnipresent danger of death and destruction is displayed through lack of colors, lack of structure, and characters' attitudes. (Martinez, 2011)

Looking at Venice through the framework – There are several articles online that talk about Venice being an inspiration to Esgaroth. Esgaroth nowhere is close to Venice's beauty however, certain factors do match. Venice is sited on a group of 117 small islands located in a marshy lagoon. So the style of construction is similar to the Lake-town. The buildings in Venice too are built on wooden platforms supported by wooden stakes that are driven into the ground.

Choice of wood is defined as it is easily available and has extended durability under water since it is not exposed to oxygen and therefore does not decay quickly. The wood also gets petrified by the constant presence of salt on the water. (DHWTY, 2014)

Curiously, most of Venice's first residents were refugees too (much like Esgaroth's). In 5th century AD after the fall of the Western Roman Empire, the Venetian population escaped to the nearby marshes to escape the barbarians from the north that were raiding Rome's former territories. Venice has always had a distinct advantage in combat and against enemy attacks because of the surrounding water. (DHWTY, 2014)

Venice was a trading town with majority of its residents to be fisherman. It was a city state later announced a Republic and never had a ruling king. The Doges of Venice are several times compared to the Mater of Esgaroth.

Physical components and design components – Waterways are the main mode of commute in this beautiful city and recently tourism is one of the main sources of income. The land masses of Venezia and Giudecca together curiously look similar to Esgaroth's plan and they too are connected to the main land from the west. The Republic of Venice is divided into the tourist area with the beautiful structures and the historically preserved area. Almost all the construction is in brick and stone with wooden foundations and gondolas are the main transport.

The city surely is complex in its systems and structures and that is what verifies the idea of imageability of Esgaroth and Venice. When we talk about Venice's imageability, we observe that it is always associated with a part of its features and not the entire experience of living there. The colorful houses, curved bridges, plazas and narrow water ways are what we are familiar off. However, the complexity of the city lies in its multipurpose existence. Unlike Esgaroth, it does not exist with the sole aim of trade and security from an external entity. It might have in the past and that is what connects both of them. What is important in this comparison is that, movies have had inspirations taken from real cities and their histories and blended them into the original context of the city (Esgaroth in the books is slightly different) so that people could relate to it better. Point to be noted here is how efficient is the connection and adaptation and whether it is limited to certain aspects. The table below provides as broad comparison narrative between Esgaroth and Venice in the light of the matrix created earlier in the paper.

	Components/Points	Esgaroth (Lake-town)	Venice
Physical	<ul style="list-style-type: none"> • Paths • Edges • Districts • Nodes • Landmarks, • Imageability (complexity) - single purpose v. multi purpose 	<ul style="list-style-type: none"> • Waterways, small alleys • Water • Market place, public buildings • House of the Master, market place • House of the Master, guard towers • Single purpose – survival 	<ul style="list-style-type: none"> • Waterways, small alleys, roads • Water • Tourist destination (several) • Tourist areas, main waterway intersections, plazas • Public buildings, bridges • Multipurpose
Non-physical	<ul style="list-style-type: none"> • Direct or indirect connection to an era • Visual imagery • Attitude of the protagonist • Relevance to different film genre (noir, techno noir) • Symbolism • Use of light/shade, angle of camera/scale of observer. 	<ul style="list-style-type: none"> • Trade as main occupation, early trade ports (beginning of Venice), Norwegian lake towns. • Use of dragon motifs all around 	<ul style="list-style-type: none"> • NA
Non-physical	<ul style="list-style-type: none"> • Balance • Cinema as perception - representation and not a copy • Presence of 'flâneur', 'auter', 'stranger', 'subject v. other dilemma', 	<ul style="list-style-type: none"> • Mostly negative connotation to the existence, continuous sense of impending doom 	<ul style="list-style-type: none"> • Colorful, areas of tourist destinations and historic preservation etc.
Design based	<ul style="list-style-type: none"> • Form • Space • Time and movement • Abstraction • Scale • Apprehension-Representation-Realization. 	<ul style="list-style-type: none"> • Crooked houses, drunken arches, lack of color • Congested space, unorganized • Grid but not orthogonal • Lonely Mountain always visible • Sooty, depressing trade town 	<ul style="list-style-type: none"> • Elegant house, decorated arches, colorful facades • Congested space, organized • Grid but not orthogonal • Flourishing city
System based	<ul style="list-style-type: none"> • Social structure • Presence or absence of control • Balance of power. 	<ul style="list-style-type: none"> • City state • No ruler 	<ul style="list-style-type: none"> • Historically – city state then Republic • No ruler before but Doges and Dukes

Figure 15 Comparison between Esgaroth and Venice based on Figure 3

Metropolis – Paris (Hausmann and Le Corbusier)

Metropolis (1927) – Introduction and Analysis

Metropolis is a German science fiction movie released in 1927 by Fritz Lang and his wife. Made during the Weimar period, this movie is largely influenced by modernity and systematic order in cities. The movie was greatly lauded for its complex special effects and beautiful pictorial representation of the city. This movie got mixed reviews from public and critics.

The movie features a highly segregated city called Metropolis (2000) which has a leader (an industrialist named Joh Fredersen), essentially a brain that looks over all the decisions made in the city concerning everyone. This wealthy industrialist along with his cohorts reigns from high-rise towers while the lower class of workers works and lives in the underground city. These high class people live a very lavish life in their 'Eden gardens' (essentially sky or rooftop gardens) while the workers toil to keep the city going.

A chance meeting of Joh's son and Maria, a worker with an aspiration to bridge the gap between the two classes leads to the beginning of their love following which Freder (Joh's son) leaves the high rise life to go visit the worker city. In the confusion and scheming that ensues, Joh, with help of a mad scientist creates a machine (robot) that impersonates as Maria with an aim to break his son's ties with her. This machine however brings about anarchy and chaos amongst the order resulting in a civil revolt against the rich class. The crisis is averted in the end with the destruction of the robot and death of the mad scientist and the two classes, essentially the brain (rich class) and the hands (worker class) come together in peace using their empathy and dependence on each other (heart). (Lang, 1927)

This silent movie has almost all the characteristics of a movie made during modernity, with Joh essentially having a 'blasé' attitude towards life and his son, and the entire narration using Freder as a 'flâneur' who happens to arrive at places where things are happening.

The visualization of Metropolis – The (new) tower of Babel, which is the headquarters of Joh Frederson, stands out as a dominating landmark amongst the sea of towers in Metropolis. The city fabric exudes systematic hierarchy of buildings connected by bridges, populated by cars with private airplanes flying around in the sky. Stark vertical segregation is one of the main characteristics of the city. Tall towers have rich wealthy people populating the lavish penthouses and sky gardens, complete with a sports arena. The city's architecture is highly inspired from Bauhaus school and cubist style of design with less focus on intricate details to make stark forms stand out. The author talks about the influence of Bauhaus style of architecture and its slightly manipulated views to fit movie's requirement as follows.



Figure 16 The new tower of Babel, Metropolis 1927, Fritz Lang

‘The Bauhaus architecture at the time expressed modernity through practicality and rationality of design, but this utopian vision of progress is revealed in the narrative as a dystopia of panoptical control, disenfranchised and infantile workers, cruel exploitation, technological innovation gone mad, and self inflicted destruction.’ (Mennel, 2008, pp. 40-44)

Considering there is prominent vertical segregation amongst the classes, huge public elevators are the basic mode of commute for working class which could be considered a substitute for public transport (compared to real cities). The paths or linkages within the two classes are standard horizontal pathways (no flying cars here).

The workers city was evidently an underground extension of the towers above ground, kind of symbolizing that worker formed the basis on which the city stands.

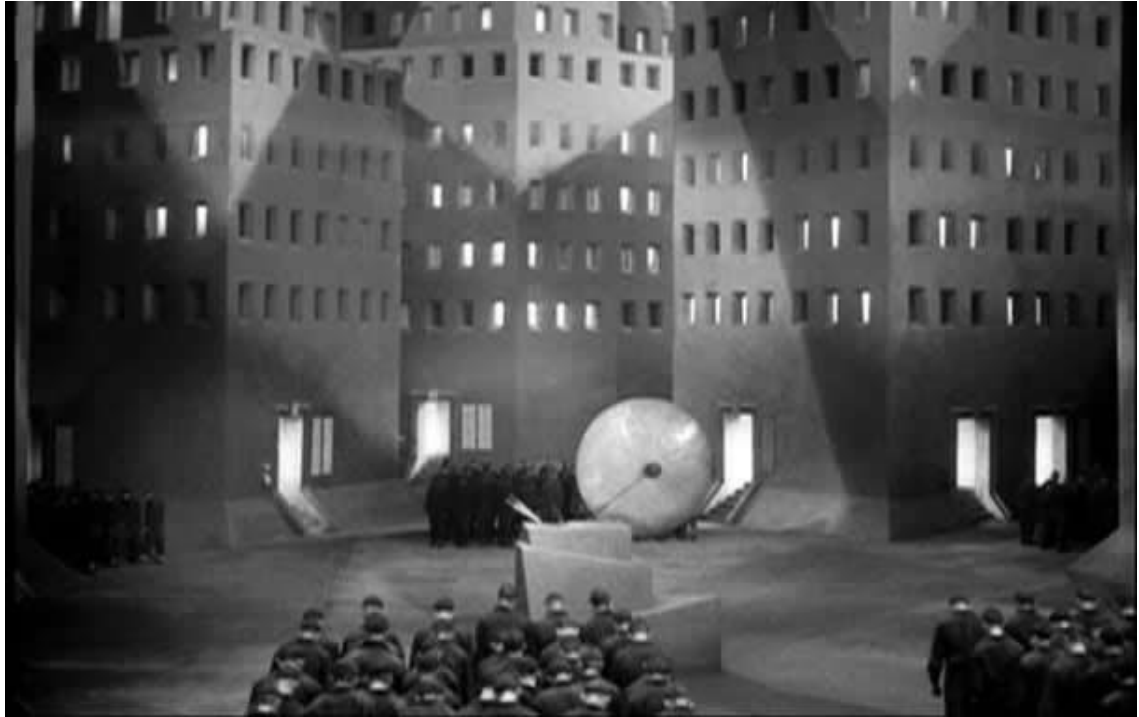


Figure 17 Worker city, Metropolis 1927, Fritz Lang

The mechanized sections of the Metropolis where the workers came to work their 10 hour shifts consisted of larger than life machines that needed constant input by the workers, as if they were an important component in the entire assembly. Freder, at one point during his visit, witnesses an accident at the heart machine with several casualties because of taxing manual labor. At this instance, Freder is shown to fantasize the machine turning into a demon (Moloch) which is in fact consuming the labors being offered to it as a payment for its services, a bold statement questioning the status of working class at that time.

Other places such as Rotwang’s house, the Yoshiwara bar and red light district or the Cathedral are not specifically mapped on the existing vertically segregated fabric.

The machine-human – On request of Joh Fredersen, an unhinged scientist Rotwang uses his robot to impersonate Maria (the female protagonist) in order to break the relation between Freder and her. The real Maria is shown to be an inspiration to the working class who believes in uniting the people of the two classes as both are important. She is a symbol of warmth, love and common sense in the mechanical Metropolis paradigm. The new Maria, however, (the robot) goes berserk and brings

about a revolt in the working class against the aristocracy. She is noticeably shown to be inclined towards debauchery and is responsible for encouraging indulgence amongst the people and controlling them with her sexuality (body of a woman). The idea of a machine capable of doing this itself is commendable for early 1900s to start with. Also, using female body as a representation of suppressed sexuality was a common thread in films based on modernity (Mennel, 2008, pp. 28-29). The machine using its own power of cognition and logic to use a woman's body to unhinge the psyche of people in Metropolis speaks to the uncertainties of the machine age that had begun taking shape around 1900s. The increasing inclination of people away from human emotions to objective indulgence is represented through this.

Interestingly, the robot in this movie is programmed by humans to attain a certain task. It turning berserk to overthrow Joh's reign was preplanned scheme of the scientist who had personal grudge with Joh. The out of control robot did influence the people to the level of controlling them, but this was more based on delusions than actual tampering with someone's mind. Essentially, the robot was behaving as humans who want to overthrow a system; an interesting observation to look for ahead.

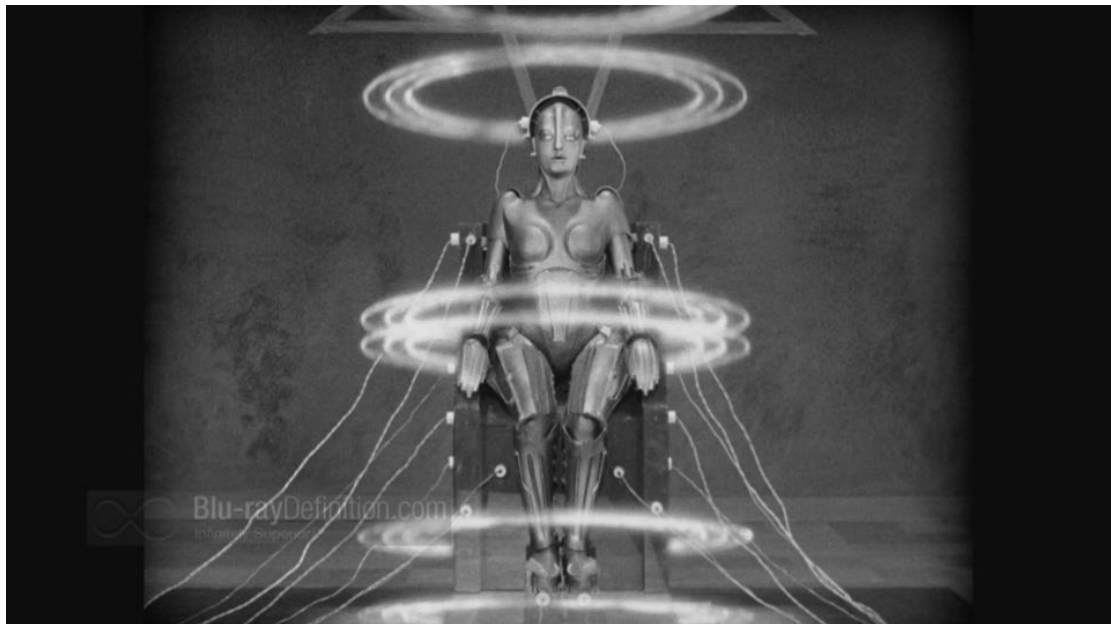


Figure 18 The machine human, Metropolis 1927, Fritz Lang

Social segregation – Life is not stress free in the Metropolis, for both the working class and the industrialists. This is something which stands out as a side effect of urban living. As far as families are considered though, relatives of industrialists, their children etc have an easy life as compared to the workers'. But then workers' kids are supposed to be workers only when they grow up. The social structure here is highly segregated into these two classes without an in-depth description into any sub classes whatsoever. One noticeable thing is that if you fail to being of any use in the Tower of Babel, you end up as a worker in the workers city, as if there isn't any in-between. The social structure is based on symbiotic relationship, where both the classes need each other but the industrialists are valued more and have ignorant attitude towards the workers (this sounds familiar). Their interrelation and overall dependence towards the use of machines is strengthened through the physical design of Metropolis. The worker city being underground gets flooded if the workers stop working which should keep them at bay but there isn't a need of that if all the workers refuse to work and just leave their underground cities which would crumble the Metropolis. The workers can't do that as the industrialists take care of their wages and they aren't qualified to do anything else. An external influence from a dominant ideology of the machine-human changes these dynamics.



Figure 19 Workers off to work using elevators, Metropolis 1927, Fritz Lang

Relation to real world cities in current era – The movie visualizes a modern city based on systematic order and rational values almost 70 years ahead of time. Although there are limitations to it, some of the aspects of the movie have nevertheless fanned out to be true in existing urban scenarios.

- Metropolis showed stark segregation amongst its people on basis of social class. It was as if the workers were nothing but slaves that had to serve out of no other alternative available to them. Considering the emergence of middle class before and around the era when this movie was released, imagining a social order based on specific roles of these two classes (decision makers and the workers) seems logical. What is interesting is the fact that the movie assumes that the middle class or the businessmen will eventually rise to power and those who are not talented enough will have to slog. Also, other social classes – the aristocracy, priests, doctors, lawyers, etc. as different occupational fields are not given prominence (aristocracy mixed with industrialists) probably because of the fact that they were all to be subservient to the rising industrialists who will run the city. With the exception of scientists though who have a certain madness associated with them on account of invention and ever liberating power of innovation and technology (industrialization led to a huge spectrum of inventions).
- Real world cities in the 2000s are no doubt quite different as none are stringently based on specific social classes but a complex mix and overlap of different occupations working together. This, however, was not always the case. Movements such as civil rights act, women empowerment had to happen in order to maintain balance and equity. Phenomena such as ‘white flight’ happening in the 50 and 60s with the start of ‘urban renewal’ are some most defining when it comes to segregation in our society. Real world cities now however, give its people more opportunities to interact and contribute to the political decision making that concerns all. This proves the hypothesis stated from Kevin Lynch’s (The Image of the city) literature review that a fantastic, futuristic scenario almost always is a single-purpose perception and that’s is why it has a strong imageability (as the visualizations in this movie do have), however, it fails to grasp the complexity of a real functioning city since it is too complex to speculate. We can also infer that the more the speculated scenario is in the future (more number of years ahead), the more unlikely it becomes.
- Metropolis, as far as physical segregation is considered, makes use of vertical division between the two classes. These two layers of separation have horizontal links within them. So, the paths are more horizontal than restricted vertical ones which are more like barriers (or edges). The new tower of Babel is surely a landmark and center of a district that exudes dominance and control. As far as aping of other places in the movie, many things are left unclear. One may surely imagine a radial

development of the city around the main tower, much like a sphere as the worker city was underground anyways. But this could be a long shot.

- Real world cities have tall buildings. The movie got that right. With interconnecting bridges and different means of segregating land uses if not classes. The zoning act was passed in New York City in 1916 and since then horizontal segregation of uses has been a common practice in America. Comparatively recent to this, we now make use of condominium arrangements to segregate space within a high rise building. 70 years ahead of its time, the movie displayed the need for doing this not to tackle sprawl or encourage mixed uses but to segregate classes. Nevertheless, the idea of using the vertical dimension (reach for the skies) was played with in the movie. As inferred from the Mennel reading, the speculation of using vertical dimension for class segregation is logical as it is the maximum stretch of exaggeration one could speculate within the given limit of values and beliefs.
- Metropolis makes use of Bauhaus style of architecture and cubist forms with futuristic touch as visualization style. The unique appearance of the new tower of Babel as compared to other buildings which are similar in appearance, gives it more importance. Use of freeways is clear and relates a lot to modern day scenario. Buildings connected via bridges are a unique feature which we don't see in our cities probably because of lack of similarity to the vertical segregation shown in Metropolis.
- One of the biggest components in the plot of this film is the huge dependence of humans on machines. Besides the constant interaction of workers with machines which still require constant human supervision, the concept of artificial intelligence is experimented with the form of the robot created by the mad scientist Rotwang. The idea that workers are more like cogs and wheels in the entire machine system, with 10 hour shifts (depicted by the clock in Joh's office) and the taxing amount of work to be done, is characteristic (a bit of exaggeration) of the injustice towards working class in that era. The invention of artificial, programmable intelligence though could be considered largely ahead of its time. When one considers the factors that may have inspired the writers to come up with this idea, one comes across the basic loss of subjectivity, warmth and humane touch in the urban scenario present at that time. Modernity was a time of rational thought and objective thinking, a characteristic of the so called 'blasé' attitude an extension of which could be a machine based artificial thinking or more like being a slave to the system. This concept could have been showed through the use of the robot to control people easily and bring upon chaos.
- Development in artificial intelligence has grown by leaps and bounds in since the late 1900s. Every day, programmable robots ready for mundane work or assistance are created and tested. Metropolis could be one of the first few movies to experiment with this idea. Movies nowadays are in plenty which talk about human and artificial intelligence interactions, and robotics and ethics.

Haussmann's Paris: Beginnings of modernism –

This was around mid 1800s when disease, overcrowding, crime and unrest were keeping the new industrial city of Paris busy. These were some of the very common effects that cities that faced due to industrialization. Now, industrialization doesn't necessarily mean location of industries in an area, it also includes a burst of population of people moving in the vicinity in search of jobs and easy money and thus the problems. These years were especially difficult for Paris because of Cholera outbreaks affecting several neighborhoods killing many people. This was the time when segregation of uses was not a thing of concern but was gaining attention as an inevitable measure. (Aran, 2015)

Georges-Eugene Haussmann was commissioned by Emperor Napoleon III between 1853 and 1870 with a vast public works program that included renovation of large portions of the city. The work included demolition of several houses, creating boulevards and avenues for beautification of Paris, construction of gardens and parks, squares and annexation of suburbs.

Many of us are aware of the extensive projects that were undertaken with an attempt to better the city; several of them curiously affecting existing houses of the poor and their mandatory displacement. Haussmann's renovation of Paris created axes and visual focal points all over the city. It created networks of public places and squares. This was more of a 'figural space' approach where each open space (void) between the buildings is framed in d designed to complement the narrative as opposed to 'figural object' style, which is common after modernism where the building has more importance than the surrounding space.



Figure 20 Haussmann Boulevard - Segregation of spaces

This concept is very much visible in all the boulevards that Haussmann designed wherein each building weaved into the urban fabric and molded itself to the street sides. All these buildings had shops facing the streets for more active interaction with apartments on top. (Bacon, 1974, p. 187)

Modernism, an era of segregation –

Modernism came around in late 1800s and early 1900s with the turn of the century. An ideology that based its principles on rationality and science, Modernism is probably one of the most influential branches of design ever. Followers of modernism believed in function of the buildings and the structure of the society. They divided every feature into a layer with an attempt to make their working efficient however, ignoring the crucial interaction between them. A scientific approach to design was followed. An approach where human values were not important. And as a result existing conditions or buildings were to be demolished to create a 'tabula rasa' for the new creation. One such plan was Plan Voisin proposed by Le Corbusier for Paris in 1925. This plan proposed demolition of almost two square miles of downtown Paris for its design. They were to be replaced by 18 cruciform glass office towers, placed on rectangular grid in an enormous park like space with triple tiered pedestrian malls and stepped terraces (Lubin, 2013). This could be connected to the classic style of skyscrapers we now see in our cities.



Figure 21 Plan Voisin - Le Corbusier, Photo: Density Atlas

The only worthy contribution of modernism could be use of vertical segregation. Moving all the functions above land thus, freeing all the space below helped in clear distinction. This, however, sowed the seeds for segregation in future. An exaggeration of this is shown in Metropolis.

The ‘flâneur’ feel or a ‘stranger’ (as defined in The Cinematic City – David Clarke) has its origins in the structured divisions of modernism. There were other offshoots of modernism like cubism, minimalism etc that have also been explored in many movies. Following matrix shows the connection we can make between these entities.

	Components/Points	Metropolis	Paris (Haussmann and Le Corb)
Physical	<ul style="list-style-type: none"> • Paths • Edges • Districts • Nodes • Landmarks, • Imageability (complexity) - single purpose v. multi purpose 	<ul style="list-style-type: none"> • Elevators segregating classes and horizontal paths in different levels • Vertical segregation • Garden of Eden – rich high class abode • Churches, grounds, entertainment districts • Tower of Babel – office of Joh • Single purpose – segregation 	<ul style="list-style-type: none"> • Roads, boulevards, avenues • Segregation in case of Plan Voisin • Public buildings, downtown • Streets, cafeterias, galleries • Public buildings • Multipurpose – segregation, order, control over chaos and spread of diseases etc.
Non-physical	<ul style="list-style-type: none"> • Direct or indirect connection to an era • Visual imagery • Attitude of the protagonist • Relevance to different film genre (noir, techno noir) • Symbolism • Use of light/shade, angle 	<ul style="list-style-type: none"> • City after industrialization (extreme case) • Sets of varying scales, cubist buildings, Tower of Babel given visual preference • Confused, new to everything, gullible 	<ul style="list-style-type: none"> • Industrialization, modernism • Tall buildings, axes and connections • NA • NA • NA • Varying scale

	of camera/scale of observer.	<ul style="list-style-type: none"> • City film (Germany) • Vertical segregation, machines as monsters, workers as machine parts • Varying scale 	
Non-physical	<ul style="list-style-type: none"> • Balance • Cinema as perception - representation and not a copy • Presence of 'flâneur', 'auter', 'stranger', 'subject v. other dilemma', 	<ul style="list-style-type: none"> • Imbalance as nothing explained in detail • Exaggeration • 'flâneur', 'stranger' 	<ul style="list-style-type: none"> • Haussmann's and Le Corbusier's approaches contradict each other
Design based	<ul style="list-style-type: none"> • Form • Space • Time and movement • Abstraction • Scale • Apprehension-Representation-Realization. 	<ul style="list-style-type: none"> • Tall, overbearing, segregated • Open and uncongested • Leaps in time • Good job in representing vertical divisions and connections • Varying scale • Reduces complexity drastically 	<ul style="list-style-type: none"> • Figural space – Haussmann, Figural object – Le Corbusier • Complementing the form – Haussmann, irrelevant to the form – Le Corbusier • Framed in movement – Haussmann, Feeling of being lost – Le Corbusier • NA • Moderate – Haussmann, Large – Le Corbusier • Successful
System based	<ul style="list-style-type: none"> • Social structure • Presence or absence of control • Balance of power. 	<ul style="list-style-type: none"> • Autonomy yet dependence - symbiotic • Rich controlling poor, machines influencing gullible humans • Rich have all the power 	<ul style="list-style-type: none"> • NA

Figure 22 Comparison of Metropolis and Paris (Haussmann and Le Corbusier) based on Figure 3

Blade Runner (2019, Los Angeles) – Current day Los Angeles

Blade Runner (1980) – The ‘could have been city’ of Los Angeles

This (Blade Runner) classical cult science fiction movie directed by Ridley Scott is often quoted as an example of postmodern film depicting dystopian future noir through its sets and use of exterior and interior design. The movie is set in Los Angeles of 2019 (not quite far away from today) and shows a pastiche of modern and postmodern ideas, art deco style architecture with a blend of different cultures and languages; all set within a dystopian, decaying or as the director puts it, ‘retrofitted’ city. (Mennel, 2008, pp. 145-148)

Blade Runner talks about a future where ‘Replicants’, or essentially genetically manufactured substitute for humans are used as off-world slaves. Their presence on earth is illegal and there are Blade Runners (very much humans), that are in charge of ‘retiring’ them (euphemism for killing). The plot revolves around the main protagonist ‘Deckard’ who is an ex-cop, ex-blade runner living a lonely life in the city. He is forced to join the force again to track down 5 replicants that have illegally come back to earth, supposedly to find a way to increase their lifespan. The plot line follows their attempt to get in touch with the Tyrell Corporation (which manufactured them) and Deckard’s chase leading to termination of the replicants.

An interesting love angle is also presented in the plot as Deckard shares mutual affection with Tyrell’s assistant Rachael, who is also a replicant (but she does not know it). Deckard, at one point is charged with killing her too but ends up saving and running away with her.

The City – The city makes use of high rise futuristic design associated with science fiction while the style used is starkly noir. The central part of the city, where the Tyrell Corp building is situated is essentially a huge pyramid like structure complete with elevators, screens etc. Much of the buildings in other urban scenarios shown through the movie are a mix and match of different architectural styles. Some are stark modern while some are intricately art deco style. The movie could be said to depict ‘un-surety’ as its central theme which is depicted through its physical environments and also the characters. One example would be use of 40s style interior work in majority of the buildings. Use of noir style of movie making makes the texture of the city dark and hazy. Interiors are either old, retrofitted or a blend of then current and newly visioned additions of machines, equipments and design.



Figure 23 Tyrell Corporation, Blade Runner 1980, Ridley Scott

The Blade Runners travel in police spinners, which are flying cars used for patrol, off-world commute and surveillance. How far can one travel in these cars is not specified. But these seem to be restricted to cops and city officials. Taking its cue from the Metropolis, this movie shows humans making use of machines, genetically enhanced and used as slaves. It's hard to tell the difference between them and in order to keep them in control (as some are more intelligent than humans), they are restricted to a four year lifespan. The replicants also have no memories and therefore do not have stimuli to generate emotions. The Voight-Kampff test that uses readings from emotional responses is used to identify replicants from humans.

The entire movie shows a different time space continuum which can be said depicts a 'could have been' version of the city. As described in one of the essays reviewed from 'The Cinematic City – David Clarke' the city shows a inwards collapse of time and space; a slow decay; an ultimate ruinance. And this ruinance is shown through the viewpoint of each subject as they take the relevance of their existence from an 'Other'. A lot of analysis has been done on this film to understand its significance, some of which has been mentioned in the literature reviews. (Doel & Clarke, 1997)

One very apparent feature of the movie is the ever present sadness in all the characters. It's as if no one is happy; everyone wants something that they can't get or have and this affects the entire fabric of the movie. This could be pointing to an exaggerated speculation of consumerism based future where people have lost value of their day to day life in search of a pipe dream. This sadness is also accompanied by a dulled down level of acting (probably done deliberately). This just makes the gap between the humans and the machines thinner. An outlier to the traditional noir movies lies in the end of Rachael's story where she (femme fatale) gets away with a wrong doing rather than being punished. It's important to stress again that the entire movie projects a feeling of 'un-surety' throughout the plot. Questions such as 'do replicants want to be humans, or better than them, or are they already better?' befuddle the viewers.



Figure 24 Spinner taking off, Blade Runner 1980, Ridley Scott

Another interesting observation in general about movies that came in 1980s is that majority of them (the sci-fi ones) had some form of flying cars in them that too shown to be used in near future (30 to

40 years). Considering the relationship to the era of production of these films, this speculation could have its origins in the energy crisis of the 80s where America was looking for alternative modes of commute and technologies related to magnetism etc were experimented with. This definitely aims at hovering cars and films generally exaggerating a situation made them fly.

Current day Los Angeles – As stated earlier, the Los Angeles shown in the movie may be considered as a ‘could have been’ scenario wherein majority of its factors change. Even though the plot of the movie is very basic, the use of pastiche in the visual imagery, quirky characters (some machines, some humans) and brilliant dialogues add to the ‘could have been scenario’. If you look at it design wise, its mostly mix of some aesthetic work and cubism with abundant use of lights and ample amount of waste tainting the landscape.

Now, current day Los Angeles is far too different than this. Second largest city in the United States, L.A. is the most populous country in the state of California. A well known melting pot of various ethnicities and nationalities, it is a major contributor in the ‘silicon valley’ businesses and has strong ties to the Hollywood film industry as well. Kevin Lynch’s book reviewed in the literature section uses Los Angeles as one of the case studies, comparing it to denser Boston and sparse Jersey City. Let’s look at some of the important features of the city.

Having its beginnings as a humble Spanish colony – pueblo to be specific, it was mostly a settlement type of colony with agricultural lands and houses. The basic grid of the town constituted of a rectangular plaza between the principal buildings and regular grid iron for the farmlands. Los Angeles under the Spanish and then Mexican rule remained a sleepy town, based on the Laws of the Indies, the basic grid work remained its classic feature. (Reps, 1965, p. 51)

The book ‘The Image of the City – Kevin Lynch’ describes the central area of Los Angeles to be bustling mostly with businesses and activities than residences. This has always been more of a place that people go to. One important feature in how people navigate or perceive L.A. is that they consider it more linear than other cities. So the central activities are more spatially extended and shifting. Landmarks such as the Civic center, Biltmore Hotel flank the main Broadway Street and much of the street façade is said to be loosely tied. Pershing Square is also a strong element in the downtown but the districts are mostly small and linear. Broadway being the largest shopping destination is easily identifiable and a good navigation reference. Based on various interviews, downtown L.A. is said to be more spread out, spacious and kind of lacks a impressionable identity. The city center is mentioned to be visually chaotic as well.

We shall look at some of the factors of comparison between L.A. shown in the movie and the current day L.A. to understand what factors are more closely related and which are simulated from other sources.

	Components/Points	2019, Los Angeles (Blade Runner)	Los Angeles (Current day)
Physical	<ul style="list-style-type: none"> • Paths • Edges • Districts • Nodes • Landmarks, • Imageability (complexity) - single purpose v. multi purpose 	<ul style="list-style-type: none"> • Roads, airways (police spinners) • City level, off-world places! • Tyrell Corp, Tall skyscrapers in downtown with huge digital billboards – Time Square on steroids • Similar to current day cities – frequent use of road side eateries and pubs 	<ul style="list-style-type: none"> • Roads, main streets etc • City-level • Small and linear, not very dense • Broadway, Civic Centre, Pershing Square • Public buildings and squares • Multipurpose – like most cities; complex

		<ul style="list-style-type: none"> • Tyrell Corp building • Interestingly multipurpose but the complexity in spaces and number of spaces shown is less 	
Non-physical	<ul style="list-style-type: none"> • Direct or indirect connection to an era • Visual imagery • Attitude of the protagonist • Relevance to different film genre (noir, techno noir) • Symbolism • Use of light/shade, angle of camera/scale of observer. 	<ul style="list-style-type: none"> • Near future – 2019, a ‘could have been’ scenario • Dark, hazy • Sad, lonely, daring • Techno-noir • Billboards, pyramidal structures, mix of aesthetic and modern, waste lying around – consumerism • Typical to noir films 	<ul style="list-style-type: none"> • NA
Non-physical	<ul style="list-style-type: none"> • Balance • Cinema as perception - representation and not a copy • Presence of 'flâneur', 'auter', 'stranger', 'subject v. other dilemma', 	<ul style="list-style-type: none"> • Imbalanced as complexity not dealt with in detail • Yes • ‘Stranger’, ‘Subject v. Other’ 	<ul style="list-style-type: none"> • Closer to balanced as complex • NA • NA
Design based	<ul style="list-style-type: none"> • Form • Space • Time and movement • Abstraction • Scale • Apprehension-Representation-Realization. 	<ul style="list-style-type: none"> • Chaotic • Mix match • Slow and dull • Good quality abstraction • Varying scale • Not complex physically 	<ul style="list-style-type: none"> • Linear growth • Sparsely divided • Fast and lively • NA • Varying scale • Complex
System based	<ul style="list-style-type: none"> • Social structure • Presence or absence of control • Balance of power. 	<ul style="list-style-type: none"> • Democracy • Machines working for humans • Blade Runners have special rights 	<ul style="list-style-type: none"> • Like any other city • Nothing exceptionally out of place

Figure 25 Comparison between Blade Runner and current day Los Angeles based on Figure 3

Inferences from the comparisons –

The analysis of the four pairs above with a comparative study present us with certain common traits between cities perceived through cinema and real world cities. The matrix of components for reading the cities makes it easier for us to understand what kind of representation the city in the movie is showing. Is it mostly physical, or exceptionally non-physical, or just system based? As stated earlier, this matrix is still under progress can be modified adding more relevant study matter for future use, if seen appropriate. The four cases considered above are not entirely broad and therefore the way they are analyzed may not cover all the genres and all the cases relevant to the topic.

Some of the crucial inferences that can be drawn from the case studies are as follows;

- Most of the urban scenarios in movies depict single-purpose cities; cities or scenarios which lack a certain complexity that real cities do. This may be because of the impact required to be put on the viewers in limited time and that's probably the reason why many of these urban scenarios (fantastic, virtual, dystopian) are highly 'imageable'. This is the same reason why they are limited to only certain set of components from the matrix.
- Another important observation is that since these are limited to certain aspects of the city, the relevant speculations are exaggerated to their full potential (flying cars in Blade Runner, urban decay, vertical segregation in Metropolis). In case, these scenarios aren't speculative but representative (Minas Tirith or Esgaroth), they are made as efficient as possible in their limited aspects.
- Another observation points to the lack of complexity of these scenarios. Most of them rely on visual forms and imagery and those few who talk about intrinsic, non-physical or social values fail to locate themselves in an era (past or speculated). This could be described as lack of balance, thereby only a few aspects are focused on and others left out.
- Somewhere along the way, these movies show certain aspects of the society that actually are seen around us in some form or the other – dependence on technology, segregation of classes, economic imbalance, use of A.I. etc. and even though many of these factors are exaggerated, their relevance cannot be ignored.

This probably relates to how we perceive things. Images that are highly visual, simple and have a lasting impact on us are generally form based. Besides these physical versions of perception though, some of these movies talk to the then existing real conditions in the city and that is what makes them important. Ideas such as social decay, decentralization, segregation of classes are very real and they affect our cities drastically. We as planners are supposed to mould ourselves to these scenarios as possible and mend them were necessary.

The following section will look at some of the latest movies that have more speculative projections of urban scenarios in them. Let's try and understand how much of it could actually happen.

Speculative case studies –

Following four movies are selected to look at speculations that seem relevant to current day and age.

The Matrix Trilogy (1999 - 2003) –

The first part of the trilogy '*The Matrix*' was released in 1999 followed by the remaining two parts '*The Matrix Reloaded*', and '*The Matrix Revolutions*' in 2003. This American-Australian science fiction action film is perhaps the most fundamental future noir film ever made. It depicts a dystopian future in which the machines have taken over the world and are actually farming humans for their body heat and electrical activity as energy source; and to keep these 'electric batteries' in check (or alive), they are shown a simulated reality which is the matrix.



Figure 26 Machines harvesting fields of humans, The Matrix Trilogy, The Wachowski Brothers

So essentially the matrix is populated by conscience of normal people but as it is a simulated reality or more clearly a virtual interface, it has computer programs and viruses in human forms as well. The matrix or the world we see in the matrix is the world we normally see around us (real world urban settings used), while the real scenario outside the matrix is a dystopian wasteland where machine overlords cover the earth's surface with wires, networks and panels, and the sky is covered with noxious fumes of gases (no sun in sight), and vast acres of land are used as human farms. The Machine City (shown in the last movie) is essentially where the main control is at while 'Zion' is the last remaining underground city populated by humans (plugged out of the matrix) who plan a rebellion to overthrow the machines.



Figure 27 'Zion', The Matrix Trilogy, The Wachowski Brothers

These people can plug in to the matrix again using their own equipments and machinery. They await the chosen one, 'Neo' (main protagonist) who they rescue from the matrix to make him understand the reality.

Morpheus: Do you want to know what it is?

Neo: Yes.

Morpheus: The Matrix is everywhere. It is all around us. Even now, in this very room. You can see it when you look out your window or when you turn on your television. You can feel it when you go to work... when you go to church... when you pay your taxes. It is the world that has been pulled over your eyes to blind you from the truth.

Neo: What truth?

Morpheus: That you are a slave, Neo.

(Wachowski & Wachowski, 1999, 2003)



Figure 28 'Zion - Core area', The Matrix Trilogy, The Wachowski Brothers

The first movie pretty much summarizes the matrix and how it works and the plot revolves around Neo's rescue and his first mission back into the matrix. As put forth in Barbara Mennel's book, the era of future noir and science fiction movies slowly started moving into subjects of virtuality, reality, and subjectivity etc. With the advent of technology and high use and demand of video games and such, this seems a very logical trend. The interesting fact is that the physical aspects of the city become irrelevant in this scenario and as far as planning or social aspects are considered, one has to look at intangible spheres of the society. Factors such as 'who controls the city' or 'whose city it is' become more important. Social utopias or dystopias are at the forefront than the physical ones.

The section will not plainly explain the plot of the movies as all of them in their entirety do not speak to the urban planning aspect relevant to the topic. However, certain important points will be brought into spotlight to understand certain common themes such movies depict.

The second part of the movie shows Neo and his groupies trying to reach the source of the matrix in an attempt to break it or understand it better. The mysterious psychic lady who goes by the name Oracle is the one who is sure of this and who also shows immense faith in Neo's ability to reach there. She is shown to be the only lady (computer program) who has substantial influence over the main characters as she is supposed to know the reality behind the matrix. So everyone follows her

advice. However, when Neo reaches the source, one of the most interesting twists of the movie is introduced.

Neo meets 'The Architect' of the matrix at the source, the one who created the matrix. He (it – computer program) reveals to Neo that he (Neo) is merely a sum of all the remainders of the equation on which the matrix is based. He (Neo), is essentially, an anomaly. The Architect further explains that there have been six iterations before of the matrix, which repeat the same cycle as this one. Initially, the first model of the matrix was too perfect (an ideal world), but it failed as (according to The Architect), humans aren't perfect. The subsequent matrices thus were made with help of a lesser program (one that was in close connection to the human psyche) named the Oracle which The Architect calls as the mother of the matrix, he himself being its father. This essentially means that the entire process of Oracle giving hope to people of Zion about the chosen one, followed by the chosen one being selected and then reaching the source is all an elaborately planned scheme to give people 'Hope', as hope makes the matrix more stable. The chosen one now has a choice to either save a few people at Zion in order to populate another 'Zion' in the next iteration, or sacrifice himself and destroy the matrix forever, killing everything and everyone (including his loved ones). This brilliantly planned loop gives the spectators goose bumps as it makes us realize how easy it would be to control humans if such a perfect, calculative, efficient system of simulated reality existed.

However, this particular iteration has another anomaly, which changes the stakes completely. This anomaly is a computer virus by the name 'Agent Smith', who wants to escape the matrix and gain control over the machines. He (it) soon becomes a threat to the machine overlords and they seek Neo's help to eradicate him in return of which they promise to end the war and pull back their sentinels from attacking Zion.



Figure 29 The last stand between Neo and The Machine City, The Matrix Trilogy, The Wachowski Brothers

Interesting concepts relating to urban fabric -

- As the story proceeds, we come to know that the reality of the matrix being simulated, the characters can defy the laws of physics in it. So flying from roof tops to roof tops, learning to fly a helicopter in 10 seconds, dodging bullets by bending time all are possible (some only for the chosen one as it seems). This depicts immense level of freedom one can enjoy in virtual reality if one has control of it. The very basis of video games with goggle displays is the same.
- The use of concepts such as the architect, an ideal world that failed and lesser intelligence of a intuition based program all speak greatly to many real world concepts and everyday perceptions. An

ideal world, essentially Utopia is destined to fail and intuition always balances out the brain (even in Metropolis).

- What this movie talks about above all is the control and balance of power (how a world controlled by entities that know only calculations and equations would be). Relating it to the current urban scenarios, much of the new development is based on technological advances like use of Google glass, advanced mapping through cell phones, online shopping, online dating etc. This undoubtedly has everyone willingly give in to a technologically induced coma where in actual human interaction can easily be simulated by an program.
- This necessarily brings in the idea of loss of control over our cities and lives. An online account can be hacked; an automated car can be hacked too. These applications derive their functioning from the data we feed them and this data in wrong hands can be used against us. People are asking who controls this data and what kind of power and influence do they have then.
- Speaking in urban planning terms, if a virtual reality is simulated successfully, people will not be physically using the city. Working from home, dating through applications etc. will completely throw off our city's job and housing ratios, or land use patterns, or even transport options. If the brain can be tricked into anything that easily, a simulated matrix could be a possibility in long term future.

Tron Legacy (2010)

This is a sequel to the 1982 movie named Tron and talks about similar concepts about A.I. control and parallel worlds. This, however, is a more limited concept than The Matrix Trilogy and has a few relevant planning related features that if not this exaggerated, may actually be a thing of the future.

Introduction to the Grid – The grid or a simulated reality inside a game is introduced to us when the protagonist gets teleported into it after a strange message that shows up on one of the arcade games in his father's old game store. This protagonist (Sam) is the son of Flynn who was the CEO of ENCOM (computer software company) before he disappeared about eight years ago.

As Sam enters into the game, he is confronted by a computer program that identifies Sam as a human user after he bleeds in a fight and takes him to Clu, who is the Grid's corrupt ruling program that wants to break out into the real world. Rescued by another program, Sam reunited with his father (Flynn) who explains him that he has been trapped here since last eight years trying to get out but cannot as he does not have the 'identity disc' (Clu's possession) to do so.

Flynn tells his son that he had been working on a project to create a perfect world (Utopian pipe dream yet again) and had appointed Clu and Tron as its security heads and partners. However, Clu betrayed them and killed off Tron trapping Flynn inside the game all this time. (Kosinski, 2010)

Understanding the Grid – The Grid essentially is the area which is under surveillance of Clu; a programmable city that is essentially a grid that can change (extrude out buildings, stagger levels or just clear out space) as required. Flynn has stayed out of his grasp by staying off the grid which is shown to be an undeveloped terrain.

The architecture and interiors used in this movie are very advanced, sleek and make use of neon lights. The most relevant factor is the programmable nature of the grid. Imagine if such a grid could be designed. A automated road structure that clears out the debris after an automated car breaks down or has a malfunction; or a building space that can be programmed to change according to climate. MIT's SENSEable labs are already researching on certain patents glass types that can be programmed to display different transparency for different people (something like customizing your Facebook wall). A truly programmable grid does seem an exaggerated concept but current

researches in understanding material and energy flows in urban scenarios and use of sensors and indicators to collect data from the users are very real. This may change the basic components of a city (paths, links, edges etc.) completely.

Google glass for example can use digital signs that help people navigate through the city. How it will affect the actual city's fabric is a different question altogether.



Figure 30 Concept art of the grid, Tron: Legacy, Joseph Kosinski

Snow Piercer (2013) –

This is a South Korean science fiction movie based on a French graphic novel named '*Le Transperceneige*'. It takes place aboard a globe spanning 'snowpiercer' train that is home to the last remnants of humanity after a unintentional ice age was induced in an attempt (gone wrong) at climate engineering to reduce the increasing global temperatures. (Bong, 2013)

This train runs on 'perpetual motion' engine designed by Wilford, who now essentially is looked up to as God of this new social order. The elites all occupy the front portion of the train while the backward classes, laborers etc. occupy the compartments at the rear. Now, it is safe to say that escaping the train is not an option as the temperatures outside are fatally low and no one can possibly survive those and therefore this train with its reaffirmed social order is all there is.

What's interesting in this case is the foolish nature of man to establish order. Even after the entire world he created has ended, he restores to a basic exclusionary order of hierarchy in the train which essentially could be looked at as entire globe in a fish bowl. The workers at the end are essentially the scum of humanity and are fed with protein bars (disgustingly made from insects and roaches in the train as protagonist later finds out) and are used for experiments to understand the exterior conditions.

The plot revolves around Curtis who with the help of their local old leader (Gilliam) leads a revolt that will take them all the way to the front of the engine to confront Wilford. Such revolts have been made before and have consistently failed but this succeeds eventually and Curtis (Gilliam dies mid way) finally meets Wilford.

What Wilford tells him is exactly what can happen if control is given to limited people in a society. Wilford says that Gilliam and him are good friends (well, were as Gilliam dies) and it has always been there plan to spark a will amongst the people at the last compartments to start up a revolt now and then so that they could kill some of them off in order to maintain the balance of the ecosystem in the train. Isn't that lovely?

This again points to the illusion of who has control of the society and who has the right to make these decisions.

Consider this, in long term future when fossil fuels are extinct, water shortage is inevitable and land is scarce, who do you think will have more control? Who will suffer? It is movies like these that help planners gauge an extreme concept and dial it down to find practical solutions.



Figure 31 The route of snowpiercer, Snowpiercer 2013, Bong Joon-hu

Elysium (2013) –

In 2154, Earth is over populated and polluted. A handful of rich people have left the planet to live in a space station called Elysium (spookily on the lines of white flight in Atlanta). This Elysium is essentially an abode of aristocracy and leisure while people die of hunger and diseases on the planet. The entire plot revolves around a protagonist from the surface who infiltrates the space system in order to steal some important information. (Blomkamp, 2013)

Some of the factors to be observed in the movie are;

- Use of mixed use, garden city like planning in the space ship.
- Social and class segregation with associated perks and leisure.
- Total chaos, breakdown of system on the surface.
- Heaps of waste and abandoned buildings everywhere.
- Robots supervising humans on the surface for work.



Figure 32 Three images showing the spaceship, condition on the spaceship and, condition on the earth, Elysium 2013, Neill Blomkamp

An interesting common link is majority of these movies is how the protagonist crosses over the gap between the classes is an attempt to either break it and bring something back with him. This speaks to the incompleteness of the two systems and possibly the right answer lies in their co-existence.

Inferences/Conclusions – How does it all connect?

- Can a link be established between real cities (ancient/modern) and conceptual cities (virtual/fantastic/utopian/dystopian) to understand different/common elements of planning?
 - The answer to this is yes it can be. This link depends on several factors as put forth in the matrix of components. These factors may be physical, non-physical, design or system based. They depend on the perception of the subjects.
- What kind of standard set of components could be adopted or created for efficient reading of the cities (old and new, real and conceptual)?
 - The paper gives a in-progress version of the matrix with different aspects and its comparisons. It is obvious that this matrix is incomplete as they are certain aspects in both movies and cities that cannot be compared on common grounds. Yet it attempts to understand any indicators that may be used to gauge in on the scenario depicted and its relevance to existing conditions.
- Are there any cases where utopian/dystopian ideas or their minor aspects, for cities of the past, actually fanned out to be true in recent urban settings? How crucial were they?
 - Some part of certain ideas could have fanned out to be true. The case studies that look at old cities include movies which mostly represent than speculate anything. However, features such as segregation of society, dependence on technology, simulation and virtual reality etc. are relevant.
- Can futuristic urban scenarios of cities shown through movies in recent times be linked to contemporary urban living in an attempt to predict the possibility of some of its aspects actually happening in foreseeable future?
 - They can be as is done in case of the speculative case studies keeping in mind that such movie scenarios are almost always
 - Single purposed therefore limited,
 - Not balanced which means not complex,
 - Exaggerated to the highest possible potential of the features chosen to be depicted.
- Why do we perceive such ideal scenarios? Why do these scenarios show what they show? How does it affect planners?
 - The answer to the first question could be the fact that human nature intrinsically aims for perfection. We, in our ultimate wisdom, are never satisfied with what we have and therefore always aim for better things. Interestingly utopia is unattainable for this very reason. However, these dystopian scenarios in the movies could be used as antithesis to what we want and use them to not end up failing in our endeavors as planners or citizens of this world.
 - Visual stimulant is perhaps most intriguing and has maximum impact on ones memories. Majority of these ideas and therefore associated with some form of visual imagery and form. This helps us build a narrative in our minds.
 - Planning as a field touches a large number of aspects of a city. It deals with tangible physical aspects such as design and networks and also other policy and strategy base aspects wherein planners create vision plans and future plans. Factors such as division of resources, efficiency of networks, movement of people, sustainability all are closely related to planning and therefore it is necessary to understand where the society as a whole is going. A drastic change to virtual reality gaming, dating etc could affect the land use patterns drastically. Factors related to equity are becoming more crucial as time passes. These scenarios as said earlier can help planners understand certain factors or determinants that have become obsolete or will be important in the future and they can actively think of not ending up like any of the dystopian scenarios portrayed.

Areas of Future Research –

The paper attempts to look at ways in linking virtual/fantastic cities to real cities of past and present with an aim to understand their speculative power. This spectrum however is huge as there are several movie genres that comment on various aspects of urban living and could be looked at to develop an extension to the matrix created in this paper.

Exploring more connecting links between the two fields through different perceptions could be looked at – psychoanalysis, sustainable living etc. Exploring other forms of literature and media (books, novels, articles, television series, and comics) for more examples and interesting cases could be interesting.

Perception governs most of these things. The author of this paper has tried to be as objective as possible in analyzing the movies but another set of eyes over the entire material to tweak around aspects could help the topic be more grounded.

Finding a way to measure these links could be an interesting area of research and finally exploring the topic of why we perceive such scenarios with evidences could open up new spectrums in the fields of planning.

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