MOVING-IMAGE AS A MEANS OF READING
THE RHYTHMS IN THE URBAN SCENE:
THE CASE OF 'CITY SYMPHONIES'

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ABSTRACT

**MOVING-IMAGE AS A MEANS OF READING
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Analyzing and reading of rhythms in urban space can contribute to urban design processes by providing significant input about different movements in the space. Henri Lefebvre (1992) elaborated the concept of rhythm in cities and everyday life, and developed the idea of *Rhythmanalysis*. Likewise, Gilles Deleuze (1983) classified the images and signs with reference to movement, and examined the relationship between *movement-image* and *cinematographic image*. This study categorizes the elements of urban space by using the concept of rhythm. It elaborates the *moving-image* – i.e. the simplest form of cinema – as a means of comprehending these rhythms. The ideas of the cinema theorist and director Dziga Vertov have an important role to develop this method, that is, analyzing the rhythms in the urban space via moving-image. The *kino-eye*, the cinema movement which aims to decode the life as it is, led by Vertov, helped developing the methodological approach of this thesis.

To illustrate this theoretical approach, the city symphony films, *Berlin: The Symphony of a Great City* (1927) and *The Man with Movie Camera* (1929) are examined as case studies. A rhythmanalytical reading on these avant-garde and experimental documentary films helps identifying the benefits of using the moving-image as a means of reading the rhythms in the urban space.

Keywords; rhythmanalysis, rhythms in the urban space, moving-image, City Symphonies

ÖZ

KENT MEKANLARINDAKİ RİTİMLERİ OKUMA
ARACI OLARAK HAREKETLİ GÖRÜNTÜ:
'KENT SENFONİLERİ' ÖRNEĞİ

İplikci, Ender

Yüksek Lisans, Kentsel Tasarım, Şehir ve Bölge Planlama Bölümü

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Kentsel mekandaki ritimlerin analizi ve okuması, mekandaki farklı hareket biçimlerini belirlemek açısından kentsel tasarım süreçlerine önemli girdi sağlayabilir. Henri Lefebvre (1992) ritim kavramını şehir ve gündelik hayat bağlamında ele almış ve *Ritimanaliz* kavramını geliştirmiştir. Ayrıca Gilles Deleuze (1983) hareket kavramı ile ilişkili olarak, imgeleri ve göstergeleri sınıflandırmak amacıyla *hareket-imge* ve *sinematografik imge* arasındaki ilişkiyi incelemiştir. Bu çalışma, kentsel mekanın parçalarını ritim kavramını kullanarak yeniden sınıflandırmayı amaçlamaktadır. Çalışma sinema kavramının en yalın tanımı olan *hareketli görüntüyü*, kentsel mekandaki ritimleri kavramak için bir araç olarak kullanmanın yollarını aramaktadır. Kentsel mekandaki ritimleri hareketli görüntüler aracılığıyla analiz etme konusunda sinema teorisyeni ve yönetmen Dziga Vertov'un sinemaya yaklaşımı önemlidir. Vertov'un başını çektiği, hayatın olduğu gibi çözümlenmesini amaçlayan bir sinema hareketi olan *sine-göz,* bu tezin yöntemini geliştirmede yardımcı olmuştur.

Bu çalışmada, söz konusu teorik yaklaşımı sergilemek amacıyla *Berlin: Büyük Bir Kentin Senfonisi (1927)* ve *Kameralı Adam (1929)* isimli kent senfonileri örnek çalışma olarak incelenmektedir. Bu filmlerde temsil edilen kentsel ritimleri okuyarak, kentsel mekandaki ritimleri okuma aracı olarak hareketli görüntünün kullanılmasının sunduğu olanaklar irdelenmektedir.

Anahtar Kelimeler; ritimanaliz, kentsel mekanda ritimler, hareketli görüntü, Kent Senfonileri

to my beloved family,

and to the dreamers who struggle for the future…

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CHAPTER 1

INTRODUCTION

> *"Time is at once fleeting, ungraspable, and grasped, timed, timed chronometrically." (Lefebvre, 2007,51)*

In the 2007 edition of Lefebvre's sixty-nine-page outstanding text *Rhythmanalaysis* (1992), the preface by Stuart Elden identifies Lefebvre's understanding of time, i.e. his emphasis on the importance of instants. Elden mentions that Lefebvre's understanding of time was shaped by Proust, in terms of loss and memory and in this respect recollection and repetition become particularly important. Lefebvre's approach to the concept of history is not linear as Hegel or Marx argued, but closer to the concepts of change and cycles by Nietzsche (Elden, 2007).

This background by Elden gives evidences about the approach of Lefebvre to the concept of *rhythm*. His starting point is shaped around the concept of *repetition.* The repetition of the instants creates the *linear* and *cyclical* processes, and Lefebvre's notion of time arises. He states that cyclical repetitions originate in the cosmos as days, years, etc.; and linear repetitions arise from the social practices such as the experienced time (Lefebvre, 2007, 8). *The cyclical and the linear measure themselves against one other* (Lefebvre, 2007, 8). The cyclical processes of the cosmic time are measured by linear ticktacks, and simultaneously, linear ticktacks are produced by the cyclical movements of the mechanization of a clock. In this dialectical togetherness, rhythm reunites the notions of qualitative and quantitative aspects and elements. This takes us to the duality in the meaning of time as both a measurable and experienced phenomenon. I.e., there is nothing such as unmeasurable rhythms and '*Everywhere where there is interaction between a*

place, a time and expenditure of energy there is rhythm' (Lefebvre, 2007, 15). To understand the concept of rhythm, Lefebvre asserts some complementary terms, i.e. *polyrhythmia, eurhythmia* and *arrhythmia,* which will be discussed in the thesis. Briefly saying, Lefebvre shows that the rhythm is everywhere, even in circumstances that have the most complex and unobservable rhythms, or even in the most arrhythmic situations.

In a similar vein, rhythm is everywhere in the urban space, too. For instance, it is in the movement of a person, in sunrise and sunset, in the flowing water, on the facade of a building or on a tree branch released in the wind. The concept of rhythm should be examined in detail in the urban design field in order to interpret on the relationships in the urban scene.

Cullen, in Townscape (1964), uses three terms of *serial vision, place* and *content* to understand the urban space. Alexander, Ishikawa and Silverstein, in Pattern Language (1977), seek the patterns of the space within a variety of different scales to define the city. Lynch, in Image of the City (1988), refers to the image experience of the visual elements of the city by offering a sort of society-image. These principle texts in the field of urban design; which focus on the concepts of perception, experience, form and function; have inspired many theoreticians and practitioners who analyze different aspects of urban morphology and physical elements of cities. To add to what they have already developed, i.e. to better comprehend the dynamic and heterogeneous city of the 21st century, the ryhthmanlytical approach of Lefebvre can be operational. Reading the rhythms in the urban scene can make significant and unexpected contributions to the urban design process.

1.1. Terminology

As this study investigates the moving-image in the urban space, the literature of cinema is often consulted. Therefore, the terminology used in this study may require clarification. The cinema literature uses the concepts of *moving-image, cinema, movement-image, cinematography, video* and *videography* to represent and define the images which are moving. Among them, 'moving-image' can be seen as the simplest one that refers to the moving images on the screen, therefore the thesis uses this term. Vertov (1984) developed the term *Kinochestvo,* as an abstract form of cinema, which aims to reach an objective level by telling the truth to the people. Moving-image can be basically seen as a contemporary version of Vertov's term. On the other hand, the concept of cinema is used to refer to the historical circumstance of the development of a new visual technology. Cinema was derived from the French word cinéma, shortened from cinématographe; combined the Greek words, *kinema* (movement) and *graphein* (to draw) (Online Etymology Dictionary, 2018). Cinema, *cinématographe*, means 'drawing the movement'. Starting from the discovery of the movie camera machine, in this study, the term 'cinema' is used to define the historical evolution, the development of a new technique. Meanwhile, the term 'cinematography' is used to attribute an aesthetic dimension to cinema. In addition, the terms 'video' and 'videography' are used to indicate the artistic dimension of moving-image.

The second issue that might need clarification is visual narrative techniques. In the history of modernity, "linear perspective" of Renaissance, "photography" of the early 19th century and "cinema" of the late 18th century are the breakpoints that identify the historical evolution of visual narrative techniques. This study mostly uses the term *visual narrative* rather than *visual representation,* because narrating the urban space by using a visual technique is one of the key concepts of this study. This term is preferred to avoid the risks of confusion with other visual representation techniques like mapping, drawing, sketching, etc.

1.2. Aim and Scope

This thesis underlines the significance of rhythms in urban scene that can be consulted in the urban design processes. The moving-image, which is recorded via video-recording tools, can help finding out the rhythms in various urban scenes. This study primarily aims at underlining the significance of moving-image as a somewhat less-used tool in analyzing urban spaces. The moving-image can be particularly helpful in figuring out the repetitive actions –or 'rhythms' as identified in this study- in urban scenes. The study limits its scope to emphasizing the concept of rhythms in urban scenes, and underlining their significance in contributing urban design processes. It does not describe a methodology for capturing them, nor suggests a particular recording tool/technique. It aims to stimulate discussions on the abilities and disabilities of moving-image in capturing rhythms, and on how these rhythms can contribute to urban design.

In *Rhythmanalysis,* Lefebvre portrays a comprehensive and assertive theoretical framework to reconsider the interrelation of space and time by analyzing the rhythms of everyday life. However, his method focuses on the social practices, but the spatial emphasis is comparatively narrow-scoped. By taking the human body as a reference point to analyze the external rhythms, Lefebvre (2007) warns his readers about the risk of staying totally subjective. His approach to the rhythms refers to both qualitative and quantitative methods. That might be the main reason why Lefebvre (2007, 36) propounds that *'No camera, no image or series of images can show these rhythms.'*

Urban space does not only consist of the spatial forms and elements, nor it is purely shaped by social practices. It is a unity of these two. Applying the method of Lefebvre to urban design, rhythms of different urban elements and the relationship between them should be examined by using a visual tool.

John Berger (1977, 7) starts his spectacular work, *Ways of Seeing* with the following words: *'Seeing comes before words. The child looks and recognizes*

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before it can speak.' Seeing can be defined as the strongest sense to perceive the environment around us. Within the urban space, this sense allows to understand the movement in three dimensions, and in this respect, seeing strengthens the sense of the self and the other. In other words, under ideal circumstances, by the help of seeing, we develop an interrelationship with it, and make significant amount of our decisions about the space through this sense. That might be one of the reasons that giving a visual form to the space has been always the point of interest of professions like urban planning, architecture and urban design. It should be defined as not only in aesthetic meaning, but also as a phenomenon which steers and limits the human movements and behaviors.

Despite the power of seeing, Berger (1977) reports that there is always a gap between words and seeing, most particularly in scientific knowledge. Words, numbers, maps, drawings etc. might not be always adequate to comprehensively interpret on the world. In the history of modernity, vision-oriented technology has approximated the phenomenon of seeing to scientific knowledge. Starting from the linear perspective of Renaissance, photography of the 19th century and later cinema; evolution of visual narrative techniques has helped to narrow down the gap between words and seeing, and created a new form of expression, a new visual language. This study, likewise, elaborates "seeing" as a means to contribute to the world of the static knowledge.

At this point, the approach of Martin Heidegger (1977) should be briefly discussed to better understand the relationship between the vision-oriented technology and knowledge. In his remarkable text *The Age of World Picture*, Heidegger (1977) grasps the complexity of modern technology by focusing on its influence on the modern science and knowledge. He points out the significance of technology, i.e. tools and techniques, and accordingly the methodology on the evolution of the modern science and knowledge (1977). In this point of view, the capacity of moving-image as a medium that

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distinguishes the rhythms in the urban scene has an important role for this study.

This study is not the first study that describes the role of moving-images as a medium for examining the city and urban space. Donald Appleyard, Kevin Lynch and John R. Myer (1971) used video techniques to deal with the aesthetics of the highway experience from the eyes of the driver and passenger and how this approach can contribute to the design of highways. They used moving-image as a medium to display the highway journey experience and analyze the images by using a genuine and innovative graphic language (Appleyard, Lynch, & Myer, 1971). Moreover, Lewis Mumford (1963) made six short documentaries, named 'Lewis Mumford on the City', to examine the urban phenomena by the help of the moving-image. Edmund Bacon (1962) had a similar attempt of using documentary to narrate the redevelopment and designing experience of postwar Philadelphia. These pioneering works underline the significance of moving-image as a visual narrative technique in examining the city.

Lefebvre uses a qualitative method to analyze the rhythms of everyday life and uses words to describe it. He claims that no image can show the rhythms. Urban design involves in giving visual form(s) to space, and these forms are presented by using maps, design projects, sketches, photographs, models, etc. 3D presentation techniques and animations are also used. The highly dynamic, changeable, and even inequitable nature of the contemporary urban space with movements and rhythms on it may not be adequately presented in such milieus. This study focuses on the moving-image to figure out the rhythms in the urban scene as a contributing element to urban design. It illustrates the significance of movement and rhythms in the case of 'City Symphonies[1]'.

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[1] 'City symphonies' are distinctive modernist films that attempt to capture the urban experience of American, European and Soviet cities in the 1920s (Koren-Kuik, 2013).

The main research interest of this study is shaped around the following questions:

- Is it possible to determine the rhythms in the urban space by using moving-image as a visual narrative and representation technique?
- What are the advantages of analyzing the rhythms in the urban scene by using moving-image?

The expected outcome of this study is:

- to discuss the capacity and power of the moving-image on visualizing, capturing and recording the rhythms in the urban scene,
- to underline the rhythms of urban space in the urban design discourse.

For this purpose, Chapter 2 elaborates the evolution of the visual representation and narrative techniques in the history of modernity, starting from the Renaissance to the early 21st century. This chapter elaborates the ideas of John Berger (Ways of Seeing, 1977), Walter Benjamin (The Work of Art in the Age of Mechanical Reproduction, 1936) and Jonathan Crary (Techniques of the Observer, 1992) with the aim of showing the relationship between the cinema and urban space. In the history of modernity, every new technique to reproduce human vision has led to significant shifts in human perception. By the help of the works of mentioned writers, those breaking points on the visual narration techniques have been figured out as 1) linear perspective of Renaissance, 2) photography from the 19th century, and 3) cinema of the 20th century. Susan Sontag's book 'On Photography' and Gilles Deleuze's book 'Cinema I – The Movement Image' have been applied to examine and categorize the techniques of photography and cinema. Chapter 3 portrays the theoretical framework of the study; applying Lefebvre's rhythmanalytical approach to the urban space. This chapter seeks establishing a new way of looking to the urban space by the help of the concept of rhythm. How to determine and categorize the elements of urban space as part of rhythmanalytical approach is a key question of this chapter. Later in the chapter, how to designate, narrate and represent the

rhythms in the urban space will be sought by the help of the methodological approach of Dziga Vertov's writings on cinema. One of the most important Soviet directors and cinema theoreticians, Vertov developed a new way of comprehending the art of cinema. He aimed to reach a sort of film-object – a subjective way of looking to the modern society by the help of the capacity of cinema to tell the absolute truth to the proletariat. Combining Lefebvre's theoretical approach with Vertov's methodology, the aim is to construct a new way of looking to the urban space and narrate it with a supportive visual tool, i.e. the moving-image. Chapter 4 analyzes the city symphony films of the 1920s as a case study. Two films are chosen: 'Berlin: The Symphony of a Great City' directed by Walter Ruttmann (1927) and 'The Man with Movie Camera' directed by Dziga Vertov (1929). In the history of cinema, from among dozens of city symphonies, these two films are categorized as the most comprehensive works of art which represent the dynamic modern urban life of the metropolitan areas of the 1920s. City symphonies are significant examples of understanding the concept of rhythm in two ways: cinema and modern city. It is not possible to claim that Ruttmann and Vertov were aware of Lefebvre's rhythmanalytical approach, but as it will be elaborated in this chapter, they were both aware of the rhythms in the modern city and its everyday life. Analyzing the rhythms in the urban space were not the main concern of those two films, they both had strong sense of using cinema as a means of understanding the modern city. In this study, examining these films are important because they can be described as significant works of art which deal with the rhythms in the urban space. Chapter 5, the conclusion chapter, discusses the potentials and contributions of the rhythmanalytical approach to urban space, and the method of expressing, representing and narrating these rhythms through a visual tool, the moving-image, in the urban design discourse. The expectation of the methodological inference of this study is to suggest an interdisciplinary approach to the urban space by focusing on the rhythms in the urban scene; and extract, record and analyze them via moving-image technique.

CHAPTER 2

VISUAL NARRATIVE OF THE URBAN SPACE

"Hurray for the poetry of machines, propelled and driving; the poetry of levers, wheels, and wings of steel; the iron cry of movements; the blinding grimaces of red-hot streams" (Vertov, 1984, 9).

Soviet director and cinema theorist Dziga Vertov ends the manifesto of the *kino-eye* movement, which he heads, with these words by showing adoration to modernity and to the images of modernity. Since Renaissance, modernity had been fed by many sources and had fed humanity with different kinds of instruments –or rather inventions and innovations. The evolution of visual narrating techniques in the history of modernity should be understood comprehensively in order to define the relationship between space and its visual narrative and representation. In the history of modernity, many technologies and techniques have been developed. However, with regard to the visual narration of space, three techniques are significant: 1) *linear perspective* of Renaissance period, 2) *photography,* the first big step to reproduce reality in visual form and 3) *cinema,* which can capture time and movement. Those techniques can be considered as fundamental tools that help understanding and explaining human perception with a sort of visual language. In addition to that, as Benjamin points out, *the mode of human sense perception changes with humanity's entire mode of existence* (Benjamin, 2007, 222)*.* Those techniques are significant for both visual representation and visual perception.

This chapter explains the path to the invention of cinema in a way to define the relationship between moving-image and urban space. John Berger argues that every new technique defined a new way of seeing (1977) and this historical process shaped the theoretical and philosophical approach to the phenomenon of visual representation of space and its parts.

2.1. Modernity and New Ways of Seeing

Modernity, in which, with the words of Marx, 'all that is solid melts into air' cuts across all the boundaries of humankind, paradoxically unites – unites and disunites at the same time – all mankind (Berman, 1983). He argues that modernity is an age in which all we know about us and the world changes. This creates a maelstrom which has been fed from many sources in the course of five centuries. Harvey (1990), meanwhile, focuses on the words of Baudelaire (1863) to define 'modernity', *the conjoining of the ephemeral and the fleeting with the eternal and the immutable*. This dual formulation can be approved as a brief and simple way to characterize 'the condition of modernity'. Most of the modern writers like Berman (1983) and Frisby (1985) emphasize the fleeting, the ephemeral and the fragmentary side of Baudelaire's dual formulation and argue that the only secure thing about modernity is its insecurity (Harvey, 1990). For Harvey, such ephemerality and change come with a number of significant consequences; modernity – aside from any pre-modern social order – can have no respect even for its own past. As Marx pointed out, modernity started an age in which *'everything seems pregnant with its contrary'*. Also, as Berman, Harvey and others pointed out, on one hand, modernity caused the maelstrom of ephemerality and change, on the other, the consequences of this maelstrom have built something new, something eternal and immutable which also hangs by a thread of fragmentation and chaotic change.

While defining this contradiction of the modernity, Harvey (1990,16) refers to the mythical figure of Dionysus, *to be at one and the same time 'destructively creative' and 'creatively destructive'*;

> *The image of 'creative destruction' is very important to understanding*
> *modernity precisely because it derived from practical dilemmas that*
> *faced the implementation of the modernist project. How could a new*
> *world be created, after all without destroying much that had gone*

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before? You simply cannot make an omelet without breaking eggs, as
a whole like of modernist thinkers from Goethe to Mao have noted.
(Harvey, 1990, 16)

The phases of modernity defined by Berman (1983) overlap with the historical development of visual narration technics – or so called inventions. He divided the history of modernity – or we can use the term *'experience of modernity'* – into three phases, each of which overlaps with the discovery of new technics to represent 'human vision'.

The first phase started in the 16th century and lasted until the end of the 18th eighteenth century. People were just beginning to experience modern life but they hardly knew what hit them. They started to feel the changes in their daily life or social relations but they had little or even no sense of being part of a modern public or community. The second phase began with the French Revolution in late 18th century and its reverberations which caused enormous changes in the social and public life. In this phase, demoded imperial states began to weaken and collapse, and newly industrializing nation states started to rise instead. In the 20th century, the third and final phase, the process of modernization has expanded to take in virtually the whole world and a global culture of modernism, i.e. cultural modernism, has achieved spectacular triumphs of art and thought (Berman, 1983). Harvey defines cultural modernism as a new impetus with the impact of Nietzsche who had led the way in placing aesthetics above science, rationality and politics. With this conception of the modernist project, Harvey attributes a new and very special position to artists, writers, architects, composers, poets, thinkers and philosophers and he adds that if creative destruction was an essential condition of modernity, then perhaps the artist as an individual had a heroic role to play (1990). The most famous example of such 'heroic figure' with creative destruction of Second Empire Paris is Georges-Eugène Haussmann. Paris, under the impact of Haussman, faced two 'creative destruction' processes. The first one is the plan that was put into practice by Haussmann by destructing

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'the old' and constructing 'the new'; and the other 'utopian' proposal, Plan Voisin by Le Corbusier, which would destruct the 'old Haussmann Paris' and construct a 'new Paris', which was never built. The works of those two architects and urbanists in Paris might be the best example of the creative destruction image of modernity defined by Harvey. In addition to the spatial history of Paris, it should be noted that the significant role of the city in founding the myth of cinema since the first public demonstration of the Cinématographe by the Lumiére brothers *who dazzled their audience by projecting moving pictures onto a screen'* on December 28, 1895 in the basement of Grand Cafe (Mennel, 2008).

New technics of representing 'human vision' overlap with the phases of modernity defined by Berman: In the first phase Renaissance discovered *linear perspective*. Secondly, the age of great discoveries in science and technology – the optics have met with chemistry and *photography* was born. And after all, in late 19th century, in the world of speed, movements and rhythms, stable images of the photography started to move and moving-image – in other words *cinema* – was born. Benjamin (2007) notes to the *creatively destructive* effects of these new technics on the perception of human beings:

> *During long periods of history, the mode of human sense perception changes with humanity's entire mode of existence. The manner in which human sense perception organized, the medium in which it is accomplished, is determined not only by nature but by historical circumstances as well* (Benjamin, 2007, 222).

If we approach this statement with the perspective of the perception of space through visual media, new visual narrative techniques had taken the dominant position in these historical circumstances. Through the history of modernity, every new technique led to significant shifts and set sail for new horizons by means of perceiving the space.

Berman (1983) describes the last phase of modernity as highly developed new landscape of steam engines, automatic factories, railroads, new industrial zones; daily newspapers, telephones and other mass media (to which we could add visual media like photography and cinema). Especially after the World War I, a new mode of modernism came into the picture in the refined forms of *'machine aesthetic'*, by the technocratic pastorals of the Bauhaus, Gropius and Mies van der Rohe, Le Corbusier and Leger (Berman, 1983). Harvey explains the approach of these scholars as *'to bring art back to the people through the production of beautiful things'* (Harvey, 1990, 22). In this sense, modernism intends to affect the aesthetics of everyday life and it brings modern art into our homes. Likewise, as Benjamin (2007) indicates, the changing capacity of reproducing and disseminating the work of art with the catalytic role of photography and later film radically changed the material conditions of the artists' existence within the modern society. His ideas are not only important to understand the artists' existence within the modern society, but also this point of view helps urbanists to track the effects of the techniques on the idea of *sense of place*. In his remarkable article, *The Work of Art in the Age of Mechanical Reproduction*, Benjamin (2007) seeks for the influences of the new technics like photography and cinema on the *aura* and *authenticity* of the work of art and reproducing art. From the viewpoint of an urbanist – in parallel with the ideas of Benjamin – the question of how these new technics effect the sense of place, and aura and authenticity of the place becomes crucial. Effects of photography and cinema on the idea of sense of place will be profoundly examined later.

The term 'machine aesthetic' is one of the most important concepts to define the relationship between modernity and visual narration techniques. This term is frequently met when searching the relationship between the city and the cinema. Examining the theoretical and historical context between these two brings us to the documental cinema genre which is named 'city symphonies'. If we take the city itself as a kind of vision machine with its whole built

environment; buildings and infrastructure of streets; transit elevators and moving walkways, the film genre known as 'city symphony' explores the power of this machine (Schwarzer, 2004). In the last phase of modernity, with the invention of photography and later cinema, a new perception of time and space occurred, and with the montage technics, city symphonies could capture the experience of early twentieth century modernity, i.e. the 'machine aesthetic' of the city (its railroads, stations, streets, bridges, vehicles, automatic factories etc.). Together with the city symphonies, other works of early cinema, too, take the city as a machine and mention the modern life in this machine. Harvey uses Chaplin's Modern Times as an example to define the idea that the machine, the factory, and the rationalized city provide a sufficiently rich conception to define the eternal qualities of modern life (1990).

Photography and film had changed the capacity of reproducing and disseminating the work of art. Moreover, these innovations had widened the horizons of perception and representation of the reality. Photography is simply a special combination of optics and chemistry (Baker, 2012). At the beginning, they were both used for documentation and recording the events, or in more abstract terms they were used to capture the time and space. However, as Berger (1977) points out, even photograph is not a mechanical record. The invention of camera changed the human's way of seeing, the meaning of the visible became something different to them and these radical changes were immediately reflected in painting and led to new movements like impressionism or cubism (Berger, 1977). A technological invention, composed of *special combination of optics and chemistry*, widened the new ways of seeing, and as a result, led to profound changes. In addition to the approaches of Gropius, Rohe and Le Corbusier (tarih), photography and film are outputs with the influence of modernity on art; machine aesthetic – 'aesthetics _of_ the machine' or 'aesthetics _by_ the machine'.

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There are also profound changes in the meaning of art with the rise of modernity. Likewise, pointed out that a new built environment started to develop with modernity (Berman, 1983 and Harvey, 1990). As Benjamin and Berger (1977) highlight photography and film led to profound changes in art, and – from the standpoint of this thesis – they changed the way of seeing and opened up new ways of perceiving and representing the time and space.

2.2. Visual Narrative Techniques in the Historical Context

"Seeing comes before words."

(John Berger, 1977)

Mankind, from the beginning of the history, has always sought to imitate and manipulate human vision, because it is the strongest sense, especially to perceive the space. While walking on the street, we feel the ground with our feet, we hear the voices of the cars, people or animals, we smell the coffee that comes from a café, or we taste that coffee while walking on the street. But if we talk about perception of space, the sense that comes first is 'seeing'. Barlas (2006) categorizes the theories about perception in two groups: First suggests that perception is dependent on sensory experiences. The second suggests that the basis of perception is information and senses function as perceptual systems. Meanwhile, Lynch (1988) defines the design problem as *'giving visual form to the city'* and takes the visual elements of the city to define the image of the city. The approach of urban design to perception of space is generally shaped by the terms like image, visual form and seeing. The methods of analysis and visual representation techniques for space and spatial elements are mostly static ones, such as maps, plans, conceptual diagrams, sketches, models and so on. However, the object of this thesis, namely the moving-image, is the least applied for analysis or visual representation, which is going to be elaborated in its historical context later.

To understand the relation between seeing, perceiving and representation, we should start from the beginning; Cave paintings, Egyptian hieroglyphics, the

invention of writing (which can be described as visualizing of speaking), Roman and Greek mosaics, Medieval illustrations, Renaissance paintings, etc. The history of mankind is full of efforts to create some kind of a visual language and a considerable amount of this is about visualizing the world around us – in other words, the tryouts of imitating the human eye. In the evolution of visual representation – or observing – technics, there are three critical breakpoints:

- The linear perspective of Renaissance: Its invention approximately overlaps with the first phase of modernity defined by Berman (1983). In the history of modernity, this technique can be described as the first breakpoint of visually reproducing the reality especially in the context of spatial aspects. Because, for the first time, humanity had explored to portray and 'draw' the sense of depth by the help of linear perspective.

- Photography: It is the second and the most persistent technic that is developed in early 19th century.

- Cinema: It is one of the greatest inventions in the third phase of modernity, where the process of modernization expands to virtually the whole world by the help of cultural modernism.

2.2.1. Linear Perspective: The First Breakpoint for Rationalizing the Vision

In the first phase of the modernity, where it is quite blurry to observe the processes and the consequences, great progresses with great discoveries in art and science had started to rise in Florence, Italy. Especially, the consequences of the efforts for the perfection of the image of reality were enormous. According to Crary (1992), the breakpoint of Renaissance Linear Perspective on human vision was more than a simple shift in the appearance of the image and the work of art. It was not separable from the reorganization of knowledge and social practices that modified in numerous ways the productive, cognitive,

and desiring capacities of the human subject (Crary, 1992, 3). In other words, it was not just an artistic movement to represent the religious myths, but with the reproduction of the image, the effect of this new technique on the way to rationalist thought cannot be denied. Therefore, linear perspective can be described as the first rational breakthrough to represent the reality and to understand the human vision phenomenon with a method which uses the Euclidian geometry.

The work of Lorenzetti, *Effects of Good Government on the City Life* is a good example of spatial representation in the field of painting before the invention of linear perspective (Figure 2.1). The lack of the sense of depth and spatial hierarchy complicates the understanding of spatial composition. On the other hand, approximately two centuries later, the famous painting of Raphael, *the School of Athens*, shows the power of this technique (Figure 2.2). Its extra realistic details and usage of light makes the spatial aspect of this painting very remarkable. The effect of the sense of depth and spatial composition between the parts on the realistic appearance of the painting cannot be denied. The comparison of those examples shows the significant contribution of linear perspective to the visual representation of space.

Figure 2.1: Effects of Good Government on the City Life by Ambrogio Lorenzetti, 1338-1340
Source: https://www.wga.hu/frames-e.html?/html/l/lorenzet/ambrogio/index.html, accessed on July, 2017

Figure 2.2: The School of Athens by Raphael, 1509-1511
Source:https://upload.wikimedia.org/wikipedia/commons/thumb/9/94/Sanzio_01.jpg/
1546px-Sanzio_01.jpg, accessed on August, 2017

With the words of John Berger, *'Perspective makes the single eye the center of the visible world'* and it led the way to the thought that the visible world is arranged for the spectator while it used to be arranged for God (Berger, 1977, 16). The viewpoint of Berger explains the influence of linear perspective on the development of enlightenment and rationalist thought well enough. On the one hand, linear perspective was mostly used to picture the religious myths of Christianism, on the other, it helped the human beings to realize the self and to see the world in a more rational manner.

This rational breakthrough of Renaissance did not only take place in art and thought, but also in the architecture and cities. According to Bacon, the coming of the Renaissance brought a new rational basis for the extension of the city with the new scale of the city growth (Bacon, 1967, 93). He uses the network system of interconnecting streets, squares and principal churches of Renaissance Florence, to describe the phenomena of the beginning of a city-

wide design structure on a new idea which led the way to the new order of a new city vision; later the Baroque Rome, and then the Modern Paris (Bacon, 1967). Such novelties in the fields of art and thought might seem minor at first glance, but those are the first and very profound changes on the way to modernity. If we turn back to the idea of Berman in the epoch which started with the movement of Renaissance, people started to feel the changes in their daily life or social relations but they have little or even no sense of being part of a modern public or community. And consequently, as modern human beings, we owe a lot to linear perspective as a visual representation technic because of its contributions to the rational and later modernist thought.

2.2.2. Photography

In the early nineteenth century, the efforts to capture the images in camera obscura – an optical device that reproduce the image on the screen in a box – became successful. After failures of image fixing processes, in 1826 or 1827, Nicéphore Niépce succeeded fixing the image to a polished pewter plate with eight hours of exposure (Beaumont, 1982) (Figure 2.3). This first surviving photograph taken by a camera shows the view of the buildings and landscape seen from the window of his workshop in Le Gras, France (Scruton, 2008).

Figure 2.3: Landscape in Saint-Loup-de-Varennes
Source: http://www.photo-museum.org/catalog-works-niepce, accessed on August, 2017

Once again, mankind blended the scientific knowledge with a primitive device and innovated a new, more advanced machine; *'a combination of optics and chemistry'* (Baker, 2012). According to Benjamin (2007, 222) '*the mode of human sense perception changes with humanity's entire mode of existence'*. If we think about this, it can be said that this new optical-chemical device under the guidance of camera caused dramatic shifts and changes in human

perception and mode of existence since it created a *'new way of seeing'*. However, the effects of photography took rather a long period to observe, because the technology of this optical-chemical machine developed gradually. The early technologies of photography had allowed only long exposures and therefore, architecture used to be quite suitable for the early photographic works for its stillness and ubiquity (Schwarzer, 2004) (Figure 2.4).

Figure 2.4: Nelson's Column under Construction, Trafalgar Square, London by William Henry Fox Talbot, 1844 Source: wwww.metmuseum.org./toah/works-of-art/2009.279, accessed on August, 2017

With the evolution of the technology of photography in the nineteenth century, images of architecture became fruitful, reproducible and long lasting photography (Schwarzer, 2004). Because it provided paper prints, halftones allowed magazine and book reproductions, and high speed photography permitted street photography.

2.2.2.1. The Nature of the Photographic Image

The invention of Renaissance perspective, later camera obscura, and photography shows us that they are partly in the same quest of representing a sort of 'objective realism' of human vision. As mentioned above, photography, which is the closest technique to represent and reproduce the reality or real objects, caused dramatic changes and led to a new way of seeing. Photographs are the visual reproductions and outputs of 'real objects' and they create a kind of photographic reality.

For André Bazin, '*Photography and the cinema … are discoveries that satisfy, once and for all and in its very essence, our obsession with realism.*' (Bazin, 2004). Bazin and many others argue that photographs are extraordinarily realistic beyond the paintings, drawings and any other handmade images can reach (Walton, 2008). In addition to Bazin, Roger Scruton, points out the power of photography to represent things as they are and argues that photographs are mirror-image of reality (Scruton, 2008). Despite of the technics like photomontage or optical manipulations, he claims that photographs are '*the photographs of real objects which were existed on a certain time and place'* (2008)*,* and capture the reality and reproduce it on a white paper.

At this point, the tension between the truthfulness of '*photographic realism'* and photography as the *'perfection of the image'* comes into picture. Photography, as the first breakthrough in terms of visual realism, visually represents real objects, but these objects cannot be assumed just as mechanical records (Berger, 1977). In Berger's opinion, images were sights which have been recreated and reproduced, and photographs were the most realistic ones at first glance. However, he argues that when we look at a photograph, we see the photographer's selection of the sight from an infinity of other possible sights and moments (Berger, 1977). Sontag (2008) also focuses on the subjective

power of photography on artistic interpretation and uses the term *'beautification'* to describe photography as the perfection of the image.

In addition, Walton argues that since photographs are two dimensional and framed; they freeze the time and movement, many of them are black and white, even the most realistic motion pictures in 'living color' are merely the projections of the real objects and space on a flat surface, and easily distinguishes from 'reality' (Walton, 2008). Likewise, according to Gene Blocker (1977), the photographic image can be described as *a subject can indeed be made to say whatever the photographer wants it to say*, because the selection of the subject, angle, direction of light etc. are all the subjective ways rely on the photographer's point of view or expressive of feelings and mood.

2.2.2.2. Seeing the Reality Through Photographic Image

What is crucial about the relation between photography and space is whether photography is capable of portraying the space and its elements. Or in other words, can we read and express a particular place through a photograph? To answer these questions, we should start with elaborating the process of seeing. In his 1942 work *The Art of Seeing,* Aldous Huxley suggested the formula of *'Sensing + Selecting + Perceiving = Seeing'* (Lester, 2011, 4). Lester (2011) explains the concepts of Huxley as follows: The first phase of visual perception is *sensing,* which means letting light get into your eyes and so that you can see objects around you. However, at this phase, only your brain connects with the outside world but your mind does not. In other words, there is no mental processing of the image in this phase. The next stage is to *select* a particular element with focusing and looking at a specific part of scene and to select it from unlimited possibilities. Selecting is a conscious act and now your mind is registered with the environment, too. The last phase of seeing is to *perceive* which demands sharper mental activity. This phase is mentally processing an image on *a higher level of cognition than simply sensing and*

selecting. In other words, to perceive is a process of considering the meaning of what you see. (Lester, 2011, 4-5).

The formulation of Huxley in terms of *photographic seeing*, i.e. to see through photographic image, is significant to answer the question of whether photography is capable of representing the human perception of space. However, before going into the details of this question, I would like to briefly examine the nature of the photographic image.

In her 1977 work, *On Photography,* Susan Sontag explains photographic image basically under two categories; *aesthetic* – she also uses the term of beautification – and *instrumental* – she also uses the term of truth-telling – approaches to identify the phenomenon of photography (Sontag, 2008). According to Sontag, on one hand, photography is capable to beautify and subjectivize the *reality*, on the other hand, it has the power to objectify it with not only a legacy from science which is value-free truth but also moralized ideal of truth-telling adapted from the nineteenth-century literary (Sontag, 2008, 86). As discussed earlier in this chapter, this dual formulation of photography defined by Sontag, helps us to characterize the photographic image and how we perceive it but, from the standpoint of this study, understanding and elaborating the truth-telling way of photography will be discussed to understand and analyze urban space.

To reconsider the formulation of Huxley for the process of seeing, what is the difference between seeing *the reality* and seeing *the reality through photographic image*? Let us first consider these stages in terms of seeing the reality, or rather, perceiving the urban space in real. The first stage, sensing, is related with our five senses. The very fundamental difference between seeing *the reality* and seeing *the reality through photographic image* will be examined in this phase because in real space[2], all of our senses take place but

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[2] According to Sontag, *'in modern society, a discontent with reality expresses itself forcefully and most hauntingly by the longing to reproduce this one. As if only by*

sensing through photographic image, seeing is the almost *the one* sense to perceive the image (of course the environment in which we see a photograph has the potential effect on *seeing the photographic image,* but in ideal conditions – with no outer interventions –those effects can be disregarded). While seeing is the primary sense to perceive the real space, other senses have secondary impact on it, but on the photographic image with no outer influence, seeing is the only sense to perceive it.

At the *selecting* phase of the process of seeing (in) the real space, personal experiences, cultural background, social norms etc. take primary place, since such background information in our minds shapes the selections that we make in various aspects. However, in photography, the author – photographer – is making this selection/decision instead of the spectator and that is the reason why we see through someone else's eyes. While looking at a photograph, a framed and bounded image, which is narrowed by someone else, is seen. At this point, the idea of Sontag about the beautification and truth-telling power of photography takes place. She defines photography as *clouds of fantasy* and *pellets of information* at the same time (Sontag, 2008, 69). If the photographer captures the image before *perceiving* phase, the outcome image mostly has a journalistic or so-called truth-telling value. However, a part of such images, have also random artistic value at the same time. Sontag explains this contradiction with the works of some of the famous photographers (2008). Consequently, unlike seeing (in) the real space, at the selecting part of the process of seeing the real space through photographic image, our selection is narrowed by the photographic image. Despite the fact that the focus of the subject is chosen by someone else, as spectators, we still have the power of

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looking at reality in the form of an object – through the fix of the photography – is it really real, that is, surreal (Sontag, 2008).' Thus, photographic image allows to look at reality in the form of object and in that, creates the surreal image of the space. In other words, it represents the space and creates some kind of a virtual space. That makes the difference between 'real space' and 'the space in photographic representation' – or the so called virtual space.

selection and interpreting what we see on the two dimensional and framed image through our personal experiences, cultural background, social norms etc.

As Huxley explains, perceiving is the process of considering and giving the meaning to what we see on a higher level of cognition mentally. As Barlas (2006) points out, there are different perception theories that explain the nature of perception. One group of these theories suggests that perception is dependent on the sensory experiences while another category suggests that the basis of perception is information and that the senses function as perceptual systems (Barlas, 2006). First we sense the image with our all five senses, then we select and focus on a particular subject, object etc. through our background information and when we interpret and give a meaning to what we see, we start to perceive it. As defined above, perceiving the real space is to consider and give a meaning to what we see.

In the perceiving phase, the beautification power of photography takes place. Photographers, who aim to capture *the most beautiful image* and to give a meaning to the image, try to find the right spot and time to reach their aims as Sontag explains. From the perspective of the spectator's seeing, perception of the photographic image is oriented within the boundaries selected by the photographer. Even in the most honest and transparent photographic image, spectator sees a subjective image – a view of a photographer – but he/she still has the power and freedom that come from the background information like personal experiences, cultural background, social norms etc. Different people can – and most probably will – see a photographic image different than each other because of such factors.

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2.2.2.3. Narrating the Urban Space Through Photography

Based on the idea of Walter Benjamin; '*the mode of human sense perception changes with humanity's entire mode of existence*' (2007, 222), in the history of modernity, every new technic and invention had caused new ways of seeing not only in physical *seeing* but also in philosophical seeing. In the case of photography, these changes and shifts happened faster and sharper compared to the previous techniques like linear perspective. As discussed above, photography has a strong beautification power and from this perspective it has an artistic role for expressing a new kind of an aesthetic work (Sontag, 2008). Therefore, we cannot consider it a totally reliable expression tool. On the other hand, for others like Scruton (2008), photography is a mirror-image of the reality and so it is not capable of representing anything but just extract it as it is.

However, it is not very easy to answer the question of whether photography is capable of representing the space since it has many contradictions in terms of truthfulness, expression, and aesthetic value. Due to these contradictions, photography can be defined as a subjective tool of reproducing the reality.

Photography gained its power of influence on society in the history of modernity. In its two-century history, photography had taken as a social status for the rich with early portrait photography, or it had been used by the photographer of Haussmann, Charles Marville, to document the so-called development and evolution of modern Paris and in his works we could observe the creative destruction image of modernity with the growth of the modern city (Figure 2.5).

Figure 2.5: Creative Destruction image of Haussmann Paris: Boulevard Henri IV,,
photo taken by Charles Marville, 1877
Source: www.nga.gov/features/slideshows/marville-paris.html#slide_24, accessed on
August, 2017

The power of photographic image which is captured at the right time and right place cannot be denied and now we are living in a world surrounded by images – social media like Facebook or Instagram, cities and architecture which is invaded by advertisements, applications like Google Earth that gives us the opportunity to see the places, cities from our living rooms etc.

To analyze, understand and interpret the urban phenomena and the environment around us, photography has always been a useful tool for architects, urban planners and landscape architects. However, as discussed above, photographic image cannot be used as an entirely rational way to deal with urban space(s). If it is a subjective tool of reproducing the reality and *the real space*, for the professions dealing with space, the multi-layered and ambiguous structure of the phenomena of photographic image and its contradictions should be considered.

2.2.3. Cinema

The history of cinema had begun in the basement of a Parisian café on December, 28th 1895 with the preview of *The Arrival of a Train to La Ciotat Station* (L'Arrivée d'un Train Ã la Ciotat) by Lumiere Brothers (Figure 2.6). In this very first experience of cinema, 10 short movies had been previewed in this preview (Lebeau, 2001). According to the journalists who were the witnesses of this preview, there had been fear and panic risen, within the audience of 'The Arrival of a Train to La Ciotat Station', with the image of the moving train on the screen which was approaching towards the audience (Lebeau, 2001). As far as the relation between city, modernity and cinema is concerned, this very first experience of cinema shows us that the images of modernity – city, machine, factory, etc. – had created a new mode of perceiving reality. With rapid developments of this new technology in the early 20th century – slow motion, moving camera, montage and collage technics, etc.– it offered a new way of perceiving space and time.

Figure 2.6: The Arrival of a Train to La Ciotat Station by Lumiere Brothers, 1895, Shots chosen and reassembled by the author

Cinema can be described as the next big step of reproducing the reality, and when we compare it with previous techniques (or milieus), the influence of this new technique was enormous in art, science and philosophy. It caused a newest and probably the deepest change in the human sense and humanity's entire mode of existence. Undoubtedly, cinema takes this power from its capacity of reproducing and representing the reality. In addition to photography, as

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Benjamin (2007) notes, cinema brought the movement to stable photographic image and later sound, and that is why it is more significant because it offers an aspect of reality which is free of all equipment. The photographic image captured the time and space, the reality was framed, frozen and transposed it to some other time and space. Moreover, it could be reproduced, duplicated and relocated *the reality* which had been frozen in certain time and space. The contribution of cinema to the photographic image is that it could capture the *movement*, in other words, for the first time in the history of mankind, *time* and *space in time* could be captured, reproduced and broken off the reality.

Throughout the history of cinema, the relationship between the city and this new mode of art has always been strong. For instance, Mennel (2008) reports that Haussmann's vertical organization of Paris took on a symbolic and metaphoric significance for Fritz Lang's *Metropolis* (1927). In the movie, Lang designs the city in vertical layers, and this approach metaphorically represents the hierarchy between the different classes of the society. Meanwhile, in the dinner scene of *Roma* (1972), Frederico Fellini shows the dynamic and vivid city culture and its reflection on the urban space. Wim Wenders' *Der Himmel Über Berlin* (1987) and Ridley Scott's Blade Runner (1982) display the monochromatic fragmentation and ephemerality of the postmodern world, focusing on the aesthetic qualities of space and time (Harvey, 1990). The examples show the strong relationship between cinema and urban space and architecture. Cities, themselves, can be seen as actors of the movies in plenty of cases.

Deleuze (1986, 5) reports that the distinguishing aspect of cinema is '*...not merely the photo, but the snapshot; the equidistance of snapshots; the transfer of this equidistance on to a framework which constitutes the 'film'; the mechanism for moving on images.*' He defines cinema as a system that can reproduce movement *as a function of equidistant instants* (1986). The cinema basically consists of the serial photographic images captured equidistantly in time to represent the movement. In other words, Deleuze defines cinema as the

system that reproduces the movement by relating it any instant moment (1986). He claims that cinema does not provide an image which consists movement but rather it presents *movement-image* (1986). In his remarkable book 'Cinema I The Movement-Image' he seeks for the classification of images and signs by determining the elements of movement-image. The classification by Deleuze will be discussed in detail below, since this is one of the most extensive and systematic study to comprehend the phenomenon of cinema in a more philosophical way.

He starts with examining the pieces of *movement* by the help of the ideas of French philosopher Henri Bergson from his book *Matter and Memory* in 1896. In short, Deleuze reaches three levels of movement:

 '*1- the sets, which are defined by distinct parts;*

2- the movement of translation which is established between these parts and modifies their respective positions;

3- the duration or the whole, a spiritual which constantly changes according to its own relations.' (Deleuze, 1986, 11)

He explains these three levels with two features; one happens between objects or parts, while the other expresses the duration or the whole (1986). To clarify these levels of movement, the first level, which describes the sets and closed systems, consists of *immobile sections* and we can describe these sets as the smallest parts of the movement. Deleuze also uses the terms *'frame, set or closed systems'* to define the first level. The second level, which is established between these sections and relates the objects and the sets with the whole, is described as *'shot and movement'*. The third and last level describes the whole and aggregation of sets and movement, and at this point *montage* comes into play to constitute a meaningful whole (Deleuze, 1986).

2.2.3.1. The Frame, the Shot and the Montage

Deleuze (1986, 12) defines the first level as *a relatively closed system* that consists of the elements presented within the image framing. According to him, the frame always defines something geometrical or physical and he adds that in any case, framing is the mathematical limitation and also dynamically depending on the concept. (Deleuze, 1986, 13). In this respect, the first level of movement-image – *framing* – is highly related to the physical space. It frames, defines and limits the spatial aspects of the image, and gives us a sort of geometrical form. The image which is selected within the frame resembles with photographic image. I.e., the first level of the movement has many common characteristics with photography.

Within the frame, the elements of the image can be either brought together or separated and the relation between the elements determines by the frame (Deleuze, 1986, 13). Framing basically means to define the elements within the frame, the hierarchy of the elements and relation between the elements. While defining those, director – or rather cinematographer – uses methods like depth of field or using different angles. All these methods address a kind of point of view. The subjectivity of the cinematographic image takes place here firstly, because the frame defines a way of seeing of somebody else. What cinematographer had chosen from the infinite number of options within the angles or the focus points is seen within the frame.

Deleuze describes the second level of movement by Bergson, with the words; *'The shot is the movement-image. In so far it relates movement to a whole which changes, it is the mobile section of a duration.'* (Deleuze, 1986, 22) In other words, shot presents the time and movement, and that idea is what make shot the smallest part of the cinema. While the frame defines a way of seeing, now the shot designates and presents the movement within this frame. The power of cinema basically takes place at this point. If we return to the very beginning of this chapter, the first cinema works of Lumiere brothers, are the

purest examples of the term of shot. It expresses the smallest moving parts of the whole and in this respect the shot is the base of the narration. In addition, according to Deleuze (1986, 23), the shot which produces the mobile section of movements, does not only express the duration of the whole, but it puts bodies, parts, aspects, dimensions, distances and the respective positions of the bodies. At first, the frame used to arrange the sets and sub-sets, frame and sub-frames, foreground and background and the relations between them, now the shot determines the movement between and within these elements, and the relation between the frame and out-of-field, and as a consequence it becomes a tool of relating them. In other words, the shot does not only express the movements of the object within the frame but it also determines the relation between the inside and outside with the movements of the camera.

We observe the breakthrough of the cinema by the help of the concept of shot which defines the movement-image or motion pictures or moving images. The shot provided new relations between time, space and 'things' to be redefined. This gives the power to get rid of the boundaries and frames, background and foreground and the disadvantages of fixed images. In the earlier times of cinema, before it discovers the fiction and action, the shot used to submit us the image of pure movement, or with the term of Deleuze, *the movement-image*.

With the discovery of montage, cinema had faced with the new potentials to manipulate the time and space, but on the other hand, it creates a contradiction whether the cinema is a confidential visual narrative technic, or it creates an imaginary world. Adapting the idea of Sontag (2008, 69) about photography to cinema, *'it is cloud of fantasy and pellet of information',* to define the contradictions of cinema as in photography. Montage bears on the *movement-image* to constitutes the whole with them (Deleuze, 1986, 29).

The montage defines the whole, the idea. How do we describe the whole? Deleuze integrates different theoretical approaches or 'schools' to explain the

concept of montage under four categories; *'the organic trend of the American school; the dialectical trend of the Soviet school; the quantitative trend of pre-war French school; and the intensive trend of the German Expressionist school.'* In each case, in spite of the differences in the styles of directors, they have a sort of common themes, problems and preoccupations, a consensus, to found new concepts of schools of montage (Deleuze, 1986, 30).

Those schools of montage underlie the modern cinema and its sub-categories or varieties. But, regarding the use of cinema as a tool to narrate the space in an objective way, one of these schools stands out, the dialectical trend of Soviet school. The Soviet school of montage has two important directors; Sergei Eisenstein and Dziga Vertov (Deleuze, 1986, 33). Vertov's film, …….., is one of the case studies chosen for this study, therefore his approach to the dialectic montage is worth mentioning with the words of Deleuze:

> *'In Vertov the interval of movement is perception, the glance, the eye. But the eye is not the too-immobile human eye; it is the eye of the camera, that is an eye in matter, a perception such as it is in manner, as it extends from a point where action begins to the limit of the reaction, as it fills the interval between the two, crossing the universe and beating in time to its intervals.'* (Deleuze, 1986, 40)

Vertov argues that cinema should stay completely objective and it should be separated from other arts like drama and it should be instant as the life itself (Özön, 2014).

2.2.3.2. The Three Varieties of Movement-Image

Deleuze mentions that movement-images are divided into three categories: *perception-images, action-images and affection-images* (1986, 68).

Perception-image is the perceived image, the image which frames the image reflected by a living image (Deleuze, 1986, 62). It can be interpreted as a so called-frame, which relates to space and the things within the space. From this

point of view, '*the thing and the perception of the thing are one and the same thing, one and the same image, it is related to all the other things and images*' (Deleuze, 1986, 63). The term "space" can be added to this definition as follows: The space and the perception of the space are one, the space as whole and the parts of the space relates to other parts and the whole. If we reconsider the formulation of Huxley about seeing, perceiving is the process of considering and giving the meaning to what we see on a higher level of cognition mentally (Lester, 2011). In other words, perceiving is a conscious act based on our five senses and the background information – or our memory. From this point of view, it is quite reasonable why Deleuze treats the perception-image as the first variety of movement-image. Perception-image is the act of perceiving the movement without having an impact on it, or interacting with it, but rather staying as an observer. Deleuze adds that perception-image is predicated on elimination, selection or framing and for this reason, he defines it as first material movement of subjectivity (Deleuze, 1986, 63,65). This description will help us to understand the idea of Vertov which will be discussed below; the subjectivity of the matter, the conscious of the matter, the eye of the matter, the dialectics of matter and eye; *kino-eye*.

When the reaction ceases to immediate and becomes possible action, the next variety of movement-image comes into picture, that is, the action-image. Action relates the movement to 'act' while perception relates movement with matter (Deleuze, 1986, 65). In other words, action-image can be basically defined as the phase in which interaction between the parts of the image – space – and the observer – camera – becomes possible. Act has an impact on the movement and this causes a mutual interaction.

While Deleuze interprets perception-image as *received movement*, and action-image as *executed movement*, there is a third variety between those two, which is *affection-image* (Deleuze, 1986, 66). He uses *the face* as a metaphor to define this concept more clearly because according to him, face is the tool of expression of emotions.

The main idea of Deleuze is that movement-image consists of these three; perception-image, action-image and affection-image. This formulation is quite strong to explain the cinema as whole, since it includes the creative, fictional and manipulative features of cinema. Like in the debates whether photography is a sort of art with the power of beautification or it is mirror-image of reality, cinema stands within the scale between the documentation power of it and the expressive approach to it. At this point, the question "how to approach to cinema, or the video image, as a tool to understand the movements or rhythms in the urban space" can be asked. Usual narrative documentation technics of cinema is not enough age as a tool of analyzing urban space and its rhythms. Screening and viewing such usual narrative documentaries are not much different from reading scientific articles or using different mapping technics since they both resort scientific methods and technics to narrate the main idea. The theoretical position of this new analysis method should position in between those two – it should be documentary and artistic at the same time – to make it more understandable by non-professionals. To reach that point, I would like to focus on the perception-image concept of Deleuze since it concerns with perceptual parameters of movement-image with a sort of material-related base when it is compared with other two varieties which are more related with emotional and fictional aspects. To suggest the video image as a tool for analyzing the rhythms in the urban space, those aspects should be considered in detail.

2.2.3.3. Kino-Eye: The Idea of Dziga Vertov

> *'I'm an eye. A mechanical eye. I, the machine, show you a world the way only I can see it. I free myself for today and forever from human immobility. I'm in constant movement. I approach and pull away from objects.*

> *… Freed from the boundaries of time and space, I co-ordinate any and all points of the universe, wherever I want them to be. My way leads*

towards the creation of a fresh perception of the world. Thus I explain in a new way the world unknown to you.' (Vertov, 1923 cited in Berger, 1977, 17)

David Abelevich Kaufman, known as Dziga Vertov, famous Soviet avant-garde director, is one of the most important key figures who argues objectivity in the cinema. Deleuze examines Vertov in the dialectical approach of Soviet school, but argues that the idea of Vertov about dialectics is different from Eisenstein. *'Vertov's originality is the radical affirmation of a dialectic of matter in itself'* (Deleuze, 1986, 39). The idea of Vertov was shaped around the materialist thought; he developed the concept of seeing in matter, and created the term *kino-eye* (or cine-eye), *the mechanical eye* and *the eye in the matter.* With his own words, *'First thought of the kino-eye as a world perceived without a mask, as a world of naked truth.'* (Vertov, 1984).

Vertov seeks an objective way of expressing himself via cinema. Deleuze (1986, 81) explains that he aims to carry the perception into things, to put it into matter, and this forms the essence of the idea of Vertov about montage and this is the definition of objectivity – to see without boundaries or distances. This idea might seem rather intangible at first, but the instruments and methods of Vertov embody his ideas. From the practice to the theory, the writings of Dziga Vertov aim to reach a tangible point to express himself. That is why the movie 'The Man with Movie Camera', the city symphony directed by Vertov, can be described as the manifestation of the Kinoks who can be basically defined as *the operators of kino-eye.* There is a neologism in this term coined by Vertov; it involves the words kino (cinema or film) and oko (poetic meaning of eye) and at the same time the –ok ending can be translated as a traditional suffix used in Russian to indicate a male, human agent (cited from the footnote of the translator, Vertov, 1984).

This movie will be examined as the case study of this thesis. It should be noted that, such experimental cinema works might seem boring, hard to watch and

hard to comprehend at first glance. However, for the professionals dealing with urban space, feeling the spatial aspects and the rhythms of these products is quite significant to discover new methods to analyze and interpret the urban space and its rhythms.

As Berger (1977) points out, perspective makes the eye the center of the visible world but *the camera – more particularly the movie camera – demonstrated that there was no center* (Berger, 1977, 18). At first, photography put away the uniqueness of *eye* and *things*, later movie camera offered the possibility of being everywhere – in the eye of a horse, to look below a moving train, etc. This is what Deleuze calls *to see without boundaries and distances*, freeing the eye from the limitations of human and putting it into the matter, in the camera.

However, as Deleuze propounds, '*the cinema is not simply the camera: it is montage*' (1986, 80). To develop an understandable whole, camera is not the main aspect, but the montage is. Vertov (1984, 7) explains the requirement of montage as '*the geometrical extract of movement through an exciting succession of images*'. Montage is the determination of the whole. To extract the geometrical essence of the movement, Vertov digs into the intervals and the phrases. *The interval* is the element of the art of movement but not movement itself, and *the phase* is organizing the elements of movement and its intervals (Vertov, 1984). Accordingly, he proposes that *kinochevsto is the art of organizing the necessary movements of objects in space as a rhythmical artistic whole* (Vertov, 1984, 8). Vertov uses the term of *kinochevsto* to attribute intangibility to the cinema, by using the suffix '*chestvo*' which indicates an abstract quality, so *kinochevsto* can be described as the quality of the cinema-eye (cited from the footnote of the translator, Vertov, 1984). In other words, cinema is the art of arranging and establishing relationships between and within the intervals which draw the movement to a kinetic resolution. By doing this, he aims to reach the *film-object* and he defines it as *a finished etude of absolute vision, 'the montage I see'*, or rather to define it as

the life itself – capturing the life with kino-eye (Vertov, 1984, 42). The concept of film-object is the main idea of the cinema of Vertov, he chased for telling the absolute truth via cinema with an experimental visual language. This is the revolution of Vertov; to use cinema as a scientific and an artistic tool at the same time.

> *'We are cleansing kinochestvo of foreign matter – music, literature, and theater; we seek our own rhythm, one lifted from nowhere else, and we find it in the movements of things'* (Vertov, 1984, 7).

The above quote explains why the conceptualization of Vertov is chosen as a basis for this study. Kinochevsto – cinema with the abstract visual language to express the geometry of movement – should be understood so that it can be used for analyzing the rhythms in space. He aimed to free the cinema from all unreliable tools like music, literature, scenario and actors/actresses and to carry it to the point of *the art of inventing movements of things in space* (Vertov, 1984, 9). He redefines the objectivity within cinema and the visual language used by him helps to discuss the urban space, its parts and its rhythms in a certain intangibility level.

Consequently, this approach has advantages and disadvantages at the same time. The most remarkable advantage can be regarded as it is free of the narrative language and technical terms. It provides the opportunity of seeing the unseen, thinking the unthought, in other words, a new way of seeing and thinking. However, the risk of not being understood should not be disregarded because of the experimental visual language used in it. While using moving-image as a means to analyze the rhyhms in the urban, to prevent this risk, the intangibility should be limited to a certain level as discussed above.

2.2.3.4. Narrating the Urban Space Through Cinema

In the history of modernity, cinema is one of the biggest invention and innovation, which led to a strong breakpoint of seeing and perceiving the

world. It did not only define a new way of seeing, but also helped to understand and interpret the environment around us. The power of cinema comes from this; it redefined the relation between human and the surrounding by reproducing the time and space and manipulating it.

However, likewise photography, cinema has two faces: One is the fiction which is a way of story-telling – as in the literature –, and the other face aims to tell and express the truth. The cinema of the 21st century falls into the first face, because almost all works of cinema tell us a story based on a scenario with the help of actors and actresses and expensive productions. On the other hand, the documentaries of the 21st century are in the second, because they aim to express the truth, but they still use some kind of narration techniques, scenarios and animations. These documentaries cannot break off their link with such narration techniques. The approach of fictional cinema and documentaries is not sufficient to apply moving-image as a new tool of analyzing urban space and its rhythms.

Therefore, understanding the revolution of Vertov is very important to produce a new way of examining the city. His approach is not only valid for discussing spatial aspects of the city, but also helpful to understand the urban phenomena as a whole. He aims to reach the level of film-object by decoding the life as it is and placing the economic structure of the society at the center of attention (Vertov, 1984, 66). That means his ideas and methods can be used to specify the elements of the urban space and to redefine the relationship between and within these elements. Kino-eye defines the observer – kinok – in the city – the eye in the matter – or the *flâneur* of Benjamin or *rhythmanalyst* of Lefebvre. All these profiles have a sort of common ground; to analyze everyday life of the modern city. Vertov uses movie camera as a tool, as an instrument to do that. This slogan summarizes his idea about cinema; *'Down with the staging of everyday life! Film us as we are.'* (Vertov, 1984) and this defines the revolution of Vertov on cinema in terms of urban space and urban phenomena as whole.

CHAPTER 3

ANALYZING THE RHYTHMS IN THE URBAN SPACE

This chapter aims at discussing the following questions: What is rhythm? How do the rhythms *of* and *in* the urban space occur? Are those rhythms observable and measurable? Is it possible to capture, record and transpose those rhythms with a sort of visual language? In addition to these questions, the of regarding the rhythms in the urban space in terms of analyzing urban space will be sought.

3.1. Description of Rhythm

The concept of *rhythm* belongs to many disciplines, ranging from art to science, from philosophy to history. The dictionary meaning of rhythm is *'regular repeated pattern of movement or sound'* (Oxford Dictionary, 2017).

Comprehensive and in-depth studies on this concept are rather few. Henri Lefebvre elaborated rhythms comprehensively in his 'incomplete' book *Rhythmanalysis* (1992) to make it a part of knowledge. According to Lefebvre, it is not possible to make a 'simple and basic definition' of rhythm. Instead, he creates a sort of concept and opposition cloud including, *repetition and difference, mechanical and organic, cyclical and linear, quantitative and qualitative (...)* (Lefebvre, 2007, 9). He uses these concepts to identify the characteristics and structure of rhythms regarding time and space.

Lefebvre (2007, 6) starts the conceptualization of rhythm with a criticism: *'We easily confuse rhythm with movement, speed, a sequence of movements or objects.'*. From this point of view, he puts forward the terms of beats and cycles – or repetitions – and reaches the terms *cyclical* (Figure 3.1) and *linear repetition*s (Figure 3.2). Lefebvre (2007, 8) explains that, cyclical repetition originates in the

cosmic, in the nature (days, seasons, years etc.); and linear repetition comes from social practices, i.e. from human activity. Consequently, he defines a dialectical relationship between linear and cyclical repetition as follows: *'Time and space, the cyclical and the linear, exert a reciprocal action; they measure themselves against one another; each one makes itself and is made a measuring-measure.'* (Lefebvre, 2007, 8).

Figure 3.1: Process of cyclical repetition, drawn by the author with respect to Lefebvre (2007)

Figure 3.2: Linear repetition, drawn by the author with respect to Lefebvre (2007)

In this dialectical relationship, Lefebvre (2007, 8) adds one missing aspect to define rhythm; *measure*. When there is rhythm, there is always measure. There is no such thing as unmeasurable rhythm, and without measuring them, rhythms cannot be easily determined. But how can rhythms be measured, with a quantitative or qualitative method, or both? Lefebvre argues that;

> *'Rhythm reunites quantitative aspects and elements, which mark time and distinguish moments in it – and qualitative aspects and elements, which link them together, found the unities and result from them.'* (Lefebvre, 2007, 9)

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In this respect, rhythms are both natural and rational (Lefebvre, 2007, 9). For example, time is measured with the movements of earth, moon and sun – in other words with cyclical cosmic repetitions. Modern human divided those repetitions into parts like years, months, days, minutes etc. Time is measured with cyclical repetitions but the way it is experienced is linear and ongoing. For instance, the conventional watches, even their form is circular and they measure the circular movements of earth, but the way we experience the time of those watches is with linear ticktacks (Figure 3.3 and Figure 3.4).

Figure 3.3: Cyclical movements of hour and minutes are determined by linear ticktacks, drawn by the author with respect to Lefebvre (2007)
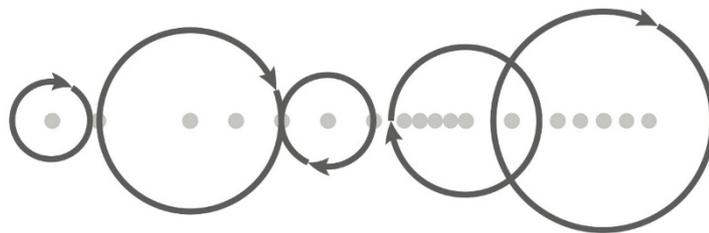
Figure 3.4: The complex relationship between cyclical and linear rhythms, drawn by the author with respect to Lefebvre (2007)

In addition, heartbeats can be used as a metaphor to expose that experience. From birth to death, the sign of the life has always been identified with a linear repetition; heartbeats. Our body shows the dialectical relationship between the cyclical and linear repetitions. It has linear repetitions like our organs have (heartbeat, etc.) and

cyclical repetitions like eating, excretion, sleeping[3] etc. This phenomenon is the main reason why Lefebvre chooses our body as a reference point of analyzing rhythms. A rhythm is slow or lively only in relation to other rhythms (Lefebvre, 2007, 10).

> *'Spontaneously, each of us has our preferences, references, frequencies; each must appreciate rhythms by referring them to oneself, one's heart or breathing, but also to one's hours of work, of rest, of waking and of sleep. The preferences measure themselves; the measure passes through a frequency. Precise techniques enable us to measure frequencies.'* (Lefebvre, 2007, p. 10).

What can be the reference while analyzing the rhythms in the urban space through visual media or moving-image? Again our body or cosmic time or mechanic repetitions?

In brief, according to Lefebvre, rhythms consist of cyclical and linear repetitions, and our body and its repetitive actions are references to analyze the rhythms. In this respect, to present the idea of *rhythmanalysis,* he uses the dialectical analysis method within the terms of *time-space-energy*: *'Everywhere where there is interaction between a place, a time and an expenditure of energy, there is rhythm.'* (Lefebvre, 2007, 15). Therefore, he constitutes a framework for the analyses with three concepts: '*(a) repetition (of movements, gestures, action, situations, differences), (b) interferences of linear processes and cyclical processes and (c) birth, growth, peak, then decide and end'* (Lefebvre, 2007, 15).

When we interrelate the themes/concepts of cinema by Deleuze (1986) with this framework by Lefebvre (2007), item '*a'* overlaps with frames – the smallest part of movement-image, if the concept of repetition is narrowed down to instants; item '*b'* associates with shot – sets, duration, process –; and item '*c'* is linked to montage –

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[3] This dialectical relationship and unity bring montage to mind. Deleuze defines montage as '*… the operation which bears on the movement-image to release the whole from them* (1986)'. In this respect, it would not be wrong to propose montage as it *reunites quantitative and qualitative aspects and elements*.

the whole which has a start and end (Table 3.1). Table 3.1 shows in what aspects their concepts converge to one another, however, this is not a perfect overlap. The aim of this categorization is to suggest a hybrid approach regarding rhythms in the urban space and their representation and narration via moving-image.

Table 3.1: Combination of the concepts of rhythmanalysis and cinema- derived by the author

	1st level	2nd level	3rd level
Rhythmanalysis	(a) repetition	(b) interferences of linear processes and cyclical processes	(c) birth, growth, peak, then decide and end
Cinema	frame	Shot	montage
Intersection	beats / instants	the relation between linear and cyclical processes / sets, duration, intervals	the life / the whole, montage

The above framework that is associated with the themes/concepts of cinema brings about the question whether, in the triad of time-space-energy, we can replace *energy* with *movement.* To be more precise, the concept of energy or expenditure of energy represents something intangible, something spiritual. Energy is hardly observable and measurable, but rather discernible. At this point, movement can be defined as the tangible version of energy. In other words, within the time-space, energy manifests itself with movement(s). The main emphasis of this study evolves around this idea: Rhythms in the urban space come into picture in the dialectical relationship of time-space-movement.

In order to define the relationship between the rhythms in the urban space and the rhythms of the *whole*, Lefebvre (2007) suggests three complementary concepts: *polyrhythmia, eurhythmia* and *arrhythmia*. *Polyrhythmia* means two or more rhythms which work together without conflict or dissonance; *eurhythmia* is the 'creative interaction' between two or more rhythms in harmony as in the state of health; and *arrhythmia* defines the conflict or dissonance between two or more rhythms. How can those concepts be illustrated within the urban space? For instance, an urban square has the *polyrhythmia* under normal and usual circumstances in the everyday routine, without dissonance and conflict between its elements. A street musician might be defined as an element caused the rhythms shift at the first glace; his/her influence might change the behaviors, movements and usage pattern of the people, or concentration on an unusual part of the square, or make a couple dance etc. This 'creative interaction' defines the *eurhythmia* of this square by putting together the different rhythms of different elements of urban space in harmony. When someone, who try to stop the music and to turn the square its usual state, shows up, then *arrhythmia* takes the space.

3.2. Elements of Urban Space and Their Rhythms

According to Lynch (1988), city consists of the image experience of the visual elements, and this creates a sort of society-image. Cullen (1964) uses three terms to understand the phenomenon of urban space; *serial vision, place* and *content*. Meanwhile, Alexander, Ishikawa and Silverstein (1977) look for the patterns of the space at different scales. In urban design and city planning literature, these studies are considered as the pioneering ones to understand the urban space. Among these principle texts of urban design, *serial vision* concept of Cullen (1964) comes to the forefront with regard to the relationship between space and movement. He aims to manipulate the elements of the urban space to develop a sense of movement throughout a journey on a path. In other words, serial vision defines the sense of movement between the consecutive places in towns. The concept of Cullen can be basically defined as a comprehensive approach to understand sense of the self-

moving in the urban space and perception of the movements in the structural elements of the urban space (Figure 3.5).
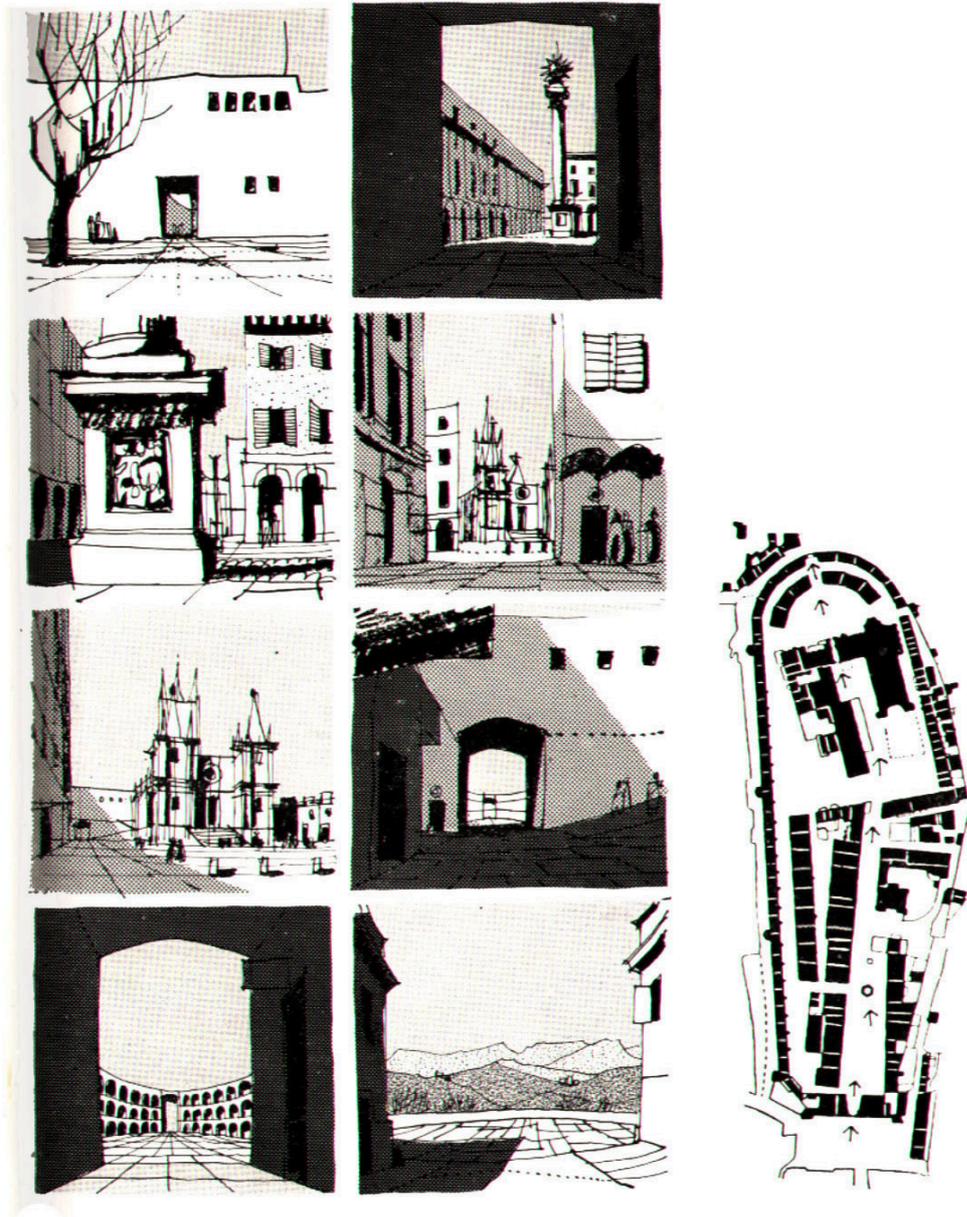
Figure 3.5: Serial vision (Cullen, 1964, 17)

However, to identify the rhythms *of* and *in* the urban space, additional concepts seem to be required. This study uses the concepts of *mobile* and *immobile*, and the *natural* and *unnatural*. The *relative* – which will be examined in the following – and *dialectical* relationship between those four is the key point to define a new *rhythmanalysis* approach via moving-images. As discussed above, Lefebvre (2007) identifies rhythms within the terms of linear and cyclical repetitions. The rhythms in/of social practices and perceived time originate from the linear repetitions, and this defines the unnatural elements of the urban space. On the other hand, natural elements refer to something from nature, like cosmic time (days, seasons and years) and biological time (sleeping, eating, etc.), in other words cyclical repetitions. In parallel to these elements, the mobility level of them should be considered to define the rhythmical relations and integrity of them. Therefore, those four terms categorized as elements of urban space to construct a rhythmanalytical reading on the urban space.

Table 3.2: The elements of urban space with regard to rhythm, derived by the author

Mobile	immobile
Natural	unnatural

First of all, these concepts should be explained in relation to urban space and spatial forms. What do natural and unnatural actually mean? For instance, let us examine the forest of Middle East Technical University Campus; most of the trees in the campus were planted by workers, students and academicians of the university within sixty years. Does this situation make this forest *less* natural because it is a *human-made* forest with an *external intervention?* The answer is yes and no at the same time. This forest should be defined as *relatively* unnatural because it has been created by human. At the same time, it is *relatively* natural because it has become

part of the environment and turned into an important habitat for many animal species.

Is it possible to define an urban spatial element as totally unnatural? A comparison between a *human-made* park and a car parking area shows that difference. They are both created with an *external intervention within the environment*, and therefore the car park cannot be strictly defined as unnatural, but it is *relatively* unnatural when it is compared to a greenery park.

The term "unnatural" does not refer the opposite of the nature, but it defines the elements which do not appear simultaneously within the environment. These examples show that there is a relative relationship between natural and unnatural elements within the urban space and this creates a transitive spectrum between them (Figure 3.6).

natural ◄||||||||► unnatural

Figure 3.6: The relationship between natural and unnatural elements of urban space, derived by the author

There is a similar relative relationship between the mobile and immobile elements of urban space:

> *'Overlooking the gardens, the differences between habitual rhythms blur; they seem to disappear into a sculptural immobility. Except, of course, the sun and the shadows, the well-lit and the gloomy corners, quite cursory contrasts. But look at those trees, those lawns and those groves. To your eyes they situate themselves in a permanence, in a spatial simultaneity, in a coexistence. But look harder and longer. This simultaneity, up to a certain point, is only apparent: a surface, a spectacle. Go deeper, dig beneath the surface, listen attentively instead of simply looking, of reflecting the effects of a mirror. You thus*

perceive that each plant, each tree, has its rhythm, made up of several:

the trees, the flowers, the seeds and fruits, each have their time.'

(Lefebvre, 2007, 31).

His words explain the relative relationship between the mobile and immobile. A tree might seem immobile, but if it is compared to a bird on it, the tree has its own time, its own rhythms. If we could observe[4] and record this tree for one year, we could determine that it is not totally immobile. Some sort of visual representation techniques like time-lapse enables us to observe such phenomena, which will be discussed later.

From this perspective, even buildings are not totally immobile, since they have their own time and rhythms. They are built on a certain place, people get to live in them, work or do other activities, the building gets old and decays, and then it gets repaired, cleaned and painted, and so on. A tree is relatively immobile to a person, a building is relatively immobile to a tree, etc. With humans' time and rhythm, other people, animals, machines – cars, trains etc. – or waves and clouds might seem mobile. However, with a more developed eye, the mechanical eye of Vertov (1984), we could determine and observe the rhythms of the *relatively* immobile elements within the urban space. Once again, this relative relationship between mobile and immobile can be visualized transitively on a spectrum (Figure 3.7).

mobile ◄|||||||||||► immobile

Figure 3.7: The relationship between mobile and immobile elements of urban space, derived by the author

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[4] With using a visual technique, we can observe a tree for a long period. Time-lapse is one of the most common technique to record long periods of time with a visual representation technique.

It should be noted that the concepts of mobile and immobile do not refer to 'the movements of things'. The terminology used in this study develop around the concept of rhythm. Therefore, the term mobile does not define the moving, such as immobile does not define the still. These concepts are used in terms of their rhythmical structures.

The borders between these four elements (natural, unnatural, mobile, and immobile) of urban space are rather blurry because of the relative relationship between them. Even so, such categorization helps understanding the elements, and consequently rhythms in the urban space. A distinct categorization is avoided so as to keep the idea at a certain intangibility level in the context of cinematic representation.
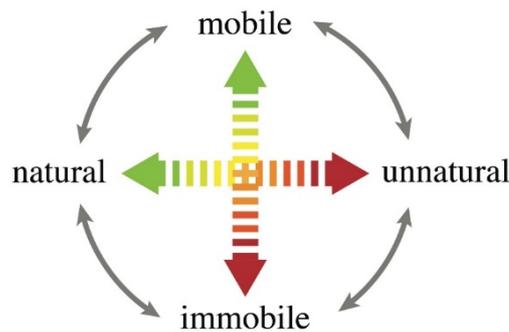
Figure 3.8: The relationship between mobile/immobile and natural/unnatural elements of urban space, derived by the author

Moving things in the urban environment can be categorized under the mobile elements such as people, animals, machines, etc., due to their highly rhythmical potentials:

- *People:* women, men, children, teenagers, adults, elders, disabled, etc. (The list can be extended.)
- *Animals:* Pets can be categorized as relatively unnatural because their behaviors, movements and rhythms are mostly related to human. On the

other hand, wild animals in the urban space like birds, rats or insects are relatively natural, because their behaviors, movements and rhythms are rather unpredictable compared to the pets.

- *Machines;* Bicycles, cars, buses, trucks, trains, etc.

In addition, most of these elements (except wild animals) can be categorized as relatively unnatural because they are *about* the human, *of* the human or under the command and in service *for* the human. In addition, clouds, a river or creek, waves of the sea or ocean should be categorized under the natural and mobile elements within the urban space.

Let us take a boulevard as an example with the mobile elements. There are all sorts of people walking on the sidewalk, public transportation buses and private cars on the street, animals and machines. Under ideal circumstances, everything and every element works together in harmony, people walk on the sidewalks, or walk across the street when the traffic light turns into green for them, all the vehicles move within the legal speed limits and stop when the traffic light turns into red for them etc. This practice, under usual conditions, represents *polyrhythmia*. Under more ideal circumstances like with better public transportation system, the traffic decreases and sidewalks gets wider for the people, and the usage of bicycle increases, the human activity on the sidewalks diversifies with street musicians or artists etc. Now, this practice represents *eurhythmia*. However, when a disaster shows up, like a car accident, *arrhythmia* takes the stage.

Let us now think about the relatively immobile elements *in* and *of* the urban space. At first glance, the elements which cannot move can be categorized as immobile, such as buildings, roads, bridges, squares and streets, etc. However, by a rhythmanalytical approach, they can be defined as relatively mobile when compared to each other. For instance, the pavement of a crowded road is more mobile compared to a building along that road. Similarly, natural elements of the urban space like trees or any other plants, lakes, or maybe even mountains have their own time and rhythms. In some cases, they change gradually in time, or with

an external intervention. At first glance, they seem still but if you look *deeper, harder* and *longer*, their rhythms can be observed.

As discussed, under normal and ideal circumstances, there is a polyrhythmic unity between natural and unnatural, mobile and immobile elements of the *urban space*. In this manner urban space can be basically defined as the polyrhythmic unity of its elements – natural and unnatural, mobile and immobile.

As the study focuses on the rhythms in the urban scene with regard to the *Rhythmanalyst* of Lefebvre, and the *Kinok* of Vertov, next section elaborates these two approaches in detail.

3.3. Rhythmanalyst and Kinok

> *"This world cannot be so beautiful*
> *without human eyes loving this world."*
> *(Yaşar Kemal, Fırat Suyu Kan Akıyor Baksana, 1997)*

According to Lynch (1988), people cannot be simply described as observers of this spectacle – urban, but they are rather part of it likewise the other elements. As Lefebvre (2007) argues, our body is part of the environment, and therefore we should think and percieve the space as an element of it. Lefebvre and Vertov both aim to perceive, comprehend and interpret the environment around them and to give a meaning to it, by using different instruments and tools.

Rhythmanalyst is a person who listens his/her own body and learns the rhythms of it in order to appreciate external rhythms, the body serves him/her as a metronome (Lefebvre, 2007, 19). This is the main reason why Lefebvre chooses the body and its rhythms as a reference to realize the external rhythms.

> *'The rhythmanalyst will not be obliged to jump from the inside to the outside of observed bodies; he should come to listen to them as a whole and unify them by taking his own rhythms as a reference: by integrating the outside with the inside and vice versa.'* (Lefebvre, 2007, 20).

Lefebvre (2007) adds that nothing is immobile for the rhythmanalyst, *'... he considers a stone, a wall, a trunk, he understands their slowness, heir interminable rhythm.'* He identifies the rhythmanalyst as an *empiricist,* since '*He thinks with his body, not in abstract, but in lived temporality* (Lefebvre, 2007, 21).' In other words, rhythmanalyst arrives the concrete through experience and in this manner, he has to professionalize himself to capture the external rhythms (Lefebvre, 2007, 22). The approach of rhythmanalyst to the urban space originates from rather a personal experience, as Lefebvre (2007) points out, *in lived temporality,* not *in abstract* meaning.

Lefebvre (2007, 36) argues that, *'No camera, no image or series of images can show these rhythms.'* In his opinion, the aim should not be using camera to 'show' the rhythms, but rather to use it as a supportive tool to express them. With a sufficient self-education, and the right tools, it may not be used as a positivist method but an empirical one. What do the right tools mean? A more developed body, mind and eye? A mechanical, electrical or digital device? A camera? At this point, the idea of Vertov on the developed eye, i.e. movie camera, takes place to suggest a interdisciplinary approach on the rhythms in the urban scene.

> *'We cannot improve the making of our eyes, but we can endlessly perfect the camera.'* (Vertov, 1984, 15).

Vertov wrote these words in the 1920s, when the cameras could only capture 16 frames per second. They were dependent on the stillness of a tripod or, to make them move, bulky rails and unstable vehicles were utilized; they would record only black and white without sound, etc. In 2017, scientists discovered a camera which can capture 5 trillion frames per second (Billing, 2017). In the 21st century, even regular personal cameras can reach 100 frames per second, as well as professional equipment like jimmy jibs, steady cams, etc. Moreover, with technological development of the drones, camera could get rid of the obstacles and started to move in literally three dimensionally within the space. Nowadays,

regular people can reach amateur versions of such equipment and they become cheaper, reachable and more user-friendly.

In the last 90 years, the technological development of camera has been impressive. Therefore, understanding the approach of Vertov gets more and more important because the developed eye is now more developed. This mechanical eye – kino-eye – presents more opportunities to professionals who deal with the urban space.

He defines the base of kino-eye as follows;

> *'The decoding of life as it is.*
>
> *Influence of facts upon workers' consciousness.*
>
> *Influence of facts, not acting, dance or verse.*
>
> *Relegation of so-called-art – to the periphery of consciousness.*
>
> *Placing of society's economic structure at the center of attention.'*
> (Vertov, 1984, 66).

In this respect, he defines the purpose of movie camera as *the exploration of the phenomena of live* (Vertov, 1984, 69). This purpose is not much different than Lefebvre's. Vertov and Lefebvre have quite similar aims, but their way to arrive this aim is different from each other, as they use different tools and instruments. *Exploration of the phenomena of life* is very significant in the context of revealing the relationship between rhythmanalyst and kinok.

Consequently, Vertov and kinoks aim to reach the *film-object*. He defines it as the *montage I see* (Vertov, 1984, 37). Film-object is the *'finished etude of absolute vision'* that originates from the experimentation of movie came in space and time (Vertov, 1984, 37). It establishes a meaningful whole by the help of montage

If someone films everything that he or she sees within the urban space, the result will most probably be a jumble, but if someone edits what has been filmed, the result will be clearer and more understandable (Vertov, 1984, 18). The power of montage comes from editing the instants and intervals to create a meaningful

whole. In Vertovian montage, kinoks observe the environment and events, he or she records what is seen and perceived, and edits it as a whole to produce *the film-object*. This is what Deleuze (1986) calls *objectivity*. In the hands of kinok, the mechanical eye – kino-eye – experiments the distention of time and dissection movement, by schematizing the processes of long durations which are inaccessible to the normal eye (Vertov, 1984, 19).

Thanks to the advancements in the technology of camera, what Vertov suggests as a technical approach (such as time-lapse or slow motion) became easier to use. Time-lapse can compress the time and provides long durations observable. Meanwhile, slow motion can stretch the time and helps to examine the rhythms of fast 'things'. So, why not to use such techniques to objectify the elements and rhythms that Lefebvre discussed as perceivable?

Two portraits, rhythmanalyst and kinok, might seem quite different from each other at first glance. However, as discussed above, they have a common ground, which is based on observing, interpreting and narrating the environment around us. They might suggest different methods with different equipment to support their idea, nevertheless, the focus of both of them is not much different from each other. The purpose of Vertov was to find a new approach to the art of cinema by *filming the life as it is* and to tell the truth to the proletariat, not the fantasy world of fictions, scenery and acting. This approach can be interpreted as the roots of modern documentaries, but his experimental style and revolutionary ideas are much more than this. He aimed to reach the absolute truth via camera.

On the other hand, rhythmanalyst uses his/her body as a tool, as a reference to analyze rhythms. However, as Vertov argues, our body, our eye is weak in the meaning of time. A person can observe the external in accordance to his or her own time. This means, it is most probable to miss most of the rhythms beyond his or her eyes. Lefebvre exemplified the rhythms of a tree, they are not easily observable with our eyes, but a mechanical eye can compress or stretch the time for us and make them observable. Or, it can slow down birds and provides us to

determine their rhythms. Within the urban space, a mechanical eye; camera makes the relatively dialectical relationship between its elements and their rhythms observable for us.

3.4. Capturing the Rhythms in the Urban Space

In this section, the potential and capacity of moving-images in terms of capturing and recording urban space and its rhythms will be discussed. The methodology of Vertov suggests the following division of labor:

1) kinok-observers,

2) kinok-cameramen,

3) kinok-constructors,

4) kinok-editors,

5) kinok-laboratory assistants (Vertov, 1984, 75).

Among them, *kinok-observer, kinok cameramen* and *kinok-editors* are the main interests of this study. Moreover, he lists the equipment that kinoks need;

1) quick means of transport,

2) more sensitive films,

3) small, lightweight, hand-held cameras,

4) lighting equipment that is equally lightweight,

5) a staff of lightning-fast reporters, 6) an army of kinok-obervers (Vertov, 1984, 74).

In the 21st century, the digital technology and recent developments enable to decrease these two lists. For instance, *kinok-laboratory assistants* are not needed anymore, because digital sensors took the stage from the chemical films so editing and finalizing the work are done by the computer programs. Now, very small action cameras can record very high definition images even with the very low light. Presently, such technological developments are easier to access and they provide

great opportunities for the kinoks of the 21st century. Being a cameraperson or film editor is not as difficult as it used to be. The cameras are more affordable and easier to use, the interface of film editing programs are much user-friendly, not only amateur programs but also very professional editing programs, etc.

At the first stage of his method, Vertov gives assignments to the kinok-observers as follows:

> *'a. Observation of a place*
>
> *b. Observation of a person or object in motion*
>
> *c. Observation of a theme irrespective of particular persons or places'*
> (Vertov, 1984, 70).

After the observation stage, filming what has been seen comes next, but editing stage starts while filming the environment, because *'The kinoks attribute a completely different significance to editing and regard it as the organization* of the visible world. They should distinguish among; editing during observation, editing after observation, editing during filming, editing after filming, gauging by sight, and the final editing to establish a complete work of art (Vertov, 1984, 72). This phasing of editing process on the production of a movie shows the Vertovian montage approach based on editing in every phase.

Vertov also suggests solutions for the unexpected conditions, for example if preliminary observation is not permitted *the first two steps drop away and the third or fifth step comes to the fore* (Vertov, 1984, 72). In any other circumstances, all the steps presented above are carried out and the editing is not interrupted, *beginning with the initial observation and ending with the finished film-object* (Vertov, 1984, 72). This general formulation reveals the idea of Vertov on montage. Observation takes primary stage because even while observing the urban space, kinoks should consider the relationship between instants, intervals and whole.

Is it possible to subtract rhythmanalytical approach from the methods of Vertov? Or how is it possible to make a rhythmanalytical preview on *kinochestvo*? The answer

stands in the manifest of kinoks; '... *we seek our own rhythm, one lifted from nowhere else, and we find it in the movements of things* (Vertov, 1984, 7). Let us reconsider dialectical relationship which causes rhythms of and in the urban space; time-space-movement. The approach of Vertov to cinema satisfies this theoretical analysis of the concept of rhythm. Also, the similarity between kinok-observer and rhythmanalyst is quite remarkable. Rhythmanalyst observes and spectates the environment around her or him, and listens the external rhythms with reference to her or his internal rhythms, in other words the rhythms of the body. Involving the idea and method of Vertov to this formulation, unseen will be seen, non-observable will be observable, with the changing the capacity of the body of rhythmanalyst by the help of camera. Vertov has seen the opportunity of how camera can develop the way we see and now, after the recent technological developments, this approach is more meaningful. Kinok-observer – rhythmanalyst – should observe and listen the urban space. By doing these, he or she should film what is seen, while and after observing. The last and the most important stage of this analyzing method is editing of these raw visual materials.

Neither Vertov was aware of the concept of rhythmanalysis, nor Lefebvre thought of using camera as a subsidiary tool for his method. The main argument of Lefebvre (2007) is that no camera can show these rhythms, they should be listened and perceived with a more empirical method. Combining these two approach should not be considered as a positivist and quantitative method. A combined method will be an empirical and qualitative one, since it is still based on observation. Rhythmanalytical reading on city symphonies gives an idea about this combined method.

The next chapter elaborates the *city symphonies*; some sort of documentaries which were produced in the 1920s, as the case of this study. The concept of rhythmanalysis in these movies will be discussed. Most probably, the creators of those movies were not aware of the concept of rhythm comprehensively, however, the results and final works of them give valuable opportunities to understand this concept. The concept of Lefebvre (2007) will be sought within them and that is the main reason why they have been chosen as a case study.

CHAPTER 4

CASE STUDY: A RHYTHMANALYTICAL

READING ON 'CITY SYMPHONIES'

In the post WWI period the world of art had witnessed the birth of an avant-garde documentary film trend named as 'City Symphonies'. Koren-Kuik defines the city symphony as a distinctive modernist film that attempts to capture the urban experience of American, European and Soviet cities in the 1920s (2013, 12). Tay Kalafatoğlu defines the aim of these productions as capturing the inner truth by narrating a poetic manipulation of mood, time and space (2016, 63). Mouat argues that city symphonies put forward three notions: 1) *the new metropolis*, 2) *the relationship between time, space and motion*, and 3) *the new cognitive interpretation of the world* explored by modernist artists (2013, 21). Marcus proposes that these films open up the modernist daily life by putting space and time relations in the center (2014, 89). In addition, Schwarzer makes the following definition to explain the relationship between city, cinema and modernity;

> '... the city itself, with its buildings and infrastructure of streets, transit, elevators, and moving walkways, can be understood as a kind of vision machine. The film genre known as the city symphony explores the power of this machine.' (2004, 243).

Consequently, city symphony films can be generally identified as avant-garde works of art that reveal fragmented experiences of modern urban life and space, by manipulating time and space which express a new mode of modernist subjectivity. However, they should not be categorized as neither totally artistic (subjective), nor analytic (objective). The position of these works of art stands between those two, which can be described as *modernist subjectivity*.

The dictionary meaning of symphony is *'an elaborate musical composition for full* (Oxford Dictionary, 2017). A symphony can be basically defined as complete work of art in rhythmic and harmonic unity. I would like to point out the similar rhythmic structure of the symphonic music and city symphonies. According to Marcus (2014, 90), these films have symphonic dimension which is structural and rhythmic. She mentions that the concept of rhythm was placed at the center of the writings about the cinema in the 1920s. This rhythmic approach is quite obvious in the narrative technique used in the city symphonies. Nevertheless, they do not only use the concept of rhythm as a visual narration and montage technique, but also explore the rhythms in the modern city and its everyday life. A great deal of the city symphony films was made in the age of silent movies and at the background they used symphonic music. However, as discussed above, the usage of music in city symphonies are rather different than the other examples of the silent cinema era. In a manner of speaking, they unite the modern city, cinema and music to express a complete work of art. At this point, it should be noted that the real sounds of the city would also contribute to the rhythmanalytical approach. Being aware of the significance of sounds in any form of recorded moving image, this study limits its scope to the moving images of the 1920s, where the sound aspect was not present.

The very first example of these movies is *Manhatta* produced by Charles Sheeler and Paul Strand in 1921. Following prominent films of this genre can be listed as *Etudes sur Paris* (Andre Sauvage, 1921), *Rien que les heures* (Alberto Cavalcanti, 1926), *Berlin: Symphony of a Great City* (Walter Rutttman, 1927), *The Man with Movie Camera* (Dziga Vertov, 1929) and *Rain* (Joris Iven, 1929) (Koren-Kuik, 2013, 12). Especially between the two world wars, dozens of short and long city symphony films with different themes and cities had been produced. Most of these movies discuss and reflect the conjuncture of their era and geography. For example, in *Manhatta*, Charles Sheeler and Paul Strand focus on the spatial dynamism of Manhattan and New York City by using the images of skyscraper constructions, panoramas of the city and machinery within the city, rather than the human activities. The idea of ever-changing and transforming urban space of the capitalist

city is used as a main theme of *Manhatta* by showing constructions as a mode of production. Besides these, the natural elements and relationship between unnatural and natural elements of New York take place in the secondary focus with the images of water and clouds. Likewise, in the film of Joris Ivens, *Rain*, made in Amsterdam, water is the main focus of the movie. As a city of water and canals, rain is used as a strong metaphor to define the relationship between water, human and city. In this city symphony, rain – as a natural phenomenon with its own rhythms – and water take the main stage to define these rhythmic relationships. As discussed above, the common aspect of city symphony films is the expression of the modern city, its elements and the relationship between these elements with a rhythmic method by taking strength from symphonic music.

Some examples like *Manhatta* and *Rain* take the modern city in a narrower context by using limited elements of urban space. Such city symphonies can be described as fragmented expression of the modern city. However, among dozens of city symphony films, two of them step forward as they elaborate the modern city and its elements as a whole: Walter Ruttmann's *Berlin: Symphony of a Great City* and Dziga Vertov's *The Man with Movie Camera.* These city symphonies are chosen as case studies because of their capability of expressing rhythms of/in the urban scene. They are significant not only due to their approach to the modern city as a visual phenomenon, but also their consideration of the city as a machine with rhythmic elements.

4.1. Methodology

The methodology assumed for the case study analysis is a qualitative one, as it will use the three levels explained in Table 3.1 in Chapter 3:

- The first level is the rhythmanalytical approach describing the instants – the frame of Deleuze (1986) and repetition of Lefebvre (2007). This is the level of the immobile and frozen in time and space; as in the photography. Therefore, it is simply touched on without a deliberate analysis.

- The second level refers to the intervals which define the relationship between linear and cyclical processes (Lefebvre, 2007). Deleuze (1986) describes the second level with the concept of shot as *mobile section of duration,* in other words, *movement-image*. In this study, the second level defines the intervals of time and the visual representation of pure movement within the urban space.

- The third level states the whole – *birth, growth, peak, then decide and end* by Lefebvre (2007). For Deleuze (1986), montage specifies the whole – the idea. In the context of rhythmanalytical reading of city symphony films, they will be examined as a whole to focus on the urban space and its rhythms.

After analyzing the films as a whole, the selected fragments/shots will be discussed to define how rhythms are examined in the films. The importance of these fragments – second level – comes from their capacity of expressing the relationship between time, space and movement, in other words rhythms. However, in the context of rhythmanalytical study of Lefebvre, the concept of rhythm originates from the collaboration of time, space and movement. Without representing movement and sense of time and space, the concept of rhythm blurs. That is the main reason why frames from the city symphonies are not examined within the rhythmanalytical reading on the city that they explored. Photography is always used as a tool for analysis in urban design, nevertheless this concept is not adequate for the analysis of rhythms. In the case study analysis, the aim is not to analyze the films themselves, but the modern urban space and its rhythms, which are represented in these films

with an avant-garde visual language. The general idea of the two films is capturing the everyday life of modern city, from the dawn to the night. There is no acting, set or fiction in these movies, therefore, their method can be defined as observational. An advertisement in 1927 uses this slogan to describe *Berlin: The Symphony of a Great City* as *'the film of six million actors and one hundred thousand buildings'* (Fox Europe in Film-Kurier, 10 July 1927, cited in Hake, 2008, 246). With an artistic interpretation, these documentaries reveal many clues about the society and the city of the era. It should be noted that while examining the rhythms in the urban scenes represented in the films, fragments are re-edited by the author to support the conceptual idea, and these re-editions are presented as videos with the CD in the appendix. It is suggested to read the text by viewing these videos.

4.1.1. Data for Analysis

While analyzing the rhythms in these two films, the main used data are the films themselves. Primarily, the aim of the case study is comprehending the film as a whole and explore how they approach to the rhythms in the city. Additionally, the experimental and avant-garde visual language that relates different parts and rhythms in the city and creates a meaningful whole is quite significant in terms of developing a new approach to the present day urban space by taking power from the approach of city symphonies. Other data on the city symphonies are articles and book chapters. There are plenty of writings and researches about city symphony films from very wide range of professions; from architecture, to urbanism and from art to cultural studies.

The approach and the language of city symphonies make them as a comprehensive source for various disciplines. Therefore, in this case study, the approach is to include these different fields to apply a multi-disciplinary perspective on the rhythms in the urban space. For this reasons, a qualitative method is used to analyze the rhythms in the city symphonies.

4.2. Berlin: The Symphony of a Great City

4.2.1. The City of Berlin in the 1920s

After the foundation of the Wilhelmine Empire in 1871, Berlin experienced significant growth in its population size, which was one million in the 1870s, two million during 1900, and 4 million by 1920. With this rapid development, especially in late 19th century, the built environment of Berlin had undergone major changes with industrial zones, traffic squares, shopping boulevards, train stations, residential districts, etc.

After the WWI and collapse of the Wilhelmine Empire, the Weimar Republic period started. The liberal atmosphere of this period caused significant improvement in art and architecture such as the Bauhaus movement. Hake (2008) points to the period between the stabilization of currency in 1924 and the world economic depression in 1929, in which the interest of critical, philosophical, literary, photographic, and filmic text to architecture and everyday life of modern city raised. In this respect, the city of Berlin can be defined as a laboratory for avant-garde movements like the Bauhaus.

The Weimar Berlin was the capital of the society after a big war, which was trying to stand up back. However, the class contradictions and conflicts remained unsolved which made the society quite sensitive and fragile. Within these conditions, this industrialized society used to embody many opportunities for the avant-garde artists of the early 20th century, and the built environment – in particular the city of Berlin – became a kind of laboratory for them. The city symphony of Walter Ruttmann, *Berlin: The Symphony of a Great City* emerged under these conditions.

4.2.2. 'Berlin: The Symphony of a Great City' by Walter Ruttmann

Walter Ruttmann (1887-1941), a film producer and director, who was born in Frankfurt and studied architecture, produced experimental videos and films. Within his filmography, *Berlin: Die Sinfonie der Großstadt* – Berlin: The Symphony of a

Great City (1927) in collaboration with Alberto Cavalcanti, can be considered as his masterpiece. Macdonald and Cousins (1998) point out that in *Berlin,* Ruttmann was impressed by the ideas of Dziga Vertov on cinema (cited in Tay Kalafatoğlu, 2016), and in this respect he reached a so-called *film-object* in the film. When approaches of Ruttmann and Vertov are examined together, it is seen that this interaction is reciprocal since in *The Man with Movie Camera,* Vertov also used similar montage and narrative technique with Ruttmann, which will be discussed in the following section.

In *Berlin: The Symphony of a Great City*, the general idea and method of Ruttmann is based on the Soviet dialectical montage, because he frequently draws upon contradictions between different elements of the city, which have been discussed in the previous chapter. This dialectical montage approach for the city of Berlin, its elements and rhythms establishes a meaningful whole by using a visual narrative of the city's daily life. For instance, in lunch time, the serial images of workers, carriage horses, bourgeois and a lion in the zoo, while they all are eating, display a strong image of class division in the city (Figure 4.1, Video 1). Such narrative technique allows the perception of the parts of the city as a whole in a rhythmical integrity. As far as expressing urban scene and its rhythms are concerned, the film of *Berlin* is the most comprehensive and successful example of city symphonies. Taking the modern city and its everyday life as a whole and the visual language of the film strengthen its significant in the city symphonies of 1920s.

Figure 4.1: Workers, Carriage Horses, Bourgeois, and Lion in the zoo all having their lunch, shots chosen and reassembled by the author

4.2.2.1. The Whole and the Montage

Ruttmann, the director, elaborates the everyday life of Berlin under five main chapters in the film. He divides the day into periods, and determines these chapters through the time, starting from early in the morning and late at night. Some chapters, and accordingly the temporality and spatiality used in these chapters are important in terms of rhythms in the city. The opening sequence is not be included under these five chapters. Ruttmann establishes the relationship between the rural and the city, natural and unnatural throughout a linear train journey. *Berlin* starts with waves on the surface of water, which later turn into abstract images. Abstracted graphics of wheels of locomotive and closing railway barriers are hidden on the second layer of these mechanical waves. Following this, the moving-images of opening and closing railway barriers, locomotive, train and its parts come to the stage. This opening sequence is significant in terms of establishing a relationship between the rhythms of natural and unnatural; and such abstraction technique visualizes these rhythms and relationship between them (Figure 4.2, Video 2). In a manner of speaking, the natural and unnatural, the machine and the nature come together in common rhythms.
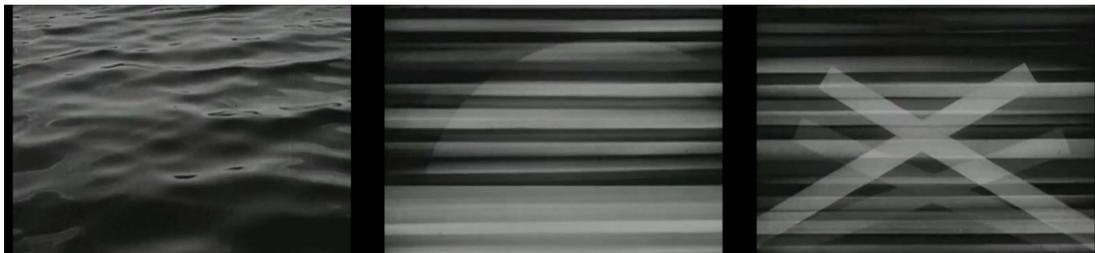
Figure 4.2: Abstraction in the opening sequence, waves turning into abstract images, shots chosen and reassembled by the author

After that, the audience starts a linear journey from rural to urban with the views of forests, fields, villages, low density neighborhoods, industrial zones, infrastructure of the railways, residential districts under construction, increasing density of urban fabric, and this sequence finishes as the train enters into the station. This train

journey constitutes a linear relationship between rural and urban. This linear relationship could be interpreted as a metaphor of historical progress of modern city, i.e. a visual representation of birth of the modern. Ruttmann establishes a sense of movement with the help of the linear repetitions of electricity pylons, which lead to a sort of rhythm to occur. Using such rhythmic and linear journey from rural to urban in the introduction sequence converges the emerging of the modern city.

After this dynamic, fast and rhythmic journey, Ruttmann introduces the city of Berlin with its panoramic view, captured from a higher viewpoint. This transition sequence between the intro and the first chapter shows slowed rhythms of the sleeping Berlin.

Chapter I

The first chapter of the film starts with the image of a clock tower, which shows 5:00 a.m., and later, the empty streets and squares of Berlin with using detailed images of infrastructure, architecture and industry of the city. Up until this point, Ruttmann mostly presents the immobile elements of the urban environment, the rhythms of which are not observable. The only mobile elements are a running stream, a blowing sheet of paper, a walking cat etc. In other words, within such 'empty' and 'sleeping' urban scene, natural elements determine the rhythms. Besides these elements, the moving-images of a group of people (probably returning from a party), policemen, a man hanging a banner, etc. are the parts of this rhythm. In this respect, a policeman walking on the sidewalk is not much different than a walking cat in terms of rhythms from the perspective of this study.

Later, the rhythms of the city gradually awaken with the opening of the doors of the locomotive and tram garages, the doors of the workers' homes, etc. Ruttmann shows the linear movements of the workers, trains and trams, which lead to a significant change in the rhythm of Berlin. The gates of the factories open, the mass of workers start walking to these factories, and finally with the gathering a worker's hand and a crank together, machines start to work. With the movements of the machines, the city awakens and reaches its rhythms that consists of linear and radial repetitions,

and horizontal and vertical movements. By reaching this level, the first chapter of *Berlin* ends.

In this chapter, Ruttmann highlights the industrial production with the moving-images of working class and machines and the relationship between them. Therefore, the element that determines the rhythms of the urban scene are workers and machines. Also this chapter can be interpreted as the visualization of the rapid production mode of an industrialized society that constitutes the base of the rhythms in the urban scene.

Chapter II

The second chapter starts with the moving-images of opening blinds of the windows; workers cleaning the houses and streets; students going to school, postmen beginning to work, etc. As the clock tower shows 8:00 a.m., shops open. In this section, with white collars and bourgeois going to work, a different transport mode shows up; two-storey buses and private cars. Meanwhile, the railway and metro system of the city still have a significant role in public transportation. As in the first chapter, the linear movements of the mass of white collar workers are particularly important in determining the rhythms of the city. However, the most remarkable difference is the 'tools' that they use.

In the second chapter, the factories are replaced with office towers, elevators show up, the typewriters, telephones and call centers are shown instead of gears and cranks of the factory machines. Linear and radial repetitions, as well as horizontal and vertical movements repeat in this chapter, too. The main difference between the first and second chapter is that, different social classes are shown with their differentiated rhythms. Ruttmann determines this differentiation and express it in a visual language. Not only in the context of rhythms of these groups, but also spatial usage and the movements within the urban scene of them are taken with a different visual language.

Chapter III

The third chapter of *Berlin* starts with a journey from a metro going through a tunnel, and Ruttmann uses shots from different angels and details of metro constructions. During the third chapter, different transportation modes such as trams, buses, carriages, private cars, bicycles and pedestrians take place. The moving-images from underground, ground and elevated transportation modes represent the multi-layered structure of urban transportation system, and accordingly the multi-layered structure of movements of elements. Homogeneity and multi-layered structure of the society is the secondary theme of this chapter.

Ruttmann frequently uses the moving-images of different classes, social and ethnic groups, aristocracy, military, religious men by mostly focusing on the single characters within the crowds. The rhythms of the society can be perceived with reference to these characters, from their movements or stabilities. He also uses some particular events which express the variations of the rhythms of everyday life such as a wedding or a funeral. Also, a fight between two men, or a leader of workers being taken by a policeman in the workers' rally can be defined as example of arising arrhythmia within the society. And lastly, a third theme of this chapter can be defined as the advancements in transportation as it shows the moving-images of intercity railway, aviation, etc.

From the standpoint of this study, the significance of the third chapter comes from its focus on the relationship between the rhythms of different layers of mobile and immobile elements of urban space. Trains passing between, under and through the buildings, the linear and radial movements of private cars, carriages, pedestrians, trams and buses within the urban scene express the daily rhythms of Berlin. In addition to these, a complete and artful montage helps to perceive the multi-layered structure of the urban scene and the diversity in the society. Despite some incidents which create arrhythmia, it is seen that the city is in a polyrhythmic unity.

Chapter IV

When it is 12 at noon, the rhythms of Berlin get slower and elements of the city start the lunch break. The blue and white collar workers, bourgeois and aristocracy, carriage horses, animals at the zoo have their lunch. Following this, with the relaxing effect of water element within the city, nap time for human and animals starts. Following this break, with the gradual acceleration of the rhythms in the urban scene, it reaches a dizzying level. The experimental visual language, which combine the moving-images of the weather getting worse, dynamic and chaotic shots from the shop windows, a roller coaster, suicide of a woman, etc. represents the arrhythmia within the elements of urban space. In this experiment, Ruttmann digresses the objective realism and converges the expressionist approach by manipulating and using the acting in the scene of the woman's suicide. It is possible to claim that this suicide scene stands out in the whole of the film. According to Hake (2008), this *staged melodramatic scene allows for a rare acknowledgement of the shock of modernity and the violence of modernization.* Following this scene, with reusing of the moving-images of water element, rain, the city calms down and turns back to its own polyrhythmia.

Later on this chapter, the work in the factories and offices ends, white and blue collar workers go out, and the gates of the factories and office buildings close. Following this, other kind of gates open; and sport, leisure and entertainment activities start. The fourth chapter ends with these activities.

This chapter could have been divided into two with the end of work, but Ruttmann decided to embrace these activities together. In this chapter, Ruttmann mostly focuses on the rhythms, which emerge within social activities, rather than those in the urban scene.

Chapter V

It gets dark and Chapter five starts with the city lights. In this chapter, the rhythms of the city gain a different dimension. Nightlife entertainment activities like cinemas, theaters, concerts, night clubs, etc. together with nighttime indoor sports activities

like hockey, ice-skate, cycling race, boxing, etc. represent the rhythms of the city. The dizzying rhythms of Berlin nightlife takes the primary place while the spatial dimension becomes secondary by narrowing down it to indoor spaces. Montage integrates all these parts and elements of Berlin in the context of time, space and movement, and helps the visual representation of the urban rhythms and relationship between them. Schwarzer (2004) summarizes this as follows; *'Berlin: The Symphony of a Great City mechanizes the city, its architecture and society. Ruttmann makes us see the coordination of the urban life, how its disparate parts work together.'* The power of this film comes from the method of visualizing the everyday life, rhythms and elements of the urban space as a whole in harmony.

4.2.2.2. Classification of the Shots with regard to the Rhythms in the Urban Scene

As discussed in previous sections, *shots* are the smallest parts to designate movements within the space. Therefore, to comprehend the rhythms of urban space and the way how Ruttmann portrays them, selected fragments and shots of *Berlin* will be examined by using rhythmanalytical approach of Lefebvre. Through the chronological progress of the film of *Berlin,* this study classifies the shots under seven categories:

1. rhythms of a sleeping city
2. rhythms of human beings
3. rhythms of commercial activities
4. rhythms of different transportation modes
5. rhythms on city's structural layers
6. rhythms of/by nature
7. rhythms of night

The rhythmanalytical examination of the shots will help figuring out the rhythms in time, space and movement. In spite of the risk of subjectivity, such empirical approach to these fragments aims to propose a new way of looking to the modern urban space of the 1920s.

1. Rhythms of a Sleeping City

In the first chapter of the film, before the city wakes up, Ruttmann uses the moving-images of empty streets of Berlin. However, to give a sense of movement and rhythm, he focuses on a flying paper with the effect of wind, a policeman and his dog walking on the sidewalk, and a cat walking on the sidewalk, a group of people (probably going home after a party) turning the corner of a building, etc. These shots identify the rhythms of the urban space in the early morning. They can be seen as relatively immobile and tranquil sections in the urban scene, which are determined by the environment – by both natural and built (Figure 4.3, Video 3). For instance, while in the shot of the flying paper, the rhythm of the urban scene is determined by a natural element – wind; on the other hand, the movement of the people – accordingly the rhythm of urban scene – is narrowed down by an element of built-environment – a building.

Figure 4.3 Rhythms of a sleeping city; the blowing paper, the policeman and his dog, the cat walking, people turning from a party, shots chosen and reassembled by the author

2. Rhythms of human beings

In the first and second chapters of *Berlin* the most important element – human – of urban space and their rhythms takes place. In these selected shots, human is the determining factor of rhythms of urban scene. Not only their movements, but also the way they use the space and establish the relations such as private & public and semi-private & public gain importance. Especially in the context of variation of the usage of urban space by different groups is well-handled through visual representation approach of Ruttmann. By reducing, this variation can be categorized as differentiated architecture, transportation modes and tools – machines. For example, blue and white collars have both similar movements within the urban space which reveals the rhythms generating by linear repetitions of walking men and women. However, interaction patterns of these groups with urban space and its other elements are rather different from each other. Ruttmann brings those differences together in the big picture of film of *Berlin* with a skillfully used montage (Figure 4.4, Video 4).

Figure 4.4: Blue Collar Workers (line in the above) and White Collar Workers (Line in the below) in the Urban Space, shots chosen and reassembled by the author

3. Rhythms of commercial activities

In addition to all these, the second category of moving-images to represent the awakening of the city is the opening of windows, blinds, showcases and the doors of the shops. These shots are significant by establishing the relationship between private & public and semi-private & public. Ruttmann again uses montage skillfully to put forth to signify the contribution of these relationships to the rhythms of the city and how it accelerates them (Figure 4.5, Video 5). In these shots, opening of the commercial units contribute the rhythms of urban scene new dimensions. For instance, after they open up, the relationship between people and built environment becomes permeable; more people gets inside and go outside of the buildings, fast and transportation aimed walking passing throughout these buildings turns into rather casual and interactive movements. In this context, the rhythms of the urban scene transform and diversify.

Figure 4.5: Opening the windows and blinds establishes new relationships in the urban space, shots chosen and reassembled by the author

4. Rhythms of different transportation modes

Following these, in the third chapter, rhythms of the machines takes place by the moving images of trains, subways, buses, private cars, carriages, bicycles etc. Therefore, this theme is categorized by different transportation nodes by including pedestrians. However, in this context, the movements and behavior of pedestrian mostly designated by these machines. For example, when the police or traffic signs guides the traffic, the relationship between machines and pedestrians is rather in polyrhythmic whole, but without such regulation, the interaction between them becomes problematic and even chaotic which creates arrhythmia (Figure 4.6, Video 6). The selected shots under this category, helps to determine the influence of modernity through the moving-images of different transportation modes. The accelerated rhythms of modern urban environment are perceived eloquently in these shots. Radial and linear repetitions generating by these transportation machines are the main factors to determine the rhythms of Berlin and its elements.

Figure 4.6 – Different transportation modes and rhythms, shots chosen and reassembled by the author

5. Rhythms on city's structural layers

Besides, in the third chapter, layered structure of the city is another theme in the moving-images of railways. Ruttmann frequently uses the moving-images of underground, ground and elevated railways to show the dynamism of Berlin. The main source of this dynamism is highly mechanized with the transportation system. Ruttmann takes train and railways as a dominant image of modernity in every part of the film. He takes this image not only in the context of transportation and infrastructure, but also urban landscape element and part of the urban space which determines the rhythms. By using in a very wide range of angles, trains are going under the ground, on the ground, on the bridges and they even get through the buildings. Those sequences reveal the modern city perception of the period between two world wars; a perfect combination of engineering and art in the context of rhythms of modern urban environment (Figure 4.7, Video 7).

Figure 4.7 – Rhythms of the different layers, shots chosen and reassembled by the author

6. Rhythms of/by nature

In the following chapter of *Berlin* leisure activities which mostly take place in cafes, restaurants, open spaces like parks or sport avenues etc. The main spatial theme in which those activities take place can be defined in relation to the natural elements of Berlin. Using the moving-images of not only the people in the parks, but also the ones who enjoy the sun and be pleased by the slow winds etc. constructs a strong relationship with the natural elements of the urban space. Rhythms of the urban scene and society calms down and therefore, those selected shots represent the calm and relaxing rhythms in relation to nature (Figure 4.8, Video 8).

Figure 4.8 – Calming the rhythms in the urban space, shots chosen and reassembled by the author

7. Rhythms of night

After the sunset, in the last chapter, Ruttmann uses similar elements as visual instruments, but a new tool takes the stage, the light. The presence and absence of light is one of the most important key features of the German expressionist montage (Deleuze, 1986, 51). In this respect, with the skillfully used light by Ruttmann, the rhythms of Berlin gain a new dimension in night. This new dimension can be seen on the windows of a building with lights turning on and off, or in the reflections of wet streets, or windows of the trams, or on the neon signboards of the night clubs, etc. The light does not only create new rhythms, but it also reveals new images within the urban space, and this creates a different dynamism in the urban space (Figure 4.9, Video 9).

Figure 4.9 – Effect of light on the rhythms, shots chosen and reassembled by the author

4.2.2.3. General Discussion on 'Berlin: The Symphony of a Great City'

The visual language which is used by Ruttmann in *Berlin: The Symphony of a Great City* is avant-garde and experimental. The narrative in this city symphony gains its power from both the capacity of representing the city's dynamism, and aestheticization of modernity with the images of city, architecture and machine. This visual language can be defined as what Harvey (1990) calls *aesthetics by the machine* – movie camera – which represents *aesthetics of the machine* – metaphorically modern urban space and its elements. In this respect, the city symphony of Ruttmann can be considered as a praise to modernity with its causes and effects. Vertov has a similar approach in the movie of *The Man with Movie Camera* with a different level of abstraction. As in all of the city symphonies of the 1920s, the images of modernity and everyday life of modern city is the primary focus. Ruttmann uses the rising metropolis of the late 19th century, city of Berlin, to visualize and narrate the images of modernity and modern city. The rhythmanalytical reading of such works of art can help urban planners and designers to understand the urban phenomena of a certain era.

The success of the movie Berlin is its narrative of the city as an entire modernist subject. In different chapters of this city symphony, Ruttmann pictures the relationships between different elements of the urban space, which are determined with respect to rhythms and movements. The power of representing the movements and dynamic everyday life of the city is another significant contribution of the film to the disciplines dealing with the urban space and modern city.

4.3. 'The Man with Movie Camera' by Dziga Vertov

David Abelevich Kaufman, known as Dziga Vertov, is one of the most important theorists and directors in the history of cinema. His masterpiece, *The Man with Movie Camera* (in Russian: Chelovek s kinoapparatom), contributes to the manifesto of his *kinochevsto* theory. In other words, it can be argued that Vertov rationalized his approach in this film. *The Man with Movie Camera* starts with the following text;

'Attention viewers: This film is an experiment in cinematic communication of real events without the help of the intertitles, without the help of a story, without the help of theater. This experimental work aims at creating a truly international language of cinema based on its absolute separation from the language of theater and literature.'

Even this introductory text of the film shows the attitude of Vertov to cinema and to his film. He does not define his role as a 'director' but as *'author-supervisor experimenter'* in the credits of the movie. Unlike in *Berlin: The Symphony of a Great City,* his experimental approach gives a new intangibility dimension to film of *The Man with Movie Camera.* As discussed in previous chapters, the clues from these two films show that Ruttmann and Vertov are affected from each other not only in terms of technique, but also in their conceptional approach.

For some like Hicks, *The Man with Movie Camera* has been *mistakenly* described as city symphony compared to the work of Ruttmann. He claims that the screened cityscape is composite likewise the day is (2013, 176). The claim of Hicks could be found reasonable, since, unlike the other examples of this genre, Vertov does not focus on a single city but various cities including Moscow, Kiev and Odessa. In addition, the role of the modern cityscape, structural parts and spatial aspects of it takes the secondary place. However, according to Schwarzer, *The Man with Movie Camera* is often called as a film about a film, but he adds that it is also a film about *how a city is constructed on film* (Schwarzer, 2004, 243). This proposition underlines two themes about this film:

1. the cinema itself.

2. the city and its everyday life,

The high experimental language of this film and its binary structure indicated above gives it a different place in the city symphony genre. If it is contradictory whether it is a city symphony or not, what does *The Man with Movie Camera* offer to urban planners and designers, architects and other professions dealing with urban space? If

this Soviet avant-garde work of art attributes the urban space a secondary or tertiary position, how is it possible to make a rhythmanalytical study on urban space?

Essentially, the main reason of its differentiation arises due to the nature of the visual narration language of Vertov. In examining *The Man with Movie Camera,* two points will be focused; the intervals which take the urban space, and its elements in the primary place; and the technique that relates these intervals and their parts.

4.3.1. The Approach of Vertov in 'The Man with Movie Camera'

To Schwarzer (2004), the work of Vertov is a film about *how a city is constructed on film,* taken with a highly experimental visual language. When compared with the integrated style of Ruttmann, which takes city as a whole within time-space, Vertov seems more manipulative. The basic reason for this, as Hicks (2013) puts forward, is that Vertov takes the temporal and spatial aspects of the modern urban environment in a comparatively fragmental manner. This approach complicates to comprehend the city and its environments as a whole, but at the same time, the manipulative and experimental visual language of Vertov gives the opportunity of establishing the rhythms and relations of urban elements, which cannot be seen by the human eye. In this respect, Vertov reveals not only a new way of seeing, but also a new way of looking to the modern city, using the movie camera. As it is profoundly discussed in the second chapter, a more developed eye, the kino-eye can capture the rhythms of the elements of urban space, which cannot be seen with our eye.

To return to the binary meaning of *The Man with Movie Camera*, according to Feldman;

> *'Vertov's argument in Man with a Movie Camera can be summarized by two phrases that recur throughout his manifestos and are coupled in the title of his first feature: 'Life Caught Unawares' and the 'Cinema Eye.'* (Feldman, 2014)

The concept of *'Life Caught Unawares'* is encountered frequently in the writings of Vertov. *'Recording the life as it is'* idea is prevailing in his masterpiece, too;

however, it is difficult to determine which one of these concepts is primary in this film. Petric (1993) points out that Vertov advised the kinoks to record the life as it is, and by doing so montage could create the film-object. He adds that, it does not mean that film-fact should remain unchanged but it is built on the '*constructivist principle of an ideational juxtaposition of different materials to produce a more meaningful structural whole.*' (Petric, 1993, 4). *The Man with Movie Camera* provides a meaningful whole which pictures the dynamism and rhythms of modern city. However, his masterpiece is also a film about a film, and for this reason, the absense of the camera is felt spiritedly?. This is seen in three forms in his film:

1. camera and the kinok-cameraman is located in the space and seen in the film– rather than behind the scene (Figure 4.10, Video 10),

2. the effect of the camera in the meaning of the subject – mostly seen in the mimics of the people (Figure 4.11, Video 11),

3. merging the kinok-cameraman and camera in one – or in other words, gaining consciousness of the camera and becomes kino-eye (Figure 4.12, Video 12).

Figure 4.10: Cameraman in the urban space, shots chosen and reassembled by the author

Figure 4.11: Camera that is felt in the urban space, shots chosen and reassembled by the author

Figure 4.12: Camera gained consciousness, shots chosen and reassembled by the author

In *Berlin*, Ruttmann gives camera as a spectator role except for one or two exceptional cases, and he interrelates the camera – as a tool and as a spectator – and the subject – the everyday life and rhythms of the urban space and the society. On the other hand, Vertov gives camera – and accordingly the spectator – a more active and intervening role in his film. In one sense, as Hicks (2007) discusses, it can be defined as some kind of a manual of how to make a film with reference to kino-eye movement. However, in the context of this study, beyond this portrayal of Hicks, the power of this film originates from its attribution some consciousness to camera and establishing a new relationship between the modern urban space and spectator by removing the spectator from a passive position.

To summarize, in *The Man with Movie Camera,* the method of Vertov constitutes a new relationship between camera and subject – i.e. the urban space. Since he focuses on two themes, the 'modern city' and the 'cinema', it might not be easy to perceive the rhythms of urban space and its elements. Still, it still gives an opportunity of observing, perceiving and understanding the modern urban environment of Post-October Revolution Soviet cities and society. Mentioning the contradictions within the society and narrating the labor and women power with a dialectical visual language makes *The Man with Movie Camera* a strong example of city symphonies by means of picturing the everyday life. In the following section, the rhythms will be sought throughout intervals – i.e. shots – with the aim of understanding the methodological approach of Vertov.

4.3.2. The Urban Rhythms Hidden Within the Intervals

Because of the experimental and intangible visual language of *The Man with Movie Camera*, a strict categorization is not as possible as it is done in *Berlin: The Symphony of a Great City*. In addition, the spatial emphasis is rather limited, therefore shots are selected in a way to focus on how Vertov stretches time and manipulates space by using his 'advanced eye', and what kind of rhythms can be determined. The selected shots are examined in a chronological order through the time of the film.

The start of the film, i.e. the wake-up scene of a woman and a city, reminds how Lefebvre (2007) identifies the human body as a reference point of the rhythms. Vertov focuses on the rhythms of a woman's body, her pulse and breathing and later urban scenes such as moving clouds, windy trees, buildings, streets, parks and more sleeping people. Depending on these scenes, it is possible to argue that Vertov relates human body with the urban space, and he takes it as a reference or a starting point of examining the modern urban environment. In this respect, he links the sleeping human body with the sleeping city (Figure 4.13, Video 13).

Figure 4.13: Rhythms of the body and rhythms of the urban space, shots chosen and reassembled by the author

Following this, Vertov establishes a similar relationship between human beings, architecture and cinema by using serial moving images of opening of a human eye, blinds and camera lens diaphragm. This is the other strong relation between human body, spatial element and camera in *The Man with Movie Camera* (Figure 4.14, Video 14). Speeding up of the rhythms follows this sequence, which switches on and everyday life starts. This metaphoric approach constitutes the sense of inside and outside, self and other by meeting them on a common ground.

Figure 4.14 Relationship between human beings, architecture and cinema, shots chosen and reassembled by the author

As the day starts, level of mobility increases with the movements of people and machines. Later on in this chapter, Vertov builds another brilliant metaphor between cameraman, labor and spatial element. Serial images of a coal worker, factory or power plant chimney, and the cameraman climbing on this chimney create a strong relationship between human power behind an industrial urban image and modern urban environment. This sequence shows how different rhythms of a worker and an industrial structure synchronize through cine-eye (Figure 4.15, Video 15). Once again, Vertov brings rhythms of different elements together on a common ground and creates a polyrhythmia.
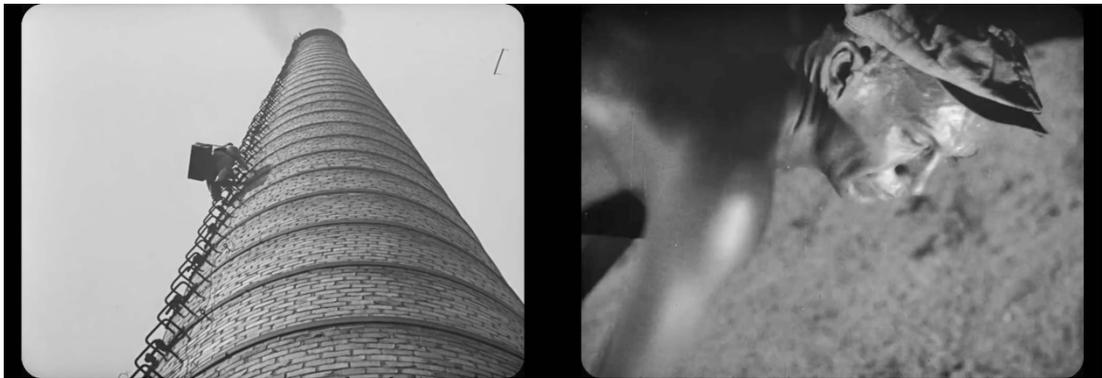

Figure 4.15: Cameraman, chimney and worker, shots chosen and reassembled by the author

The following selected shots can be described as a visual narration showing the power of cine-eye: the editor can freeze space and time. While the cameraman captures the moving-images of ordinary street scenes, a strong woman character interferes and manipulates time and space as she wants. She freezes the images, or accelerates, or decelerates them. In this respect, montage has the power of establishing new relationships, contradictions or destroying and breaking them into fragments (Figure 4.16, Video 16).

Figure 4.16: Montage and manipulation of time and space, shots chosen and reassembled by the author

The perspective of Vertov on urban architecture resembles with Alexander Rodchenko – Soviet constructivist photographer and graphic designer – as he pictures the architecture of the city from unusual angles. This approach presents a new way of looking to immobile elements of urban space, and how architecture reveals rhythms in urban space from the eyes of a moving camera (Figure 4.17 and Figure 4.18 – Video 17). In this respect, the style of Vertov can be defined as a moving version of the approach of Rodchencko.

Figure 4.17: Lestnitsa (Steps) by Soviet constructivist photoghrapher Alexander Rodchenko, Source: https://www.artsy.net/artwork/alexander-rodchenko-lestnitsa-steps, accessed on October 2018

Figure 4.18: Moving Images of the Architecture by Vertov - Shot chosen and reassembled by the author

As it is the case in *Berlin,* when the machines stop, leisure, relaxing and entertainment time starts in the city. In these shots, Vertov uses various techniques and stretches time, either slowing it down, or speeding up, or reverse it. By the help of these techniques, he shows rhythms of different elements in the space, which are not easily recognizable by human eye (Figure 4.19, Video 18). Those shots mostly focus on the human anatomy and main theme of them can be described as the reflecting rhythms of the human body to the urban space via sporting activities.

Figure 4.19: Stretching time with montage techniques, shots chosen and reassembled by the author

Last but not least, shots include the panoramic views of the urban scenes editing with highly dynamic montage and dizzying rhythms. By using urban spatial elements and moving-images that reflects the idea of cine-eye; *cinematic communication of real events without the help of the intertitles, without the help of a story, without the help of theater.* The manipulation power of those shots cannot be denied but still with an experimental approach, the art of cinema closes to represent the truth, both in societal and spatial means (Figure 4.20, Video 19).

Figure 4.20: The closing sequence of the film, shots chosen and reassembled by the author

4.3.3. General Discussion on 'The Man with Movie Camera'

As far as the modern urban environment, everyday life and its rhythms are concerned, it is possible to argue that *The Man with Movie Camera* is not as strong as *Berlin*. However, it is a complete modernist work of art, which reflects the dynamism and rhythms of modern urban environment. The experimental visual language might make this film difficult to comprehend as whole, but it shows the capabilities of this visual representation technique pushing the limits of the movie camera. Montage helps the rhythms of urban space and its elements, hidden within the intervals, to create a rhythmic unity. As a consequence, this unity reveals a complete work of art in *The Man with Movie Camera,* as it introduces a new way of seeing and a new way of looking.

> *'By close-ups of the things around us, by focusing on hidden details of familiar objects, by exploring commonplace milieus under the ingenious guidance of the camera, the film, on the one hand, extends our comprehension of the necessities which rule our lives; on the other hand, it manages to assure us of an immense and unexpected field of action.'* (Benjamin, 2007, 236)

Benjamin expresses the power of movie camera with these words. In this regard, *The Man with Movie Camera* and its experimental and avant-garde visual language widens our seeing and looking. In 1929, by using the techniques and ideas ahead of its time, Dziga Vertov makes the unseen seen and impalpable palpable with the help of the movie camera.

4.4. The Inferences from Rhythmanalytical Reading on 'City Symphonies'

The rhythmanalytical reading on the urban scenes represented in these documentary films helps urban planners, designers and architects to understand the urban phenomena of the 1920s, the era of cultural modernism. Through the eyes of the avant-garde visual artists of this era, the concepts developed by Lefebvre (2007), i.e. *repetition and difference, mechanical and organic, cyclical and linear, quantitative and qualitative*, become concrete in the case of city symphonies. The power of cinema comes from not only the capability of representing and reproducing human vision, but also the capacity of extending human vision by the help of montage. As Deleuze (1986) suggests montage is the process of determining *the whole.* As it can been seen in city symphonies, it is also a process for constructing the new modes of relationships between various elements of urban space. Besides, the capacity of stretching time and space gives a new dimension to cinema. This ability of camera widens the horizon for the human eye and this is what Vertov (1984) names the advanced human eye, the kino-eye. As he claims, our eyes are weak to detect the rhythms of the most of the elements of urban space. The rhythms, which Lefebvre (2007, 21) defines as *sensible* which is *neither the apparent, nor the phenomenal, but the present*, can be observable and identifiable by the help of camera. It can make those sensible but not observable rhythms obvious. With the limited technical possibilities of the 1920s, Vertov and Ruttmann set off on a quest this phenomenon in their city symphony films. Their films can partly show the rhythms of modern city with the concepts developed by Lefebvre, and in this respect they succeed representing the rhythms by a visual language.

The second issue, which we can infer from the city symphonies, is the capability of the moving image in designating the structural parts of the urban space. These movies use one day of the city life as a subject and the visual language of them helps to comprehend and compare the variance of the urban space usage. Both of the city symphonies discussed are quite successful in showing differentiating density levels of people and cars throughout a day. This variation expresses the characteristics of

the modern urban environment and its parts. For instance, borrowing the terms from Lynch (1988), within the daily story of these cities in some pieces, it is possible to designate the paths, landmarks, nodes, edges and districts. Although the aim of these films is not expressing them, the case study analysis on them has allowed us understanding the capabilities of a moving image in figuring out such urban elements.

The avant-garde experimental visual language of city symphonies comes with the risk of staying completely intangible. This risk is more in *The Man with Movie Camera* since it tries to melt modern city and cinema in the same pot. This conceptual approach by Vertov has the risk of staying in a highly abstract and subjective level. But this risk also comes with an advantage; pushing the limits of this visual representation technique, both in technical and conceptual way, offers new dimensions to approach the rhythmanalysis concept of Lefebvre. On the other hand, the approach of *Berlin: The Symphony of a Great City* is more comprehensive and perceivable in the context of rhythmanalysis. Its method of expressing the modern city, its everyday life and rhythms is more compact and well-coordinated. Such visual language helps the comprehend the modern Berlin as a whole with its elements and relationship between them.

As a consequence, moving images in urban scenes (whether they are artworks or not) can be instrumental to understand cities with their spatial and societal elements. It should be pointed out that, a quantitative analysis on these movies is pretty difficult. Even so, in the fields of urban design and architecture, possibilities offered by them should be considered more.

CHAPTER 5

CONCLUSION

This study has aimed to elaborate the concept of rhythm in urban design. The studies on this concept concentrate on the fields such as sociology, philosophy, geography, etc. However, in the urban design discourse, the concept of rhythms and analyzing them should be described more comprehensively. This thesis does not aim to propose clear-cut methods on how to apply it, but aims to underline its significance as a new approach; i.e. rhythms in the urban scene to be analyzed by using the moving-image.

Therefore, the theoretical framework and approach of this thesis can be described as;

1- to rethink the urban space throughout the concept of rhythm,
2- to analyze the rhythms in the urban scene by using a visual narrative technique,
3- to discuss how can this tool support the urban design process.

Perceiving the time and space has always been in the main interest areas of the professions dealing with urban space. To design a better living environment, understanding this phenomenon and achieving the most possible rational data have a significant role. Lefebvre (2007, 15) argues that *'Everywhere where there is interaction between a place, a time and expenditure of energy there is rhythm.'* In this study, the interaction between urban space, time and movement constitutes the rhythms in the urban space. The origin and the source of the rhythms in the urban space is the nature – cyclical repetitions – and social practices/human experiences – linear repetitions (Lefebvre, 2007).

Departing from this point of view, with the application of the concept of rhythm, the elements of the urban space are categorized as follows: natural and unnatural, mobile

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and immobile. Within the perspective of the rhythmanalytical approach of this study, such categorization can be defined as the attributions of the urban space which should be emphasized. Also, the relationship between the elements of urban space is relative and all of them are positioned in a dialectical unity. Identification of the natural and unnatural originate from the natural/cosmic repetitions; years, seasons, days and nights, etc. Nothing is totally unnatural or natural in the urban space but 'relatively' unnatural or natural compared to other elements. This defines the relative and dialectical relationship between the elements of the urban space. Same approach is valid by defining the mobile and immobile elements. In the rhythmanalytical approach of Lefebvre (2007), nothing is immobile, but relatively mobile. Lefebvre (2007) gives an example from the rhythms of a tree; for a human being, a tree is might seem immobile and has no rhythms at the first glance. But if we dig deeper and look harder and longer, we will see that tree has its own rhythms, blossoms in the springs, drops leaves in the falls (Lefebvre, 2007).

However, our eyes are weak (Vertov, 1984), and have so many limitations to look harder and longer. Consequently, to analyze and determine the rhythms in the urban space in a more rational way, we should assign a visual meaning to them. In other words, to offer such classification of the elements of urban space and to analyze the rhythms through this classification, we should offer a new visual tool to read, analyze and narrate the elements of urban space. This thesis offers moving-image as the visual tool to analyze the rhythms in the urban space.

Throughout the long history of modernity, the evolution of the techniques to understand and reproduce human vision is remarkable. This historical process of the techniques is significant to reveal the advantages and disadvantages of one of the most developed visual narration technique, moving-image in the context of using it as a means of analyzing the rhythms in the urban space. The first breaking point in this historical processes is the linear perspective from Renaissance. This drawing technique can be described as the first big step to reproduce the human vision in a rational way; it is the rationalization of human vision. Especially in the context of perception of space, explaining the sense of depth and place became possible first

time in the history of humanity after linear perspective. As Crary (1992) argues, Renaissance's Linear Perspective was more than a simple shift in the appearance of the image and the work of art. In the early 19th century, by the help of the developments in chemistry, the optics of camera-obscura had met with chemicals and photography was born. The invention of the photographic camera is very important for reproducing the human vision. As Benjamin (2007) indicates, photographic camera annihilated the uniqueness of the object and made it available in multiple places. Before photography, *perspective proposed to the spectator that was the unique center of world,* however, photographic camera – and most particularly movie camera – *demonstrated that there was no center* (Berger, 1977, 18). In the late 19th century, the invention of movie camera made capturing the movement possible. Firstly, photographic camera had been able to record the reality, frozen it in a certain time and space, and later movie camera could capture the movements in the space and in this respect it could record a duration, an interval; in other words, particular piece of the time. The power of the movie camera comes from this capacity of capturing, recording and reproducing time and space. That is the main reason to consider the moving-image as a means of analyzing the rhythms in the urban space and approaching to the elements of urban space. As Crary (1992) assets for the linear perspective, any on these techniques are more than a simple shift in the appearance of the image in the work of art. They have caused deep changes in terms of our perception of the environment around us. Accordingly, photography and most particularly cinema (moving-image) became the determining elements of the visual culture of the 20th century.

In the early 20th century, cinema, modernity and city have met on a common ground and was embodied with 'city symphonies'. Schwarzer (2004) takes the modern city as a kind of vision machine with its buildings, infrastructure, etc. The city symphony film genre explores the power of this machine. If we take the modern city as a rhythmic machine, city symphony films explore the rhythms of this machine and its parts and elements. Koren-Kuik (2013) makes one of the most comprehensive

definition of city symphonies; they are distinctive modernist films that attempt to capture the urban experience of American, European and Soviet cities in the 1920s.

From among the dozens of city symphony examples, two of them step forward in terms of highlighting the rhythms in the urban space; Ruttmann's *Berlin: The Symphony of a Great City* (1027) and Vertov's *The Man with Movie Camera* (1929). The main reason for choosing these two films as case studies is their capacity of exploring the everyday life of modern city and the rhythms in it. Also, their experimental visual language is very significant for this study because comprehending their method would be an important guide for future studies to explore the rhythms in the urban spaces via moving-image. This study does not claim that these two films primarily focus on the rhythms in the urban space and explore them through the rhythmanalytical approach. However, they focus on the everyday life of modern city and take it with a rhythmic unity by the help of montage. Their significance comes from the method used for exploring the modern city. Not the cinematic techniques they used, but the visual meaning that they gave to the city via movie camera and montage has a dominant role. Their main concern is not the rhythms in the urban space, but they use the concept of rhythm as a tool, a narration tool. Therefore, in the fourth chapter, a qualitative method has been applied for a rhythmanalytical reading of the city symphony films.

By taking the power from the experimental and avant-garde language of city symphonies of the 1920s, this study aimed to speculate and discuss a new way of looking to the urban space. On the one side of the binary structure of this thesis, the approach of Lefebvre to analyze the everyday life by using rhythms has an important role. And on the other, this study suggests moving-image as the answer of the question of how to designate and visualize these rhythms. City symphonies take the everyday life of the cities within a rhythmic unity by the help of montage. Therefore, rhythmanalytical reading on the city symphonies seeks discovering new modes and tools to comprehend the urban scene.

Combining the concept of Lefebvre with the approach of Vertov helps discovering new horizons in disciplines dealing with urban space, most particularly in urban design. Rapid and extraordinary development of digital technologies in the 21st century increase multidisciplinary approaches especially in spatial studies. Moving-image can be considered as a means of understanding the complex structure of contemporary urban space. It is important to note that such approach to the urban space should be multidisciplinary to take it with the most comprehensive way.

5.1. Further Research Question

Ninety years ago, city symphony films had pushed the boundaries of cinema, and created work of arts exploring the modern urban environment. The abstractions in them and experimental language that they used are inspiring. Understanding their point of view to the modern city and its everyday life is very important to reveal and develop new analytical approaches to comprehend the current complex urban environment and its elements. Not only in the context of the rhythm, but also structural, aesthetical and social presence of/in the urban space, new multidisciplinary approaches come into prominence.

We are experiencing a new mode of visual culture, such as social media, 360 degree videos, virtual realities and drones. As Vertov, Ruttmann and many others achieved in the 1920s, the professions dealing with urban space should diversify the tools and technologies to broaden the viewpoint and discover new horizons. The world we are living in is turning into the world of images. Nowadays, reproducing the human vision is more developed than the rapid technological developments. As Berger (1977, 7) reports '… *the knowledge, the explanation, never quite fits the sight.'* By the help of computational image analysis techniques, and unlimited viewpoints presented by moving-image techniques, in the 21st century, we have never been so close to gathering together the scientific knowledge with our sight and perception.

Some further research can focus on the following questions: How can we reconsider the contemporary urban space by the help of the moving-image? And what does combining different technologies with the moving-image offer to the professions dealing with the urban space?

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