

**EMBODIED EXPERIENCE OF SPACE THROUGH  
CINEMATIC LENS**

**DILAN ACAR**

Master's Thesis

Graduate School  
Izmir University of Economics  
İzmir  
2020



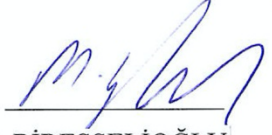
**EMBODIED EXPERIENCE OF SPACE THOGUH  
CINEMATIC LENS**

**DİLAN ACAR**

A Thesis Submitted to  
The Graduate School of Izmir University of Economics  
Master's Program in Design Studies

İzmir  
2020

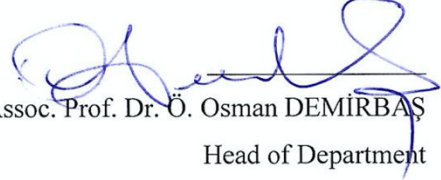
Approval of the Graduate School



Prof. Dr. M. Efe BİRESSELİOĞLU

Director

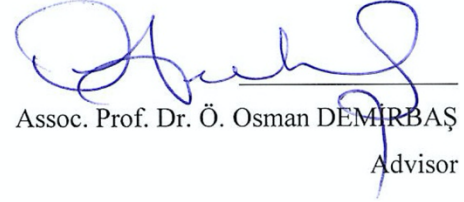
I certify that this thesis satisfies all the requirements as a thesis for a master's degree.



Assoc. Prof. Dr. Ö. Osman DEMİRBAŞ

Head of Department

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for a master's degree.



Assoc. Prof. Dr. Ö. Osman DEMİRBAŞ

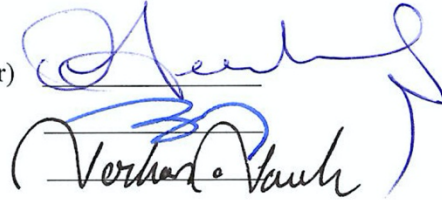
Advisor

Master's Exam Jury Members

Assoc. Prof. Dr. Ö. Osman DEMİRBAŞ (Advisor)

Assoc. Prof. Dr. Zeynep TUNA ULTAV

Assist. Prof. Dr. Serkan Şavk



# ABSTRACT

## EMBODIED EXPERIENCE OF SPACE THROUGH CINEMATIC LENS

Acar, Dilan

Design Studies Master's Program

Advisor: Assoc. Prof. Dr. Özgen Osman Demirbaş

July, 2020

Cinema shapes our perception of reality through moving images. Photographic and moving images satisfies our obsession with realism. This satisfaction provided by “existence” and “lived experiences” which “body” becomes a physical element and “embodiment” is as an experience based on the perception of the perceiver. This study examines the concept of embodied experience of space in the way of creating an image of the world through the cinematic lens. The concept of “being in space” is considered as a design thinking process for filmmaking process which emphasizes the concept of “embodied experience of space.” The aim is to understand how cinema changes the perception of the cinema audience by the use of design. Notions of “real space” and “cinematic space” are discussed through the concepts of “being in space” and “embodied experience of space.” The concept of “being is space” is addressed by the theories of Heidegger, Bollnow and Merleau-Ponty to discuss the real space for understanding the process of positioning oneself in the physical environments whereas

the concept of “embodied experience of space” is discussed through the theories of De Certeau, Norberg-Schulz and Pallasmaa to see the process of creating an image of the world as the cinematic space. As a case study, the movie called “The Thirteenth Floor” (1999) is selected and a semiotic analysis is conducted through the spatiality and design objects in the movie. The thesis considers filmmaking as a design-oriented creation which consolidates the transfer of specific conceptions, ideals, moods and feelings. By merging cinema and design, mise-en-scène and cinematographic elements of “The Thirteenth Floor” are analyzed. The main objective is to understand the conceptions of “real” and “virtual” through the design of the time periods (1937, 1999 and 2024) that are introduced in the movie.

Keywords: Cinema, Design, Space, Embodiment, Perception, Virtuality.

# ÖZET

## SİNEMATİK MERCEK ARACILIĞIYLA SOMUTLAŞTIRILMIŞ DENEYİM

Acar, Dilan

Tasarım Çalışmaları Yüksek Lisans Programı

Tez Danışmanı: Doç. Dr. Özgen Osman Demirbaş

Temmuz, 2020

Sinema hareketli görüntüler aracılığıyla gerçeklik algımızı şekillendirir. Durağan ve hareketli görüntüler, gerçeklik arzumuzu tatmin eder. Bu tatmin “varoluş” ve “yaşanmış deneyimler” yoluyla sağlanırken alıcının algısına bağlı olarak “beden” fiziksel bir element, “vücut bulmuşluk” ise bir deneyim hali olarak kabul edilir. Bu çalışma, mekan yolu ile şekillendirilmiş deneyimin yeni bir dünya imajı yaratmasını sinema merceğinden incelemektedir. “Mekanda olmak” kavramı film yapım sürecine ait bir tasarımsal düşünme sistemi olarak ele alınmış ve “mekan yolu ile şekillendirilmiş deneyim” kavramını pekiştirdiği ileri sürülmektedir. Amaç, sinemanın tasarımı kullanarak izleyicinin algısını nasıl değiştirdiğini anlamaktır. Gerçek mekan ve sinematik mekan görüşleri “mekanda olmak” ve “mekan yolu ile şekillendirilmiş deneyim” kavramları etrafında tartışılmıştır. “Mekanda olmak” kavramı Heidegger, Bollnow ve Merleau-Ponty’nin teorileri üzerinden gerçek mekanda kendimizi nasıl konumlandığımızı anlamak adına ele alınırken, “mekan yolu ile şekillendirilmiş deneyim” kavramı De Certeau, Norberg-Schulz ve Pallasmaa’nın teorileri çerçevesinde sinematik mekan kullanılarak dünya imajının nasıl yaratıldığı

tartışılmıştır. “13. Kat” (1999) filmi vaka çalışması olarak seçilmiş ve filmdeki mekansallık ve tasarım objelerinin incelenmesiyle semiyotik bir analiz yürütülmüştür. Tez; belirli kavramları, idealleri, ruh hallerini ve duyguları aktarmasıyla filmlerin tasarım odaklı bir yapım sürecine sahip olduklarını öne sürmektedir. Sinema ve tasarımın birleştirilmesiyle “13. Kat” filmindeki mizansen ve sinematografik unsurlar incelenmiştir. Buradaki amaç, filmde tanıtılmış olan farklı dönemlerin (1937, 1999 and 2024) tasarımlarına ilişkin oluşturulan “gerçek” ve “sanal” kavramlarının algılanışını anlamaktır.

Anahtar Kelimeler: Sinema, Tasarım, Mekan, Algı, Sanallık.



## TABLE OF CONTENTS

<b>ABSTRACT</b> .....	<b>iii</b>
<b>ÖZET</b> .....	<b>v</b>
<b>TABLE OF CONTENTS</b> .....	<b>vii</b>
<b>LIST OF TABLES</b> .....	<b>ix</b>
<b>LIST OF FIGURES</b> .....	<b>x</b>
<b>CHAPTER 1: INTRODUCTION</b> .....	<b>1</b>
<i>1.1 Problem Definition and Aim of the Study</i> .....	<i>2</i>
<i>1.2 Methodology and Structure of the Research</i> .....	<i>3</i>
<b>CHAPTER 2: BEINGNESS AND EMBODIMENT</b> .....	<b>6</b>
<i>2.1 Reality, Hyperreality and Perceptual Realism</i> .....	<i>7</i>
<i>2.2 Sense of Presence, Co-presence and Perception</i> .....	<i>8</i>
<i>2.3 Notions of Space</i> .....	<i>10</i>
<i>2.3.1 Real Space</i> .....	<i>12</i>
<i>2.3.2 Embodied Space</i> .....	<i>12</i>
<i>2.4 Koeck's Definition of Being in Space versus Embodied Experience of Space</i> .....	<i>13</i>
<i>2.4.1 Being in Space</i> .....	<i>13</i>
<i>2.4.2 Embodied Experience of Space</i> .....	<i>15</i>
<b>CHAPTER 3: SPACE IN CINEMA AND EMBODIED EXPERIENCE OF SPACE</b> .....	<b>17</b>
<i>3.1 A Brief Introduction to the Cinema</i> .....	<i>18</i>
<i>3.2 Embodied Meaning and Metaphors in Cinema</i> .....	<i>20</i>
<i>3.3 Cinematic Experience and Mediated Perception</i> .....	<i>22</i>
<i>3.4 Cinematic Space and Narrative</i> .....	<i>24</i>

3.5 <i>Perceptual Design, Cinematic Narrative and Consciousness</i> .....	27
<b>CHAPTER 4: CASE STUDY</b> .....	<b>28</b>
4.1 <i>Methodology</i> .....	30
4.2 <i>Adaptation of Koeck’s Interpretation of “Being in Space versus Embodied Experience of Space”</i> .....	32
4.3 <i>Analysis of the Movie “The Thirteenth Floor”</i> .....	33
4.3.1 <i>Rationalization of the Case Study</i> .....	33
4.3.2 <i>Story and Structure of the Movie</i> .....	34
4.3.4 <i>Criterion of Relevance</i> .....	37
4.3.3 <i>Criterion of Expressiveness</i> .....	41
4.3.4 <i>Criterion of Functionality</i> .....	44
4.4 <i>Discussion</i> .....	64
<b>CHAPTER 5: CONCLUSION</b> .....	<b>71</b>
<b>REFERENCES</b> .....	<b>73</b>

## LIST OF TABLES

Table 4. 1 Adaptation of Koeck’s Interpretation of “Being in Space versus Embodied Experience of Space” (adapted from Koeck, 2013).....	33
Table 4. 2 Portraying of different identifications of the characters relating to the different time periods. ....	36
Table 4. 3 Interpretation of “Being in Space” and “Embodied Experience of Space” in regard to criterion of relevance. ....	66
Table 4. 4 Interpretation of “Being in Space” and “Embodied Experience of Space” in regard to criterion of expressiveness.....	68
Table 4. 5 Interpretation of “Being in Space” and “Embodied Experience of Space” in regard to criterion of functionality. ....	69

## LIST OF FIGURES

Figure 3. 1 Kinetograph (Source: American Physical Society Sites, 2020). .....	19
Figure 3. 2 Kinetoscope (Source: Museum of Modern Art, 2020). .....	19
Figure 4. 1 Three different time periods that the story took place. ....	35
Figure 4. 2 Circular representation of timeline. ....	35
Figure 4. 3 Portraying of the character through the simulation interface. ....	37
Figure 4. 4 Close-up shots of the shoes. ....	38
Figure 4. 5 Examples of the illustration of flat surfaces. ....	39
Figure 4. 6 Scenes that are associated with smoking. ....	40
Figure 4. 7 Scenes with curtains are illustrated. ....	41
Figure 4. 8 Example of an action-to-action transition. ....	42
Figure 4. 9 Example of an aspect-to-aspect transition. ....	43
Figure 4. 10 Example of a moment-to-moment transition. ....	43
Figure 4. 11 Example of a scene-to-scene transition. ....	44
Figure 4. 12 Example of a subject-to-subject transition. ....	44
Figure 4. 13 Shots from the world of 1937. ....	46
Figure 4. 14 Shots from the world of 1999. ....	47
Figure 4. 15 Shots from the world of 2024. ....	47
Figure 4. 16 Wide-angle shots of the outdoor places. ....	48
Figure 4. 17 Wide-angle shots of the indoor places in 1937. ....	49
Figure 4. 18 Wide-angle shots of the indoor places in 1999. ....	50
Figure 4. 19 Wide-angle shots of the indoor places in 2024. ....	51
Figure 4. 20 Illustration of movie character’s embodied experience of space. ....	53
Figure 4. 21 Illustration of simulation interface. ....	53
Figure 4. 22 Illustration of consciousness transfer of Douglas Hall from 1999 to 1937. .....	55
Figure 4. 23 Douglas Hall’s first experience of the simulation 1937. ....	57
Figure 4. 24 Douglas Hall’s first experience in the simulation of 1937. ....	58
Figure 4. 25 Douglas Hall experienced another world reality through the body of John Ferguson. ....	59
Figure 4. 26 Metaphors that addresses the murder of Hannon Fuller. ....	60

Figure 4. 27 Close-up shot of a newspaper.....	60
Figure 4. 28 Metaphors that distinguish different time periods. ....	61
Figure 4. 29 “End” signboard as a metaphor that illustrates the place where the simulation ends.....	62
Figure 4. 30 13 <sup>th</sup> floor as a portal for the simulated world of 1937 (A and B), a headset unit as a tool for experiencing the virtual reality of the world of 1999 (C and D). ...	63
Figure 4. 31 Two different ways of utilizing the green light. ....	64

## CHAPTER 1: INTRODUCTION

Cinema is a tool which influences our perception of reality through moving images while aiming to show us other lives and worlds (Kutucu 2005). We are experiencing a simulation of real life when watching a movie from a sensory-motor perspective (Gallese and Guerra, 2012). This can be the reason behind our obsession with realism as humankind. Cinema and photography satisfy this obsession based on their capability of re-producing the reality by recording and capturing technologies (Kutucu, 2005; Bazin, 1967). Feelings of compassion and sympathy are very important for making the moving image or the photograph as worthwhile (Kutucu, 2005). "Space" has a variety of identifications within the framework of related discipline and subject. Through the cinema perspective, space is interpreted in different manners; "movie theatre" as the physical space where the cinema audience watches the movie; "shooting location" as the real space where the movie has been shot; "setting" as the notion which defines where the story takes place in terms of time, place and environment; "cinematic space" as the simply everything that can be seen from the screen.

In this research, space is discussed over the cinematic space through the concepts of "being in space" and "embodied experience of space" while covering the existential, architectural and embodied notions of space. Cinema stimulates an embodied experience upon the audience by relying on; (1) design of the cinematic world presented through cinematic space; (2) narrative which creates a bound between perceiver and story. Specifications of the cinematic world is structured by both story and narrative, visualized by the spatiality and design objects. Physical space can be experienced through the direct involvement however, this changes into another form for cinematic space: "observation and experience are become limited between camera, audience and space" (Kutucu, 2005, p. 41). Cinema utilizes that limitation to manipulate our perception of reality. Sobchack (1982, p. 327) states that;

*“Moving camera is not only a mechanical instrument but, an object of visual and kinetic perception which is also a subject that sees and moves and expresses perception. It participates in the consciousness of its own animate intentional, and embodied existence in the world”* (cited in D’aloia, 2012, p. 159).

### ***1.1 Problem Definition and Aim of the Study***

Effectiveness of the cinematic manipulation gives information about the quality of the movie which can be evaluated by many different aspects. In this research, it has been evaluated through the perspective of cinematic experience that is realized through the observation of the cinematic space. Cinematic experience is an involvement where the cinematic world is introduced with the perceiver over the spatial properties and representations. The discussion in this thesis is established on the basis of Koeck’s (2013) clarification of “Being in Space versus Embodied Experience of Space” which he discusses the “existential and experiential notions of space” in regard to the city and the cinema. Concepts are differentiated by relying to spatial discourses of theorists; Heidegger, Bullnow and Merleau-Ponty in the manners of “locating the self in spatial environments”; De-Certeau, Norberg-Schulz and Pallasmaa in the means of “creating an image of the world based on our surrounding” (Koeck, 2013, p. 56). The concept of “being in space” refers to our sense of existence created by the perceptual realization occurring based on physical space around us. The concept of “embodied experience of space” acknowledges cinema as a medium which produces an image of the world that is eventually affects the way we perceive and act afterwards.

Koeck’s interpretation is extended into a new adaptation by correlating the concepts within the parameter of time and space—spatiality—to refer; existential, architectural and embodied notions of space. In the framework of this study, cinematic world is acknowledged where the concept of embodied experience of space is emphasized through the design of the spatial set up and design objects in the movie. The concept of embodied experience of space is considered as forming in a “layered structure” that can be correlated with cinema audiences and movie characters. The aim is to discover:

- (1) how the concept of “being in space” can be considered as a design tool in filmmaking process for creating the sense of being there;
- (2) how the concept of “embodied experience of space” forms in a “layered structure” by the conception of spatiality and representations in the movie.

Nowadays, the significance of having a multidisciplinary approach is coming into prominence for almost every field of study. By presenting the self-directed world reality, movies contain variety of aspects relating to different fields. Cinema’s association with design is crucially important. Also, their working processes resemble to each other for example, almost every design field possess elaboration of “user experience” for designing new products and/or services. Analogously, filmmakers are intentionally or unintentionally being mindful about design in terms of creating and detailing story and narrative for offering a better cinematic experience. Both disciplines have to have adequate observation skills for contributing the expectations of their audiences and/or users; one plans the whole aspects of the movie as the experience itself; and the other design all the processes that the user is going to confront during the use of product and/or service.

Considering design-thinking in filmmaking process provides much more efficient cinematic experience to the cinema audience. By merging cinema and design, the thesis analyses the concepts of “being in space” and “embodied experience of space” through the examination of spatiality and design objects. The aim is to understand how the concept of being in space can be emphasized for portraying the cinematic world image as “real” or “virtual” within the framework of movie’s cinematic reality. Especially, predictions are considered for slipstream fiction movies to see the effect of design over the concept of embodied experience of space in terms of shaping the perception of the audience.

## ***1.2 Methodology and Structure of the Research***

Joseph Rusnak’s movie “The Thirteenth Floor” (1999) is selected as a case study to analyze the concepts of “being in space” and “embodied experience of space.” A new adaptation of “being in space versus embodied experience of space” is created for



using it as a groundwork for the case study analysis while examining the spatial set up and design objects in the movie. Based on the layered structure of the concept of embodied experience of space, inferences considered for both cinema audiences and movie characters:

- (1) by which creates the sense of existence through the design of the cinematic world;
- (2) by which determines the quality of the cinematic experience through the design of the cinematic space.

The movie analysis is conducted with a semiotic consideration while analyzing the cinematography and mise-en-scène aspects in the movie through the following criteria;

- (1) “relevance” is used to designate the objects in their relation to the story,
- (2) “expressiveness” is used to analyze the emphasis of movie editing,
- (3) “functionality” is used in the manners of:
  - a. “scenographic function” is for portraying the spatial setting through camera work;
  - b. “semantic function” is for analyzing the objects through metaphors and metonymy;
  - c. “aesthetic function” is for examining the design of the objects in regard to their materiality (Gambarato, 2010, pp. 107-112).

After the introduction chapter, 2 focuses on perceptual concepts that roots into epistemological concerns related with beingness and embodiment. Spatial theories are discussed through Koeck’s (2013, p. 56) interpretation of “being in space” and “embodied experience of space.” As Kutucu (2005, p. 132) states, for having the vision of a multidisciplinary study, space in movies should be analyzed based on the “production of space” and “experiencing spatial realities.” Theories from Heidegger, Bollnow and Merleau-Ponty discussed under the concept of “being in space” which refers to the *real space* for understanding the process of “positioning ourselves in physical environments”, and theories from De Certeau, Norberg-Schulz and Pallasmaa

are examined under the concept of “embodied experience of space” for understanding the “process of creating image of the world around us” to refer *cinematic space* (Koeck, 2013, p. 56). Chapter 3 focuses on “space in cinema” as well as “the evaluation process of the perception” to discuss the factors that cause perception shifts among the cinema audience. In chapter 4, case study is conducted through movie analysis based on Josef Rusnak’s movie called “The Thirteenth Floor” (1999). Analysis of the movie considers cinema and design together with a semiotic consideration while examining the movie’s preferences of cinematography and mise-en-scène. The case study aims to find out the determining factors of the embodied experience of space—as the cinematic experience—through the conception of spatiality and representations presented in the movie.

## CHAPTER 2: BEINGNESS AND EMBODIMENT

This chapter discusses *beingness* and *embodiment* through the notions that are evolved around two sets of concepts *as reality, hyperreality and perceptual realism*, and *sense of presence, co-presence and perception*. The first set of concepts are discussed under the first subtopic and the second set are covered in the second sub-topic. Third sub-topic examines the distinction between *space* and *place* together with the examination of the role of body. *Koeck's definition of Being in Space versus Embodied Experience of Space* is discussed in the third section.

The meaning of being has been questioned from ancient days until contemporary times. Concept of being is the core subject of ontology where the characteristics of “being” and “being of things” stated as main concerns. Most of the philosophers like Aristotle, Hegel, Heidegger, Husserl Plato, Sartre considers “being” as a sort of formation that should be described by its own being. Instead of making concrete explanations, Heidegger (1996, p. 3) points out that being is an “indefinable” concept. He refuses to use the word “entity” while referring the concept. The way of existence differs according to variation of beings, so he suggests that the existence of every being should be examined differently. As a term, “being”—to be—refers to the way of “having an existence” whereas, “beingness”—state of being—refers to the state of being’s quality. Discussions about the state of “being-in-the-world”, Csordas (1994, pp. 10-12) says that it should be examined by “existence” and “lived experiences.” Being and beingness merges for defining the state of “being-in-the-world.” “Body” is described as a physical element and “embodiment” as an unstable experience based on the perception of a person like a way for engaging with the world (Csordas, 1994, pp. 10-12).

Embodiment is mostly related with the term “presence” which is about our “perceptual sensation” that offers the sense of existence outside of where our physical body is actually located (Biocca, 1997, p. 18). The concept relies on non-physical experiences where the mind and senses are indicated as important factors. Gallese and Guerra (2012, p. 189) describes movie as “a crossroad of three different bodies: the body of the filmmaker, the body of the movie and the body of the perceiver.” Between these

three bodies movies are offering us “embodied experience” as the cinematic experience. Deleuze (1997, p. 201) says that movies are not just about “acting and the action” or “assassin and the victim”, but they are the combination of those relations. He states that images exhibit mental relations and those relations are not merely determined by the act of the movie character.

## ***2.1 Reality, Hyperreality and Perceptual Realism***

The curiosity about the concept of reality has never lost its significance and it is questioned by many philosophers like Aristotle, Baudrillard, Descartes, Hegel, Heidegger and Plato. Four levels of reality are identified by Plato under the two main emphasis; one controlled by “the sun” that refers to *vision*; and the other is affected by “the good” that refers to *intelligence*. The sun affects the lowest levels where the ordinary man lives who sees only visible objects or shadows. Their understanding of reality is shaped through perceptible things like a form of pleasure of the visible self. The upper levels receive reality as the experience of the intelligence. Either way, it is stated that what “the good” is cannot be explained but, it is possible to express what it is like to be (Gould, 1969, pp. 20-29).

The concept of simulacrum<sup>1</sup> refers to the representation or copy of a copy which discovered in twentieth century from the work of three French thinkers; Pierre Klossowski<sup>2</sup>, Gilles Deleuze<sup>3</sup>, and Jean Baudrillard<sup>4</sup>. The concept is first addressed in Klossowski’s theologico-erotic writings where he criticizes the Church fathers about their corrupted representations of the gods (Smith, 2012). According to Deleuze, simulacrum recognizes copy but at the same time copy itself continually interacts with the original referent. Baudrillard states that simulacrum constitutes “a hyperreal” and “simulation of the real” (McDonald, 2009, p. 1). Actually, discussions about simulation and simulacra have been covered since Plato’s time. Plato states that the

---

<sup>1</sup> Plural: simulacra.

<sup>2</sup> See, Klossowski’s “Sacred and Mythical Origins of Certain Practices of the Women of Rome” (1968).

<sup>3</sup> See, Deleuze’s “Difference and Repetition” (1968) and “Logic of Sense” (1969).

<sup>4</sup> See, Baudrillard’s “Simulacra and Simulation” (1981).

world reality is acknowledged by “images” or “imitations” by which gives an opinion of the actual world where we belong to (Gould, 1969, p. 20).

Baudrillard (1997, pp. 5-6) rejects the idea which suggests that a sign has to have a depth of meaning or it has been exchanged for a meaning. Simulacra refers to “representations” whereas simulation refers to the “imitation of the system” like being a mechanism. He (1997) defines the whole system as a “gigantic simulacrum” that is not exchanged for the real but exists for itself. Representations recognize the simulation as a false representation but, the simulation embraces the whole structure as a simulacrum itself. About the process of “exposing an image” Baudrillard (1997) identifies four aspects:

- (1) by reflecting main reality;
- (2) masking and altering main reality;
- (3) by masking the absence of a main reality;
- (4) by not having any association to any reality;

and finally, by referring to its own simulacrum. For searching the objective reality, Bourdieu (1996, pp. 482-483) says that it is more feasible to grasp the idea of “representations” which refers to the “whole reality of a social world” so that the world is realized “as will and representation.” Lombard and Ditton (1997) refers that the concept of “realism” is a multi-dimensional between “social realism” and “perceptual realism.” Social realism is associated with the “validity of the communication substance”—as the media content—although, perceptual realism is about confirming the “credibility level of the metaphors” that are presented in communications—as the media form (cited in Mennecke et al., 2011, p. 419).

## ***2.2 Sense of Presence, Co-presence and Perception***

Loomis (1992) identifies that the concept of “presence” is a state of consciousness which helps to perceive stimulus or environment (cited in Biocca, 1997, p. 20). Designers pay attention to the “sense of presence” in the means of learning, transferring knowledge, attention and motivation purposes (Barfield et al., 1995;

Lombard & Ditton, 1997 cited in Biocca, 1997, p. 20). Based on our everyday sense of presence, we unconsciously create a model of an external space based on our sensory organs in the physical world. When the presence of another intelligence is noticed from the user, the minimum level of social presence occurs. It is same for the virtual environments but this time perceptual processes generate perception of the virtual world (Biocca, 1997). “Embodied presence” enables people to take action in order to find themselves in their desired places. It is not only about materiality, but the feeling of “realness” determines the quality of “being there” as the experience itself (Taylor, 2002, pp. 43-44). Perceptual technologies like photography, cinema or any sort of media form, broaden our senses for making sense about ourselves. Those technologies are not only *mediating* but also *constituting* the understanding of our physical existence. Subjectivity of the embodied presence relies on the technology which co-constitutes objective and physical practice in regard to representation and social existence (Sobchack, 2004).

Perception is the meaning that has been understood and interpreted both internally and externally to the self (Gaines, 2006). According to Armstrong (1961) physical objects or events prepossess our sensory organs. The knowledge about their existence and characteristics is acknowledged unintentionally but not necessarily putted in a verbal way (cited in Collins, 1967). Schopenhauer (1909) illustrates that understanding of the knowledge relies on our relatedness with the content, our relationship determines the idea of perception. Field of cognition has been addressed over the last two decades within the fields of philosophy, psychology, neurology and artificial intelligence. Especially, human cognition is addressed from different fields of studies therefore, interdisciplinary research fields are emerged (e.g. cognitive neuroscience, cognitive neuroscience, cognitive psychology). The term “subjective enactment” is from the cognitive that: (a) perception can be founded in perceptually oriented actions; (b) actions are “perceptually guided” as the consequence of cognitive formations by which appears from the repetitive “sensorimotor patterns” (Varela et al., 1991, p.173 cited in Beijnon, 2017). Human perception is controlled by structures which eventually affecting “the self” and “pattern of our senses” (Beijnon, 2017).

### 2.3 Notions of Space

*“We do not mean a place or space in which there is absolutely nothing, but only a place in which there are none of those things which we expected to find there.”*

*-Descartes<sup>5</sup>*

*Space* is the source experience of embodiment by being objective, abstract and undifferentiated. By articulating space as being “impenetrable” Newton (cited in Bennet, 2017, p. 1) distinguishes space from place by comprehending place as a part of space. Newton states that place is absorbed by “penetrable” things except from body because it is also impenetrable thing. By focusing the extendibility and mobility, body is investigated in an abstract manner rather than referring to its physicality. Paul Dourish (1996) states that:

*“Appropriate behavioral framing not noted in the properties of space at all. Instead, it is rooted in sets of mutually held, and mutually available, cultural understandings about behavior and action. In contrast to “space,” we call this a sense of space”* (cited in Resmini and Rosati, 2011, p. 75).

Three ways of perceiving space are defined by Harvey (2004, p. 2) as; (1) “absolute”; (2) “relative”; and (3) “relational.” *Absolute space* is addressed like a frame that events are planned and recorded in. This space is conceived as the property of demarcations and city plans based on the ideas of Newton and Descartes. Perception occurs through buildings and structures where the experience lived through the feelings relating to associated space. *Relative space* is correlated with thoughts of Einstein and the non-Euclidean geometries and stated as “relative in the double sense”; (a) measurement is considered in terms of scale and means; (b) form of measurement is emphasized based on the framework of the observer. *Relative space* is conceived as the space of mobility, perspectives and displacement. Perception is achieved through natural environment,

---

<sup>5</sup> In, Biocca, (1997). The cyborg's dilemma: progressive embodiment in virtual environments. *Journal of Computer-Mediated Communication*, 1(3), p. 20.

people and capital and but also through mobility, feelings of expectations and social norms. *Relational space* is related with the theories of Newton which he claims that the space cannot be explained by other circumstances. Relationality of space and time are accounted for in the framework of this mentality. By suggesting the processes does not appear in space, but forms as their own (Harvey, 2004; Perrault, 2012).

According to Biocca, the world is embodied and created from patterns of energy revealed by the human body. The body is portrayed like an information channel which simulates the mind (1997). Piaget (1955) mentions that space cannot be divided from body, organism and environment (cited in Koeck, 2013). Our embodied and existential senses are affected by our sudden judgement upon the characteristics of space that we make unconsciously (Pallasmaa, 2014). Space is not just an area that covers objects, but also a cognitive space where the meaning of signs is dignified (Gaines, 2006). Dynamics of the space is shaped by some variables such as; body, perception, experiences, sense of self, social and cultural relations (Low, 2003). Pandolfi (1990) claims that the existence of a person is affected by historical and social structures in the way of describing and expressing the self. This situation manifests itself within a “minimal” identity so that the experience of the body saturates “body” and “existence of a person” (cited in Low, 2003, p. 11).

Presence realized by our corporeal bodies as well as our virtual identities (Taylor, 2002). Corporeal body forms in physical space with an observable manner. However, virtual body represents the body of user inside of virtual environment (Biocca 1997). Sense of presence in virtual environment is generally created by the “avatars” so that the user can embody into that world. Two aspects are stated in regard to virtual embodiment:

- (1) “The body schema”<sup>6</sup> can be regulated by physical body;
- (2) Physical and virtual bodies may have different social roles compared to each other.

---

<sup>6</sup> *The body schema* is defined as an inner representation of the user’s own body.



These statements differ according to related situation and associated virtual environment. Biocca (1997, pp. 19-24) states that user's sense of presence changes back and forth between three environments;

- 1) "Physical environment" by which the user *actively* creates a mental model of the non-mediated version of *material space* where they can acknowledge and observe the cues in their physical surroundings,
- 2) "Virtual environment" by which the user creates a mental model of the *virtual space* where they can acknowledge and observe the cues in their *virtual surroundings*. It is stated that presence in virtual environments are relatively lower in contrast to physical environment,
- 3) "Imaginal environment" by which realized if the user does not receive or respond to any sensory cues from both physical and virtual environment. It is similar with daydreaming or dreaming where the presence is internally simulated.

### ***2.3.1 Real Space***

The act of thinking of a physical space recalls particular sensations. This recall is similar to the act of remembering of a space from the movie (Koeck, 2013). In physical space, we are surrounded by forms of representations and movies are considered as being the closest form to world reality (Kutucu, 2005). From a two-dimensional screen, the audience does not experience physical space they experience cinematic space that is visualized by *mise-en-scène* and narrative (Kutucu, 2005).

### ***2.3.2 Embodied Space***

"Embodied space" addresses where the experience and consciousness appear physically and spatially. The term lets us avoid the misconception between objective and subjective standpoints about the notion of "body" in terms of its physical and representational aspects. Discrete notion of body is acknowledged with lived

experiences where the body is seen as an entity both physically and biologically (Low, 2003, p. 10).

## ***2.4 Koeck's Definition of Being in Space versus Embodied Experience of Space***

Koeck (2013) states that cities are perceived more than one sense. Sense of space becomes as a multi-sensory engagement that can be founded in phenomenological and existential arguments. He (2013, pp. 55-68) expands the discussion throughout the existential and experiential notions of space while addressing the spatial theories under two subchapters as “being in space” and “embodied experience of space.”

### ***2.4.1 Being in Space***

*“Space is a means by which to bind as well as separate, to include as well as exclude, and precisely by bringing to life a critical conception of space, he provides some of the tools for decoding the spatial metaphors that ‘script’ our efforts to integrate, negotiate, and theorize different ‘positions.’ This is the brilliance of the production of space.”*

*-Smith<sup>7</sup>*

Being in space refers to our sense of being there occurred by our real-life experiences with the interaction of physical world. In order to better understand the concept of “being in space” the concept of “being” itself has to be discussed. According to Heidegger (1927, pp. 2-3) there are three prejudices about the meaning of being:

- (1) It is the most “universal concept” consists in everything that the medieval ontology sees being as “transcends”;
- (2) It is an “inexplicability concept” that based on our traditional logic rooted in ancient ontology it seemed as not something like being;

---

<sup>7</sup> Cited in Perrault, (2012, p. 16).

- (3) It is a “self-evident concept” that used in all knowing and predicating about every relation to being and oneself.

He (ibid., p. 3) points out that everybody understands the statements like “the sky is beautiful” or “I feel happy” but the comprehensibility of these statements demonstrates its incomprehensibility. To avoid inexplicability, question of the “meaning of being” must be formulated. What is questioned has to be clarified and conceptualized because, each being requires its own conceptualization (ibid.). Heidegger formulates a terminology called “Da-sein” which he describes as a “mode of being, presence or being-there” (ibid., p. 6).

Da-sein exists as a mode of “being-in-the-world” experienced by “being attuned.” It is about: “*what constitutes the world and self and their essential relatedness*” (Thonhouser, 2019, pp. 1-2). Bollnow discusses two claims of Heidegger as the source of his discussion:

- (1) Somehow, we are always attuned;
- (2) All of our experiences shaped by attunements (ibid.).

Heidegger’s existential analysis examines human existence over one simple example which leads a common understanding of existence. Bollnow proposes that the plurality of manifestations should be studied by philosophical anthropology for illustrating the new dimensions of human being in relation to the world (ibid.).

According to Merleau-Ponty (2005) the idea of being relies upon perceiving the world through our bodies—as the subject of perception. He (ibid., p. 239) states that “*every external perception is immediately synonymous with a certain perception of (the) body, just as every perception of (the) body is made explicit in the language of external perception.*” Koeck (2013, p. 60) compares the theory of “perception” and “body” by focusing the fundamental parts of the cognitive processes for defining the state of being.

### 2.4.2 Embodied Experience of Space

As a phenomenon, experience is described as a subjective knowledge about the personal occurrence. As a result of the processing of experiential data, experiences consist as “living and lived experiences.” Three detectable layers are referred for explicating the “basis of experience” (Eugeni, 2011, p. 7);

- (1) The first layer is about *sensory scanning* together with the *characterization of accessible resources*. Subjects are achieved as an awareness about the existing emotions around themselves,
- (2) The second layer is about the *narrative processing* where the layer between subject and outside world is recognized,
- (3) The third layer is about the *relational adjustments*, realized between subject and existing object. Experience of other entities can be examined for understanding the bodily signals and replicating their mechanism (Eugeni, 2011).

Three aspects are illustrated in relating to the subject of experience as; embodied, located and culturally inserted. First, experience is realized through mind and body system at the time of encountering an unexpected situation. Then, the subject of experience is described as an ongoing activity where the perceptual memories are converted into meaningful configurations for future interpretations. Lastly, the subject of experience is defined as being in an active and complex structure that the range of resources are immersed (Eugeni, 2011). Embodied experience is a kind of a simulation which refers to representations created by “observed actions, emotions and sensations.” It is realized if the person performs or experiences similar actions or emotions (Ward, 2015, p. 167). Instead of being “pre-conceptual” or “non-conceptual”, perceptual experiences determine our involvement with the world. For example, Kant (1781) states that the world cannot be experienced “in the absence of conceptual structure” because it specifies the “representational components of experience” (O’Brien, 2020).

Coëgnarts (2017, p. 2) illustrates embodied communication model through two important theories<sup>8</sup> relating to the “embodiment”:

- (1) Artists unintentionally pay attention to the thoughts of other people and this thought is referred as “embodied”;
- (2) Meaning is described as an embodied thought. Proof of the embodied thought is determined relying to the meaningfulness of the expressions (such as language and cinema);
- (3) Awareness occurs if the perceiver (such as cinema audience) interprets the embodied thought as; (a) a mode of embodied expression; (b) a mind reading that is provided by embodied simulation mechanism.

---

<sup>8</sup> See, George Lakoff and Mark Johnson’s “Conceptual Metaphor Theory (CMT)” and Vittorio Gallese’s “Embodied Simulation (ES) Theory.”

## CHAPTER 3: SPACE IN CINEMA AND EMBODIED EXPERIENCE OF SPACE

This chapter discusses the space concept in cinema through the concept of embodied experience of space in order to figure out the effects of space design over the cinematic experience—as the embodied experience of space. In the first set, a brief definition about cinema is given together with the evaluation process of the cinematic perception. Second sub-topic covers the concept of *embodied meaning* in relation to the *metaphors in cinema*. In the third section, *cinematic experience* is covered through the examination of *media experiences* for understanding the concept of *mediated perception*. In the fourth sub-topic, *cinematic space* is covered through cinematography and mise-en-scène in the means of relating meaning with the *narrative*. Lastly, for referring to the simulated experiences, *perceptual design* is acknowledged in relating to the *consciousness*.

By the beginning of the 20th century, movies have been used like a tool that reflects the changes of social and institutional relations in city and space. Movies are presented through motions, sounds and emotions by relying to the knowledge and imagination of the perceiver (Kutucu 2005; Clarke, 2012). Cinema is a multidimensional practice, rather than just being a screen-based experience, movies modify the quality of the urban spaces (Koeck, 2013). Three types of visual space are categorized in cinema: (1) in front of the camera as “real space”; (2) space that is appeared through screen referred as “cinematic space”; (3) lastly, size and shape of the screen itself is considered (Ebrahimi Asl and Mizban, 2016, p. 346). However, Gardiès (1993)<sup>9</sup> clarifies four types of space from a geographical perspective which addresses to the relationship between “space, set, and characters”;

- (1) “Cinematographic space” is used for pointing out the *institutional settings*<sup>10</sup> where the viewing action is facilitated,

---

<sup>9</sup> (cited in Levy, 2013, p. 694)

<sup>10</sup> It refers to the medium which the movie is represented through (e.g. movie theaters, television or any type of device with screening qualification).

- (2) “Diegetic space” is used to referring to the whole cinematic reality independent from the story,
- (3) “Narrative space” is associated with the distinguishable spatial characteristics that affecting the substance of the story,
- (4) “Viewer space” refers to spatiality in the manners of the communication tool that the movie uses (Levy, 2013, p. 694).

In the second chapter, the body was described as a physical item and embodiment as a way to engage with the world (Csordas, 1994). The active body of the cinema audience becomes more static during the cinematic experience. The world idea shifts into a paradigm where the represented world image is introduced through the cinematic space. Kutucu (2005) states that the creation of the embodied experience is achieved through the regeneration of spatial reality between transmitters (filmmakers) and receivers (cinema audience). Cinematic experience is relying on the relationship of audience’s real-world experience which forms in a “iconic and non-iconic social and visual cues.” Thoughts upon people in the real world and fiction world is shaped by our social experiences that are affected by the media representations (Prince, 1996). Eugeni (2011) states that the media experiences are pre-established as they impersonal and common.

### ***3.1 A Brief Introduction to the Cinema***

Cinema is illustrated within the framework of photographic medium due to its relationship with the photographic image in terms of *realism* (Prince, 1996, p. 27). Bazin (1967) describes the photographic image as the object. The term “cinematic” is used for referring to the capability of cinema about controlling the subjective experience of time, space and movement (Ward, 2015, p. 159). From the invention of the motion picture until today’s digital camera technology, the perception of cinema was influenced by many changes in technological developments, historical and social circumstances. First motion-picture camera was invented by Edison and his assistant Dickson in 1890. The invention is named as Kinetograph (Figure 3.1) which comes from the Greek words— “kineto” and “scopos”—which refers to “movement” and “watch.” Patent for Kinetograph (film mechanism) and Kinetoscope (viewing

mechanism) was obtained in 1891 (Museum of Modern Art, 2020; Library of Congress, 2020). About Kinetoscope (Figure 3.2) it is stated that:

*“When we view still images in rapid succession, our brain perceives them as being in continuous motion. Dropping a nickel into the Kinetoscope’s slot would activate the machine, and as the celluloid rolled through it at varying frames per second, one person at a time could peer through a peephole on its top and watch as short moving sequences passed before their eyes”* (Museum of Modern Art, 2020).

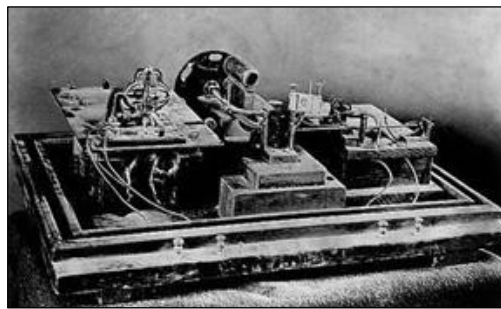


Figure 3. 1 Kinetograph (Source: American Physical Society Sites, 2020).

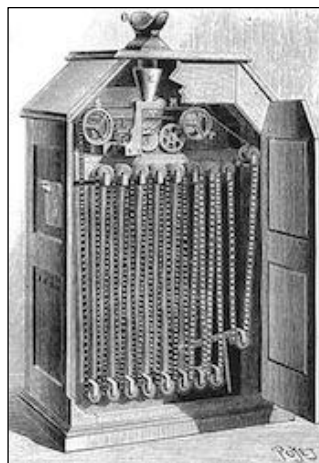


Figure 3. 2 Kinetoscope (Source: Museum of Modern Art, 2020).

In 1895, The Lumière brothers invented Cinématographe which is a motion-picture camera combined with, printer and projector (Museum of Modern Art, 2020). The mechanism is considered as the actual cinema invention by providing both capturing



and screening technologies. Kinetograph had been providing the viewing for only one person through peephole.

About the similarity between cinema and hypnosis, Bellour (2009, p.15) mentions that the cinematic experience likens to “a form of hypnosis” (cited in Eugeni, 2012, p. 2). This statement may change according to contextual and stylistic preferences of the movie. Movies are classified into categories based on their genre, movement, period and nationality. Eugeni (2012) states that the cinematic apparatus and cinematic experience are presented with a metaphor of hypnosis for example, using of low lights purposely.

### ***3.2 Embodied Meaning and Metaphors in Cinema***

As a medium, cinema uses different approaches to convey meaning through moving images. According to the conceptual meaning<sup>11</sup> theory, all modes of expressions are defined on the basis of linguistics. However, embodied cognitive science claims that the meaning is grounded in bodily knowledge and articulated as the following (Coëgnarts, 2017);

- (1) Form is considered as meaningful because thoughts are interpreted through forms,
- (2) Thought is grounded in embodiment,
- (3) Characteristics of embodied thought is presented through meanings that are structured in forms,
- (4) Language is stated as a mode of expression by relying to the embodied processes that are engaged with the human senses,
- (5) Meaning is not necessarily limited with the linguistic meaning (ibid.).

It can be said that the meaning is already rooted in bodily knowledge and structures. Linguistics can be considered as one of the ways of externalizing the meaning. Relating to the filmmaking process other approaches can be described as: writing

---

<sup>11</sup> See, Mark Johnson (2007, 2013).

scenario, organizing, planning as a development phase; location scouting<sup>12</sup>, design set and costumes as pre-production; shooting as production; montage color grading, effects and sound mixing as post-production (Guest, 2012). All these aspects are designed to obtain the movie as the final output that helps to transfer meaning.

Embodiment of the concepts are addressed verbally (language) or non-verbally (movie) between form (as the source of perception) and content (as the source of thought). Linguistic expressions are examined for finding out how the embodied metaphors are rooted in for understanding the structure of meaning about other forms of expressions. The phenomenological dissimilarity between words and images points out that the language is forms within a strict and figurative structure. Immediate correlation cannot be founded for language and the world of perception. For movies, comprehensive formation of language is not realized because the reality is simulated (Coëgnarts, 2017). About the conditionality of metaphors, Coëgnarts and Kravanja (2016) claims that the structure can be arranged during the filmmaking process and they underline some suggestions;

- (1) The system of the actual source domain is designed by conceptual metaphors by relying to the conceptual domains of experience,
- (2) Source domains are guided by deductional image schemas which refers to the pattern of human sensory-motor experiences,
- (3) Cinematic image schemas are created by the operation of different cinematic devices like a general combability (characteristic) which can be examined through movies,
- (4) The expansion of metaphorical pattern is elaborated by the systematic process in filmmaking. Spatial rationale of the image schema can be adapted over the deductional rationale of conceptional target domains,
- (5) Target domains in movies are generally obtained metonymically by outlining of one conceptional domain instead of two (Coëgnarts, 2017).

---

<sup>12</sup> The process of finding location for the movie.

Mirty's idea of signification in cinema classifies around psychological and linguistic signs. Psychological signs are addressed to inner representations relating to our perception. Although, linguistic signs refer to forms relating to ideas or notions. Cinematic experience relies on physiological signs of perception which induce the process of realization based on our senses (Lefebvre, 2014). Visual art forms should be considered as a more than tool which demonstrates just occasions or objects but stays as the basis of "visual thinking" (Archeim, 1969, p. 254 cited in Coëgnarts, 2017, p. 6).

### ***3.3 Cinematic Experience and Mediated Perception***

About the relationship between "real" and "virtual" Gallese and Guerra (2012, pp. 183-184) mentions that movies serve a variety of possible fictional worlds. Perceiving those fictional worlds likens to our real-world perception. According to the cognitive film theory, visual psychology and neuroscience perceiving scenes in movies are similar with direct and mediated experiences in terms of dynamics of attention, spatial cognition and action. Like Embodied Simulation (ES) theory mentions that our brain and body system use neural resources while we are observing performed actions to simulate those actions (Gallese and Guerra, 2012, p. 185).

Cinematic experience is referred as a form of involvement that indicates a contextual relationship with the audience. During the viewing activity, two types of consideration are stated about the status of the audience: (1) by cinematic experience being as a passive activity; (2) by the relationship between camera and point of view which focuses on the aspects that mediates the connection. These expositions are addressed over the complexity of narrative cinema regarding the relationship between audience and their bodily orientations (D'aloia, 2012). During the cinematic experience, cinema audiences are highly active by processing the audiovisual information obtained from screen (Asl and Mizban, 2016). D'aloia (2012, p. 159) uses the embodiment as a general explanation for the cinematic experience where the cinema offers *re-embodiment* of an experience that is already *disembodied*. About contextually embedded metaphorical issues in movies, Sturken and Cartwright claim that they can

only be understood based on the proper background knowledge of the cinema audience (Maszerowska, 2012).

Media experience is defined as an experience that the attention is provided by sensory materials (e.g. moving images, photographs, words, sounds, noises, pictures etc.) It is stated that media experience can be observed in the means of:

- being a continuous ordinary experience; or
- combining with other activities.

In the second chapter, three detectable layers have been stated about the basis of experiences; *sensory scanning*, *narrative processing* and *relational adjustments*. Those clarifications can be applied into the media experience. However, this time the subject creates not just one, but *three fields of intentional objects*. The first field refers to the regular experiences where the world is seen as precise. In the second field, sensory materials are provided by media devices. In the third field, nature is addressed as fictional so that the world is perceived indirectly where the discursive materials have been accessed by the subject. In summary, between the “three layers of experience” and the “three fields of intentional objects” experiences are realized on the basis of seven joints;

- A. *Sensory scanning together with qualitative figures*: sensory materials are obtained through media devices,
- B. *Narrative sorting about the indirect world*: indirect world can be experienced by the media users,
- C. *Narrative sorting about the discourse*: sensory materials are perceived through the media users where the media devices expressed as: (a) a continuous indirect production; (b) a development and revision of the story; and (c) a perceptible format that can refer to time and space,
- D. *The narrative sorting about the direct world*: media users discover the connection between their own activities and the circumstances that they realized in the indirect world. This connection can be occurred as continuously

(in terms of “factual” media experience) or discontinuously (in terms of “fictional” media experience),

E. *Relational conformation among the subjects of the indirect world:* mindset of the subjects (fictional characters) are sensed through the perceivers by consorting their memories, emotions, and knowledge,

F. *Relational conformation among the subject of discourse:* presence of the continuous activities (such as writing, speaking, etc.) are realized by the user based on trust and assurance or distrust and lack of assurance,

G. *Relational conformation among the subject of the direct world:* the users realize that the relationship among trust and assurance can be adapted into the direct world to compound with other users therefore, media experience evolves as an ordinary experience with social interactions (Eugeni, 2011, pp. 7-9).

### ***3.4 Cinematic Space and Narrative***

Fundamentality of cinematic space consists through “two-dimensional discontinuity” and “deceptive three-dimensional continuity.” Three-dimensional physical space is captured by camera lens where two-dimensional cinematic image is produced as the output. The continuity in cinematic space can be postulated as “illusion is becoming motion” which is created through the series of static images. Portrayal of the objective reality, it mirrors the real space or addresses the fictional space (Dunat, 2015, pp. 475-485).

Cinematic space serves different ranges of relationships by establishing sensory, social and material characteristics. Meanings and associations about the term “space” are exposed by the creation process of space both intellectually and physically (Clarke, 2012, p. 25). Visual components are introduced through cinematic space in terms of their forms and spectacles. Visual components in movies are specified by cinematography and mise-en-scène which;

- makes the art form aesthetic and worthwhile,

- consolidates the meaning to enhance the narrative for communication purposes.

Cinematography simply referred to the preferences of the camera work in order to introduce the properties of associated setting. In the early 1900s, fundamentals of cinematography were established as a set of rules which helps filmmakers to achieve sustainable visual outcomes in every shot. Four main principles are defined in terms of camera work: (1) camera angles; (2) framing; (3) point of view; (4) camera movement (Håkansson, 2013). Motivation of the narrative is designated by the choices of camera work. Movies are capable of stimulating the affective reactions such as; amusement, fear, enjoy, disgust, etc. However, the cinematic techniques are generally not recognized during the viewing action so that they are perceived in non-conscious way (Rantala, 2012). Understanding the cinema composition is realized by the cinematographic embodiment based on the emotional state of the audience (Tikka, 2008). *Mise-en-scène* addresses to the framing (a shot) with the whole aspects in it (setting, lighting, set design, composition, acting and costumes). Single shot is used to refer “a piece of space” where the movement and duration is obtained by the “sequence shots” (Deleuze, 1997, p. 25).

Memory and imagination are described as embodied by their association with emotional details that forms in the narrative. Fiction is considered as a kind of illustration where the unconscious memories and moods are converted into meaningful narrative. Studies in cognitive neuroscience shows that reading or listening of narrative actually stimulates an embodiment because an important part of our sensorimotor system is activated. According to Embodied simulation (ES) theory this situation is related with the mental process relating to our ideational (planning, observing) and actual (experiencing) actions (Gallese, 2011). Based on mirror mechanism, ES can be realized during the imagining or perceiving of things. Imagining actually activates the same cortical area that is stimulated during the involvement of actual experience. “Visual imaginary” is stated as being equal to “actual visual experiences” and “motor imagery” with the “actual motor experiences” (Gallese, 2011, pp. 197-199). Also, ES can be released during the fictional world experiences (like, reading a novel or watching a movie);

- Where the mirror mechanism creates Feeling of body (FoB),
- Where the narrated piece is correlated with the bodily memories and imaginary relations (Gallese, 2011).

Rather than detecting the body's reaction with external stimuli, FoB is used for addressing our way of making sense about the social world (Gallese and Wojciehowski, 2011).

*“Embodied simulation as it is described here is quite different from standard accounts of the Simulation Theory of mind-reading. Embodied simulation is a mandatory, pre-rational, non-introspective process – that is, a physical, and not simply ‘mental’ experience of the mind, emotions, lived experiences and motor intentions of other people. Embodied simulation challenges the notion that interpersonal understanding consists solely of our explicitly attributing to others propositional attitudes like beliefs and desires, which we map as symbolic representations within our own minds. Parallel to the detached third-person sensory description of our social world, embodied simulation creates internal non-linguistic ‘representations’ of the body-states associated with actions, emotions, and sensations within the observer, as if he or she were performing a similar action or experiencing a similar emotion or sensation. This is what the Feeling of Body (FoB) amounts to. By means of the neural format we share with other human beings, and, to an extent, with some animals, as well, we can map others’ actions onto our own motor system, as well as others’ emotions and sensations onto our own visceromotor and somatosensory systems. It has been proposed that empathy is rooted in embodied simulation. Consequently, the FoB is not to be uniquely conceived of as a mere sensing of how our body reacts to external stimuli. It is a bodily way of making sense of our social world”* (Gallese and Wojciehowski, 2011).

### ***3.5 Perceptual Design, Cinematic Narrative and Consciousness***

*Perceptual engagement* is used for referring to the conceptual and simulated physical experiences (See, Bastiaansen, Thioux and Keysers; Gazzola, Aziz-Zadeh and Keysers; Keysers and Gazzola; Keysers et al.). “Mood” of the perceiver is defined by the perceptual engagement in the means of being a “pre-attentional unconscious mechanism” which performs multimodal information. *Narrative engagement* is used for describing the conceptual and simulated social experiences (See, Lombard and Ditton; Mar and Oatley). “Emotion” and “meta-emotion” are constructed by the narrative engagement through “attentional conscious mechanisms.” Every piece of cinematic unit form with presence and each combined sequence is defined as “proto-narrative” which is about intuitive connection with bodily experience of the mediated space. Perceptual design addresses to “P-consciousness” whereas narrative design refers to “A-consciousness” (Ward, 2015, pp. 164-167). Block (1995) describes P-consciousness (or phenomenal consciousness) as the “experiential properties of sensation, feeling, and perception.” A-consciousness (or access-consciousness) is used as “rational reasonings and direct way of action controls” (Block, 1995, p. 228). Movies have to be designed while minding the perceptual design from beginning of the filmmaking process till the post-production phase.



## CHAPTER 4: CASE STUDY

Spatial set up and usage of the objects are essential elements that specifies the quality of an experience as in real life and cinematic experiences. Both of the worlds (real world and cinematic world) are conceived by the objects which defines the properties of those realms. Objects are not just qualified by their colors, shapes, and textures but they characterize an ideology, context and emotion. Objects are utilized in the sense of being “sensorial” and “emotional” for constructing, preserving and specifying the characteristics. That enables us to look at movies with an “interpretative gaze” (Gambarato, 2010, p.106). Almost all kinds of properties—including objects—are structured within the system so that the receiver's perception is inevitably shaped by those characteristics configured in the world—like tools, language, culture and etc. (Merleau-Ponty, 2017; Toadvine, 2019).

Objects in movies are used to present particular thoughts, ideals or any kind of intentional meanings. About the “being of things” and “occurrence of things” Merleau-Ponty (2017, pp. 60-61) states that they are inseparable, so it can be stated that interpretation of the objects can give information about the narrative. Cinema is described as “perceptual” like any other visual arts, by the combinations of (selection of the screened parts, duration of the parts, their alignments, featuring sounds and voices) that predicts the integrity of cinematographic structure. The movie (as a final composition of those combinations) offers “perceptual experience” to the audience realized by the “objective entities and their sensible characteristics” (Frey, 2013, p. 71).

The objective world is identified through “spatial entities” which the subject receives the knowledge of those entities through the “world of objects.” Subject and object are described as two types of reality based on Cartesian metaphysics: subject forms internally and object is apprehended externally (Azeri, 2011, p. 269). In order for “experience” to occur between subject and object, Kant (1929) states that it can be realized if the existence of the “objects of experience” occurs (cited in Azeri, 2011, p. 269). We gain knowledge about the objects through their occurrences and appearances associated with the spatiality they are engaged with. Realization of the experience is

affected by the knowledge obtained from objects and spatiality. If we consider the same logic through the cinema perspective, objects should have rationality according to cinematic reality. Then they have to correspond to the audience's knowledge which makes it possible for cinema to relate narrative with the objects.

About the idea of reality shaping knowledge, Azeri (2011) points out that human determination should be addressed for analyzing reality. Analyzing the objects in movies essentially provide information about the cinematic reality. About the experience provided by the artworks, Merleau-Ponty (2017) states that they cannot be substituted with individual experiences, but they provide their kind of experiences. Basically, interpretation of the objects in movies provides information about the narrative so that the bound between audience and cinematic world can be correlated in a better way. Perceiver creates relations among happenings at the time perceiving and understanding a narrative text. By referring to "the syuzhet" (plot of a narrative) and "the fabula" (story), Bordwell (2004, pp. 248-249) states three types of principles relating to their relationship:

1. "Logic" is referred to such situations where an event assumed as the result of another event like a character trait. The syuzhet provides a systematic for reassuring of making narrow inferences.
2. In terms of "time" it is stated that the syuzhet can give clues about the fabula events in any series of order.
3. In regard to "space" it is stated that the syuzhet can produce a planning of fabula space by describing the associated surroundings to the perceiver.

Bordwell (1985) claims that how the syuzhet presents the fabula determines the spectatorial effect. The syuzhet and the fabula are unintentionally integrated with the cinematic reality. Baudry and Williams (1974) points out two levels of identifications based on the cinematic reality:

- It is engaged with the image itself pictured through the character representation as a secondary identification;

- The first level is accepted and considered as being “in action” so that the camera is substituted as the subject which captures the objects.

Subjective and objective are integrated into the narrative fiction movies for creating emotional relations with the audience while using the cinematic frame as a part of space where the action can be seen (Rantala, 2012; Altman, 1985 cited in Dunat, 2015). Filmmaking is simply a process of design where the frame is used like a canvas for “sign planning” to better emphasize the narrative (Gambarato, 2006, p.159). Design not just demonstrates the narrative but constitutes meaning and mood while acknowledging “*how the particular film-world is aesthetically revealed and how we are effectively attuned to that world*” (Sinnerbrink, 2012, p. 155 cited in Tarvainen, Westman, & Oittinen, 2015, p. 1). Understanding and interpreting an artwork (text, painting, play or movie) creates activity where the perceiver plays an important role. Understanding is intervened by transformational acts through both “bottom-up” (as psychological courses) and “top-down” (as conceptual courses). The act of perceptual recognition is stated as “interpretive” and if the knowledge is indirect, it is derived from the “interpretation.” In terms of movie interpretation, it is stated that the interpretation of the critic tests associated theory (Bordwell, 1991, pp. 2-4).

#### **4.1. Methodology**

Koeck’s clarification of “Being in Space versus Embodied Experience of Space” is interpreted in a different manner and utilized as a groundwork for the case study. Distinctly from Koeck’s interpretation, this research relates the concepts through the parameter of spatiality to refer; existential, architectural and embodied notions of space. Joseph Rusnak’s movie called “The Thirteenth Floor” (1999) is selected as a case study to analyze;

1. how the concept of “being in space” can be interpreted through the movie in the means of the sense of existence,
2. how the concept of “embodied experience of space” structures in a “layered” form realized for movie characters and cinema audience.

In the movie, space is considered as “an entity” based on the conception of “being in space.” Cinematic world is designed to idealize the sense of existence upon movie characters and cinema audiences. Cinematic space is designed to provide experience to the audience by embodying the presented. In “The Thirteenth Floor” movie characters also realize experience on the basis of embodiment of the places they are engaged within. This is why the concept is stated as being in a layered form. Effectiveness of the spatiality and objects realized for both the movie characters and cinema audiences in the manners of;

1. sense of existence of the movie characters which is defined by the objects and their relation to the associated environment,
2. quality of the cinematic experience which is determined by the objects and their relationship with the contextual reality of the cinematic world.

Cinema and design are considered together to analyze the expressed theories through the spatial set up and objects in the movie with a semiotic consideration. About the intentionally or unintentionally of the signs, Morris (1938, p. 20) states that: *"something is a sign only because it is interpreted as a sign of something by some interpreter..."* (cited in Eco, 1986, p. 15). Analysis of “The Thirteenth Floor” relies upon the examination of cinematography and mise-en-scène preferences within the framework of following criterions;

- (1) *relevance* is used for designating the specific objects to examine their relevance with the story,
- (2) *expressiveness* is used for analyzing the movie editing to introduce the spatial set up and objects to the cinema audience,
- (3) *functionality* is utilized in the means of:
  - a) *scenographic function*, for the examination of “setting” through camera angles and movements;
  - b) *semantic function*, for the signification of objects based on metaphors and metonymy;
  - c) *aesthetic function*, for the designation of specific objects in the manners of designerly choices (Gambarato, 2010, pp. 107-112).

#### ***4.2 Adaptation of Koeck's Interpretation of "Being in Space versus Embodied Experience of Space"***

Koeck (2013, p. 56) distinguishes "being in space" and "embodied experience of space" under the "existential and experiential notions of space" for analyzing the arguments by their relation to "city and cinema." Concepts are distinguished over the discourses of key scholars: Heidegger, Bullnow and Merleau-Ponty addressed in the means of "positioning the self in spatial surroundings"; De-Certeau, Norberg-Schulz and Pallasmaa in the means of "generating an image of the world based on the surrounding" (Koeck, 2013, p. 56). Consideration of *being in space* is about our perceptual realization through physical space in regard to disclosing our sense of existence. Deliberation of *embodied experience of space* considers movies as a tool that creates world image which affects how we perceive the world afterwards. Koeck (2013) addresses the embodied experience of space as a notion that shapes the perception of the perceiver after they watch movie. He assumes that the perceiver's perception upon spaces can be affected through moving images. By analyzing the embodied experience of space through the movie analysis, this research considers the concept as in a layered structure that can be realized for both cinema audiences and movie characters. In the scope of this research, Koeck's interpretation is extended into spatial notions (existential, architectural and embodied) for using them as a parameter for the movie analysis (Table 4.1). As Bordwell (1991, p. 8) states "*the spectator draws not only on knowledge of filmic and extrafilmic conventions but also on conceptions of causality, space, and time and on concrete items of information...*"

Table 4. 1 Adaptation of Koeck’s Interpretation of “Being in Space versus Embodied Experience of Space” (adapted from Koeck, 2013).

	Existential Space	Architectural Space	Embodied Space
	Perceived	Conceived	Experienced
Being in Space	Being there, surroundings and identification.	City, buildings, properties of location, symbols and expressions.	Origin of the object, thoughts, sensations and simultaneity of perception.
Embodied Experience of Space	Visuality, urban landscapes, inactive reception of impressions, reality and narrative.	Social, political and economic rationality of a place, physical laws.	Tactile perception, implying relation, enunciative function, tacit knowledge.

### ***4.3 Analysis of the Movie “The Thirteenth Floor”***

Analysis of the movie is conducted by depending on three main criterions; relevance, expressiveness and functionality as discussed above. Adaptation of Koeck’s interpretation is covered through the examination of cinematography, editing and mise-en-scène.

#### ***4.3.1 Rationalization of the Case Study***

*“In any medium, a narrative can be thought of as a chain of events occurring in time and space and linked by causes and effects...”* (Thompson 1999, pp. 10-11 cited in Cutting, 2016).

A movie from the science-fiction genre is selected because science-fiction provides perception shifts through the contextualization of time and space which is relatable to the framework of this research. The movie actually fits well into the category called “slipstream fiction” named by Bruce Sterling which covers the movies that stays in-between mainstream and science-fiction. In this genre, science-fiction feeling is not given through “defamiliarizing devices” but the use of “mixed reality” (Hayles and Gessler, 2004, pp. 1-2). This provides an appropriate field for discussing the concerns of the research, since the theme of the movie is likely to be foregrounded in ontological and epistemological issues. Willis (2016, p. 75) mentions that *The Thirteenth Floor* presents a narration through Baudrillardian fundamentality by stating that “*the real is lost behind the multitudinous simulations within the narrative, the film is in fact much closer to a truly Baudrillardian representation of the hyperreal.*”

#### ***4.3.2 Story and Structure of the Movie***

The movie relies on the idea of simulated worlds where the “slipstream of mixed reality” is given by portals of the simulator (Hayles and Gessler, 2004, p. 3). The story proceeds through solving the murder of Hannon Fuller—owner of the big computer company—whom was about to share a highly important piece of information with his colleague Douglas Hall. The company established a simulation technology of the world in 1937 in Los Angeles where the cyber beings (avatars) are scripted in the simulation. Simulation users are able to shift their consciousness into the cyber beings while they intersect the simulation. This intersection is portrayed as a *Deja Vu*, but the remembrances do not belong to cyber beings because the experiences are gained by the simulation users. Throughout the movie, the audience assumes that there are two worlds; the world of 1999 as the actual world and the world of 1937 as the simulation. At the very end, it is understood that the world of 1999 was also virtual which is simulated by the world of 2024 as the actual real world. According to Willis (2016, p. 76) the perceiver’s state of experience is correlated with “a symbolically-mediated hyperreality” which has no association with the real because the situation is virtually beyond the possibility. So, three time periods are introduced in the movie (Figure 4.1). Order of the years not forms in a linear understanding of time, but circularly where they all embedded within each other (Figure 4.2). Circular representation relies on the

idea of simulated worlds because there is one real world—2024—and the simulations are designed in a similar world conception for accommodating the imitations from the reference world.



Figure 4. 1 Three different time periods that the story took place.

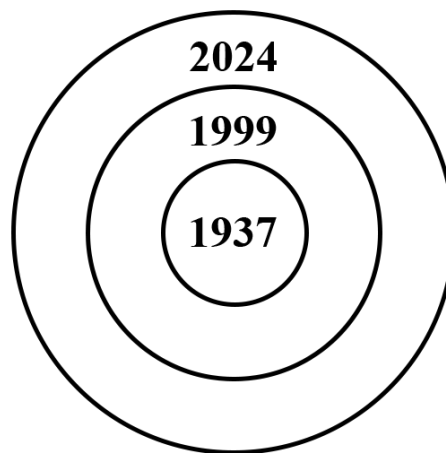


Figure 4. 2 Circular representation of timeline.

In the movie, character bodies are represented as a tool used by an upper consciousness for sheltering purposes. They used like design objects for example, the character appearances are created according to the specifications of the time periods. Identification of the movie characters differs between time periods and they are distinguished over their appearances and consciousness. In the framework of this research, consciousness and lived experiences are correlated with the concept embodied experience of space. Acts and behaviors of the movie characters are evolved around their lived experiences that they gained from different time periods. Emphasized knowledge in the specific time period affects the characters overall understanding and acts. In the movie, character bodies are used like a port for consciousness. Simulation users are able to shift their consciousness into other cyberbeings by using their body. Some of the movie characters are accommodating multiple identifications as the following:



Table 4. 2 Portraying of different identifications of the characters relating to the different time periods.

1937	1999	2024
		
Grierson	Hannon Fuller	Hannon Fuller
		
John Ferguson	Douglas Hall	David
		-
Jerry Ashton	Jason Whitney	-
-		
-	Natasha Molinaro	Jane Fuller

Movie characters are defined as “users” by the simulation interface (Figure 4.3). Way of their existence varies according to which body their consciousness inhabits.

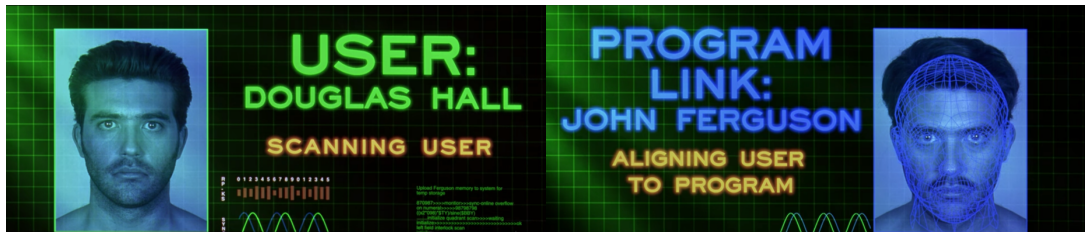


Figure 4. 3 Portraying of the character through the simulation interface.

#### ***4.3.4 Criterion of Relevance***

For designing the perception of space, some objects are specifically used for elaborating the conception of different time periods. Four objects are specified according to their relations between time periods; shoes, flat surface, smoking and curtains.

First example is the illustrating of “shoe” which can be correlated as a universal figure for reflecting the necessities of associated environment and society (Figure 4.4). The world of 1999 substitutes the obligation of wearing shoes (Figure 4.4 A) however, the world of 2024 does not require such necessity (Figure 4.4 B). While portraying this contrast between 1999 and 2024 (Figure 4.4 A and B), locations of the shoes are arranged in a similar composition. However, framing of their depth of field differs; in 1999 deeper depth of field was used; in 2024 shallow depth of field was used which only highlights the shoes and feet. Except from these inferences, illustrating of shoes reflects the character's state of mind which is inevitably affected by the spontaneous indicators of the space perception relating to the environment. For example, character’s emotional confusion is shown by illustrating the shoes irregularly (Figure 4.4 C).



Figure 4. 4 Close-up shots of the shoes.

Second example is “flat surface” which can be associated with the idea of a protected place where the character uses simulation technology away from everything. In 1937 and 2024 flat surface is illustrated through the use of “bed” whereas in 1999 it is portrayed through the “surface of the simulation machine.” Being lay down over a flat surface signifies the isolation by which necessitates concentration like if the character meditates. Red cursors on the Figure 4.5 shows that the flat surfaces are shown within some sort of frame where the action lefts behind the scene. In 1937 (Figure 4.5 A), interior portrays that the period is away from having an advanced technology with the simple home looking along with the choices of antique objects. Whereas in 1999 (Figure 4.5 C), the complex design of the simulation device gives the feeling of cybernetic age. In 2024 (Figure 4.5 B), environment is portrayed conveniently by giving the sense of simplicity. Design of the world of 2024 gathers two aspects from other periods; cozy look addresses to the world of 1937 with the use of “bed”; advanced technology refers to the world of 1999 but this time the portrayal of the simulation device is converted into simpler designerly choice—a headset.

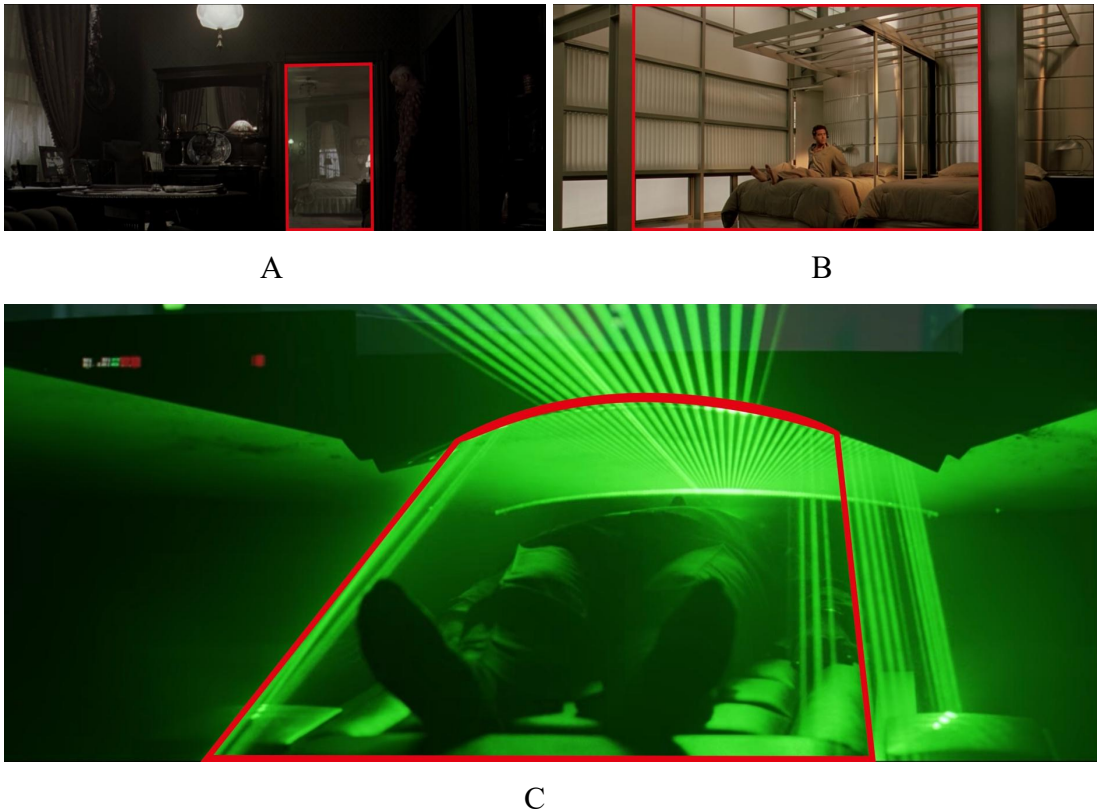


Figure 4. 5 Examples of the illustration of flat surfaces.

Third example is the “smoking” which reflects the character development relating to his experiences between time periods. At the beginning of the movie, the detective offers smoke to Douglas Hall, but Douglas rejects the offer by stating that he is not a smoker (Figure 4.6 A). Douglas again rejects the smoke offer from his employer when he is in the simulation of 1937. However, he finds out that John Ferguson (his identification in 1937) is a smoker after the boss asks him “since when?” (Figure 4.6 B). Then, Douglas embraces the idea of smoking and brings his experience from 1937 to his own world—1999 (Figure 4.6 C).



A



B



C

Figure 4. 6 Scenes that are associated with smoking.

Last example is the use of long white “curtains” to create the idea of mystery relating to the environment and time period. Curtains are appears in two scenes where the same characters are showed; in 1999 curtain is right behind Douglas Hall where he stood to look at Jane Fuller (Figure 4.7 A); in 2024 Douglas and Jane walk through curtain, Jane takes the hand of Douglas and walks ahead like introducing him with the actual world (Figure 4.7 B). In the first scene the curtain hides the properties of the outside world, while in the second scene it is used like a passage/gateway which opens up to the actual world.



A



B

Figure 4. 7 Scenes with curtains are illustrated.

### ***4.3.3 Criterion of Expressiveness***

Editing is another aspect that evaluates the sense of space. Some scene transitions are preferred to put emphasis on specific spatial relations. Five joints of editing transition are stated in the means of enhancing the embodied experience of space;

1. *Action-to-action transition* shows the progression of one single subject in a specific amount of time. Parts of an action is showed rather than illustrating the entire movement so the audience can fill the gaps in-between the actions. Figure 4.8 shows the travel of the character where is headed over to find out a symbolic indicator which

approves the virtuality of the 1999 world. Because of the emotional intensity of the scene, completing the action takes relatively longer (71 seconds).

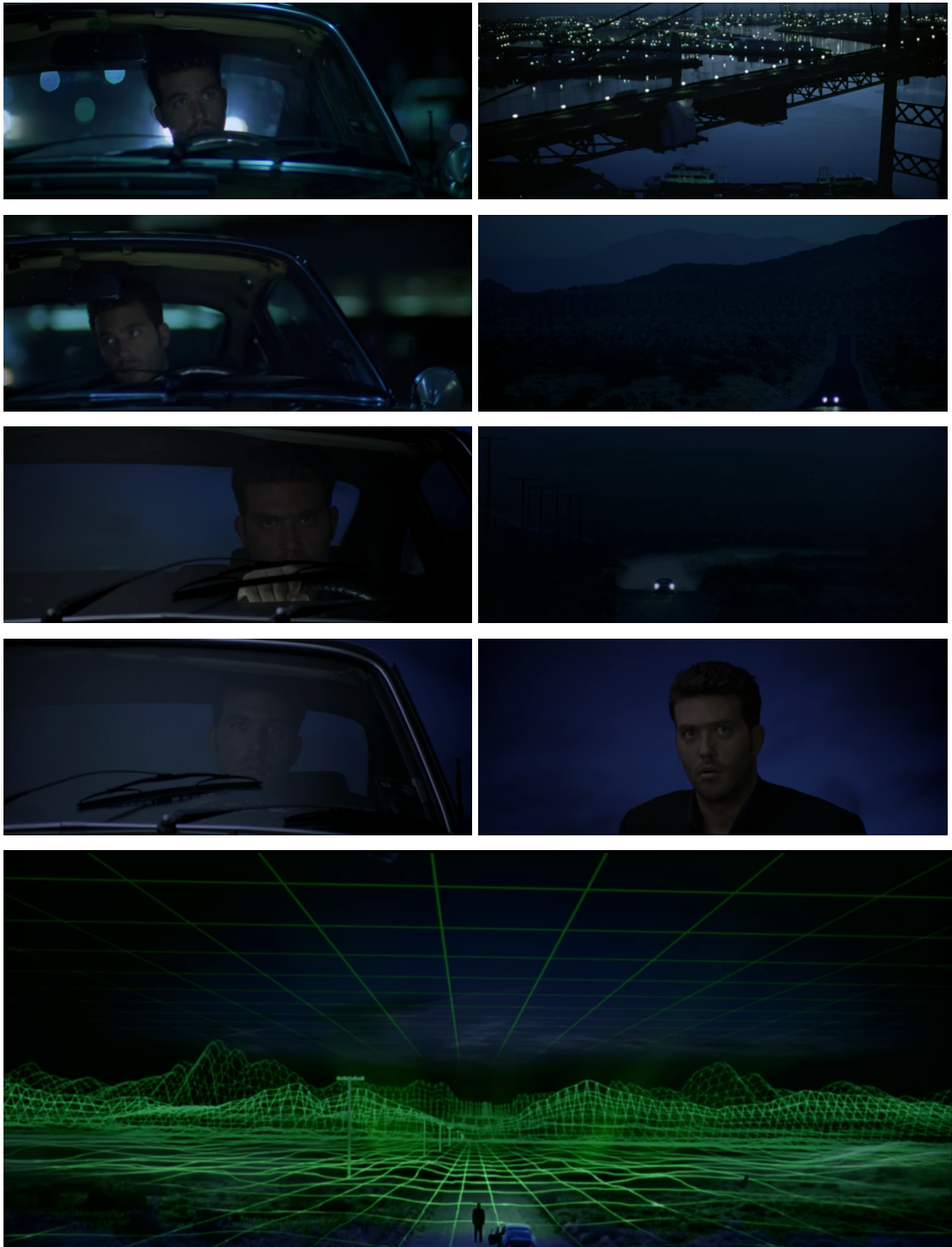


Figure 4. 8 Example of an action-to-action transition.

2. In *aspect-to-aspect* transition, same place is elaborated to arouse the feeling of curiosity, giving the impression about an idea or emotion. Figure 4.9 shows different aspects of space that character observes in the moment he entered it.



Figure 4. 9 Example of an aspect-to-aspect transition.

3. In *moment-to-moment* transition, same action is portrayed with a minor change in time, like describing the immediate occurrence of an action. Consciousness transfer is illustrated as a sudden action, while showing the character's head coming towards to the camera (Figure 4.10).

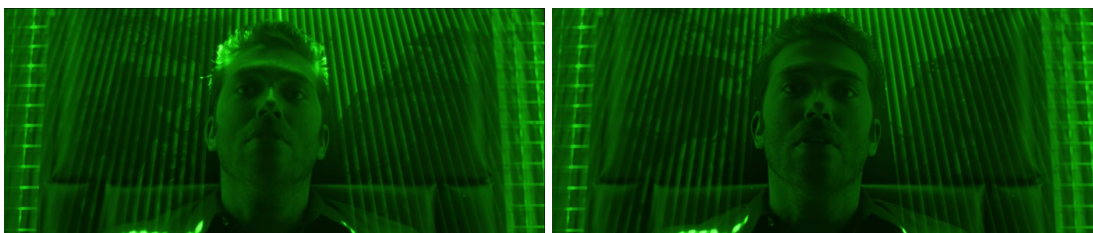


Figure 4. 10 Example of a moment-to-moment transition.

4. *Scene-to-scene* transition refers to the shifting into another spatiality that is respectively distant. This transition is used for illustrating the continuing life flow of 1937 simulation (Figure 4.11). After the character returns to his consciousness in 1999 (Figure 4.11 A), simulation of 1937 (Figure 4.11 B) continues to exist on its own. Embodied experience of space is addressed over the shifting of identifications between time periods.



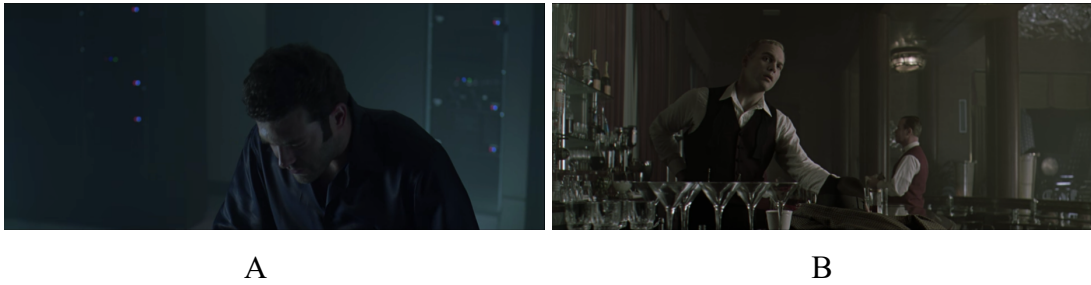


Figure 4. 11 Example of a scene-to-scene transition.

5. *Subject-to-subject* transition refers to the scenes that consist of more subjects. The audience does not have an idea of the space before seeing each subject in turn. Seeing cigarette packs (Figure 4.12 A) on a floor evokes the supermarket setting, where Natasha Molinaro is (Figure 4.12 B). So, to give the feeling of a supermarket setting, the movie first shows the cigarette packs, then the character itself as the main subject.



Figure 4. 12 Example of a subject-to-subject transition.

#### 4.3.4 Criterion of Functionality

It is the combination of relevance and expressiveness in terms of analyzing particular objects by their relations to the movie context. Object preference may differ from the actual purpose of the filmmaker (Gambarato, 2010).

#### ***4.3.4.1 Scenographic Function***

*“The scenographic concept, as currently understood by the majority of artists, is a far cry from the pictorial two-dimensional aspect that traditionally characterizes scenography and focuses much more on the three-dimensional (architectural) nature of the space or the scenic objects and its close relationship with the performers”* (Ribeiro, 2007, p. 109 cited in McKinney and Iball, 2011).

Setting itself can be used for disclosing particular meanings and information for different purposes: for evoking specific emotions upon the audience; for giving clues about social, political and economic rationality. In terms of cinematography preferences, wide-angle shots are used for portraying the spatial set up while illustrating the indoor and outdoor elements. Scenographic function is mainly covered around the aspects of;

- spatial set up through the examination of different time periods: 1937, 1999 and 2024,
- cinematography choices relating to the use of camera angles through the indoor and outdoor places.

To portray the world of 1937 (Figure 4.13 A), a demonstration of a crowded working class is shown through the different shots from the city. Sociocultural conditions are informed for giving the “reality” effect. Those times in America there was the Great Depression, spatial structure of the city sparse is illustrated by pointing the inadequacy of the economic conditions (Figure 4.13 B). Also, showing the cigarette advertisement (Figure 4.13 C) in middle of nowhere describes the priorities and lifestyles of the people in 1937.



A

B



C

Figure 4. 13 Shots from the world of 1937.

The idea of “big city life” To portray the world of 1999 (Figure 4.14) by showing high-rise buildings (Figure 4.14, B and C) and elite lifestyle inside buildings (Figure 4.14 A). In this way, adequateness is portrayed about having a simulation technology in the world of 1999 thus the fact about the reality of the world could be disguised from the audience a little while.



A

B



C

Figure 4. 14 Shots from the world of 1999.

To introduce the world of 2024 (Figure 4.15) the idea of “mystery” is utilized by framing the outside world behind the curtains (Figure 4.15 A). It creates the sense of “unknown” world, which is distinctly different from its references (simulations). Living conditions of the society are not reflected through the image of crowd but demonstration of “children” which evokes the feeling of safe and innocence. Showing the architectural conception portrays the social, political and economic rationality of a place (Figure 4.15 B).



A

B

Figure 4. 15 Shots from the world of 2024.

*Wide-angle shots of the outdoor places* are mostly used for giving the sense of familiarity to create the feeling of “being in space” in a big scale by showing the architecture, buildings and structure of the city (Figure 4.16). By presenting the outdoor settings, the movie informs the audience about the time period. Properties of the periods are introduced through the wide-angle shots while enabling it in a larger scale of perspective. About the color filters, they are used creating specific moods over time periods; 1937 designed to be look like an antique (Figure 4.16 A); 1999 portrayed as a technological era with the use of dark and blue tones (Figure 4.16 B); 2024 reflected like a utopia and/or dystopia with the sense of timelessness and hazy bright look with the use of golden tones evokes the feeling of luxury so to say almost every item looks like glittering (Figure 4.16 C). The movie chooses to portray the real world as like a “better world” by using the metaphors that would revive the sense of “wealth” and “ideal.”



A

B



C

Figure 4. 16 Wide-angle shots of the outdoor places.

*Wide-angle shots of the indoor places* are mostly used for creating comprehensibility about the time periods by outlining the indoor details. The feeling of “being in space”

is created through specification of the aspects relating to the indoor settings. Color filters are still similar between indoor and outdoor spaces, based on the specification of the time periods. Figure 4.17 shows that the hazy appearance of the world of 1937 continues preserve itself in the indoor settings. Lighting conditions of the scenes are mostly designed on the emphasis of specific areas. Location of the lighting source leads where the action is going to take place. Figure A shows that the lighting source—the desk lamp—portrayed in a distance (Figure 4.17 A). In the next scene, the camera shifts to the opposite angle where the suit is shown (Figure 4.17 B). The suit fits to Grierson however, he does not remember wearing it because Hannon Fuller was the person who uses that suit.



Figure 4. 17 Wide-angle shots of the indoor places in 1937.

Figure 4.18 shows the wide-angle shots of the indoor places in the world of 1999. To reflect the serious business side of the world of 1999, black granite floors and black leather seats are used (Figure 4.18 A). About the lighting condition, table lamps are used while still benefiting from additional lighting comes from the elevator (Figure 4.18 A). Technological devices in the environment are used as the secondary source of light in the 13<sup>th</sup> floor—where the computer company is located (Figure 4.18 B and C). To illustrate the largeness of the computer company, machines with green lights on them extend to the back of the corridor (Figure 4.18 B). Bright and dark areas in the scene allow the audience to pay attention to the simulation device, which is highlighted by its own lighting (Figure 4.18 C).



A



B

C

Figure 4. 18 Wide-angle shots of the indoor places in 1999.

Figure 4.19 shows the wide-angle shots of the indoor places in 2024 which looks modern and elegant. Unlike other time periods, artificial daylight is used as the main source of light for illustrating the pureness of the time period. After waking up in the world of 2024, Douglas walks through the corridor which he is surrounded by the huge structure of the interior (Figure 4.19 A). Portraying him small-scale in the environment implies the idea that there are so much to discover about the present world. Living room is portrayed commodiously by not containing any unnecessary object. Purified look is obtained by the use of artificial light, indoor plants and translucent walls which gives a roomy feeling (Figure 4.19 B).



A



B

Figure 4. 19 Wide-angle shots of the indoor places in 2024.

#### ***4.3.4.2 Semantic Function***

Some visual stimuli refer to “contextually embedded metaphorical issues” and it can only be understood based on the proper background knowledge of the perceiver (Sturken and Cartwright, 2001 cited in Maszerowska, 2012, p. 70). This function investigates the movie with a semiotic method of metaphor and metonymy analysis by approaching two ways that are clarified by Coëgnarts (2015);

- (1) Examining the “metaphorical and metonymic structure of the character perception” (ibid., p. 82) through: (a) bodily gestures; (b) mise-en-scène—costumes, props, lighting;



- (2) Analyzing the spatial metaphors in terms of time and space relating to the time periods.

Firstly, conceptual metonymy and metaphor are discussed through the character perception. It suggests that the target domain of perception can be triggered by showing the bodily features of movie characters. It does not mean that every visualization of the perceptual organ is “metonymically intended” but some of the usages portray the character perception (Coëgnarts, 2015, p. 83).

Showing the bodily gestures is used to portray embodied experience of space (Figure 4.20, respectively A, B, C and D) reflected through the close-up shots of the character’s eyes (Figure 4.20, A and B). Showing the eyes of the movie character enables audiences to the consciousness shifting and this shifting is illustrated as if we are passing through a tunnel (Figure 4.20 C). Character wakes up in the simulation portal where the embodied experience of space is practiced. Place becomes more than abstract location because, the being is not portrayed something like a being in the story (Norberg-Schulz, 1980; Heidegger, 1927).

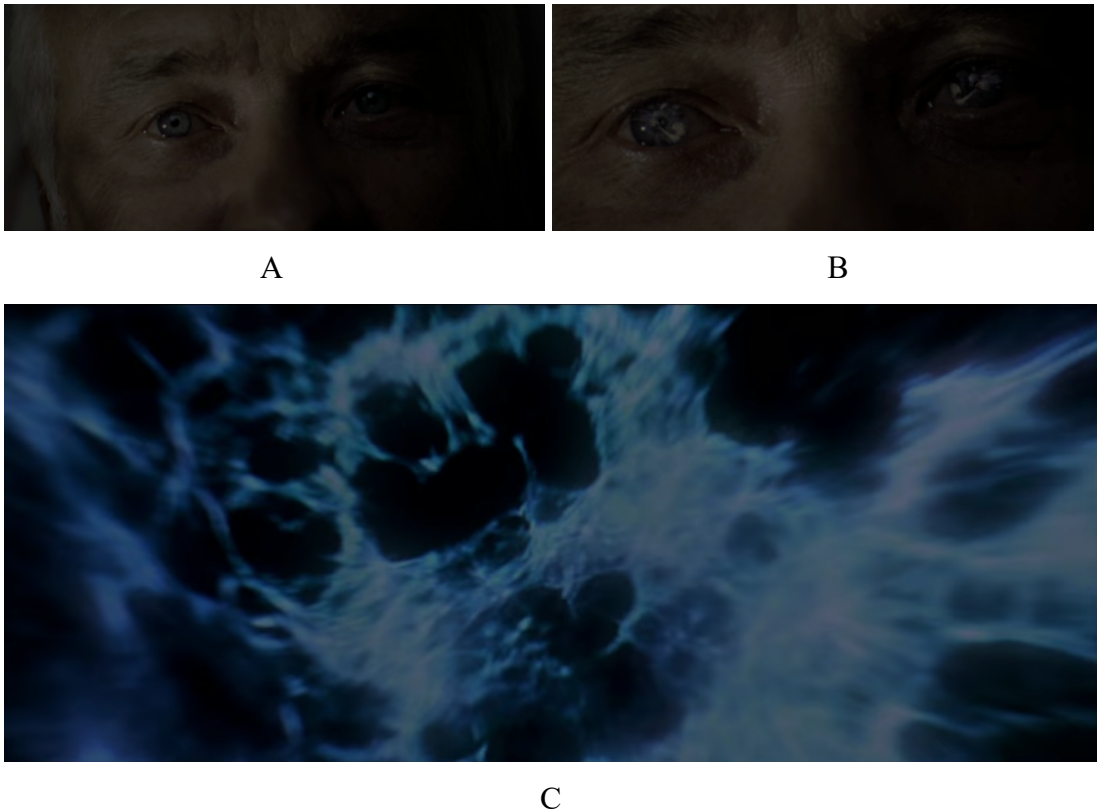


Figure 4. 20 Illustration of movie character's embodied experience of space.

Showing the simulation interface is used to illustrate which user is connected to the device. Figure 4.21 shows that consciousness of Douglas Hall is shifting from 1990 to 1937 into the consciousness of John Ferguson.



Figure 4. 21 Illustration of simulation interface.

Figure 4.22 shows the consciousness transferring journey of Douglas Hall that he experienced as his very first time. Figure shows how the perceptual experience of the movie character is illustrated to the cinema audience. Douglas Hall connects the world of 1937 through the simulation device from the world of 1999. Once the simulation device is functioning, the camera zooms into the character's eyes (Figure 4.22 A). The next frame is looks like a tunnel (Figure 4.22 B) to create a sense of transition between the two consciousnesses. Sense of presence is realized based on the associated body that the character links into. After the first frame, point of view (POV) shots are used for audience to experience another world reality through the eyes of the movie character. Layered structure of the embodied experience of space also refers to this particular situation where the cinema audiences embody themselves into another world reality. In the next frame, abstract illustration mixes with the sight of the connected mind, so that the small-scale woman image is seen in the middle of the screen (Figure 4.22 C). When the transition process is completed, the scene transits into a full frame where the image of the woman is extended into full frame (Figure 4.22 D). Respectively Figure E, F and G shows the eyes of Douglas Hall, where the consciousness transfer is portrayed through his eyes. While the woman is expecting a response from John Ferguson (Figure 4.22 H), his life flow in the world interrupts due to the transition process which blocked his consciousness for a bit.



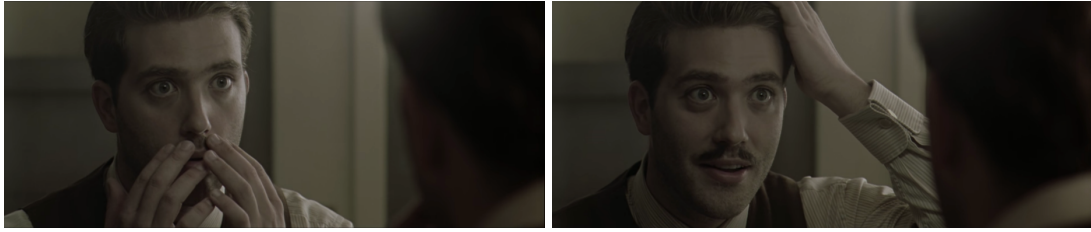
Figure 4. 22 Illustration of consciousness transfer of Douglas Hall from 1999 to 1937.

After Douglas Hall shelters into the body of John Ferguson, he surprises to experience another world reality that he already knows as virtual. He investigates the world of 1937 while observing the surrounding that is conceived through architectural setting and design objects. Each frame builds up with the clues that finally let the character and cinema audience to understand that John Ferguson is in the bank, working (Figure 4.23 respectively from A to I). John Ferguson appears to screen each time he gazes around to receive information about the environment (Figure 4.23 A, F and H). At first, he looks up to the ceiling where a diffused lighting fixture is used (Figure 4.23 B). About the other lighting conditions of the bank setting, direct lighting is preferred with the use of table lamps (Figure 4.23 C and D). The floor lamps (Figure 4.23 E) are used for semi-direct lighting. Other movie characters around Douglas Hall—including himself—are used like a design objects in terms of their costumes and accessories; men wore tie while wearing vest over shirt and some of them are using glasses (Figure 4.23 A, D and E); one woman wore a fancy accessory (Figure 4.23 G) while the other got her hair done (Figure 4.23 E). The spatial fiction that he exposed changes according to the design of the period and the necessities required by the simulation. For example, in the world of 1937 the fence was required between bank officers and customers (Figure 4.23 D). In the last frame (Figure 4.23 I) we officially expose the information of the bank environment by seeing money in the hands of John Ferguson.



Figure 4. 23 Douglas Hall’s first experience of the simulation 1937.

After investigating the surrounding, he goes to the bathroom to visually approve his existence by looking at the mirror. Character’s certainty about his being in the world of 1937 is portrayed through tactility (Figure 4.24, A and B). The appearance of the character is used like a design element that changes according to the specification of the time period. For example, his look in the world of 1937 is a bit different with a mustache and different hair style (Figure 4.24 B).



A

B

Figure 4. 24 Douglas Hall’s first experience in the simulation of 1937.

About the simulation mechanism Jason Whitney (programmer of the simulation) mentions that: “While my mind is junked in, I am walking around experiencing 1937! My body stays here, and it’s kind of holds the consciousness that the program links you to it.” This statement portrays the embodied experience of space realized by the movie characters as the first layer of the concept. The second layer refers to the cinema audience who identifies them with the movie characters. Figure 4.25 shows the curiosity of Douglas Hall while he is observing the environmental aspects around him for the first time. He looks up and down from his field of sight while behaving in an unusual way like testing the world reality by hitting his foot on the ground (Figure 4.25 A and B). About the indoor lighting conditions, it still proceeds around the bank environment by the use of table lamps in front of the bathroom (Figure 4.25 C). Homely look is created by using indoor plants and painting used on the wall (Figure 4.25 C and D). However, the entrance of the bank looks more formal than the bathroom entrance since seeing a huge iron door at the back of the scene (Figure 4.25 A and B).



A



B



C



D

Figure 4. 25 Douglas Hall experienced another world reality through the body of John Ferguson.

Giving *close-up shots* of particular objects is preferred as a way for describing the most indispensable situations. For example, Hannon Fuller hides highly classified information in the simulation of 1937, for his colleague—Douglas Hall—could find it. This “highly classified information” is manifested through the illustration of a “letter” (Figure 4.26 A). Later in the scene, the murder threat is depicted with a “knife” (Figure 4.26 B). Illustration of scattered medicines on the ground describes the murder as being sudden action (Figure 4.26 C). On the morning of the murder, seeing a bloody shirt in Douglas Hall’s laundry basket (Figure 4.26 D) gives a hint about who the killer is.



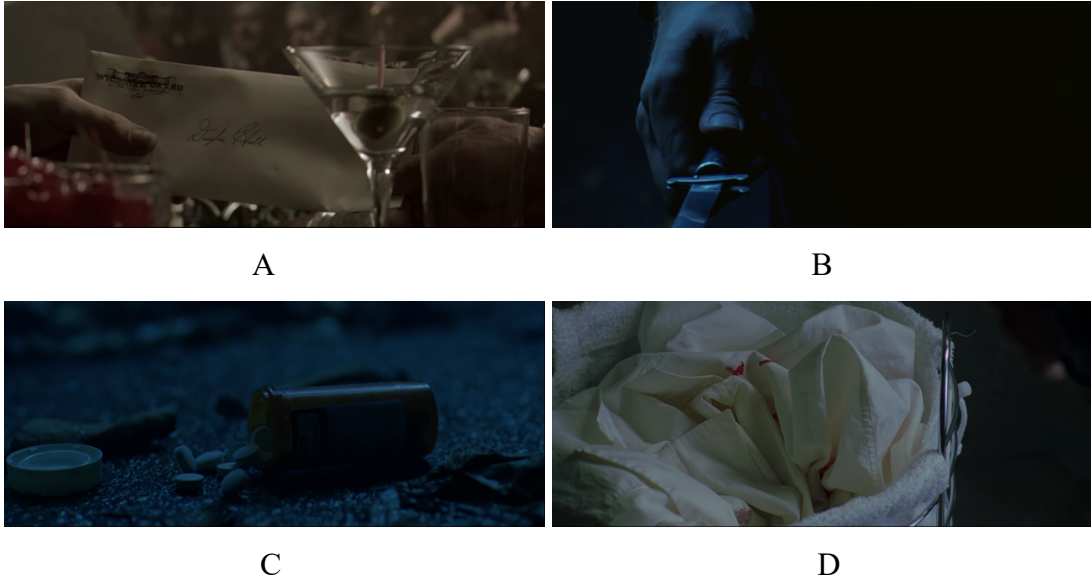


Figure 4. 26 Metaphors that addresses the murder of Hannon Fuller.

Another intentionality of using close-up shots is to portray the “bigger picture.” For example, Figure 4.27 shows that all the considerable information is gathered under the illustration of a “newspaper.” Unknown time period has been officially introduced as the only real world where the “crime rates are at an all-time low.”

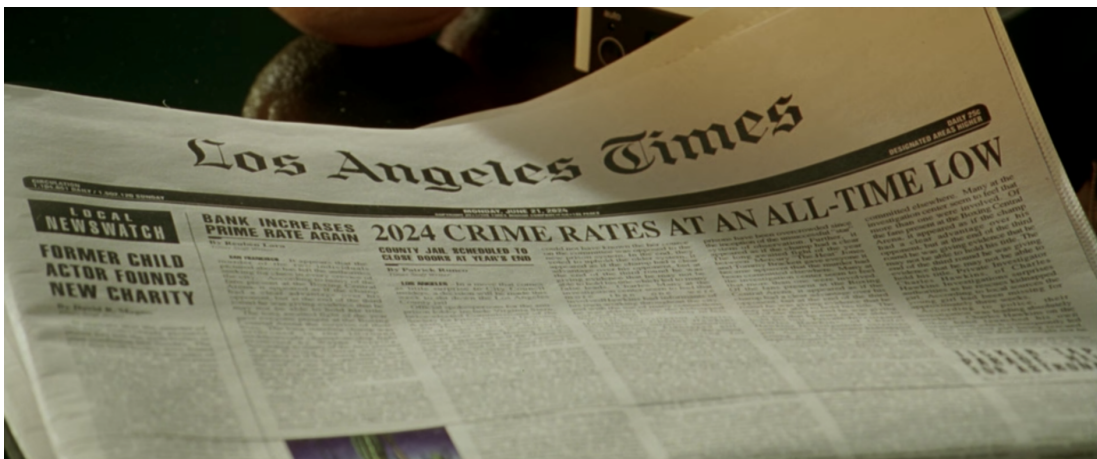


Figure 4. 27 Close-up shot of a newspaper.

Design of the interiors, costume preferences and appearances of the characters are idealized based on the period’s features. Bartender in 1937 has portrayed more elegantly with the choices of fancy suit and bow (Figure 4.28 A). In 1999 bartender is

characterized in a more casual look with the choices of leather jacket and piercings (Figure 4.28 B). This distinction between elegant and casual is also reflected through the bar designs; in 1937 the bar is conceived with elite golden colored items (Figure 4.28 C). However, in 1999 there were only gaming machines, lie slot machines (Figure 4.28 D). Even the way of serving a drink is also portrayed as a distinguishing element between the periods (Figure 4.28, E and F). Also, color preferences of the scenes differs according to the periods; in 1937 (Figure 4.28, A, C and E) sepia color (reddish-brown) tones are mostly used to give an impression of the old times as a metaphor of an old photograph whereas, generally dark colors are used with neon highlights in 1999 (Figure 4.28, B, D and F) to picture the period in a more everyday life style of the late 90s.



Figure 4. 28 Metaphors that distinguish different time periods.

From the letter entrusted by Hannon Fuller, Jerry Ashton finds out that the world of 1937 is a simulation and he goes after the clue to see the evidence himself. In pursuit

of this clue, he breaks the barrier, in which the “end” sign is depicted (Figure 4.29). The sign indicates that Jerry Ashton is exceeding the limitations of the simulation where the beyond is yet not designed.



Figure 4. 29 “End” signboard as a metaphor that illustrates the place where the simulation ends.

#### ***4.3.4.3 Aesthetic Function***

Design of the objects gives clue about their functionality as well as the artistic preferences or cultural source of the aesthetic expression (Gambarato, 2006). First example of this function is the use of simulation technology which differs between the world of 1999 and 2024 (Figure 4.30). Because there was not any simulation technology, the world of 1937 is not mentioned. Also, it is stated that the only simulation that has its own simulation is the world of 1999. In 1999, mechanism features with an exaggerated appearance (Figure 4.30 C) and functioning (Figure 4.30 A and B) so that the digital revolution is highlighted while attracting the attention (Figure 4.30, A and B). In contrast, a portable device is used to address the simplicity of the time period while still having an advanced technology in 2024 (Figure 4.30, D and E).

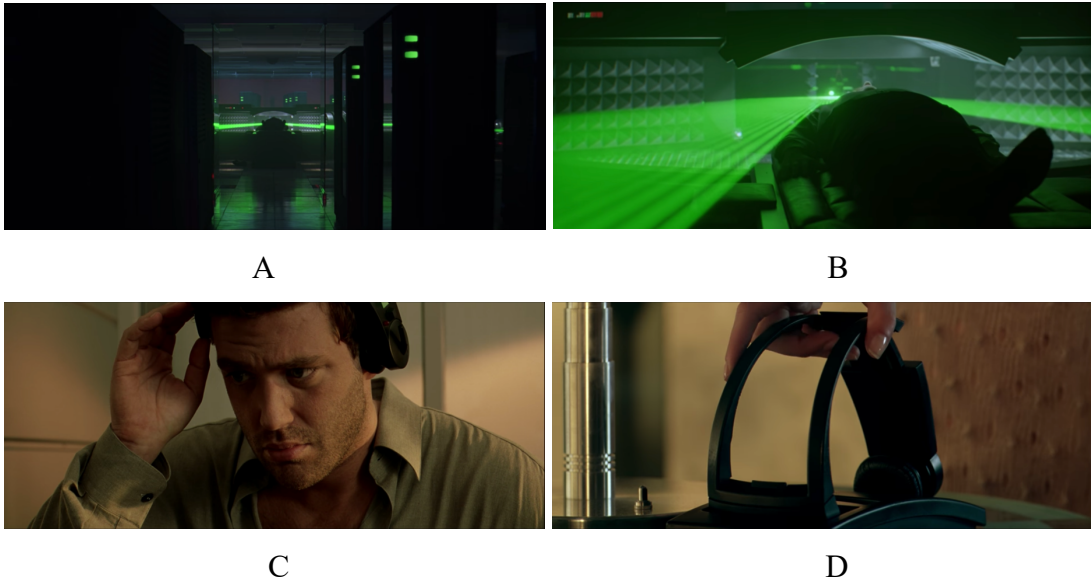
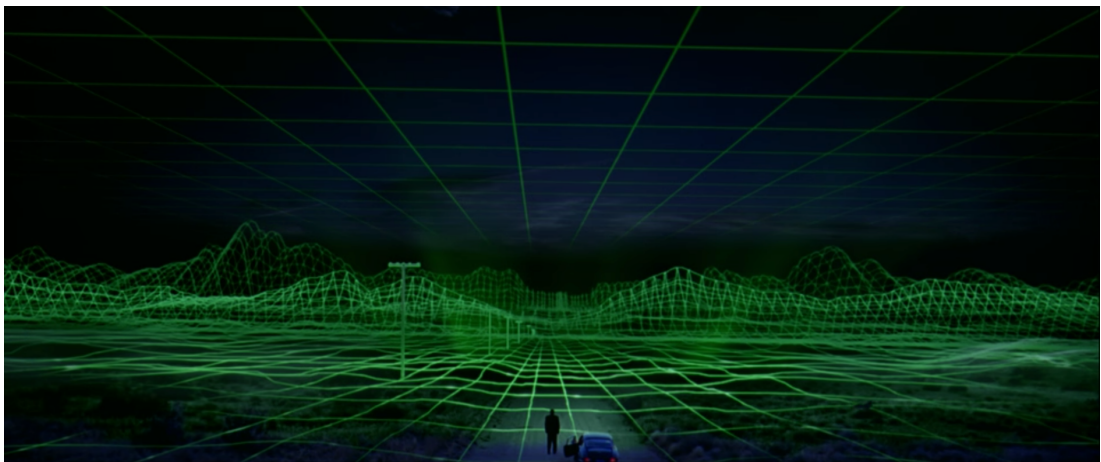


Figure 4. 30 13<sup>th</sup> floor as a portal for the simulated world of 1937 (A and B), a headset unit as a tool for experiencing the virtual reality of the world of 1999 (C and D).

Another example is the green neon lights that are utilized as a design element for two different purposes; by which being a section of the simulation technology which illustrates the functioning (Figure 4.31 A); designs and visualizes the spatial fiction of the simulated worlds (Figure 4.31 B). In both cases, green neon lights create virtual reality while emphasizing the perception of “real” and “virtual” in the framework of the movie.



A



B

Figure 4. 31 Two different ways of utilizing the green light.

#### ***4.4 Discussion***

Analysis of the movie is conducted based on the layered structure of the concept of “embodied experience of space” realized by movie characters and cinema audiences. The concept is taken into consideration by emphasizing the embodied experience of space by which enhances the cinematic experience. By creating the feeling of “being there” the concept of being in space determines the “quality of an experience” (Taylor, 2002, pp. 43-44). Embodied experience of space is related with perception which is shaped by the representations which eventually affects the way we perceive the world. Perception of the audiences is shaped knowledge that they gained from the cinematic world. Perceptual engagement with movies influences we perceive, experience and

imagine after seeing that movie. This situation is the same for movie character but in terms of their perception inside the cinematic world. To emphasize the effectiveness of the embodied experience of space, the concept of being in space arranges the adequacy of the movie in the means of perceptual design. Perceptual design of “The Thirteenth Floor” is mainly conducted over “the feeling of being there.” Design of the time periods are arranged with such representations to enhance the sense of being there and they are constituted uniquely for the conception of each time period. The audience observe all these design contributions over the cinematic space. On the basis of the movie analysis, interpretation of “being in space and “embodied experience of space” is been made in regard to criterion of relevance (Table 4.3), expressiveness (Table 4.4) and functionality (Table 4.5).

Table 4.3 shows the effects of criterion of relevance. Specifications of particular objects gives an information about the conceptions, ideals or necessities of the associated setting. As a universal figure, “shoe” reveals a common understanding upon cinema audience to reflect the society’s necessities. Using of “flat surface” describes the idea of points out the sacredness of an important action (consciousness transfer). “Smoking” is used in the sense of illustrates the change of character perception due to his experiences between time periods. Lastly, idealization of the time period is created with the use of “curtain” by which gives the sense of mystery.

Table 4. 3 Interpretation of “Being in Space” and “Embodied Experience of Space” in regard to criterion of relevance.

	Being in Space	Embodied Experience of Space
Flat Surface (that the character lays down for consciousness transferring process)	The idea of protected place is used for portraying the process of consciousness shift as sacred.	Importance of the process of consciousness shift is accounted.
Shoes	The idea of universal figure is used for revealing of familiar sensations upon audience.	The necessities of associated environment and society is introduced.
Smoking	Incompatible acts of movie character are portrayed to see cause and effects of the events.	The process of character development is shown.
Curtains	The idea of mystery is created by the use of same object in different manners.	The idealization of associated environment and time period is represented.

Table 4.4 shows the effects of the criterion of expressiveness. To give the feeling of passing time, action-to-action transition is used so that the idea of temporality is created. Sense of being there is constituted by the use of aspect-to-aspect transition which enables audience to observe the environment. Impressions about the cinematic surroundings creates the perception of cinematic reality. Movement-to-movement transition is used to attract the attention of the audience by showing sudden actions between movements. According to the response of the audience can be regulated while

showing them similar actions in the upcoming scenes. Scene-to-scene transition is used for transferring the sense of being there into other places that are relatively far away from each other for introducing the cinematic world. Feeling of being there is also created through the recognition on particular subjects, places and identifications therefore, perceptual association between subject and place is correlated.



Table 4. 4 Interpretation of “Being in Space” and “Embodied Experience of Space” in regard to criterion of expressiveness.

	Being in Space	Embodied Experience of Space
Action-To-Action	Perception of passing time is created.	Realization of temporality is formed.
Aspect-To-Aspect	Sense of being there is constituted with using point of view (POV) shots that enables the audience to observe the environment.	Impressions about the cinematic surrounding constitutes the perception cinematic reality.
Movement-To-Movement	To attract the attention of the audience upon a particular action, sudden transition between the movements is used.	Sudden action between movements can arouse the similar way of feeling at the time of the audience to see the repetitive action in the upcoming scenes.
Scene-To-Scene	This transition transfers the sense of being there into other places in the cinematic world.	Conceptually different settings are experienced that are relatively far away from each other so that perception upon those settings are created.
Subject-To-Subject	Feeling of being there is constituted through the recognition on particular subjects, places and identifications.	Seeing particular subjects relating to places creates a perceptual association between the subject and place.

Table 4.5 shows the effects of the criterion of functionality. In terms of scenographic function, conditions of the time period are shown with the use of wide-angle shots to create the conception of the cinematic world. Semantic function is utilized to portray the movie character’s consciousness shift with the use of POV shots. By showing this action, the movie character’s embodied experience of space is illustrated to the cinema audience. In the means of aesthetic function, some objects are used in regard to their artistic form.

Table 4. 5 Interpretation of “Being in Space” and “Embodied Experience of Space” in regard to criterion of functionality.

	Being in Space	Embodied Experience of Space
Scenographic Function	Living conditions and specifications of the time periods are portrayed through the use of wide-angle shots.	Conception of the cinematic world is constituted.
Semantic Function	Consciousness transfer of the movie character is illustrated through the use of POV shots.	Layered structure of the embodied experience of space is realized by the cinema audience.
Aesthetic Function	Same object is used for different purposes by regarding to their functionality and as artistic preference.	Conception of the cinematic world is portrayed as integrated.

In the context of movie’s cinematic reality, worlds of 1937 and 1999 are stated as being simulated from the reference world—as 2024. In the beginning, the world of

2024 was not introduced, and the world of 1999 assumed as the real world. The distinction between “real” and “virtual” is depicted through the design of the worlds of 1937 and 1999. Based on the interior design of the periods, the world of 1999 is portrayed more mechanical and formal compared to the world of 1937. Throughout the movie, specifications of the worlds (1937 and 1999) comes together to represent the actual world (2024). The world of 2024 incorporates all these different characteristics from other worlds. “Real” and “virtual” are intertwined, and the distinctions cannot provide a concrete decision about the real-world inference because the world of 2024 might not be the actual world too. Willis (2016) states that The Thirteenth Floor is approached virtual realm through a postmodern stance rather than traditional Platonic way of thinking by claiming the real as something that cannot be reproduced. The movie’s contextual reality can be associated with the paradox of the Lacanian Real. The real is not actually exists but it embodies a series of properties which creates a series of effects relating to the symbolic reality of subjects (Zizek, 2008).

## CHAPTER 5: CONCLUSION

Through art we have the opportunity to experience other realities apart from our daily life. Different from other fields of art, cinema creates its fictional reality with moving pictures and sound, so it makes cinematic experience as a sensory engagement. Our perception is shaped by our experiences from real world experiences and the ones that are created by the fictional narrative. It could be stated that watching movies affects the way we perceive and effects our future perception. Cinematic experience is correlated with the cinematic world therefore, design of the cinematic world indicates the quality of the cinematic experience.

This research consolidates that the utilization of the concepts of “being in space” and “embodied experience of space” can emphasize the quality of the cinematic experience especially in terms of slipstream fiction movies. The quality of the cinematic experience is examined over the cinematic space through the existential, architectural and embodied notions of space. Discourses are conducted on the basis of Koeck’s (2013) clarification of “Being in Space versus Embodied Experience of Space.” In the context of this study, the concept of being in space is considered as a design tool which creates “the feeling of being there” while connecting subject with the designed world. The concept of embodied experience of space considers that perceiving, experiencing and visualizing are affected by designed world. On the basis of the case study, the concept of embodied experience of space is considered in a layered structure for both the movie characters and the cinema audiences. The concept of embodied experience of space is exemplified through two different perspectives: one from the inside of the cinematic reality and the other is from the impressions of cinematic experience.

Cinematic elements of cinematography and *mise-en-scène* depicts the way how the narrative has been approached, and their combination illustrates the cinematic world. Based on the movie analysis, it can be stated that the filmmaking process uses design thinking for transferring particular moods, feelings, conceptions or ideals to the audience. By merging cinema and design, cinematography and *mise-en-scène* choices are discussed over the design of cinematic space in terms of spatial set up and objects that have been used in the movie. Spatiality and representations in the movie describe

the movie's understanding of "real" and "virtual" in the context of its cinematic reality. Each movie has its own conception of reality and virtuality which should be analyzed in the framework of its narrative. Sometimes movies are structured with complex concepts, but cinematic narration enables cinema audience to grasp these concepts more easily. In the movie "The Thirteenth Floor", the idea of simulated worlds and condition of being unsure about the reality are addressed. Based on the concept of embodied experience of space, cinema audience is affected by the cinematic reality. In terms of slipstream movies, embodied experience of space can be resulted as audience to be suspicious about their own world reality due to knowledge they gained from the cinematic reality.

Association between cinema and design creates the concept of embodied experience of space. By depending on the narrative of the movie, design of the cinematic world determines the state of the embodied experience of space which is realized by cinema audience.

## REFERENCES

[American Physical Society Sites]. (2020. February 2). 1893: Edison Records First Sneeze on Film [Image]. Available at <https://www.aps.org/publications/apsnews/200102/history.cfm>

Asl, H. E. and Mizban, P. (2016). *Visual Perception in Architecture and Cinema, Similarities and Differences*. International Journal of Engineering and Technology, Vol. 8(5): 345-349 [online]. Available at <https://dx.doi.org/10.7763/IJET.2016.V8.910> (Accessed 5 July 2020).

Azeri, S. (2010). *Transcendental Subject vs. Empirical Self: On Kant's Account of Subjectivity*, Filozofia, Vol. 65(3): 269-283 [online]. Available at [https://www.researchgate.net/publication/299049823\\_TRANSCENDENTAL\\_SUBJECT\\_VS\\_EMPIRICAL\\_SELF\\_ON\\_KANT%27S\\_ACCOUNT\\_OF\\_SUBJECTIVITY](https://www.researchgate.net/publication/299049823_TRANSCENDENTAL_SUBJECT_VS_EMPIRICAL_SELF_ON_KANT%27S_ACCOUNT_OF_SUBJECTIVITY) (Accessed 5 July 2020).

Baudrillard, J. (1997). *Simulacra and Simulation*. Translated by Sheila Glaser. Ann Arbor: University of Michigan Press.

Baudry, J., L., and Williams, A. (1974). *Ideological Effects of the Basic Cinematographic Apparatus*, Film Quarterly, Vol. 28(2): 39–47 [online]. Available at <https://doi.org/10.2307/1211632> (Accessed 5 July 2020).

Bazin, A. (1967). *What is Cinema*. Translated by Hugh Gray. London: University of California Press.

Beijnon, B. (2017). *Enactive Cinematic Perception: The Cinema as Exploration of the (Re)Presented World*, Anthropoetics: The Journal of Generative Anthropology,

[online]. Available at [https://www.researchgate.net/publication/321168803\\_Enactive\\_Cinematic\\_Perception\\_The\\_Cinema\\_as\\_Exploration\\_of\\_the\\_RePresented\\_World](https://www.researchgate.net/publication/321168803_Enactive_Cinematic_Perception_The_Cinema_as_Exploration_of_the_RePresented_World) (Accessed 5 July 2020).

Bennett, J. (2017). *Descartes, Space and Body: Isaac Newton* [online]. Available at <https://www.earlymoderntexts.com/assets/pdfs/newton1666.pdf> (Accessed 5 July 2020).

Biocca, F. (1997, August). Proceedings Second International Conference on Cognitive Technology Humanizing the Information Age. *The Cyborg's Dilemma: Progressive Embodiment in Virtual Environments*. pp: 12-26. Available at <http://128.192.206.60/share/files/papers/virtual%20humans/cyborgsdilemma.pdf>

Block, N. (1995). *On A Confusion About a Function of Consciousness*. Behavioral and Brain Sciences, 18(2): 227-247 [online]. Available at <https://doi.org/10.1017/S0140525X00038188> (Accessed 5 July 2020).

Bordwell, D. (2004). *Principles of narration*, in Philip Simpson (et al) (eds.): *Film theory: critical concepts in media and cultural studies*, London: Routledge, 245-267.

Bordwell, D. (1991). *Making Meaning*. Cambridge, Massachusetts; London, England: Harvard University Press.

Bourdieu, P. (1996). *Distinction A Social Critique of the Judgement of Taste*. 8th edition. Translated by Richard Nice. Cambridge: Harvard University Press.

Certau, M. D. (1988). *Practice of Everyday Life*. Translated by Steve Rendall. Berkeley: University of California Press.

Clarke, A. (2012). *Spatial Experience Narrative And Architecture* [online]. Available at [https://www.architects.nsw.gov.au/download/BHTS/Clarke\\_A\\_Spatial\\_Experience\\_Narrative\\_\\_BHTS2012.pdf](https://www.architects.nsw.gov.au/download/BHTS/Clarke_A_Spatial_Experience_Narrative__BHTS2012.pdf) (Accessed 5 July 2020).

Coëgnarts, M. (2015). *Embodied Cognition and Cinema*. Doctoral Thesis, University of Antwerpen.

Coëgnarts, M. (2017). *Cinema and the embodied mind: metaphor and simulation in understanding meaning in films*, Palgrave Commun, Vol. 3(2017) [online]. Available at <https://doi.org/10.1057/palcomms.2017.67> (Accessed 5 July 2020).

Collins, A. W. (1967). *The Epistemological Status of the Concept of Perception*. The Philosophical Review, Vol.76(4): 436-459 [online]. Available at <https://www.jstor.org/stable/pdf/2183282.pdf> (Accessed 5 July 2020).

Csordas, T. (1994). *Introduction: The Body as Representation and Being-in-the-World* in Csordas, T. (ed.) *Embodiment and Experience: The Existential Ground of Culture and Self*. England: Cambridge University Press, 1-24.

Cutting, J. (2016). *Narrative theory and the dynamics of popular movies*. Psychonomic Bulletin & Review. Vol. 23(6): 1713-1743 [online] Available at <https://link.springer.com/article/10.3758%2Fs13423-016-1051-4> (Accessed 5 July 2020).

D'aloia, A. (2012). *Upside-Down Cinema. (Dis)simulation of the body in the film experience*. Cinema 3: Journal of Philosophy and the Moving Image [online]. Available at [https://www.academia.edu/2368996/Upside-Down\\_Cinema\\_Dis\\_simulation\\_of\\_the\\_body\\_in\\_the\\_film\\_experience](https://www.academia.edu/2368996/Upside-Down_Cinema_Dis_simulation_of_the_body_in_the_film_experience) (Accessed 5 July 2020).



Deleuze, G. (1997). *Cinema I The Movement-Image*. 5th edition. Translated by Hugh Tomlinson and Barbara Habberjam. Minneapolis: University of Minnesota Press.

Dunat, S. (2015). *Film space as mental space*, *Semiotica*, Vol. 2015(207): 475-487 [online]. Available at <https://doi.org/10.1515/sem-2015-0039> (Accessed 5 July 2020).

Eco, U. (1986). *Semiotics and The Philosophy of Language*. Edited by Thomas A. Sebeok. Bloomington: Indiana University Press.

Eugeni, R. (2011). *A Semiotic Theory of Media Experience* [online]. Available at [https://www.academia.edu/399281/A\\_Semiotic\\_Theory\\_of\\_Media\\_Experience](https://www.academia.edu/399281/A_Semiotic_Theory_of_Media_Experience) (Accessed 5 July 2020).

Eugeni, R. (2012, June). *Lost memories. Regressions of time and style in filmic representations of hypnotic apparatus*. *Time Networks: Screen Media and Memory*, Portugal.

Frey, C. (2013). *Phenomenal Presence*. In Kriegel, U. (ed.) *Phenomenal Intentionality*. Oxford: Oxford University Press, 71-92.

Gaines, E. (2006). *Communication and the Semiotics of Space*. *Journal of Creative Communications*, Vol. 1(2): 173–181 [online]. Available at <http://www.wright.edu/~elliott.gaines/space.pdf> (Accessed 5 July 2020).

Gallese, V. (2011). *Embodied Simulation Theory: Imagination and Narrative*, *Neuropsychoanalysis*, Vol. 13(2): 196-200 [online]. Available at <https://www.tandfonline.com/doi/abs/10.1080/15294145.2011.10773675> (Accessed 5 July 2020).

Gallese, V. and Guerra, M. (2012). *Embodying Movies: Embodied Simulation and Film Studies*, *Cinema: Journal of Philosophy and the Moving Image*, 3: 183-210 [Online]. Available at <https://philpapers.org/rec/GALEME-4> (Accessed 5 July 2020).

Gallese, V. and Wojciehowski, H. (2011). *How Stories Make Us Feel: Toward an Embodied Narratology*, *California Italian Studies*, Vol. 2(1) [online] Available at <https://escholarship.org/uc/item/3jg726c2> (Accessed 5 July 2020).

Gambarato, R. (2006). *Objects of Desire – Methodology for Film Analysis in the Sense of Peircean Semiotics and Intermedial Studies*, *Kodikas/Code: Ars Semeiotica*, [online]. Available at <https://core.ac.uk/download/pdf/20344327.pdf> (Accessed 5 July 2020).

Gambarato, R. (2010). *Methodology for Film Analysis – The Role of Objects in Films*, *Revista Fronteiras*, Vol. 12 (2): 105–115 [online]. Available at [https://www.academia.edu/5218752/Methodology\\_for\\_Film\\_Analysis\\_The\\_Role\\_of\\_Objects\\_in\\_Films](https://www.academia.edu/5218752/Methodology_for_Film_Analysis_The_Role_of_Objects_in_Films) (Accessed 5 July 2020).

Gould, T. (1969). *Four Levels of Reality, in Plato, Spinoza, and Blake*, *Arion: A Journal of Humanities and the Classics*, Vol. 8(1): 20–50 [online]. Available at [www.jstor.org/stable/20163180](http://www.jstor.org/stable/20163180) (Accessed 5 July 2020).

Guest, J. (2012). *Architecture And The Moving Image: Cinematic Strategies In Design And Representation*. Masters Thesis. The University of Auckland.

Gustafson, P. (2001). *Meanings of place: everyday experience and theoretical conceptualizations*, *Journal of Environmental Psychology*, Vol. 21(1): 5–16 [online]. Available at <https://www.sciencedirect.com/science/article/abs/pii/S0272494400901853?via%3Dihub> (Accessed 5 July 2020).

Håkansson, C. (2013). *Re-examining the Traditional Principles of Cinematography of Modern Movies: A Case Study of Children of Men and Clerks II*. Bachelor Thesis. Gotland University.

Harvey, D. (2004, May). *Space as a Keyword*. Marx and Philosophy Conference, London.

Hayles, K. and Gessler, N. (2004). *The Slipstream of Mixed Reality: Unstable Ontologies and Semiotic Markers in The Thirteenth Floor, Dark City, and Mulholland Drive*, Pmla-publications of The Modern Language Association of America, Vol. 119(3): 482-499 [online]. Available at <https://doi.org/10.1632/003081204X20541> (Accessed 5 July 2020).

Heidegger, M. (1996). *Being and Time: A Translation of Sein und Zeit*. Translated by Joan Stambaugh. Albany: State University of New York Press.

Holmes, B. (2012). *For the Set of the "Ricki Lake Show," Anton Goss Took into Account Her Preferences for A Living-Room Feeling and The Color Purple* [Image]. Available at <https://www.nytimes.com/2012/09/06/garden/designing-sets-for-oprah-ellen-tyra-and-now-ricki.html> (Accessed 2 May 2020).

Koeck, R. (2013). *Cine-Scapes: Cinematic Spaces in Architecture and Cities*. New York: Routledge.

Kravanja, P. and Coëgnarts, M. (2012). *Towards an Embodied Poetics of Cinema: The Metaphoric Construction of Abstract Meaning in Film*. Alphaville: Journal of Film and Screen Media [online]. Available at <http://www.alphavillejournal.com/Issue%204/HTML/ArticleCoegnarts&Kravanja.html> (Accessed 5 July 2020).

Kurutz, S. (2012). *Designing Sets for Oprah, Ellen, Tyra and Now Ricki* [online]. Available at <https://www.nytimes.com/2012/09/06/garden/designing-sets-for-oprah-ellen-tyra-and-now-ricki.html> (Accessed 2 May 2020).

Kutucu, S. (2005). *Transformation of Meaning of Architectural Space in Cinema: The Cases of "Gattaca" and "Truman Show"*. Doctoral Thesis. Izmir Institute of Technology.

Lefebvre, M. (2014). *Symbol and Analogon (Mitry)* in Branigan, E., and Buckland W. (eds.) *Forthcoming in the Routledge Encyclopedia of Film Theory*, New York: Routledge, 458-463.

Levy, J. (2013). *On Space in Cinema*, *Annales de géographie*, No. 694(6): 689-711 [online]. Available at [https://www.cairn-int.info/journal-Annales-de-geographie-2013-6-page-689.htm?try\\_download=1#](https://www.cairn-int.info/journal-Annales-de-geographie-2013-6-page-689.htm?try_download=1#) (Accessed 5 July 2020).

[Library of Congress]. (2020, May 16). *Inventing Entertainment: The Early Motion Pictures and Sound Recordings of the Edison Companies* [Web-based visual]. Available at <https://www.loc.gov/collections/edison-company-motion-pictures-and-sound-recordings/articles-and-essays/history-of-edison-motion-pictures/origins-of-motion-pictures/>

Low, S. M. (2003). *Embodied Space(s): Anthropological Theories of Body, Space, and Culture*, *Space and Culture*, Vol. 6(1): 9-18 [online]. Available at <https://doi.org/10.1177/1206331202238959> (Accessed 5 July 2020).

Lombard, M. and Ditton, T. (1997). *At the Heart of It All: The Concept of Presence*, *Journal of Computer-Mediated Communication*, Vol. 3(2) [online].

Available at <https://doi.org/10.1111/j.1083-6101.1997.tb00072.x> (Accessed 5 July 5, 2020).

Maszerowska, A. (2012). *Casting the Light on Cinema — How Luminance and Contrast Patterns Create Meaning*, MonTI: Monografías de Traducción e Interpretación, [online]. <https://doi.org/10.6035/MonTI.2012.4.3> (Available 5 July 2020).

McDonald, A. (2009). *Baudrillard And Deleuze On Simulacra And The Soul: Searching For Singularity In Order To Prevent The Loss Of The Soul Through Cloning And Commoditisation*. Unpublished Masters Thesis. University of Dundee.

McKinney, J., and Iball, H. (2011). *Research Methods in Scenography*, in Nicholson, H., and Kershaw, B. (eds.) *Research Methods in Theatre and Performance*, Edinburgh: Edinburgh University Press, 111-136.

Mennecke, B. E., Triplett, J. L., Hassall, L. M., Conde, Z. J. and Heer, R. (2011). *An Examination of a Theory of Embodied Social Presence in Virtual Worlds*, Decision Sciences, Vol. 42(2): 413-50 [Online]. Available at <https://doi.org/10.1111/j.1540-5915.2011.00317.x> (Accessed 5 July 2020).

Merleau-Ponty, M. (2005). *Phenomenology of Perception*. Translated by Colin Smith. London: Routledge. Available at Taylor and Francis e-Library (Accessed 5 July 2020).

Merleau-Ponty, M. (2017). *Algılanan Dünya*. 5th edition. Translated by Ömer Aygün. İstanbul: Metis Yayınları.

[M.G. Comics]. (2019, April 12). *Comic Panel Transitions Understanding Comics by Scott McCloud With Examples* [Video File]. Available at <https://www.youtube.com/watch?v=USQjSnzKoYU>

[Museum of Modern Art]. (2020, May 16). Advent of Cinema [Web-based visual]. Available at [https://www.moma.org/learn/moma\\_learning/themes/film/advent-of-cinema/](https://www.moma.org/learn/moma_learning/themes/film/advent-of-cinema/)

Norberg-Schulz, C. (1980). *Genius Loci: Towards a Phenomenology of Architecture*. New York: Edinburgh College of Art Library.

O'Brien, D. (2020). *The Epistemology of Perception*. [online]. Available at <https://www.iep.utm.edu/epis-per/#SH3c> (Accessed 4 May 2020).

Pallasmaa, J. (2014). *Space, Place and Atmosphere. Emotion and Peripheral Perception in Architectural Experience*, *Lebenswelt: Aesthetics and Philosophy of Experience*, Vol. 4(2): 230-245 [online]. Available at [https://open-tdm.au.dk/blogs/materielkultur/wp-content/uploads/sites/11/2017/10/Pallasmaa\\_spaceplace-and-atmosphere.pdf](https://open-tdm.au.dk/blogs/materielkultur/wp-content/uploads/sites/11/2017/10/Pallasmaa_spaceplace-and-atmosphere.pdf) (Accessed 5 July 2020).

Perrault, J. (2012). *The Production of Space: Spatial Considerations for The Contemporary Debate on Property and The Informal Sector*. Bachelor Thesis. Lund University.

Prince, S. (1996). *True Lies: Perceptual Realism, Digital Images, and Film Theory*, *Film Quarterly*, Vol. 49(3): 27-37 [online]. Available at <https://pdfs.semanticscholar.org/5a84/055d15560f1c7e5737f86fd406f5da248914.pdf> (Accessed 5 July 2020).

Rantala, V. (2013). *Techniques of the invisible: Cinematic images of being addicted*, *Nordic Studies on Alcohol and Drugs*, Vol. 30(1-2): 105-122 [online]. Available at <https://doi.org/10.2478/nsad-2013-0008> (Accessed 5 July 2020).

Resmini, A. and Rosati, L. (2011). *Pervasive Information Architecture: Designing Cross-Channel User Experiences Book Review*, IEEE Transactions Professional Communication, Vol. 54(4): 408-409 [online]. Available at <https://ieeexplore.ieee.org/document/6068274> (Accessed 5 July 2020).

Schopenhauer, A. (1909). *The World as Will and Idea*. 7th edition. Translated by R.B. Haldane, M. A. and J. Kemp, M.A. London: Kegan Paul, Trench, Trübner & Co.

Smith, D. W. (2012). *Essays on Deleuze*. Edinburgh: Edinburgh University Press. Available at JSTOR. (Accessed 26 April 2020).

Sobchack, V. (2004). *Carnal Thoughts Embodiment and Moving Image Culture*. London: University of California Press.

Tarvainen, J., Westman, S., and Oittinen, P. (2015). *The way films feel: Aesthetic features and mood in film*, Psychology of Aesthetics, Creativity, and the Arts, Vol. 9(3): 254–265 [online]. Available at <https://doi.org/10.1037/a0039432> (Accessed 5 July 2020).

Taylor, T. L. (2002). *Living Digitally: Embodiment in Virtual Worlds*, in Schroeder, R., ed., *Social Life of Avatars: Presence and Interaction in Shared Virtual Environments*, London: Springer-Verlag, 40-62.

*Thirteenth Floor*. (1999) Centropolis Entertainment. [Online Video]. Directed by Joseph Rusnak. Accessed 20 August 2020 Available at <https://www.netflix.com/search?q=thirteent&jbv=21310833&jbp=1&jbr=0>

Thonhauser, G. (2019). *Martin Heidegger and Otto Friedrich Bollnow*, in Szanto, T., and Landweer H. (eds.) *The Routledge Handbook of Phenomenology of Emotions*. London & New York: Routledge.

Toadvine, T. "Maurice Merleau-Ponty." *The Stanford Encyclopedia of Philosophy*, spring edition, Edward N. Zalta (ed.), 2019, Available at <https://plato.stanford.edu/archives/spr2019/entries/merleau-ponty/> (Accessed 5 July 2020).

Ward, M. (2015). *Art in Noise: An Embodied Simulation Account of Cinematic Sound Design*, in Coëgnarts, M., and Kravanja, P. (eds.) *Embodied Cognition and Cinema*. Belgium: Leuven University Press, 155-186.

Willis, L. P. (2016). 'Hey! What Did You Do to the World?!': Conceptualizing the Real with Baudrillard and Žižek, *International Journal of Zizek Studies*. 10(1), pp. 63-87.

Zizek, S. (2008). *The Sublime Object of Ideology*. 2nd edition. London, New York: Verso.