

THE VISUALIZATION OF THIRD SPACE THROUGH MARCUS HARTEL'S STREET SHOOTS IN NYC

Özlem DEMİRKAN¹, Halil SEVİM²,

¹ KTO Karatay University Department of Architecture, Karatay / KONYA e-mail: ozlembabaoglu@yahoo.com

² KTO Karatay University Department of Architecture e-mail: halil.sevim@karatay.edu.tr

Abstract

Henry Lefebvre builds the production of space on three moments. These are perceived, conceived and experienced spaces. These three moments conceptually correspond to space practice, space representation, and representational spaces. Edward Soja develops his concept of thirdspace on Lefebvre's three moments. Third space is the intersection and even combination of perceived and conceived space. The intersection and combination is lived and experienced space. He defines trialectics of being and trialectics of spatiality by setting out a voyage through Lefebvre's works. He addresses to Foucault's concept of heterotopia. According to Soja, experiencing serial movements of a user create a new phenomenology. However, how is it possible to capture the instant image of serial experience of a space? Street photography can capture the instant images of people's experiences in spaces without costume and fiction. In photos, we sometimes see much more than the explored, conceived and perceived spaces. This study aims at exploring the instant images of user's serial movements in terms of making sense of Soja's concept of thirdspace. It uses visual material to give meaning to a phenomenological concept rather than reaching precise and constant results. Ten photos from Marcus Hartel's Black and White Street Photograph, and Color Street Photograph portfolios were chosen. As a method these photos are read through the context of thirdspace by evaluating the key concepts of their phenomology. After an introduction part, in the second part of the study space production of Lefebvre, in the third part heterotopia of Foucault, in the fourth part Soja's thirdspace are examined. In the fifth part, Marcus Hartel's street shoots are read again through these concepts. The instant exploration of user's serial movements in perceived and conceived space include context and meaning by referring to the intersection of perceived and designed space. The contrasts used by photography artist correspond to dual contrasts criticized by Soja. Hartel's photos taken in New York also refer to heterotopia concept of Foucault (Soja refers to heterotopia, as well). Within this context, this study examines the problem of how the space is read and produced through three moments of Henry Lefebvre, heterotopia of Foucault, thirdspace of Edward Soja, and street photos of Marcus Hartel. This study neither seeks precise results nor make an effort to produce an artistic output, the study only tries to produce the concept of third space through lived spaces snapshots. In other words, it is suggested to acknowledge this study as a third research.

Key Words: *Experience, Heterotopia, Photograph, Production of space, Thirdspace*

1. Introduction

What do architects design? What does the production process of a space constitute? How is a space read and analyzed? Precise and constant answers aren't given to these problems in design principles. However, there are some quests, methods and models to produce and read a space. Lefebvre asked the same question in his book *The Production of Space* [1].'' Does it

make sense to speak of a 'reading' of space? Yes and no. Yes in as much as it is possible to envisage a 'reader' who deciphers or decodes and a 'speaker' who expresses himself by translating his progression into a discourse. But no, in that social space can in no way be compared to a blank page upon which a specific message has been inscribed (by whom?) [1].'' But space as a subject, before thinking design process, it must be accumulated that its content.

According to Descartes, everything is substantive, and empty space is logically impossible [1]. For Hegel, an epistemological abstractness exists. It is the idea that creates the world [1]. Everything is in a cycle, and the mind recreates the idea. Space is mathematical in Euclid's works. It represents production in Marx and Engels.

Architects, interior architects and urban planners put the forms together during the design process. It is designed space. Space is a place that presence exists in any form. So presence lives the space. However, a number of concepts and definitions in the lived space have an effect on the production process of space.

When the studies on space are examined, it is observed that the works of Henry Lefebvre, Michel Foucault, and Edward Soja are milestones. Lefebvre regards the space as the process of social production. Within this context, a trialectic model is established. This model is composed of perceived space, conceived space, and lived space. A number of studies are grounded on Lefebvre's trialectic space production model (perceived, conceived, lived) with social moment. Avar [2] and Schmid [3] use it through space dialectic. Basa [4] also uses it through the experience of sustainability of urban memory and architecture studio. Prigge [5] examines urban revolution, space and representation using the trialectic model. Stanek [6] examines space as concrete abstraction through modern urbanization of Hegel, Marx and Lefebvre. Lehtovuori [7] uses it through experience and conflict. Erkılıç and Bayraktar [8] examine ecumenopolis as a method (Constantinos A. Doxiadis's notion of Ecumenopolis implies the enlargement of cities to such an extent that they become a single city without borders) through the trialectic model.

Michel Foucault forms the concept of heterotopia against utopia as other spaces [9]. Radfor Radfor and Lingel examine libraries through the experience of library surroundings as heterotopia [10]. They examine the Museum of Lord Foucault through difference, representation, and genealogy [11]. To understand Foucault's museum she defines museum as a space of representation and a space of difference. Sudradjat examines the relation of contemporary urban space with human behavior by associating Foucault's heterotopia [12]. Topinka examines the production of knowledge in other spaces through the concept of heterotopia [13]. Johnson defines the relationship between utopia and heterotopia by formulizing a variety of time and space concepts [14]. Boyer reveals the architectural reflections of the concept of mirror in heterotopia. Within this context, he composes the dialectic of imaginary space of our childhood and the real space of our adulthood [15].

Edward Soja's milestone work thirdspace is based on space production model of Henry Lefebvre. At the same time, it addresses to heterotopia of Foucault. Third space is the intersection and even combination of perceived and designed space. The intersection and combination is lived and experienced space [16]. Kaygalak focuses on Soja's concept of thirdspace within the context of reflections of postmodern criticisms of geographical thinking and novel space understanding. Moreover, he examines the new content of space as structure and design [17]. Bustin uses the concept of thirdspace as a basis in classroom-based activities of students at the age of 14-15. It focuses on perceptions of urban space which are conveyed through the 'Thirdspace' of illicit drug users in Edinburgh [18]. Anderson examines the concept of environmental resistance by integrating it into politics with the concepts of secondspace and thirdspace [19]. Moles examines the concept of walkability in thirdspace through the context of space-human communication [20].

2. The Production of Space

Lefebvre's space is the social space that presence exists. And there three moments are visible in his model for process of space production, which are perceived space, conceived space and lived space. Lefebvre's all philosophic (Soja called metaphilosophers) researches are composed of key concepts, moments. For example, a philosophical moment, a literary moment, a historical moment, a political moment are there in a city as a social laboratory. Lefebvre dealt with the concept of production of space in a Marxist way of thinking. For this reason, his concepts can be used as a template for trialectics of history, culture and space. When we evaluate the city from an epistemological and theoretical aspect, consuming its foreground of shape, it gives us significant amount of data. According to Lefebvre, city is the center of creativity. But he doesn't think of it without new arguments. He tries to connect history with the spatial, mental, cultural, social one [1]. The way to understand the historical starts with now, goes back to past and for new foresights of future again returns to everyday life of now .The production of space produces its own space [21] . Space doesn't exist by itself so it is produced. In this context, he warns us about the concept of u-topia and a-topia. He defines u-topia as fictional construction for verbal void. And for a-topia the term refers destruction of concrete space to create a social void. He thinks that firstly space was considered as a geometrical meaning. Then for Euclidian understanding, space had a mathematical meaning so the social meaning of space wasn't considered. Then, it was considered that space had a mental meaning. When the subject is concerned the dual contrast of practical space and theoretical space unite. At this point Lefebvre's moments are of importance. There are three dialectics (trialectic) between perceived space, conceived space and lived space.

Perceived space; it is the space where the everyday reality, which is called as spatial practice by Lefebvre, and urban reality are combined and all of other differences are vanished.

Conceived space (Representations of Space); conceived space and representations of space are in the field of professional disciplines. These professional disciplines can be defined as architects, interior architects, city planners, technocratic subdividers, and social engineers [1]. Conceived space has a dominant role in social life. Space has hegemony.

Lived Space (Representational spaces); it is the space where it is lived with all of the images and symbols involved by the space [1].

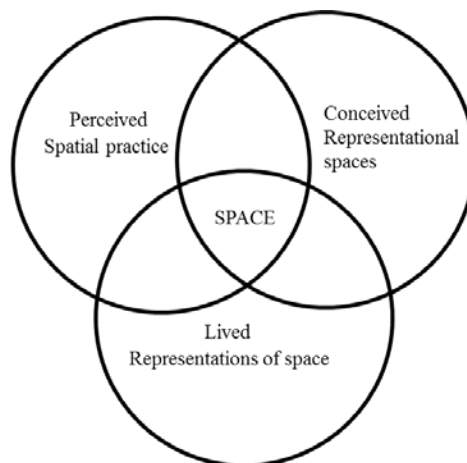


Fig. 1. The Production of Space

Lefebvre refers to the body in order to make sense of three moment social space. The level of relationship between the subject and the space make it possible for the moments in social structure to close up each other. At the same time, switching of the subject through moments without losing its own reality secure the body's position in three moment social life. At this point, the question of Lefebvre is what the difference between representations of space and representational space is.

'Save for the fact that there is very little to be said - and even less to be 'lived', for lived experience is crushed, vanquished by what is 'conceived of'. History is experienced as nostalgia, and nature as regret - as a I

horizon fast disappearing behind us [1].'

Within this context, it is possible to see Lefebvre's reaction against the notion that the lived space falls behind other moments. According to Lefebvre, the designed space is always superior. For Hegel, it is the idea that creates the world [3]. Everything is in a cycle, and the mind recreates the idea. For Marx and Engels, production is richenss. People reproduce history, consciousness, life, and the world. Lefebvre presents the concept of production in social space. Determining that the nature constitutes the human presence and everything repeats itself in a cycle supports the three moment social life. They are the designers that produce the space in the concept of production. It includes both the concrete space and the space produced by designers in their minds. The space is also produced by people. Of course, this is expressed by living reflex. Lefebvre summarizes his hypothesis as follows:

City creates a production tool.

The issue is the space. The space problematic displaces with the industrialization problematic by involving the problematics of urban and everyday life.

Marx replaced the things dealt with themselves by producer activities.

A novel approach is required to reveal social relations.

Space production is a response. It is a production for both formal and social practice content.

Space is formed by defining the pieces. It is divided into partial spaces and defined.

3. Heterotopias

Heterotopia is a spatial term used by Foucault in order to represent real spaces against utopia. It derives from the medical word heterotopy (which means a condition in which normal organ is misplaced). Foucault uses this term in three different time and place. Firstly, it was used in his book entitled "Words and Things" [22]. He argued that the things in Borges' book are placed in so different spaces that it is impossible to define a common space. The term utopia is used when the things don't have real spaces. However, all of the things are placed on plain and magical space, such as large avenues, cities with well-cared gardens, and countries that are reached easily. He named these spaces as heterotopias. The second use of heterotopia term took place in his paper called "Of Other Spaces, Utopias and Heterotopias", which was published in *Architecture/Mouvement/Continuite* journal [9]. The third one was used in a conference given to a group of architects in 1967 [14].

Foucault refers to *The Poetic of Space* of Bachelard. It emphasizes that we don't live in a homogenous and empty space. Bachelard fills the space with his phenomenology. According to Foucault, utopias exist first. They are unreal spaces. However, they are associated with real spaces. Heterotopias stand up against utopias. These are the highly real spaces. In the mirror sample, the space obtained through the mirror experience is both utopia and heterotopia. Indeed, there is no space behind the mirror. Therefore, it is the utopia. However, in reality, that space exists in terms of my perception and presence. As a result, it is heterotopia. Foucault explains heterotopia in six principles.

First principle; heterotopias exist in every culture, but in different norms. Foucault divides the heterotopias in the first principle into two. The first one is crisis heterotopias. In cultures, there are spaces which are forbidden or privileged for people in specific periods (adolescents, menstruating women, pregnant women). Boarding schools and honeymoon hotels are among the examples. The second one is heterotopias of deviation. The examples of second one are rest homes and psychiatric hospital.

Second Principle; each society produces the heterotopias of some functions in different ways within the historical process. Foucault exemplifies cemetery for this type of heterotopia.

Third Principle; Heterotopia is capable of juxtaposing in one real place several different spaces that are in themselves. Cinemas and theaters and Persian gardens are given as an example of this kind of heterotopia.

Fourth principle; Heterotopia is capable of juxtaposing in one real place several different spaces that are in themselves incompatible like cemetery. There are three kinds. The first is including loss of time. Museums and libraries are given as the examples of this kind of heterotopias. The second is festival heterotopia. Noted are the festival sites, the fairgrounds, the vacations or leisure villages.

Fifth principle; in these heterotopias, the time of opening and closing is determined. Military quarters and prisons are among the examples. Foucault uses the term purification in these heterotopias. Hammin of the Muslims and Scandinavian saunas are among the examples.

Sixth principle; Heterotopias have a function in relation to all space that remains. They create a space of illusion.

According to Foucault, brothels and colonies are the extreme examples of heterotopias. Within this context, spaces such as ships, museums, libraries, gardens, and cemeteries are demonstrated as examples of heterotopia.

4. Thirthing As Othering; Thirdspace

In his own words, Soja thinks that the concept of thirdspace encourages the readers to think differently on the meaning and indicator of space, which constitutes the spatial side of human life and is related to the concepts formed. The concepts are place, location, landscape, environment, home, city, region, country, and geography [16]. According to Soja, spatial measures of our lives have never become that much practical and political. Within this context, the concept of thirdspace involves ideas, events, appearances, and meanings. The concept of thirdspace is looking from a postmodern perspective. It has social, historical, and spatial dimensions. Thirdspace is the space where the race, class or gender, or being Marxist, materialist, idealist, and structuralist makes no difference, and all of them live together. At the same time, it is transdisciplinary. Transdisciplinary is a strategy to prevent spatial knowledge. Thirdspace is based on Lefebvre's space production model. Foucault's heterotopia is used in order to demonstrate the boundaries of thirdspace. Soja names Lefebvre as metaphilosopher. According to Soja, Lefebvre defines the limitless size of social space. Within this context, Soja builds trialectics of being and trialectics of spatiality.

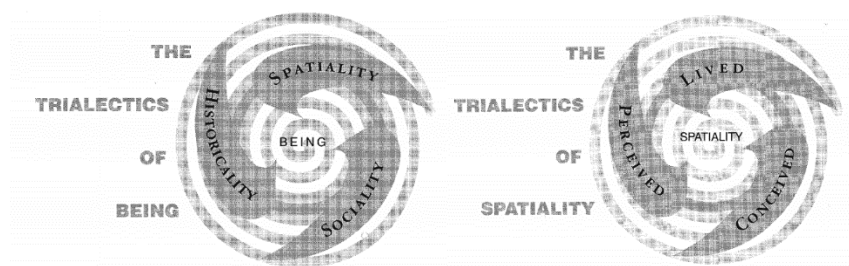


Fig. 2. (a) The Trialectics of Being (b) The Trialectics of Spatiality

The third term is the other. Aleph is place (Borges story) where all places seen from every angle all time past and present and future coexist simultaneously. The third is a possibility but not only in between position but also totally in a both and also position. Everything comes together in thirdspace. Subjectivity/objectivity, abstract/concrete, real/imagined, knowable/unimaginable, repetitive/differential, structure/agency, consciousness/unconscious, disciplined/transdisciplinary, everyday/unending story.

Soja focuses on the feminist theory for increasing the openness of thirdspace. He is influenced by the paradox of being within the same/other and also elsewhere by Gillian Rose along with other writers such as Cristine de Pizan, Dolares Hayden, Christine de Pazan, Barbara Hooper (especially about the body), Gloria Anzaldua (the borderlands), Gayatri Spivak (the reworldings), Edward Said (the imaginative geographies), Homi Bhabha (thirdspace) [16]. As expressed by Bhabha, Soja's epistemological trialectic of space means disabled, otherness, being hybrid, and openness to and involving everything simultaneously.

First space is the space of practice where space-spatial forms and concrete material are mapped on. The secondspace is the space which is designed on the minds of professional groups in design principle. Soja's definition of secondspace involves urban space as well.

Flexcity; A productively postfordist industrial metropolis

Cosmopolis; A globalized and 'glocalized world city

Exopolis; Acityscape turned inside-out and outside in through the radical reconstruction of urban form

Polarity; A social mosaic of increasing inequalities and polarization

Carceral city; A fortified Archipelago where police substitutes for polis

Simcity; A hyperreal scampscape of simulations and simulacra.

As it is in Lefebvre's concept of center /periphery, a dual dialectic exists between conceived and lived space. Thirdspace is the lived space which is between or covers perceived and conceived space. He defines thirdspace as another way of understanding and acting to change spatiality of human life.

5. Visualization of Thirdspace Through Marcus Hartel's Street Shoots

According to Soja, experiencing serial movements of a user creates a new phenomenology. However, how is it possible to capture the instant image of serial experience of a place? Street photography can capture the instant images of people's experiences in places without costume and fiction. In photos, we sometimes see much more than the explored, conceived and perceived spaces. In the field study, the shoots of Marcus Hartel, who is a street photographer in New York, were chosen [23]. Marcus Hartel started his career after moving to New York in 2003. His catch-phrase is "streets are belong to me". His photos were published in a variety of publications such as Time, Street Photography Now, Wings Magazine, Digital Photographer, Stern, Afisha, Vision, Manhattan Times, and Classic Motorcycle. Ten photos from Marcus Hartel's Black and White Street Photograph, and Color Street Photograph portfolios were chosen. The photos are read through Henry Lefebvre's model of space production, Foucault's heterotopia, and Soja's thirdspace.



Fig. 3. (a) Photograph1 (b) Photograph 2 [23]

In photo numbered 1, three different spaces with reflections take place in frame. He touches different lives by the cat seen on the reflection, the man walking, the man carrying a cup of café and much more. Like the Foucault's concept of heterotopia, the photo forms different spaces within a real space. Photo 1 also refers the mirror functions as a heterotopia. It makes this place occupied at that moment when absolutely real connected with surround spaces and absolutely unreal passing through this virtual point which is over there so the photo is declaration of thirdspace with all virtual affluence. In photo 2, the imaginary tour of the child in the train collides with illusion of adult reflected on the train. Articulating complex relationships between past and future, the photo involves imagination, reality, and memory without a permanency in time. Trilectics of being occur with its social, historical and spatial part and the photo scales down the form and scales up the emotion .



Fig.4. (a) Photograph3 (b) Photograph 4 [24]

In photo 3, two different people move on the street with help. The child moves on a stroller with the help of possibly its mother while an old man moves on a wheelchair possibly with the help of his daughter. A strong time collision is present in this photo. Mother/child and father/daughter collide in the same space in different periods of their lives. Foucault's heterotopia offers multiple possibilities within which a spatialized "otherness" can flourish [12]. Childhood and senile are referred as otherness in the society. Third space is combination of dual contrasts and base on otherness (thirthing as othering) so the photo reflects the thirdspace of social otherness. In photo 4, a handicapped man without his feet stands upright while the artificial legs stand upside down. The concept of heterotopia is medical in terms of etymology. It is a condition in which normal organ is misplaced The state of having and not having is reflected on artificial and natural photo, compensating for not having is possibly an artificial formation, which is considered.



Fig.5. (a) Photograph5 (b) Photograph 6 [23]

In photo 5, a dog is on the fuse box. It is a space where a dog shouldn't normally be. At the same time, a man with women's clothes and earrings which are made of donuts is walking. The space in the photo involves everyone that can live together no matter what their race, gender, and species are. It is the thirdspace. In photo 6, a pregnant woman is resting in front of a billboard, which displays a woman with cleavage. Foucault defines the first principle of his concept of heterotopia as the crisis of heterotopia. This definition includes pregnant women, adolescents, and menstruating women. He mentions about some prohibited and secret spaces. The pregnant woman on the photo and the contrast involved in billboard constitute the thirdspace.



Fig.6. (a) Photograph7 (b) Photograph 8 [24]

In photo 7, a kid riding a bike in a subway is seen. As in the ship example of Foucault, subway is a moving space. It is a space without space. It exists by itself. It is closed in itself and moves on to different spaces. The bike ridden in subway presents a different type of experience for the space. Within this context, the photo has a rich content on movement. In photo 8, the perception of environment is seen from inside of a car, which is a space itself. This perception changes at any moment and creates different spaces. Both photos are the postmodern interpretations of space. They are also real and lived space.



Fig.7. (a) Photograph9 (b) Photograph 10 [25]

In photos 9 and 10, living bodies are seen in front of two billboards, which present different lives. While the bodies in the first photo are walking, the bodies in the second photo are living in different spaces in virtual world. The term hyperreality is the lived space of exact copies of originals that no longer exists or never really existed. Soja gives meaning to this term referring the works of Baudrillard and described as real-imagined [16]. Both two photos can be defined by hyperreality as thirdspace.

6. In Lieu of a Conclusion

This study was carried out in order to make sense of the works of three metaphilosophers, who explore contexts, meanings, visuals, and lived spaces in cities. Each photo indicates a different space in terms of content. They are the thirdspaces of postmodern city which changes, differs, and grows at any moment since they are the instant records of the lived space. The instant exploration of user's serial movements in perceived and conceived space include context and meaning by referring to the intersection of perceived and designed space. The contrasts used by photography artist correspond to dual contrasts criticized by Soja. Hartel's photos taken in New York also refer to heterotopia concept of Foucault. The links between photos and thirdspace are summarized below.

Photo 1 -the mirror functions as a heterotopia.

Photo 2 -trilectics of being occurring with its social , historical and spatial part.

Photo 3 -thirdspace of social otherness.

Photo 4 -The state of having and not having

Photo 5 -livability no matter what their race, gender, species and choices are

Photo 6 -Crisis heterotopia

Photo7 -Rich content of movement and no-space

Photo 8 -Perception change at any point creates thirdspace

Photo 9- Hyperreality as thirdspace

Photo 10- Hyperreality as third space

This study neither seeks precise results nor make an effort to produce an artistic output. Within this context, it is suggested to acknowledge this study as a third research.

References

- [1] Lefebvre H. *The Production Of Space* . Blackwell,1974.
- [2] Avar AA, 2009. Lefebvre'nin Üçlü -Algılanan, Tasarlanan, Yaşanan Mekan-Diyalektiği. *Dosya 17 Mimarlık ve Mekan Algısı*, p. 7-17.
- [3] Schmid C, Henri Lefebvre's theory of the production of space: towards a three-dimensional dialectic. In Goonewardena K, Kipfer S, Milgrom R,Schmid D,editors. *Space, Difference and Everyday Life* , Newyork and London. Routledge, 2008, p. 27-46.
- [4] Basa İ, 2015. Kentsel Hafızanın Sürdürülebilirliği: Bir Mimarlık Stüdyosu Deneyimi. *Gazi Üniversitesi Güzel Sanatlar Fakültesi Sanat ve Tasarım Dergisi*, p. 27-42.
- [5] Prigge W, Reading The Urban Revolution: space and representation. In Goonewardena K, Kipfer S, Milgrom R,Schmid D,editors. *Space,Time and Everyday Life*, Newyork and London. Routledge, 2008, pp. 46-62.
- [6] Stanek L, Space as Concrete Abstraction: Hegel, Marx, and Modern Urbanism in Henri Lefebvre. In Goonewardena K, Kipfer S, Milgrom R,Schmid D,editors. *Space,Time and Everyday Life*, Newyork and London. Routledge, 2008, p. 62-80.
- [7] Lehtovuori P, *Experience and conflict The dialectics of the production of public urban space in the light of new event venues in Helsinki 1993–2003*. Helsinki, Centre for Urban and Regional Studies Publications, 2005.
- [8] Erkilic H, Bayraktar U,2015. Resimli ve Tamsili Bir Triyalektik Mekân Okuması Olarak Ekümenopolis. *İleti-ş-im* 23, p. 113-134.
- [9] Foucault, M.,1967. Of Other Spaces:Utopias and Heterotopia. *Architecture Movement Continuity*.
- [10] Radford GP, Radford ML, Lingel J, 2015. The Library as Heterotopia Michel Foucault and the Experience of Library Space. *Journal of Documentation* ;71:4, p. 733-751.
- [11] Lord B, 2006. Foucault's museum: difference, representation, and genealogy.*Museum and Society*;4: 1,p. 11-14.
- [12] Sudradjat I,2012. Foucault, the Other Spaces, and Human Behaviour. *Procedia - Social and Behavioral Sciences*,;36, p. 28-34.
- [13] Topinka RJ, 2010. Foucault, Borges, Heterotopia: Producing Knowledge in Other Spaces. *Foucault Studies*; 9, p. 54-70.
- [14] Johnson P,2006. Unravelling Foucault's 'different spaces. *History of the Human Sciences*;19:4, p. 75-90.
- [15] Boyer MC. The Many Mirrors of Foucault and Their Architectural Reflections. In Dehaene M, Cauter LD, editors. *Heterotopia and the City*,Newyork and London, Routledge;2008, p. 53-70.
- [16] Soja EW. *Thirdspace Journeys to Los Angeles and Other Real-And-İmagined Places*, Blackwell Publishing; 1996.
- [17] Kaygalak İ, 2011.Postmodern Eleştirilerin Coğrafi Düşünce ve Yeni Mekân Kavrayışları Üzerine Yansımaları.*Coğrafi Bilimler Dergisi*; 9:1, p. 1-10.
- [18] Bustin R, 2011. The living city: Thirdspace and the Contemporary Geography Curriculum. *Geography*;96:2, p. 60-68.
- [19] Anderson J, 2002. Researching environmental resistance: Working through Secondspace and Thirdspace Approaches. *Qualitative Research*;2:3, p. 301-321.
- [20] Moles K, 2008. A Walk in Thirdspace: Place, Methods and Walking. *Sociological Research Online* ;13:4, p. 1-17.
- [21] Lefebvre, H. *Mekânın Üretimi*. Sel Yayıncılık, 1974 p.28.
- [22] Foucault, M. Kelimeler ve Şeyler İnsan Bilimlerinin Bir Arkeolojisi. Mehmet Ali Kılıçbay. İmge Kitabevi , 1966, p.1-15.
- [23] <http://www.markushartel.com/>.

[24]<http://www.markushartel.com/street-photography/black-and-white-street-photography>.

[25] <http://www.markushartel.com/street-photography/color-street-photography>.

[26] Schmid C, Henry Lefebvre's Theory of The Production of Space Towards a Three Dimensional Dialectic. In Goonewardena K, Kipfer S, Milgrom R, Schmid D, editors. *Space, Time and Everyday Life*, Newyork and London. Routledge, 2008.

[27] Hegel, GWF. *The Philosophy of History*. Batoche Books Kitchener , 2001, p. 23.

[28] Zepeda, JR. Descartes And His Critics On Spaceand Vacuum. University of Notre Dame Doctor Of Philosophy Thesis, 2009.