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Reading the Simultaneous Motion and Reality Bending Concepts through *Doctor Strange*

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Abstract

In order to exemplify the interaction between architecture and science fiction films, Doctor Strange (2016), one of today's cinema examples, was chosen because of that the special effects created in computer environment by transferring the dreams to the film have a surrealist effect on the film; of the fantastic spaces that arise with the deformation of real places become the main character of the film; of foreseeing a different future in terms of architecture. Within the scope of the study, the film was read through the changes of time and space of the concepts of "reality bending" and "simultaneous motion". As a result of the readings on these concepts, the relationship of cinema with architecture has gained a different dimension, and it has been seen that this film can create a fantastic perspective and inspiration to the designers about the future deconstructivist buildings.

Keywords: Architecture; Film; Simultaneous Motion; Reality Bending; Doctor Strange

Reading the Simultaneous Motion and Reality Bending Concepts through *Doctor Strange*

Gülşah Uner, Ebru Erdogan

Introduction

In the historical process, mosques have also been influential in the formation of social identity. When these associations are examined, it is seen that the relationship between cinema and architecture has recently become a subject that has been examined in both fields of architecture and cinema (Ertem, 2010, p. 21). When we look at the studies in the literature in order to strengthen this unity, it is seen that there are studies on the relationship and interaction of architecture-cinema (Allmer, 2010; Dear, 1994; Atalar, 2005; Pallasmaa, 2001; Kaçmaz, 2001; Alkan Bala, 2014, 2019; Arnheim, 2002; Deleuze, 2006), the conceptual dimension of time and space (Kahvecioğlu, 2005; Giedion, 1967; Urry,1995; Schulz, 1971; Auge,1997; Giddens, 1995; Çalğıcı, 2013, Erdoğan and Yıldız, 2018), the handling of the concepts of time and space in the context of cinema and architecture (Tanyeli, 2001; Erk, 2009; Yılmaz, 2011), and spatial predictions in the city of the future created in cinema (Milner, 2009; Alsayyad, 2006; Sobchack, 1997; Serim, 2015). Güzel (2015), on the other hand, touched on the concept of *reality-bending* together with hallucination and looked at how hallucinatory spaces have an impact on the science fiction genre and how this situation is reflected in places. In this study, the concepts of *reality bending* and *simultaneous motion* will be read over the movie *Doctor Strange*. Unlike Güzel, the movie *Doctor Strange* does

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not proceed through hallucinatory spaces, but through the characters creating virtual spaces by bending real spaces and creating new virtual spaces by re-bending these virtual spaces within the film editing. The concept of simultaneous motion is examined in terms of the simultaneous existence of the created spaces, the fact that the spaces are always in motion and new formations, *and they create different realities by destroying the restrictive rules in the reality of the audience*. In this context, the handling of the aforementioned concepts and techniques, the transfer of the imagined to the film and the special effects created in the computer environment add a surrealist effect to the film, the fantastic spaces created by the deformation of real spaces become the main character of the film and foresee a different future in terms of architecture, which is one of the reasons why the movie *"Doctor Strange "* was chosen within the scope of the study. In addition, the fact that cinema adds a different dimension to architecture with the fact that it adds a difference to architectural and interior architectural designs, the relational dimension of the city skyline can be seen with the future structures, and that the spaces created with this virtual reality can be a source of inspiration for architects and offer the audience a chance to experience, have also been effective in the selection of this film.

As seen in *Doctor Strange*, the science fiction genre overturns the usual definitions of time and space with its surreal spaces and predictions of the future. While doing this, it imitates the reality of the living world and creates virtual spaces by bringing together concrete fictional spaces and

abstract spaces created by digital technology. Therefore, it can be said that the strongest link between architecture and cinema is space. Tanyeli defines this bond in 3 routes. First, cinema's definition of a virtual architecture space that is not built and is not used on the plane of reality. Second, cinema embodies real architectural spaces by reproducing them in its own virtual universe. Third is that cinema is about the architect and/or architectural activity as a personality within its own plot (Tanyeli, 2001, p. 66). However, it is seen that the spaces used in the movie *"Doctor Strange"* are connected with both the first and the second routes of Tanyeli. In the movie, on the one hand, real architectural spaces are reproduced in their own virtual universe, on the other hand, *surrealist virtual spaces are created, which are formed by the bending of reality* and have no place in the plane of reality. Thus, while the *Doctor Strange* movie looks at architectural spaces from a different perspective, it also allows people to look at architecture from a new perspective. In this context, the surreal spaces created through such science fiction films offer an experimental and innovative environment to the audience and also constitute a testing ground for future architectural design searches. This area presented provides architects with an experimental working environment, with technology opportunities, which they cannot reach in real life (Erdoğan and Yıldız, 2018, p. 7).

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Simultaneous motion

When the term *cinematograph* is analyzed etymologically, it is seen that it is derived from the Greek words *"kinema=movement"* and *"graphein=writing"* (Temel Britannica, 1993). Therefore, *cinematograph* means "the one who writes motion" and "the one who detects"; *cinematography* means "to write motion, to determine". Motion is the act of moving, including meanings such as movement, the state of an object moving relative to a stationary point, the transition from one mood to another, the beginning and movement of an idea process. The most well-known meaning of motion, which is a synonym for motion, is the change in the state and location of an object (Şengönül, 2012, p. 8). However, since Einstein's theory of Relativity (1905), it has been accepted that there are four dimensions of the universe, and the concept of synchronicity of time has emerged with the theory. It has shown itself in many fields such as painting, sculpture, philosophy, theater, photography, and cinema in different time periods of the simultaneous movement that emerged with the theory of relativity. For example; Carrà used dynamic lines and contours to emphasize the movement in his work *"The Knight"* (Fig. 1). By painting the changing shapes of the limbs of the horse and the human figure in motion at the same time, he reflected the mobility and speed simultaneously. Carlo Carrà, a futurist painter, handled the movement as a subject in his works and reflected them simultaneously. The artist's works combine the dynamism of Futurism with the structural feeling of Cubism (Gezen, 2016, p. 18-19).

Fig. 1. Carlo Carra, Knight, Oil on Canvas, 1913, ("Virtual", 2019).

Giacometti, one of the first artists to join the surreal artist community, left important works, especially in the fields of surrealist and abstract sculpture. One of his surrealist works, *"Suspended Ball"* is a very good example of the era (Fig. 2). Giacometti, who made the ball swing in real terms, turned the concept of motion into a two-dimensional concept of motion (Edi, 2011, p. 28).

Fig. 2. Alberto Giacometti, Suspended Ball, 1930-31, ("Virtual", 2019).

Cinema is professional fiction in itself when it comes to presenting events. It looks different every moment, yet there is no such temporal progress in painting and sculpture. Since this is one of the

most important features of motion, cinema uses and interprets motion in accordance with aesthetic rules (Arnheim, 2002, p. 154). Deleuze, a 20th century philosopher who studies the motion of the image and the image of motion, discusses the image of motion in the context of the concept and image relation. He achieves the concept and image identity in classical cinema based on the motion image, thanks to the rational relation. The cinematographic image is the motion itself. The motion image, which is a cinematographic image, expresses a new transformation of thought. In short, the image does not function the same as the concept, it expresses a different dimension of thought by activating a different aspect of the thought. According to Deleuze, this is what distinguishes the art of cinema from other art fields such as painting, photography, sculpture, and literature. While the realization of movement in painting and photographic images is a process completed in the mind, the automatic movement offered by the cinema, that is, the film emerges as a preparatory force for a result with its ability to manipulate the process of the image in the mind (Deleuze, 2014, p. 54). Cinema does not give us an image to which movement is added, it directly gives the image of movement. There is no dichotomy between motion and image, namely, images outside and images in the mind. There is only image movement. Image is movement itself, and movement is the image itself. The image is the visible and the visible is in constant motion (Deleuze, 1986, p. 2).

Deleuze says that Einstein is the best person to use the concept of simultaneous motion, which emerged in cinema, together with montage. Deleuze considers the use of montage in cinema as a technique that frees movement from stability and creates a collection of movements that can create different wholes with its new parts. He says that, in addition to creating a diversity of thought by creating a sudden effect in the movement, montage also found ways to pass from thought to practice by reproducing the audience's own thought. Although Deleuze looks at the image created by cinema as a movement and time transmitter, he considers the *movement* itself independent of the natural movement and the *time* itself from real-time. According to him, realizing the cinematographic illusion is the recreation of the whole of the past movements, actually, the movement and time, which the audience adopts with the distance they travel while moving the film frames (Güneş, 2009, p. 11-12). Bergson explained the concept of *cinematographic illusion* as a linear sequence of successive moments (Fig. 3).

Fig. 3. Matrix, Cinematographic Illusion, 1999 ("Virtual", 2019).

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From this point of view, cinema commentate about determining the pictures of any motion by dividing it into parts at regular intervals and then recreating the motion by reflecting it on the screen (Özön, 2008, p. 3-4). The movement, which is divided into pieces and regenerated at regular intervals, actually gives the concept of *synchronous motion*. Simultaneous motion arises as the motion follows one after the other.

Reality Bending

The concept of "reality" forms the basis of the concept of *reality bending*. *The concept of* "real″ is defined as mind-independent objective entities (Hançerlioğlu, 1997, p. 214). Deleuze (2006, p. 24), explains *reality bending* as *"the ideal element that forms the variable curvature or curls, bending"*. The bending can be of varying intensity, disrupt the structure of the image, or this distortion may be so severe that it completely changes the image. Bending is in a continuous deformation and transformation because it has a continuous formation and motion. The dancer's body, the meaning of the poet, the word thinker, the painter's image, and every memory bends the reality perceived. Bending transforms being and reveals new existences. As an example of bending, the bending of synchronism in Picasso's paintings (Fig. 4) together with cubism can be given and reflecting the movement of the object to the static table. In the works of Salvador Dali, the whole reality about the objects is twisted and the time flow melts the hours (Fig. 5). Rene

Magritte bends the perception between language and image, and when Van Gogh paints what he sees in himself, the sky and fields are twisted (Güzel, 2015, p. 49-53).

Fig. 4. Reality Bending, Cubism, Pablo Picasso ("Virtual", 2019).

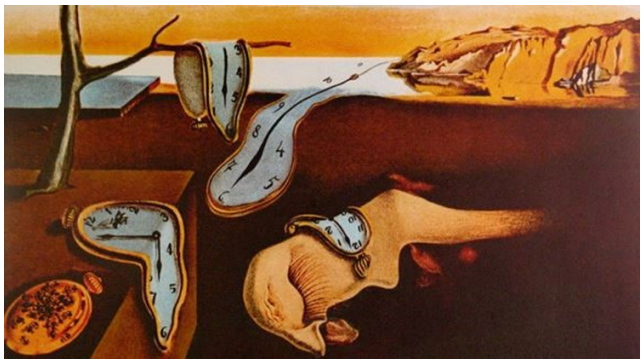

Fig. 5. Reality Bending, Salvador Dali ("Virtual", 2019).

The phenomenon of seeing requires explanation while making sense of an object seen. However, if it is an experienced space, it can make the user perceive by integrating the abstract elements with space in architectural designs. Different kaleidoscopes can be designed to reveal bending in the direction of detection. It is suggested that designing bending to design or reveal space is a serious process. Recognizing the bend allows one to experiment with it. Designing a kaleidoscope

is necessary to *consciously* bend perception. The kaleidoscope increases the speed of bending but still makes it configurable in a way that preserves its randomness. Another concept that explains the twist is *hallucination*. A hallucination is a cognitive space in which the soul wanders that involves twisting. Hallucination produces new instantaneous meanings, glances, and unreal perspectives in every moment of change. The hallucinatory twisting is virtual and a creative event. Bending creates existences parallel to be. The increasing speed of bending makes the bent image proportionally less than reality. Then it is possible to conclude that the bent mind is a free mind free from the restrictive rules of reality. This consciousness is a mind that is open to exploration. The coexistence created by the twisting curves is now a hallucination out of reality. The consciousness that bends the word, image (Fig. 6), sound, movement, space, and city (Fig. 7) reveals a separate virtual space of his own with the virtual designs of the bent. It is possible to find traces of this cognitively designed space in the material (Güzel, 2015, p. 18-51).

Fig. 6. Celestins Theater Building, Lyon, 2010, Bending the Image, (Atiker, 2010: 110).

With the advancement of technology, *reality bending* has been strengthened by the increasing use of screens and moving images in the art of placing the place in virtual transformation, and today, technology has become an indispensable part of science fiction cinema. *Augmented reality* studies, which are defined as technologies that display virtual images simultaneously on real world objects, have found newer application areas in the art of installation as well as in science and technology. Today, projection technology has started to be used as an artistic expression, especially through motion graphics and images projected on architectural structures and 3D objects (Atiker, 2010, p. 99).

Fig. 7. The City Where Reality Is Bended, Inception Movie, 2010 ("Virtual", 2019).

Cinema reproduces a certain universe of reality as fiction and enables the audience's emotions to be perceived both in an imaginary and in a real way. Therefore, science fiction cinema is not real but imaginary fiction. As seen in the movie Inception, the buildings are twisted by redesigning the

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city as reality is reconstructed and twisted in the virtual universe. In other words, cinema presents fantastic and imaginary examples of social life to people.

Reality Bending and *Simultaneous Motion* Concepts Through the Movie "Doctor Strange"

First published by Steve Ditko as a comic book in 1963, the character of *Doctor Strange*, which did not attract much attention, was adapted to the film and succeeded in introducing himself very well in the field of cinema. Victoria Alonso, Stephen Broussard, Louis Desposito, Kevin Feige, Stan Lee, and Charles Newirth produced *Doctor Strange*, which pioneered science fiction and fantasy film genres and was one of the most striking examples, directed by Scott Derrickson in 2016. *Doctor Strange* made its name known as the 14th and best film of the MCU (Marvel Cinematic Universe).

Scott Derrickson is a film director, producer, and screenwriter. In 2005, he was recognized for the supernatural thriller "The Exorcism of Emily Rose" and was awarded in the best thriller-horror category. For Derrickson, horror is the perfect kind of motion picture that a believer can work with. He says that he likes the mystery of the horror genre and argues that it is a genre that takes the mystery of the world seriously. In this context, it can be said that he wrote and directed many horror movies. Derrickson, who made a deal with Marvel to bring the comic book character *Doctor Strange* to the screens in 2016, put forward a science fiction movie as a result of the agreement, saying, *"We need cinema to break the boundaries and remember that we are not in control"*.

In the Doctor Strange movie, when the main character lived in the West, individuality came to the fore because everyone actually grew up as a lonely character, and the selfishness and caprice that resulted from this were understood only when he went to the east, and so, it was brought the idea of "*I am actually a good person*" to the fore. During the time the main character of the film spent in the east, it triggered the development of communal consciousness and mysticism with the benefit of living together with the community and thus, the mysticism called "Far Eastern Culture" brought to the fore a delicious culture (Üner, 2019, p. 59). The cultural transfer between east and west, which is felt in the content of the movie Doctor Strange, attracted the attention of almost all audiences, even the literary group, the cinema community, and musicians.

Stephen Strange does not just use the "doctor" title as a superhero name. *Strange* is also a smug, arrogant, egotistical yet talented neurosurgeon in the movie. In addition to being a successful surgeon, the money he will receive from his patients becomes the focus of attention. After a traffic accident, *Strange* is unable to use his hands, which drives *Strange* away from his profession. Neither traditional medicine nor innovative studies are useless for his treatment. As his last hope, *Strange* finds his last hope by going to *Kathmandu*, where a healing centre is located. Arriving in *Kamer-Taj* after a long journey, *Strange* learns that this is not just a centre of healing, but a defensive front that protects the world from dark forces. Here, he asks for help from a mysterious

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dervish, *The Ancient One. The Ancient One* rejects *Strange* for his selfishness. But *Doctor Strange*'s stubborn desire to return to his old life and therefore waiting for days at *Kamer-Taj*'s door, while *The Ancient One* sees the desire to be a good person behind *Strange's* selfish attitude, change *The Ancient One*'s mind. Therefore, he begins to teach *Strange* the mysterious arts. After all this, *Strange* changes his perspective on the art of magic and realizes that it is not possible to live without being worthy. Beginning with magic training from *The Ancient One*, he develops himself and becomes the supreme mage's right-hand man (Fig. 8).

Fig. 8. Lesson Training of *The Ancient One* and *Strange.*

The Ancient One and his students have powers that can open portals between spaces with the mystical powers they draw from different parallel dimensions and can reverse the structures of the buildings and create the weapons they want with their imagination (Üner, 2019, p. 61). In addition, thanks to these opened portals, it can be said that they move from New York, where they are, to another part of the world, and because they leave the current time zone as in the space, they are breaking in time and moving to another time period (Fig. 9).

Fig. 9. Portal Opened Between Spaces and Time and Spaces Change.

The cinema-specific space is sometimes formed by using existing spaces in a script, and sometimes by creating imaginary spaces that are not actually built. When the existing spaces are used in the scenario, the lifestyles offered by the existing architecture are questioned through the space specific to the cinema. Thus, fears, ideas, thoughts, and dreams reach the audience by reconstructing the physical space in the cinema's own universe. Through imaginary spaces, an environment is created to think about where the lifestyles offered by architecture can go through *utopian* or *dystopian* fictions. Therefore, it can be said that the place of the cinema is the actor as much as the characters in the cinema (Çalğıcı, 2013, p. 64). Especially in *Doctor Strange*, the use of real, familiar places by deforming and changing their reality has led to the emergence of fantastic places, which has an important place in the story of the film, and the location has become one of the main characters of the film. Special effects applications are used in the creation of many scenes that are common in today's cinema and watched in astonishment. It is seen that special

effect applications are used in most scenes of *Doctor Strange*. Special effects enable images that are not real in the cinema to be combined with real images to create a sense of reality (Yurdigül and Zinderen, 2013, p. 11). It can be said that the movie *Doctor Strange* is also a superhero movie with fantastic illusion abilities, decorated with visual shows and special effects.

Part of the story of *Doctor Strange* takes place in New York. *The Ancient One*, one of the main characters of the movie, wanders the streets of New York and follows his enemies. When he confronts his enemies, he creates an alternate reality to catch them. *The Ancient One* creates his own virtual world by bending the reality, that is, by deforming the known real space (Fig. 10). This situation can be reconciled with the yellow costume the character wears, because yellow requires creativity and allows us to find new ways. Yellow is the colour of defiance and loves mind games. Thanks to the human body, it has to establish physical communication with space. *The Ancient One* uses the space for both defence and attack by shaping the reality according to his own wishes and gaining victory against his enemies. The deformation of the space is actually similar to the constantly changing shapes that appear when looking through the kaleidoscope binoculars, as in the kaleidoscope logic. While this continuous change adds dynamism to the scene, simultaneous motion is also reflected. Despite the fact that the film takes place in New York, it is seen that the facades of the buildings are very dull and colourless, unlike the city. For this reason, it is very

difficult to find a striking point in buildings. The effect literally focuses on the movement and deformation of the space. It is possible to see this effect in many scenes of the movie.

All the places and people watching throughout the movie have turned into rather cold colours. On the contrary, it is seen that the main characters also use vivid colours in their clothes. Therefore, the characters are stripped of the emotions given by the colours.

Fig. 10. Deconstruction and Reality Bending, 02' 55" Scene (Derrickson, 2016).

The Ancient One shapes the streets of New York, creating a glass break effect when used against enemies. Thanks to this effect, multiple realities are referred to (Fig. 11). Each piece of glass symbolizes a different reality. In this way, multiple spatial realities are created in the same space. These created spaces reflect neither the future nor the past, and they continue to exist simultaneously at the same time and in the same time period.

Fig. 11. Simultaneous Motion and Reality Bending, 02' 48" Scene (Derrickson, 2016).

The special effects of the movie *Doctor Strange* created in a computer environment add a surrealist effect to the film. In cinema, the most important factor in transferring the imagined to the film is the special effects. Since these effects are prepared in a virtual environment, they go beyond the real images captured by the cameras and add virtual reality to the film. The Ancient One creates a new reality by moving the structures horizontally, by going beyond the known physical laws such as gravity. Together with this created reality, the figures move with space and adapt to the new reality (Fig. 12).

Fig. 12. Deconstruction and Reality Bending, 03' 16" Scene (Derrickson, 2016).

As explained in the concept of reality bending, bending is always in motion and new formations. Spaces are in a state of constant motion and deformation depending on these formations (Fig. 13).

The emphasis of the yellow costume reveals that *The Ancient One* was constantly challenged by his enemies. *The Ancient One* initiates a mental challenge against his enemies by deforming structures. These deformations occur quite differently from the reality perceived by the human mind. The bending of spaces made of stone, concrete, glass, and metal in the known reality into different shapes creates different realities in the minds of the viewer, freeing them from the restrictive rules in their reality. Therefore, with the effect of technological and scientific developments such as the use of materials in different ways, supporting the infrastructure of buildings with technological developments, the field of architecture, these movie scenes create a test area by allowing the audience to experience the spaces they could never be in (Fig. 12-18). In the movie, *The Ancient One's* bending reality, separating the spaces, and reassembling them in different ways is similar to the intelligence games made with Lego pieces. Just as many spaces can be created in different variations with the same Lego pieces (Üner, 2019, p. 65).

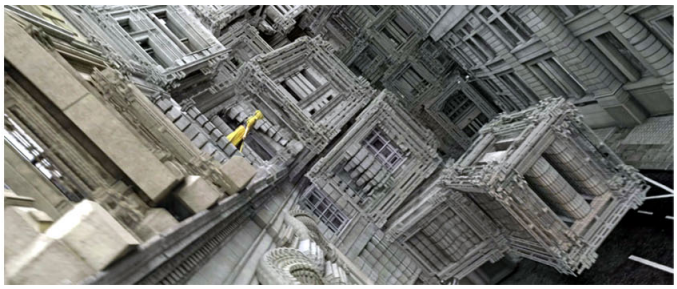

Fig. 13. Deconstruction and Reality Bending, 03' 29" and 04' 01" Scene (Derrickson, 2016).

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As mentioned in the definition of reality bending, bending can be of different intensities. As *Doctor Strange* and *Mordo* flee from the villains to the portal, the known real plane is deformed by the villains, creating a surreal perspective. While a single structure is moving in the previous frames, it is seen that all the high-rise concrete and glass structures in New York City are twisted (Fig. 14). The whole city adapts to the perspective created in this new reality and prevents *Doctor Strange* from going to the portal.

Fig. 14. Urban Decay and Reality Bending, 74' 59" Scene (Derrickson, 2016).

As the bending intensity increases, it is seen that the bent image, namely New York City, is far away from the known reality (Fig. 15). Although space is twisted away from reality, traces of real space that people perceive in their minds continue to be seen. This situation creates a dilemma in people's perception because this created dilemma becomes singular in the subconscious.

Fig. 15. Urban Decay and Reality Bending, 75' 38" Scene (Derrickson, 2016) and New York City.

As Deleuze puts it, *"the ideal element that produces variable curvature or bend is bending"*. Spaces that merge into each other in a mess and reveal new formations cover the entire scene of the movie, and *Doctor Strange*, who is in the centre of the scene, is drawn towards this newly created virtual reality. The characters in the movie comply with the unreal laws of physics brought by this virtual reality. In this case, it is seen that not only the bending of reality affects the spaces but also the people in the spaces. Fig. 16 shows how much reality is bent. Although these spaces created in virtual reality are a source of inspiration for architects, they are completely surrealist and impossible to implement because they contradict the known laws of physics and reality.

Fig. 16. Skyline Distortion and Reality Bending, 75' 56" Scene (Derrickson, 2016) and New York City ("Virtual", 2019).

The predictions of the future urban space put forward in the cinema offer representations to the people of the modern age about the city of the future and the lifestyle that awaits them. Utopias and dystopias, which make place definitions for the history of the future, constitute the most important space design principles of the science fiction genre (Erdoğan and Yıldız, 2018, p. 15).

In this movie, the roads, bridges, buildings, traffic lights, vehicles that make up the city are moved simultaneously by the characters in the movie, and they move away from reality and create new realities by ignoring the known physics rules (Fig. 17). The usual moving structure of the city in the scenes of the movie set in New York is compatible with the virtual and dynamic spaces created by special effects. Here, as mentioned in the futurism movement, it is possible to see the dynamism, movement, and simultaneous movement that ignores the rules of the past and adds to the structure of the cities that the future will bring. The city, which is in chaos, moves by breaking away from the old and evolves towards its own rules in order to create a new order (Üner, 2019, p. 69).

Fig. 17. Unreal Distortions in Your City, 76' 11" Scene (Derrickson, 2016).

After Einstein's Theory of Relativity in 1905, in addition to the width, height, and depth elements that make up the three dimensions, the fourth dimension of time began to show itself in many art fields. Seeing the concept of time in art branches such as painting, sculpture, architecture, cinema, and theatre has given the work of art surreal freedom of expression by taking it beyond the three

dimensions of known reality. This situation, especially by affecting the film frames of fantastic-science fiction cinema genres, went beyond the standard patterns and brought a surreal expression (Fig. 18).

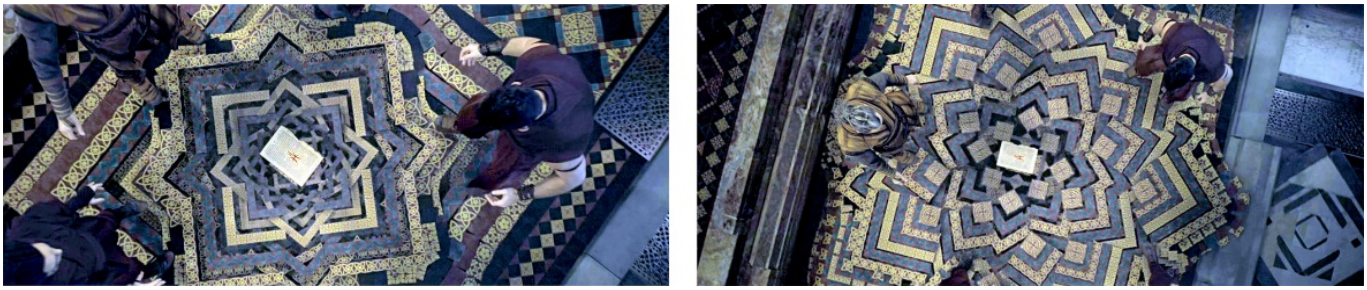

Fig. 18. Simultaneity and Reality Bending in Flooring, 37' 41" and 37' 43" Scene (Derrickson, 2016).

The concept of time is used together with movement to form the concept of simultaneous motion, as in the futurism movement. Simultaneous motion is expressed by reflecting different movements and events occurring in the same time period in a single *moment*. The villains in the movie perform a ritual with the book page they stole from *The Ancient One*. During this ritual, building elements such as the floor covering, ceiling, and wall surfaces make up space where the characters are in move in different ways in the same time period, creating new formations as a result of this movement (Fig. 19). This act of re-creation is an event in itself. In this context, cinema, which reconstructs a reality with its fiction, will be formed to the extent that it creates "singular thought", as Akay (2004, p. 8-9) puts it, by escaping from existing thought and existing elements, because "singular thought" indicates plurality. The singular thought turns everything upside down, forcing

us to break the habits and thus opening them to new possibilities. This act of creation, which emerged with the singular act of resistance in cinema, questions how a different perspective is developed in the process of constructing reality. Making a difference by escaping from the fixed and accepted reality is realized with the images of movement and time in cinema (Yetişkin, 2011, p. 127). This relationship between concept and image coincides with Deleuze's motion-image theorem in cinema.

Fig. 19. Interior Deconstruction and Reality Bending, 38' 04" and 38' 08" Scene (Derrickson, 2016).

The viewer sees the movements of the simultaneous occurrences in a single time frame. This scene, in which the known rules of physics and time are disregarded, creates breaks in the perception of the audience and forces the audience to think surreal. Although the surrealist spaces that appear in the new reality in the movie scene seem far from reality, this situation creates a dilemma in the minds of the audience, considering that the materials that make up the space are realistic. These spaces, which seem impossible to realize with today's technology, make the viewers dream of the future realization of surreal spaces with the benefits of technology. In fact, it can be said that some structures today are the dream of the past and the reality of the present.

Time, space, and motion are interrelated concepts. Especially in visual arts, the transfer of time and movement to the audience is done with the help of space. Real or surreal changes in the structure of the space make the viewer feel a certain time pass. In fact, this change brings movement with it. The villain goes to the place where Dr. Strange is in order to realize his plan, and while there, Dr. Strange struggles to resist the plan of the villain. The simultaneous movement of horizontal and vertical elements in the interior during the struggle brings about the change and reveals a utopian space perception (Fig. 20).

Fig. 20. Vertical Circulation Deconstruction and Reality Bending, 74' 05" and 74' 06" Scene (Derrickson, 2016).

Deleuze defines cinema as a system that reproduces motion or any moment, that is, as a function of moments chosen to create the impression of equally spaced continuity. According to him, simultaneous motion is a series of moving sections, it is qualitative motion. In other words, instantaneous images are taken from the passing reality and based on the fact that these instantaneous images are a characteristic of that reality, a movement or time is created by flowing them in and through the cinematography device (Yetişkin, 2011, p. 126).

According to Ural's (2005) definition, the moment separates the psychological time from the physical, because the moment is closely related to human psychology as a lived and felt time form. This can be read from the simultaneous depiction of the figure's movements at different times in the same space and at the same time on a single surface, in the scene where *The Ancient One* forces *Doctor Strange* to astral travel with his special powers (Fig. 21). The movements of *Doctor Strange*'s astral body separating from his physical body and the movements that occur while leaving are gradually shown to the audience in the same frame. While the moment of action lasts for a few seconds in real time, the time in the film is divided into micro parts, and the experiences, feelings, and perceptions of the character in a few seconds are transferred to the audience moment by moment. Thus, the concept of time has been handled psychologically through the moment. According to the Futurism art movement, the statement "a running horse has 20 feet, not 4" emphasizes the simultaneous transmission of the movement to the audience. It is seen that the simultaneous movement seen in the works of *Boccioni* and *Carra*, who are among the artists in this movement, is reflected in this scene. While the *Doctor Strange* character moved simultaneously, the place and other characters around him remained constant. This is because this situation is compatible with *Einstein*'s relativity of time.


Fig. 21. Astral Travel and Simultaneous Motion, 28' 30" and 27' 09" Scene (Derrickson, 2016).

As the film's story progresses, *Doctor Strange* finds himself in more trouble. Seriously injured by the movie's villain, *Strange* goes to the hospital where he used to work as a neurosurgeon, thanks to the portal he opened himself with his mystical power. Realizing that he is the one who can heal his wounds, *Strange* finds the solution in astral travel. Astral travel is the movement of the soul separately from the physical body and the physical body of the human being in the same space and the astral body, in other words, the soul in different places. Astral travel, which is an abstract concept, puts forward the idea that human beings can be in more than one place simultaneously by challenging the potential of the human mind. For example, while *Doctor Strange*'s physical body is on a stretcher, his astral body guides the doctor who helps him (Fig. 22). As a result, *Strange* takes place and moves in two places at the same time as mentioned in the concept of simultaneous motion. The surrealist reflection of this abstract concept, which is difficult to prove, with the visual narration techniques of cinema, enriches *Strange*'s story and reflects the extraordinary events that take place in the film to the audience, giving them a real feeling.

Fig. 22. Astral Travel and *Simultaneous Motion*, 64' 35" Scene (Derrickson, 2016).

In the story of *Doctor Strange*, which is a fantastic movie, mystical arts and portals that provide rapid movement from one place to another take an important place (Fig. 23). The concept of the portal, which is also outside of the known reality, is an imaginary way of travel arising from the needs of people. Since the past, people have made many inventions with the help of technology to make life easier. Although it is assumed that all of these inventions have a scientific basis, people's imagination comes into play in places where science and technology cannot catch up. This is because it is a very attractive idea for people to be in more than one place at the same time or to move at the speed of light between spaces. The ability to move with the speed of light, which is still not in reality, is presented to the viewer only through science fiction films, visual methods, and techniques. In the aforementioned film frame, the characters in the film immediately switch to Hong Kong by opening a portal from the desert environment (Üner, 2019, p. 76).

Fig. 23. Portals Opened at Space Transitions, 84' 24" Scene (Derrickson, 2016).

The fact that the concepts of time and space are described by people in a surrealist way in science fiction films literally reverses the rules of time and space in people's minds. It embodies the abstract concept of space and time, in a way that the audience can perceive. When we look at the film frame, Doctor Strange, who is understood to be in a different place while Wong is in the library, is simultaneously in the same frame thanks to the opened portals (Fig. 24).

Fig. 24. Portals Opened at Space Transitions, 42' 33" Scene (Derrickson, 2016).

Doctor Strange, made in the movie, finds himself at the base of people with mystical powers in New York as a result of an attack by bad guys while in Kamer-Taj. At the New York base, one of

the aforementioned mystical places, *Doctor Strange* sees three different windows. Although this location is in New York City, outside the windows *Strange* sees are landscapes of the forest, desert, and sea. Thanks to the breaks and leaps made between the spaces in question, a mosaic time fiction was created, and thus the perception of synchronicity was created. In the following scenes, it is understood that the transition from the space in New York to different spaces is achieved by means of these windows. Even though they are in different parts of the world, the mentioned places are simultaneously in the same place and in the same square and can be reached. This scene, which pushes the limits of the known perception of time and space, opens the imagination of people and reveals the possibilities that can take place in different realities (Fig. 25). With these changing spaces in the movies, time also changes in a series of rows. Therefore, space becomes a part of the temporal structure, and time gains a spatial quality within this structure. As a result, space changes define time, and change in time defines space (Bordwell & Thompson, 1986). In addition, the different space perception created with portals follows a linear timeline and continues its effect from the beginning to the end of the movie. The characters sometimes created a site map of their own in the film by opening a portal from the place they were in, moving to the other place and breaking away, sometimes opening a portal to return to the old place and making a comeback. These techniques, which are applied extensively, are dominant throughout the general narrative of the film.

Fig. 25. Space in Space, 53' 45" Scene (Derrickson, 2016).

With the intense application of the portal opening technique from the beginning to the end of the movie, the audience, who are trying to be separated from the physical time and space, are dragged into the change of time and space and left under this influence throughout the movie. Throughout the film, the viewer, who left the physical time, transitioned to filmic time as a result of the unreal interpretation of the concepts of time and space. The characters in the movie travel to different places in the same filmic time period owing to the portals opened. In this way, real-time rules have been obscured and disappeared.[1] Considering that the film in question is in the fantasy genre, the concepts of abstract time, *simultaneous motion,* and *reality bending* have been tried to be conveyed through cinema methods and techniques, even though they cannot be experienced by people in the known reality. These events taking place in a utopian world give people very different perspectives by making them unique from the constraints imposed by the laws of physics.

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Conclusion

Cinema and architecture are two different disciplines that work in interaction with each other in terms of design, abstraction, production, and visualization techniques. In this study, inferences about the cities of the future are made by examining how these two different disciplines use the concepts of *simultaneous motion* and *reality bending* in different times and different places. It has been seen that the constantly changing perception of time and space has become different in cinema by moving away from the traditional meaning. In the study, it has been seen that the concepts of time-space, reality bending, simultaneous motion are closely related among the cinema genres, and the genre in which the different dimensions can be observed in the best way is science fiction. Thanks to the science fiction film genres, the spaces created with virtual reality have been in a different interaction with architecture in terms of the existence of fantastic spaces with advanced technologies. The film *Doctor Strange* (2016) was chosen because it contains fantastic features such as the characters creating different virtual spaces of their own by bending the reality, the simultaneous existence of the created spaces, the spaces being always in motion and formation, breaking the restrictive rules in the reality of the audience and creating different realities. Multiple readings have been made on this film. It is possible to interpret the concepts of time and space in such films out of the ordinary, thanks to their technological possibilities, their ability to imagine the future, and their ability to bring surreal time and spaces closer to reality with virtuality.

Transitions, time, and space jumps can be made easily from one scene to another, and different time periods can be transferred together. It has been seen that the most basic concept that strengthens the fiction of the film is space transitions, *reality bending,* and *simultaneous motion*, which overturn the viewer's familiar perception of time and space.

Jean Luc Godard said, *"Cinema is the art of recreating time and space"*. In this context, when looking at the movie Doctor Strange and its relationship, it is seen that the structures imagined years ago have a place in today's architectural designs, and it is understood that the structures that are imagined now are transferred to people through cinema. Therefore, it is possible that the currently imagined structures will be foreseen for the future with the advancement of technology. The concept of *reality bending* seen in *Doctor Strange* film frames also brings to mind the *deconstructivism* movement. In the structures designed by adhering to the trend, bent surfaces and colliding lines can be seen with their attitude that breaks the classical rules of a multidimensional composition, separating a regular whole into its parts. Thus, there is dislocation, disorientation, and distortion of order and form. The wall does not have to be perpendicular to the floor and the floor does not have to be parallel to the floor, as shown in the movie stills. Deconstructivism is defined as an approach that consists of forms that distort, tear, shatter, throw and explode the architectural structure. It reveals the intellectual difference of the attractive aspect of the

architectural structure and its strong expression with unlimited solution suggestions. In addition to general lines such as randomly placed surfaces, curved and twisted lines, tension arising from contradictions, superposition of different systems, the difference in the use of materials, and the challenge in the structure are among the features of deconstructivism. Deconstructivism challenges concepts such as harmony, unity, and balance in the structure and proposes complex and difficult structural systems that oppose it and therefore sometimes seem impossible to construct. In this context, it can be said that the structural distortions that emerged with the reality bending concept seen in *Doctor Strange* refer to the deconstructivism movement (Fig. 26). While it is seen that virtual and real spaces are generally used in films, in *Doctor Strange*, on the contrary, the distortion of existing spaces is encountered (Fig. 27).

Fig. 26. Dancing House (Fred and Ginger), Prag, Frank Gehry, 1996 ("Virtual", 2019).

Fig. 27. Deconstructions and Deconstructivism, 75' 25" Scene (Derrickson, 2016).

Deconstructions that are seen in the 2016 movie raise the question, "Does this movie offer predictions about what future structures belong to deconstructivism will look like?". Just as we see the predictions of high skyscrapers, flying cars, etc. in the 1927 movie *Metropolis* today. Fantasy science fiction movies like *Doctor Strange* create a utopian world by changing reality, giving people the opportunity to escape from the monotony of the known real world. For this reason, surrealist films, where the laws of physics are absent and the concepts of time and space are used in very different ways, open the doors of different worlds to the audience, as in other branches of art.

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ENDNOTES:

[1] It includes real time, filmic time and time types related to the duration of the movie in cinema. Real time (physical time) is a non-relative, objective, and measurable type of time. Filmic time, on the other hand, is the type of time created by the film itself, while the time called the duration of the film expresses the physical length of the film (Yılmaz, 2011).