Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

-Research Article-

The Philosophy of Chaos in Cinema: An Analysis on the *Movie Mr. Nobody*

* Yavuz Akyıldız

Abstract

This study analyzes the movie Mr. Nobody (Dormael, 2009) within the framework of chaos philosophy, tragedy, and complex storytelling in cinema. The movie takes place in a science fiction universe where humankind has found immortality, in 2092. The main character of the movie, Nemo, is the only and last mortal in this universe. Mr. Nobody is a movie focusing on the different life experiences that could potentially occur, moving through the choice that the main character Nemo had to make as a result of his parents' divorce at the age of nine. Within the scope of the study, besides the philosophical concepts in the content of the movie, it was also discussed how this philosophy was experienced by the audience in a fictional and narrative form. Accordingly, philosophical concepts such as existentialism and modernism that are directly and indirectly mentioned in the film, criticism of modernism, the origins and philosophy of the chaos concept, fractal structures, and phenomena such as the butterfly effect and Lorenz Curves were handled in the context of complex storytelling, which has been used as a narrative technique in cinema since the 1990s, taking into account the editing technique of the film.

Keywords: *Cinema, Philosophy, Butterfly Effect, Mr. Nobody, Chaos*

* Asst. Prof., Niğde Ömer Halisdemir, Faculty of Communication, Niğde, Türkiye
E-mail: yvzakyldz@gmail.com
ORCID : 0000-0001-6976-2300
DOI: 10.31122/sinefilozofi.1233999
Akyıldız, Y., (2023)., The Philosophy of Chaos in Cinema: An Analysis on the Movie Mr. Nobody, SineFilozofi Dergisi. 8 (15). 10.31122/sinefilozofi.1233999

Recieved: 13.01.2023
Accepted: 17.04.2023

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

-Araştırma Makalesi-

Sinemada Kaos Felsefesi: *Bay Hiçkimse* Filmi Üzerine Bir Analiz

* Yavuz Akyıldız

Özet

Bu çalışma, kaos felsefesi, tragedya ve sinemada karmaşık öykü anlatıcılığı odağında, Bay Hiçkimse (Dormael, 2009) filmini incelemektedir. Film 2092 yılında, insanların ölümsüzlüğü bulmuş olduğu bir bilimkurgu evreninde geçmektedir. Filmin ana karakteri Nemo ise bu ölümsüzlük evrenindeki tek ve son ölümlü insandır. Bay Hiçkimse filmi, ana karakter Nemo'nun dokuz yaşında anne babasının boşanması sonucunda yapmak zorunda kaldığı bir seçim anı üzerinden ilerleyerek, potansiyel olarak oluşabilecek farklı yaşam deneyimlerine odaklanmaktadır. Yapılan çalışmada Bay Hiçkimse filmin içerik olarak barındırdığı felsefi kavramların yanında, seyirciye bu felsefeyi nasıl bir kurgu ve anlatı formuyla tecrübe ettirdiği de tartışılmıştır. Bu nedenle filmin doğrudan ve dolaylı olarak değindiği felsefi kavramlar olan varoluşçuluk, modernizm ve modernizm eleştirisi, kaos kavramının kökenleri ve felsefesi, fraktal yapılar, kelebek etkisi ve Lorenz Eğrileri gibi olgular, filmin kurgu tekniği de göz önünde bulundurularak, 1990'lı yıllardan itibaren sinemada bir anlatı tekniği olarak kullanılan karmaşık öykü anlatıcılığı bağlamında incelenmiştir.

Anahtar Kelimeler: *Sinema, Felsefe, Kelebek Etkisi, Mr. Nobody, Kaos*

* Dr. Öğr. Üyesi, Niğde Ömer Halisdemir Üniversitesi, İletişim Fakültesi, Niğde, Türkiye
E-mail: yvzakyldz@gmail.com
ORCID: 0000-0001-6976-2300
DOI: 10.31122/sinefilozofi.1233999
Akyıldız, Y., (2023)., The Philosophy of Chaos in Cinema: An Analysis on the Movie Mr. Nobody, SineFilozofi Dergisi. 8 (15). 10.31122/sinefilozofi.1233999

Geliş Tarihi: 13.01.2023
Kabul Tarihi: 17.04.2023

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

Introduction

In Ancient Greece, where drama art emerged, narratives are based on myths. Chaos and fractal structures lie in the source of the myth about the emergence of life. According to the creation myth, first of all, there is chaos and everything comes from chaos. The transition from chaos to order, on the other hand, begins with the emergence of Gaia (earth mother), born from chaos but the opposite of chaos. Gaia first created the landforms and the sky, then merged with the Uranos (sky) she created, giving birth to the Titans and Kronos. However, Uranus was killed by his son Kronos since he was disgusted with his children and imprisoned them underground. After, Kronos, who took the lead, united with Rheia and from this union Hestia, Demeter, Hera, Hades, Poseidon, and Zeus were born. But according to the prophecy, the descendants of Uranus will avenge Kronos, just as he took revenge on his father. The prophecy comes true and Zeus becomes the chief god by killing his father Kronos (Dürüşken, 2016, p. 17-24).

The creation narrative, which forms the main vein of the narrative, especially drama, has inspired countless plays, novels, and stories such as King Oedipus, Antigone, The Brothers Karamazov, and Hamlet. When the creation myth is examined, it is seen that there is a structure that repeats itself, but this structure also includes chaotic process. Also, the definition of fractal geometry is very similar to this ongoing narrative form that feeds on the creation myth. Because fractal geometry is "*shapes based on complex self-similarities formed by the constant repetition of basic geometrical rules*" (Canan, 2015, p. 207)". Precision regarding initial conditions, known as the butterfly effect, is critical in fractal geometry and this sensitivity includes complexity when viewed closely, and an order based on complex patterns from afar. The diversification of reality according to the point of view, on the other hand, includes the philosophical problem,[1] repose upon Plato, about the angle formed between view and reality. Chaos and fractal structures, whose narrative origins date back to the beginning of the art of drama and philosophical origins to the first philosophers, have been used frequently in cinematic narratives, especially since the late 1990s. In my opinion the narrative of numerous movies considered cult today such as *12 Monkeys* (Gilliam, 1995), *Lola Rentt* (Tykwer, 1998), *Fight Club* (Fincher, 1999) is based on fractal pattern logic. In this study, the movie *Mr. Nobody* (Van Dormael, 2009), which is thought to use the chaos and fractal pattern structure effectively, will be examined through the holistic connections to be established between cinema, image, philosophy, neuro-cinema, and the complex narrative in cinema.

[1] The problem of appearance and reality is a fundamental issue in philosophy that deals with the relationship between what we perceive and the true nature of things. It raises questions about the accuracy of our perceptions and whether they correspond to an objective reality. This issue has been debated by philosophers throughout history, from ancient Greek thinkers like Plato and Aristotle to modern philosophers such as Immanuel Kant, Bertrand Russell and Jean Baudrillard. Plato's theory of forms suggests that the physical world we experience is an imperfect copy of a higher world of perfect forms or ideas. The true reality lies in this higher realm, and what we experience in the physical world is just an imperfect copy. On the other hand, Aristotle argued that the physical world is the true reality, and that our perceptions can be trusted to provide accurate knowledge of the world. In modern philosophy, Immanuel Kant proposed that our minds construct our knowledge of the world, and we can never know things as they exist in themselves. Bertrand Russell further argued that we can never be certain that our perceptions of reality are true, and we must rely on empirical evidence and logical reasoning to approach knowledge of the world. The problem of appearance and reality continues to be an important topic in philosophy, as it raises valuable questions about the nature of knowledge, perception, and reality itself.

See. Gültekin, T. & Tokdil, E. (2017). Gerçeklik ve Sanı Yaklaşımı Üzerine Karşılaştırmalaı Bir İnceleme: Denemeler Sergi Örneği. *FLSF (Felsefe ve Sosyal Bilimler Dergisi), 2017 Bahar, sayı: 23, s. 277-290 ISSN 1306-9535, www.flsfdergisi.com*

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

At the beginning of the basic references that constitute the starting point of the study, a radical paradigm shift in the way of perceiving and describing the world today comes. Uçar (2010, p. 74) expressed this paradigm shift with the transition from Euclidean geometry to fractal geometry. Uçar says that the regular and precise shapes in Euclidean geometry also implicitly structure the intellectual world. Many thinkers from Plato to Kant formed their philosophy in line with this awareness of certainty. However, the transition to fractal geometry and the new paradigm that this geometry offers to people has also restructured the ontology of the intellectual world. The formal features of fractal geometry, which are irregular, not easily categorized, and consist of folds and fractures, reveal an intellectual system parallel to its own geometry. Uçar summarizes this structure as follows:

> "Thanks to the chaos theory and one of its concepts, fractal geometry, it has become possible to describe the disordered, chaotic structure underlying the visible order of nature. Therefore, the chaos theory has gained a very strong basis for putting forward a new conception of the universe that will replace the assumptions believed to date (2010: p. 74).

In this study, in which Mr. Nobody is analysed in the context of the chaos theory, considered as a manifestation of this new universe conception in the field of cinema criticism.

The Chaotic Process in the Creation Myth, Fractal Geometry and Dramatic Structure

As it was stated at the beginning of the study, there is a direct relationship between the creation myth and the dramatic structure[2], coinciding to a large extent. For this reason, there are countless plays, novels, and stories nourished by the creation myth and many of the contemporary stories are closely related to this mythological background as well. The creation myth has a structurally repetitive and distinctive form, while it places chaos in the center narratively. Although fractal geometry places chaos in its center by definition, when the scale of chaos is narrowed, it is observed that distinctive patterns turn into regular analogies. Mandelbrot explains the fractal structure, which is an important concept of the chaos theory, in her book named 'The Fractal Geometry of Nature' as follows:

> "…generally, I claim that many patterns of Nature are so irregular and fragmented, that, compared with Euclid-a term used in this work to denote all of standard geometry- Nature exhibits not simply a higher degree but an altogether different level of complexity… The number of distinct scales of length of natural patterns is for all practical purposes infinite. The existence of these patterns challenges us to study those forms that Euclid leaves aside as being ""formless," to investigate the morphology of the "amorphous"… Mathematicians have disdained this challenge, however. and have increasingly chosen to flee from nature by devising theories unrelated to anything we can see or feel. Responding to this challenge, I conceived and developed a new geometry of nature and implemented its use in a number of diverse fields. It describes many of the irregular and fragmented patterns around us, and leads to full-fledged theories, by identifying a family of shapes I call fractals. The most useful fractals involve chance and both their regularities and their irregularities are statistical (1983: p. 1)."

At this point, there is a direct correlation, decisive in terms of reasoning, between the scale on which any indicator is handled and the way we perceive that indicator (Canan, 2015, p. 207). Closely related to the creation myth, the myth of Oedipus is a narration considered archaic

[2] The dramatic structure is a structure that arises from the tragic structure and carries the characteristics of the tragic structure. However, today, the dramatic structure is a hybrid structure that contains the characteristics of the 19th century romance novels and the tragic structure (Topçu, 2005, p. 3). In my opinion the word "dramatic structure" is also used as a shorthand in film analysis to indicate conflict and many dramatic elements.

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

mythology and has been the founding element of the dramatic structure. In other words, the dramatic structure is based on the "existence of the universe" myth that reflects the archaic intellectuality of humans. The prophecy of Jahin Teiresias that Oedipus will kill his father Laios, who is the king, is the origin of the Oedipus myth. At this point, the prophecy inevitably begins to come true. Whatever the father King Laios and his son Oedipus do, they cannot escape the prophecy. As a result of the prophecy's realization as a self-reflexive mechanism, Oedipus kills his father, marries with his own mother, and has children with her (Sophocles, 2009). Oedipus realizes all these unknowingly, almost with a butterfly effect. This concept, which Edward Lorenz has included in the literature as the 'butterfly effect', is also expressed as the 'Sensitive Dependence on Initial Conditions' feature (Lorenz, 1995: 32-37). The concepts of the butterfly effect and sensitive dependence on initial conditions are fundamental to the field of the chaos theory. These concepts highlight the idea that small changes in initial conditions can lead to significant changes in the long-term behaviour of a system. The name comes from the idea that the "flap of a butterfly's wings in Brazil could set off a chain reaction of events that eventually leads to a tornado in Texas" (Lorenz, 1995: 14). This is an extreme example, but it illustrates the idea that small changes can have significant downstream effects. Sensitive dependence on initial conditions (SDIC) refers to the idea that small changes in initial conditions can lead to significantly different outcomes. This sensitivity to initial conditions is a defining characteristic of chaotic systems. Both the butterfly effect and SDIC are important concepts in the chaos theory, which seeks to understand the behaviour of complex systems that are highly sensitive to initial conditions. These concepts have applications in a wide variety of fields, from weather forecasting to economics to physics. By understanding the butterfly effect and SDIC, we can gain insights into the behaviour of complex systems and make more accurate predictions about their long-term behaviour (McClure: 2005, p. 30).

Beliz Güçbilmez defines the tragic structure as follows in her work titled Zaman/Zemin/ Zuhur: "Something happened in the past, and whatever it is, it affects the present. The formula is as old as the theatre. King Oedipus, which *we can accept as the first cult text of drama, was established on exactly this formula (2016, p. 23)".* The biggest factor that makes the tragic is that the tragic event is imprisoned in the past. In the *Oedipus* play, everything has already happened, and the game only includes the resolution of these phenomena. Szondi describes the *Oedipus* as a stand-alone genre, because of this structure (1987, as cited in Güçbilmez). The Oedipus tragedy has turned the relationship between the past and the future

Image 1. Möbius Strip. (Escher, M.C. 1948.*Bond of Union).*

Image 2. With the reference to Möbius Strip, the painting titled Loyalty Band (1956) illustrating that all people are connected to each other by the möbius strip. The work belongs to by E.C. Escher, who is famous with the drawings on this subject. (Dymitrow, M. 2017. Mobius Strip)

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

into a nonseparable mobius strip[3] and has been one of the works that most influenced both the theater and cinema narrative due to this structure.

The fact that any action that could rectify the current situation in the tragedy is long overdue invalidates any knowledge that the tragic heroes have. Knowledge is not something beneficial to the person who has it, it is only a tool in meeting one's tragic end. What makes King Oedipus king is that he solves the riddle asked by the Sphinx, who haunted the city of Thebes. Oedipus solves the question of the Sphinx, who asks riddles that no one could solve, however, he does not even realize that his own life was a riddle. Actually, the fact that Oedipus had solved the Sphinx's riddle does not indicate the solution of a riddle definitely, but the endless cycle between knowledge and ignorance. Oedipus, who answered the riddle of Sphinx, "Who walks on four legs in the morning, two at noon, and three in the evening?", as "the human being", becomes able to save the city of Thebes from the tyranny of the Sphinx. Among the many ironies in the answer, the most important is that the name Oedipus means "man". In fact, Oedipus, who does not precisely know the riddle's answer, gives what he knew best as the answer; his own name. Because if he doesn't give any answer, the Sphinx will eat him. In other words, Oedipus gives an answer he acquainted to a riddle he does not know. Oedipus also learns from the Delphi's prophecy that he will be the murderer of his father and the husband of his mother, and these just begin to happen after he tells the Sphinx his own name (Güçbilmez, 2016, p. 38-50). The concepts of knowledge and ignorance in *Oedipus* play constitute a short circuit at this point. This short circuit is explained as follows by Güçbilmez:

> Ancient Greek culture is no different from other cultures in terms of the vitality—or lethality—attributed to the riddle. As in the case of Oedipus, knowing or not knowing the correct answer to the riddle may lead to death. When Oedipus answers the Sphinx's riddle, the Sphinx would throw himself off the rocks, and when the answer of riddle is not known, the Sphinx would swallow Oedipus. And finally, when Oedipus solves the riddle of his life, Iocaste will hang herself, and Oedipus will blind her. Oedipus is the symbolized form of a man in nature in general (2016, p. 44).

[3] Mobius strip is a strip formed by bending a long geometric strip 180 degrees and joining it with the other end (Buckland, 2015, p.41).

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

Image 3. Sphinx and Oedipus. It is also frequently implied that there was a sexual tension between the Sphinx and Oedipus. Moreau, G. 1864. Oedipus and Sphinx

In the preface to Dostoevsky's *The Brothers Karamazov*, Freud states that Oedipus, Hamlet, and The Brothers Karamazov are the three best works written.[4] According to Freud, it cannot be a coincidence that all these three works are based on patricide. Also, patricide in these three works is based on an uncertain and ambiguous past and they also have traumatic structures. Besides, in these three works, there is an investigation of both the main characters themselves and the people around them, in which reality is constantly changing. There are psychological conditions like schizophrenia, paranoia, and amnesia that constantly blur the past in all these three works (1981, p. 21-23). In general, it can be said that all these works have "fractal" structures because the relations between events and phenomena both seem to be independent of each other and completely result from each other. As can be seen in the picture and figures below, structurally many great works of art are intertwined like a mobius strip. The same situation is true for nature itself.

[4] See also. Dostoyevski, F. M. (2020). Karamazov Kardeşler. (Çev. E. Altay). İletişim Yayınları: İstanbul. See also. Shakespeare, W. (2020) Hamlet. (Çev. S. Eyüboğlu). Hasan Ali Yücel Yayınları: İstanbul. See also. Sophocles' King Oedipus is in the bibliography.

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

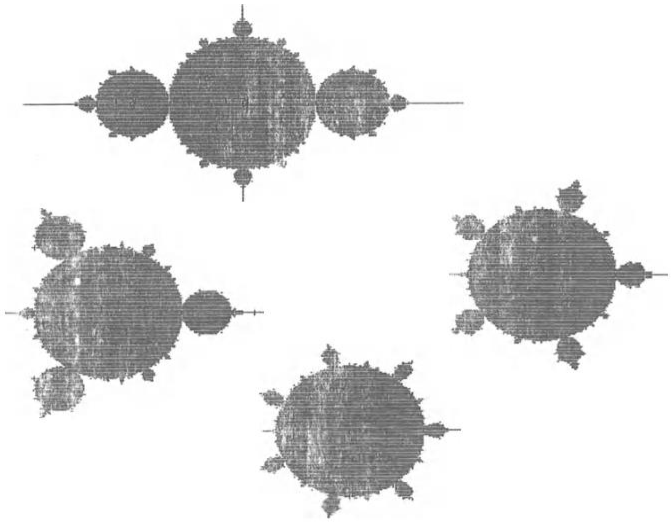

Image 4. The Mandelbrot sets for the maps (Mandelbrot, B.B. 2004. Fractals and Chaos: Mandelbrot Set and Beyond. USA: Springer. P. 140)

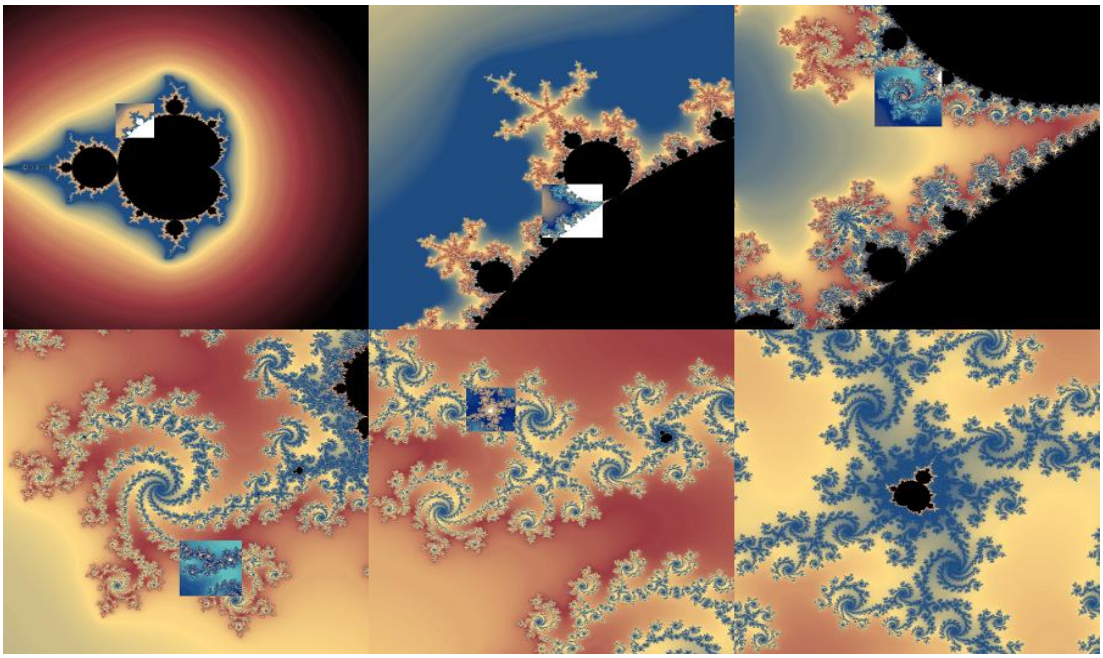

Image 5. The Mandelbrot set. Fractal structures based on self-similarities. The smallest component and the largest image contain the same structures that overlap each other.
Reference: http://www.faqs.org/faqs/fractal-faq/section-6.html

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

Image 6. M. C. Escher's lithograph dated 1948, "The Drawing Hands". The work includes paradoxical and fractal structures. (Escher, M.C. 1948.*Drawing Hands.)*

The social science that most influenced the art of cinema is philosophy. Philosophy, on the other hand, has always been in close relationship with numerical and scientific sciences such as mathematics, geometry, physics, chemistry and astronomy throughout its history. In Ancient Greece and the Middle Ages, even the philosophers and the people who did the mentioned sciences were the same people. This tradition naturally led to the formation of inseparable links between philosophical thought and scientific thought. Therefore, discussing the criticism of the modernist understanding of knowledge in the next part of the study will provide a good basis for the intellectual infrastructure of the analysis of the movie Mr. Nobody in the context of the chaos theory.

Criticism of Modernist Knowledge Perspective

Descartes emphasizes the central position of thought with his proposition, "Cogito, ergo sum". On this basis, Descartes constructs his understanding of knowledge through certain concepts such as certainty, accuracy, and immutability (2010: 15). This has become the basic approach to scientific perspective after Descartes. Since the beginning of the 20th century, critical approaches have been put forth to modernism, which has evolved into a thought system tradition shaped by the deterministic understanding based on Descartes in the philosophical sense, Copernicus and Galileo in physics, and most importantly Newton's laws of physics.

In this direction, Poincare is one of the pioneering philosophers who argue that time is not absolute and cannot be measured in any way. According to him, all standard measures of time have only one convention value, and none of the accepted concepts of time can explain the structure of time itself in any way (Callender ve Edney, 2011, p. 28-29). On the other hand, with the theory of relativity, Einstein theoretically proved that there is no concept of time common throughout the universe and that there are infinite possibilities of present, past, and future in time because time and space can be buckled. As the speed of light is approached, time slows down, or it differentiates when the gravitational coefficient is different from the earth. As a result, the perception of time constantly changes depending on the position and speed of the observer and the observed object. Therefore, time is relative, not absolute (Einstein, 1997, p. 168-173).

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

These opinions on the concept of time, together with quantum physics and subatomic studies, created important breaks in science and philosophy. Concepts such as coincidence, ambiguity, uncertainty, unobservability, and chaos began to gain importance against the scientific-philosophical approach established by Descartes and Newton. While these developments in the intellectual world directly affect art and cinematic narration, the abovementioned approaches to the concept of time have found a place in the narrative of cinema in various forms. The chaos theory and the butterfly effect are the major ones [5]of these developments.

Image7. Butterfly. https://kids.nationalgeographic.com/animals/invertebrates/facts/monarch-butterfly

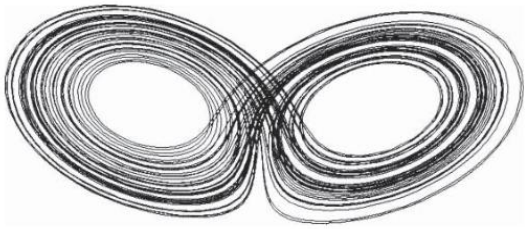

Image 8. Lorenz Attractor. Falconer, K. (2014). *Fractal Geometry: Mathematical Foundations and Applications.* United Kingdom: John Wiley & Sons, Ltd. p. 223

Sensibility regarding initial conditions, known as the butterfly effect, is critical in fractal geometry, and looking closely, this sensibility includes complexity while it contains an order based on complex patterns looking from afar. Changes considered small today are expected to cause big changes in the future. According to Lorenz (2015, p. 3-25), many systems or models that seem random are not actually random. A closer look at many structures shows how small changes in sensitive values in the initial conditions create huge differences. This is not randomness. Generally, the difficulty of determining the change conditions of a system is defined as randomness. However, when these systems are examined closely or viewed from a very broad perspective, the repetitive motifs and the resulting operation are often surprisingly regular. There is an order that seems chaotic. This means that an admirably rich material creates a structure that can be traced. Precision, determinism, and repetition create a

[5] As stated in the analysis section of the study, fictional or philosophically chaotic films have started to become widespread worldwide, especially with the 2000s. Also, the more or less chaotic Inception (Nolan, 2010), Mr. Nobody, Tenet (Nolan, 2020), The Matrix (Wachowski & Wachowvski, 1999), Mulholland Dr. (Lynch, 2001), Eternal Sunshine of the Spotless Mind (Gondry, 2004), Shutter Island (Scorsese, 2010), Predestination (Spierig & Spierig, 2014) , Arrival (Villenueve, 2016), etc. high budgets were allocated during the production phase and very high income at the box office during the screening phase. Moreover, the films in this structure were appreciated by cinema critics and academics. Considerable quality books and articles were written, especially in the English literature. In addition to this situation, the films in this structure have also gained the appreciation of cinema critics and academics. Therefore, it can be said that the films that can be associated with the chaotic structure have a very strong effect on the field of cinema. For example, the movie Inception (Nolan, 2010), an important film of complex narrative, has a worldwide box office revenue of 836 million dollars, while the production budget of the movie is approximately 160 million dollars. The Butterfly Effect (Bress & Gurber, 2004) has a budget of 13 million dollars, while only the US and Canadian box office is 57 million dollars. https://www.imdb.com/title/tt1375666/

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

mathematical "chaos". In other words, there are behaviours that seem random but not random. A bit of uncertainty, which is assumed to be the active component of estimating, and the chaos created in this way, inflames a centuries-old debate about the nature of the world (Gürsakal, 2007, p. 6-7).

Today, interest in chaos science is increasing, popularizing the subject. The fact that the theory of relativity would remain an influential and popular area of interest for decades has caused a sudden increase in interest in science. In a globalizing world, as people began to be connected to a very large network, the main problems of the history of philosophy such as existence and the meaning of life began to differentiate in accordance with the spirit of the time. One of the dynamics of this differentiation may be that most people are already aware that very small changes can sometimes have big impacts. The origin of the concept called chaos today is based on both science fiction and scientific reality. Before chaos theory was seriously brought to the agenda in science, people were thinking intensely about the meanings of chaos. Scientists were able to start conducting theoretical and practical studies on this subject only when fractal objects and disorder curves started to have some mathematical meaning.

While working as a meteorologist in the USA in the 1960s, Edward Lorenz started to develop a model that would perform accurate weather forecasting which is an extremely complex task, using computers that were newly released at the time. For a chaotic environment such as the atmosphere, he tried to obtain weather forecast data by modelling with computer software. Weather forecasts with mathematical models of Lorenz gave vastly valid results for short periods of time. Even, it was possible to achieve reasonable results when the time was slightly extended, e.g., for estimates of about a week. However, over time Lorenz realized that long-term predictions in mathematical models were quite inconsistent. The main reason for this inconsistency was that the data entered had three digits, although the computer used six-digit numbers for calculations. Lorenz's estimate was starting by entering the value 0,506, but the computer was processing this data as 0,506127. A tiny difference of 0.000127 was leading to dramatic differences in result. This picture demonstrated that tiny differences in a structure (the universe) with equal initial conditions would create very different structures (universe). This phenomenon is metaphorized in daily life as "The change caused by a butterfly flapping its wings in the Amazon forests may cause a hurricane on the other side of the world." This is where the name "Butterfly Effect" and "Chaos Theory" come from. These terms can be called the science of predicting the behaviour of systems that seem intrinsically unpredictable. Nature itself is compatible with this theory because mountains are made up of large and small ridges, and these large and small ridges follow certain patterns. Branching in trees likewise includes both order and disorder. This structure is almost the definition of the fractal geometric structure. Similar patterns can be encountered in the complex structure of various systems such as the sky, oceans, sea waves, the behaviour of human cells, and many celestial movements in astrology. In addition, "Chaos, Butterfly Effects, and Fractals" theoretically constitutes one of the most significant areas of modern mathematics (Parker, 1996, p. 4-5)[6]

[6] See also. https://www.youtube.com/watch?v=5aZTvvGy87U&t=25s

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

Image 9. An image that visualizes the butterfly effect and space-time together. https://www.anews.com.tr/tech/2022/08/17/space-butterfly-by-galaxy-collision-reveals-destiny-of-our-galaxy

These data and connections have developed a consciousness that chaos and order are not opposites, contrary to popular belief. This idea has been reflected in art, and therefore in cinema, both in terms of content and aesthetics.

Analysis of the Movie *Mr. Nobody* in the Context of Fractal Structures

From the 1990s to the 2000s, the narrative structure, which is called complex narrative in Hollywood and World Cinema, has become a popular method that is frequently used. Movies such as *Memento* (Nolan, 2000), *Pulp Fiction* (Tarantino, 1994), *Lola Rentt* (Tykwer, 1998), *Being John Malkoviç* (Jonze, 1999), *Fight Club* (Fischer, 1999), *Mulholland Drive* (Lynch, 2001), *Crash* (Crononberg, 2005) have increased the audience's interest and demand for complex storytelling (Akyıldız, 2021: 23-25). Even, popular TV series affected by this trend, such as *The Sopranos* (Chase, 199-2007), *Lost* (Abrams, Lieber & Lindelof, 2004-2010) and *Breaking Bad* (Giligani 2008-2013), which remained on-screen for many years, used complex narratives as a new wave in the American TV series industry. Defining these new stories as films with ambiguous, complex, and fragmented story structures, Warren Buckland (2015, p. 11) argues that the movies of the new media age radically represent new experiences coded as disturbing and traumatic. On the other hand, Pisters (2012, p. 14), who approaches the subject with a similar understanding to Buckland but from a quite different point of view, argues that complex storytelling creates an area of the unmediated encounter between the cinematic image and the audience. According to Pisters, in complex storytelling, we literally enter the main character's brain space through neuroimages. In such films, the audience does not see the story act through the eyes of the characters as in the movement-image and time-image (Deleuze, 2014, p. 47-100), but it is placed inside the mental world of the characters as a further dimension. The more complex the mental world of the characters, the more complex the movie's plot and the audience's watching experience. In this sense, the audience is neurally

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

compelled to actively experience the film rather than passively watching it. Thomas Elsaesser (2015, p. 29) states that films with such complex narratives have an important philosophical background and the complexity here is not intended to increase the theme. According to him, these films emphasize reason and demand a new way of seeing from the audience[7]. The main components of this philosophical way of seeing are the criticism of modernism, chaos, the butterfly effect, and fractal structures, which are discussed in detail in the theoretical part of the study.

It can be stated that the dramatic structure of *Mr. Nobody* (Dormael, 2009) is completely based on the concepts of the butterfly effect, fractal structures, chaos, and order. While emphasizing the importance of the choices that people make throughout their lives, on the one hand, these structures highlight the tragic nature of the human being, just like in *Oedipus* on the other hand. The movie can be summarized as follows: In 2092, humankind has now found immortality, and 117-year-old Mr. Nobody (Nemo) is among these immortal people. Mr. Nobody, while in a kind of coma, has reached the time of the immortals, however, it is unknown who this person is, how he got to this time and where he came from. The movie gives a series of possible scenarios on how this Mr. Nobody lives his life. Because there is no objective information about this person's life and he is living the last days of his life. At this point, the movie focuses on a choice that Mr. Nobody (Nemo) had to make when he was 9 years old and the different life possibilities resulting from the possible versions of this choice. This is where the primary layer of the butterfly effect that develops in Nemo's life is revealed. When his parents get divorced, a different possibility arises for each case that Nemo stays with his mother, stays with his father, or does not stay with both.

Image 10. Nemo is forced to choose between his mother and father when he was a little boy.
Dormael, J. V. (Director) (2009). Mr. Nobody.
TC: 00:32:51

Image 11. Nemo's decisions depend on momentary, sensitive, tiny external factors.
Dormael, J. V. (Director) (2009). Mr. Nobody.
TC: 00:34:08

Nemo is forced to make a decision that will largely determine his life within a short period of time. The director has set up the mother's getting on the train as a recurring scene in the movie to show how tangled this decision is. After Nemo chooses to stay with his father, his mother gets on the train. But then Nemo changes his mind and runs after the moving train, his mother grabs Nemo's hand and pulls him onto the train. When this scene repeats, the mother is unable to catch Nemo's hand and Nemo stays with his father. In this scene, the

[7] For detailed literature on Complex Storytelling see. Y, Akyıldız. 2021. Sinemada Karmaşık Öykü Anlatıcılığı: Chrıstopher Nolan Sineması. Doruk Yayınları: İstanbul.

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

director shows how a person's life depends on small and sensitive incidents. As mentioned, while addressing Lorenz curves and chaos theory in the theoretical part of the study, small inputs lead to big results in *Mr. Nobody* as well.

Image 12. Nemo's being able or not being able to hold his mother's hand will lead to different lives for both.
Dormael, J. V. (Director) (2009). Mr. Nobody. TC: 00:35:09

This decision that Nemo will make by choosing one of the three possibilities does not create three different life possibilities for him, but many different possibilities as shown in the film's universe. Because, as options are branched, the choices within branches are also branched. The second situation, which will change depending on the first choice that Mr. Nobody will make and which also requires making a choice within himself, is choosing his wife, that is, his life partner. Changes related to the person or time that Nemo chooses his life partner will create different life scenarios and therefore different universes. These different life potentials and different universes formed as a result of choices are shown in the following narration chart[8]:

[8] https://taylorholmes.com/2018/08/26/mr-nobody-untangled-decrypted-and-explained/

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

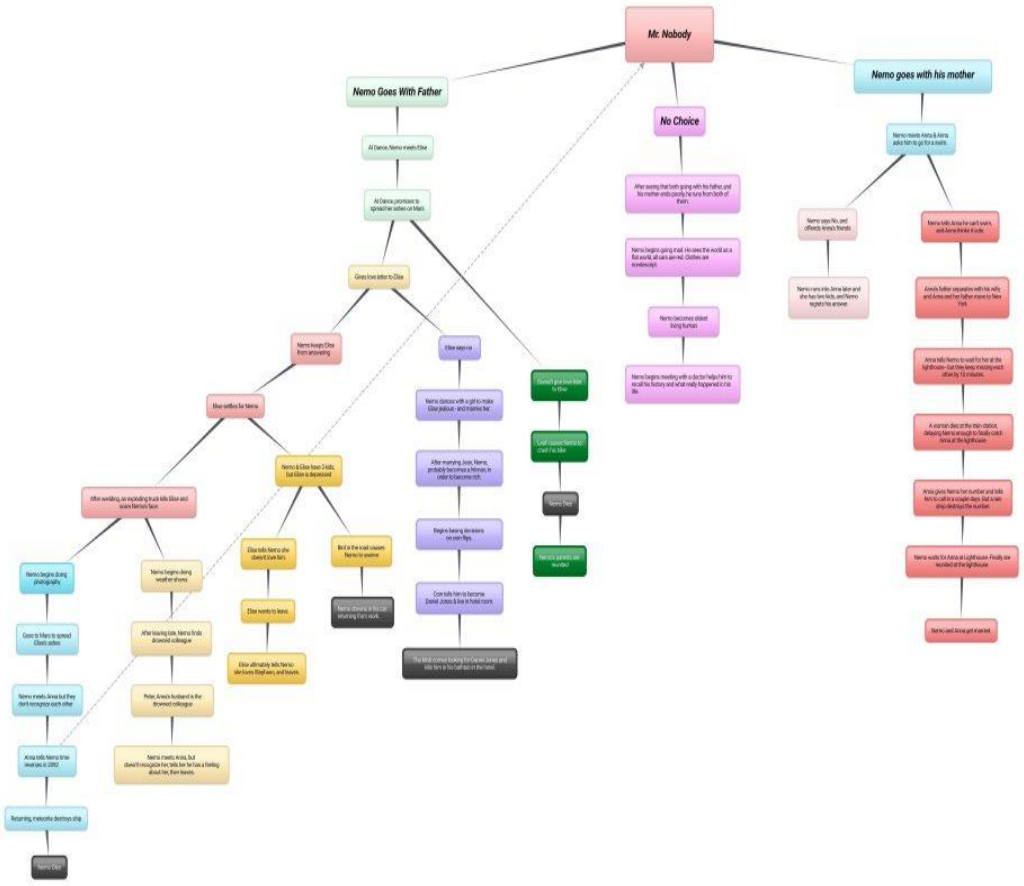

Image 13. Different realities that emerge with the different choices of Nemo. https://taylorholmes.com/2018/08/26/mr-nobody-untangled-decrypted-and-explained/mr-nobody-movie-explained-outline/

At the train station, after his mother gets on the train and the train moves, Nemo decides to go with his mother and starts running, but cannot get on the train because his shoelace is untied, and he stays with his father. At this point, the production process of the shoelaces is shown on the screen and the audience learns that the reason for the untying of Nemo's shoelace was a cost-saving effort at the shoe factory. In this way, it is shown to the audience that the choices that have been made from the very beginning of the film depend on uncontrollably small factors. So, the film philosophically brings the problem of free will and causality up for discussion in the field of the receiver. In two different sequences, it is directly conveyed to the audience that these discussions are the main philosophical background of the movie. The first one is the sequence of "Pigeon's faith", which is also the first scene of the movie.

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

Image 14. The "Pigeon's Faith" scene.
Dormael, J. V. (Director) (2009). *Mr. Nobody*. TC: 00:02:55

A pigeon placed in an experimental setup is fed at twenty-second intervals at a certain time of the day. The pigeon tries to understand why this feed is given and thinks that it flaps its wings when the reward is given. For this reason, the pigeon establishes a cause-effect relationship between the flapping of its wings and the bait given as a reward. As it is emphasized in the theoretical part of the study, the deterministic perspective of knowledge, which has turned into the knowledge perspective of the modern era, especially with the philosophy of Descartes and Newtonian mechanics, is put forward as a topic of discussion right at the beginning of the movie *Mr. Nobody*. The example of the "pigeon's faith" illustrates that this perspective of knowledge, supposed to be structured over a linear time concept between causes and effects, does not always work in the same way in terms of perceptual phenomena. The pigeon is looking for the cause of an already realized outcome and thinks of this reason as its' flapping. In other words, cause and effect change place in the "pigeon's faith", or the reason for an existing result is invented. For this reason, it can be stated that the film, which is opposed to the philosophy of Descartes, takes sides with the chaos theorem philosophically.

Another sequence where Mr. Nobody gives direct information to the audience is also included in the plot of the movie. Nemo, the main character of the movie, presents an alternative science program in one of his life scenario possibilities. In this program, it can be said that the background of the movie *Mr. Nobody* is explained in terms of the philosophy of science. The following statements were made in the part of the program conveyed to the audience:

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

Image 15. Mr. Nobody becomes the host of a science show in one of his possible lifetimes and directly conveys the basic scientific background of the film to the audience.
Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 00:23:13

> "What was there before the Big Bang? In fact, there was no 'before', because before the Big Bang there was no concept of time. Time is something that emerged with the expansion of the universe. So what will happen when the universe stops expanding and the momentum stops? What will be the nature of time? There are nine spatial dimensions in the universe if string theory is correct. There is also the temporal dimension. Initially, we may think that all dimensions are interconnected. Three dimensions we know as length, width, and depth during the Big Bang, and a temporal dimension we know as time. These dimensions were formed as a result of the dispersion of nine dimensions. The other six dimensions were tied together in remaining tiny. If we are living in a universe of damaged dimensions, how do we distinguish between illusion and reality? As far as we know, time is a dimension that we only feel in one direction. But what if one of the other dimensions is temporal rather than spatial? If you mix the puree with the tomato paste, you cannot separate them later. It is not possible. Smoke comes out of my father's cigarette, but it never returns. We can't go back either. Therefore, it is difficult to choose. You need to make the right choices (2009, Van Dormael)."

Mr. Nobody determines the axis of the movie by conveying as quoted above these two direct pieces of information to the audience. By showing the audience nine different possibilities that will emerge as a result of Nemo's three choices, the film also establishes a numerical link between its own dimensional limits and the dimensional limits of string theory. In the movie's plot, staying with his father, staying with his mother, and not making any choices constitute the first phase that makes the story branch. While the main determinant in

Image 16. The three people Nemo will marry if he stays with his father: Elise, Anna and Jean.
Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 00:24:39

Image 17. As a result of three different butterfly effects, the marriages of Elise, Anna, and Jean with Nemo are shown in the same frame.
Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 00:25:32

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

these stages is whom Nemo married, nine different life possibilities arise with three different choices.

When Nemo chooses to stay with his father, during his adolescence, Nemo's father is unable to take care of himself due to his illness. For this reason, many vital burdens that require heavy responsibility, including bathing his father, are placed on Nemo at a young age. While this situation creates weariness for Nemo, having to take care of his father at home helps him build the background to become a science fiction writer. At this point, the film emphasizes that no choice is good or bad, different prices are paid for each different choice, but there are also different and unique new possibilities in each option. In the scenario in which he stayed with his father, Nemo becomes an introverted and shy person in his daily life. He is very interested in science and science fiction literature. With this choice, the possibilities of dating and marrying Elise, Anna, and Jean and the different life potentials that are branched depending on these possibilities emerge. All of these emotional situations that Nemo experiences in his life cause him to insist on choosing Elise, who is not actually a compatible character with himself. The biggest part of Nemo's decision tree consisting of these possibilities stems from his experiences with Elise. The depressive state that becomes prevalent in the general part of life unwittingly pushes people to make choices that will continue their unhappiness. This structure is also related to the entropy law as explained in the movie. In information theory, entropy is defined as a measure of disorder, uncertainty, or ignorance. In other words, entropy is the quantitative unit of disorder in systems. The greater the disorder, the greater the entropy (Kale, 2021, p. 3-8). When the characters Nemo and Elise are together, the total disorder, in other words, the entropy increases. As a result of this choice, Nemo loves Elise, but Elise can never love Nemo no matter how hard she tries. Because she loves someone else at the starting point where Nemo says he loves her and where she can't say no to Nemo.

Image 18. Nemo gets together with Elise, but they are never happy because Elise actually loves someone else. Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 02:00:31

The fact that Elise loves someone else at the initial point where she starts a relationship with Nemo, but she decides to be with Nemo since they had a somewhat problematic process with the person she loved at that time, causes her to be unhappy throughout her life. At this point, the film strongly embeds the concept of the butterfly effect as a repetitive motif in different ways, and thus the effect of sensitive dependence on initial conditions (SDIC), into the drama.The intensity of sensibility in the initial conditions affects future experiences in an

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

unpredictable way. In the scenario where Nemo marries Elise and has children with her, Nemo works as a manager in a factory and everything is as it should be in terms of living standards. This life form, which is almost called the American Dream, has brought material opportunities with it for Elise and Nemo. However, emotionally invisible factors make Elise's life unbearable. It can be stated that the film approaches modernist philosophy from a critical perspective at this point within the context of the narrative. The fact that the couple, who make a marriage that is considered a "convenience marriage" in general terms and made with the assumption of couples' being happy on paper, is unable to be happy in any way may be read as an opposed approach to the deterministic view. In life, which does not act with the logic of Newtonian physics and Cartesian thought, the number 2 is seen as the sum of 1 and 1. However, by establishing a cinematic narrative through chaos theory, *Mr. Nobody* emphasizes the importance of the conjunction "and" while examining 1 and 1 (Gençtan, 2021, p. 29). According to the film, the relationships that determine daily life and human life and the subatomic world where non-deterministic chaos reigns are unpredictable phenomena, but can be experienced within the process. Another possibility that will arise in case Nemo and Elise are together is that Elise breaks up with Nemo by telling him she loves her ex-boyfriend Stephona. In this scenario, leaving her children and Nemo, Elise starts working in a barber shop. Even in this universe of possibility where she lives just by looking at Stephona's picture, she is happier than the times when she was living with Nemo. The mere absence of Nemo and Elise being together reduces the entropy of total unhappiness. Another scenario regarding the marriage of Nemo and Elise is about what will happen if this marriage cannot be experienced. Right after the couple's marriage, while they were traveling in their vehicle, an oil truck in front of them exploded, Elise dies and Nemo survives. After this incident, Nemo does not take anyone into his life and lives his life as if Elise is alive. He pretends to do everything with her, including eating, and he talks with her photos.

Image 19. Even though she is dead, Nemo pretends Elise is alive and eats with her.
Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 01:48:52

In this universe of possibility, where Nemo and Elise are together and Elise dies as a result of the oil tanker's explosion, Nemo has promised to scatter Elise's ashes on Mars when she dies, and he goes to Mars to keep this promise. Nemo meets Anna on Mars, and the two fall in love, but die as a result of a meteor explosion. Therefore, in this scenario also, Nemo cannot lead a happy life.

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

Image 20. Nemo and Anna meet on Mars and they like each other. However, on the way back, they die as a result of a meteor explosion.
Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 02:07:02

In the scenario that Nemo stays with his father, another possibility is marriage to Lucie. In this fiction, Nemo has promised himself that if Elise rejects him, he will be with the first woman he meets at the school party. At the party, Lucie is the woman who wants to dance with him. Since Nemo made this decision suddenly and at the most broken moment, he lives his most discordant and tragic life possibility emerges with this choice. When Nemo and Lucie are together, a real bond can almost never be established between them, and since Nemo started this relationship on a decision he made, he constructs the rest of his life to realize many of the decisions he made that day. These decisions are:

One: *I will never leave anything to chance again.*
Two: *I'm going to marry the girl on my motorcycle.*
Three: *I will be rich.*
Four: *We will have a house, a big house. A yellow house with a garden. Two children, their names will be Paul and Michael.*
Five: *I will have a sports car. A red sports car. A swimming pool. I will learn to swim.*
Six: *I will never give up until I succeed.*

Image 21. When Nemo is with Lucie, he fulfills everything he promised himself, but he can't get rid of his unhappiness.
Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 01:11:21

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

Nemo builds the life he chose with Lucie on the system of decisions made. However, life is not a success achieved as a result of decisions made. On the concept of success and life, Geçtan says the following:

> "Success", which is not an easy concept to define, has an important place for some people. We encounter evaluations such as successful or unsuccessful more often than ever. These adjectives seem to be used more often in relation to various types of performances and self-marketing. Therefore, the meaning of the word success has become quite ambiguous. I have never heard anyone say that someone has been successful in life itself because there is no definition of being successful in life (2021, p. 87).

As Geçtan stated, seeing life as a way to be covered or a job to be completed successfully will cause an existential vacuum that cannot be filled when the assumed goal is reached. Nemo, who lives his life as a performance in the scenario he chooses to be with Lucie, becomes depressed when he achieves all the goals he desired. The life designed to take revenge on Elise caused him to become the unhappy person that Elise became when he was with Elise. Among all the possibilities given in the movie, Nemo lives his richest version of himself in this scenario where he is with Elise. On the other hand, this is also the only scenario where the main character, Nemo finds the solution in suicide. In the letter he left to Lucie, Nemo says.

> "One day, everything in life seems unbearable. Choices have already been made. All I can do is move on with my life. I know myself like a book. I can foresee my every reaction. My life is trapped between airbags and seat belts. I've done everything to get to this point, and I did, but I'm dying of boredom. The hardest part is realizing that I'm still alive."

Nemo's reaction when Lucie reads this letter to Nemo is perhaps more tragic than the content of the letter. Because Nemo says that the handwriting in the letter belongs to him but he does not remember that he wrote the letter. In a life so conditioned for success performatively, Nemo is so alienated from himself that he can't even remember whether he wrote the most important lines about life himself.

In Mr. Nobody, besides these two possibilities he is staying with his father, there is only one universe of possibilities where Nemo stays with his mother. Nemo spends a very hard

Image 22. Anna comes to Nemo, who is sitting unhappily on the beach, and two different dialogues take place between them.
Dormael, J. V. (Director) (2009). *Mr. Nobody*. TC: 00:43:40

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

childhood and adolescence in cases where he stays with his father. Due to the conditions that life imposes on him, he has to take on too many responsibilities. These responsibilities make him a strict, rule-based man. However, in the scenario where he stays with his mother, Nemo goes through a period of youth and growth where he can get spoiled and rebellious and live his life as he wants, in a flow. As his soul mate, while Nemo chooses the people who are depressed and actually difficult to be with for him in his more depressive life with his father, he chooses Anna as the soul mate in the scenario where he lives with his mother and is freer. In this sense, although *Mr. Nobody* proceeds largely on the chaos theory it does not completely exclude concepts such as causality and relationality. Considering the three possibilities and the objective conditions that reveal these three possibilities, it can be said that *Mr. Nobody*'s discourse is that the living conditions have a significant impact on one's life and emotional ground. In this sense, the chaos theory in the film's narrative has a perspective that includes causality to some extent but does not reduce everything to causality. When he is with Anna, Nemo is a person amusing comfortable, determining his own future, and enjoys life even if he lives in the street, while in his relationship possibilities with Elise and Lucie he is described as a serious business person, not enjoying life, and an unhappy figure. The moment that Nemo meets Anna and starts a relationship is also visualized in a way that is closely related to how the invisible situations and moments in life shape life, in relation to the chaos theory. Developing a high level of fear of swimming from an early age, Nemo does not know how to swim. Therefore, Nemo sits on the beach unhappily while all his peers were swimming in the school's summer camp that he had to go to. Meanwhile, Anna, who notices him, comes to him and in this scene, like many other scenes of the movie, two different situations are represented, opening up two possibilities:

	1st Probability	**2nd Probability**
Anna:	Will you swim? Come on, the water is beautiful.	Will you swim? Come on, the water is beautiful.
Nemo:	No.	No.
Anna:	Let's swim. They are my friend. Get up.	Let's swim. They are my friend. Get up.
Nemo:	They're all idiot. I don't swim with idiots.	I don't know how to swim. Please don't tell this to anyone.

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

As it can be seen, even though the two dialogues are very similar, a slight difference in Nemo's last words will lead to huge changes in the lives of the characters. The possibilities of life he will structure greatly differ when Nemo tries to protect herself from the world with the urge to appear strong and when he reveals himself to the other person with all his weaknesses. The invisible emotions that a person feels inside and the infinity of possibilities in the sharing moments of these feelings have great impacts on the whole of life. Within this context, the film presents emotional states such as pride and ego as life-limiting elements, while positioning people's self-acceptance together with their weaknesses as a feature that enriches life. Analysing this scene with a holistic view, it can be stated that the movie affirms the behaviours decided by feelings rather than the rational decisions taken in life. This situation can also be read as the representation of the opposition between Apollo and Dionysus in Ancient Greek Mythology in the movie *Mr. Nobody*. The fact that Nemo does not hide this side of himself from Anna, even at his at most fragile moments, brings about a great love based on trust between the two.

Image 23. The director has shown the couple in a way that symbolizes eternity, to reveal the greatness of the love between Anna and Nemo.
Dormael, J. V. (Director) (2009). *Mr. Nobody*. TC: 01:17:05

However, when Anna's father suddenly moves to New York, the couple unintentionally breaks up. Of all the possibilities in the film's universe, the only scenario where Nemo is poor is the one with Anna. However, again, this is the only scenario where Nemo is a happy person living freely on the streets. Years pass and Nemo and Anna grow apart from each other. Nemo regularly walks through certain places every day in the hope of seeing Anna, and years later the two coincide at the train station. After this encounter, Anna and Nemo try to continue their unfinished relationship from where they left off. However, the passing years have caused Anna to get some wounds in her life and develop some sensitivities about them. That's why Anna says she needs some time to start the relationship again. Because, over the years without Nemo, loneliness has become a home where Anna takes shelter and feels safe. After all the years alone, being two again becomes heavy on Anna's soul. For these reasons, Anna gives Nemo a piece of paper with her phone number, and the lovers leave to meet two days later. However, at that time, it starts to downpour and the raindrops on the paper make the numbers unreadable. The reason why the raindrops fall, erasing the writings on the paper, is a Brazilian worker who has to stay at home after being fired two months ago and has been fed only by boiling eggs.

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

Image 24. The phone number Anna gave him becomes illegible with a raindrop. Dormael, J. V. (Director) (2009). *Mr. Nobody*. TC: 01:39:16

Image 25. A Brazilian worker fired from his job only boils eggs to feed himself.
Dormael, J. V. (Director) (2009). *Mr. Nobody*. TC: 01:40:04

Being depressed as a result of being unemployed, the Brazilian worker forgets the egg he boiled on the stove and the water boils too much, so a snowflake causes the bamboo leaf to bend. This small change causes it to rain in New York as a consequence and Anna's phone number written on the paper is ruined. This scene, which is quite revealing in terms of reflecting the philosophy of the movie, is narrated by the main character Nemo as follows:

> "(In 2092, Nemo is interviewed about his life and memories, as he is the last mortal human. Nemo starts to tell the chain of events that led to their separation with Anna, laughing bitterly.) You know why I lost Anna? Because two months earlier. An unemployed Brazilian boiled an egg. The heat created a micro-climate in the room slight difference of temperature and heavy rain, two months later on the other side of the World that Brazilian boiled an egg instead of being at work. He would have lost his job in a clothing factory because sic months earlier I would have compared the prices of jeans and I will have bought the cheaper pair. As the Chinese proverb says 'a single snowflake can bend the leaf of the bamboo." Jeans production will have moved to other countries. I lost every trace of Anna. I waited for her every day (Van Dormael, 2009)."

This scene, which is structured almost exactly as the Lorenz Curves mentioned in the theoretical part, is one of the cinematic images in which the chaos theory that pervades the entire movie is most clearly represented. This would not have happened if the Brazilian worker had continued his job at the denim factory where he was working. On the other hand, Nemo also contributed to the dismissal of the Brazilian worker, albeit very small, because also he prefers to buy cheap jeans. This factory, which produces jeans, decides to move to another country in order to reduce the costs of trousers. As a result, Anna and Nemo are never able to get together again. The happenings with the domino effect reshaped the whole life. Considered together with the chaos theory that dominates the film, it can be said that it is a scene representing how events and people are connected by invisible bonds in life.

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

The events in *Mr. Nobody* and their connections with the chaos theory are structured as outlined above. The representational and fictional perspective of the film, which affects the reception of the audience at least as much as its content, points to the logic of complex storytelling. The film has a jumping plot between the ages of the main character, Nemo, and the episodes of his relationship with Elise, Anna, and Lucie. In addition, this jumping plot, not always proceeding in a linear way, and large temporal and spatial oscillations are the parts of the basic fictional philosophy that forms the film's narrative.

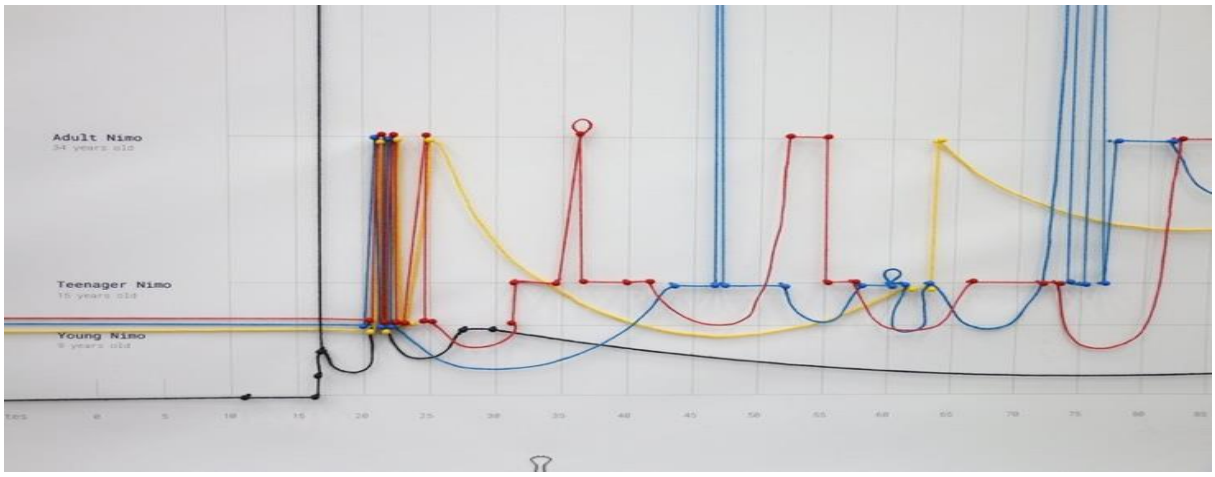

Image 26. A study illustrating the complexity of the timeline of the movie Mr. Nobody.
https://www.advacohen.com/mr-nobody1

This fictional structure of the film[9] is closely related to the chaos theory, which primarily constitutes the philosophical core of the film. This complex structure forces the audience to have an experience close to the experience of the main character Nemo, especially when watching the movie for the first time. Nemo has to react reflexively in the face of events that happen for the first time in his life, and he is in a very vulnerable position. The director, who wants to create this structure on the level of the audience, also acts with a fictional logic similar to the chaos of life. This cinematographic universe, which is built on content and style, coincide the cinematic experience with the neurological processes in the human mind by stimulating mirror neurons in humans. Because mirror neurons eliminate the distinction between **"looking and doing"** and destroys the difference between "me" and "others". Elsaesser and Hagener summarize how this theory is reflected in cinema theory as follows:

> "Mirror neurons not only control motor imitation skills, which play a key role in human learning, but also empathy and compassion for other people. Therefore, it is obvious how a scientifically verifiable theory of sympathy and empathy will have far-reaching consequences for film theory. For the body of the spectator, this theory has the content of a complete connection between the senses and the processing of information by the brain: the body-brain relationship becomes the same thing as seeing and doing (2011, p. 151)."

Hven (2017, p. 122), on the other hand, points out that through mirror neurons and the functions of mirror neurons, a direct and unmediated relationship can be established between the film and the audience that is not only immanent to the narrative and content. These

[9] Illustrating Source: https://www.advacohen.com/mr-nobody1

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

approaches in cinema theory have revealed the concept of neuro-image. In an interview, Pisters explains neuro-image as follows:

"While the narrative is always positioned in the present in the movement-image, in the time-image, the past that appears unexpectedly dominates the narrative by any means. In neuroimage, the narrative anchors a speculative future.[10]"

Similarly, according to Pisters again, "in films with complex narratives, we (audience) no longer see events through the eyes of the characters, as in movement-image and time-image, rather we are now in the mental realms of the characters (2012, p 14). Because the speculative future constantly holds new potentials and these new potentials make the narrative experienced by the audience constantly unstable. Just like Pisters, Bianco thinks that competent films with complex narrative structure and plot bring the experience of both the main character and audience very close to each other thanks to the editing technique. The structure of *Mr. Nobody* is fed from chaos theory philosophically, and complex storytelling technique, which can be considered as the closest editing technique to chaos theory, fictionally. The film is regarded as one of the competent examples of complex storytelling. Therefore, it can be stated that the speculative futures and potential lives lived by the main character Nemo in the film are experienced by the audience in an unmediated way. At least, it can be inferred that this is the viewing experience that the director intended.

Conclusion

Mr. Nobody is closely related to both narrative forms based on ancient Greek myths, and the developments and systems of thought that have emerged in contemporary science. This points to the importance of chaos and order concepts today, in a philosophical manner, as it has throughout history. Fractal structures in nature lead to both archaic, scientific, and also about-daily-life feelings and thoughts in humans. This reflexivity naturally affected art and cinema. One of the most significant arguments of philosophy derived from the chaos theory and one of its basic concepts, fractal structures, is undoubtedly related to the concept of reality. In modernism, the concept called reality can be conveyed in some way with fixed models. Modern philosophy basically has a deterministic approach to reality and tries to envision a universe based on a cause-effect relationship. However, chaos theory emphasizes that such a definition is not possible and that an alternative reality created by any model cannot be superior to another alternate reality. In this sense, taking scientific and mathematical structures with it, the chaos theory points out that the journey to search for reality in philosophy has become blurred, in just the same way as in Ancient Greece. The movie *Mr. Nobody*, which constitutes the research sample of the study, has a fractal structure not only in terms of content but also in terms of fiction.

Mr. Nobody aims at not only to show the chaos theory philosophically but also to make the audience experience it cinematically. Hence, the movie has a complex narrative structure, which today is called a cinematic narrative form and can pose a viewing challenge for people used to linear watching. However, the director Van Dormael who desired to combine the content and form of the film tried to create a cinematic butterfly effect on the audience. In this case, in terms of perception and phenomenological experience, the audience is desired to be positioned at the same point as the main character on the screen, via cinematic tools and editing techniques. This stylistic configuration breaks the cycle of the classical audience, viewing area

[10] http://www.patriciapisters.com/files/sy_122_norosinema_gost_2.pdf

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

(non-diegesis), and the cinematic universe (diegesis) and it is aimed to develop ***a view and interpretation*** of the viewer's own life through the crack formed.

The movie *Mr. Nobody*, which has the above-mentioned features both philosophically and fictionally, has a tragic form in the structural sense. In the movie, Nemo never knows who he is, just like Oedipus. Because Nemo never has a life that can be fixed. All the lives that Nemo lives and many situations within those lives are sensitive enough to change with the butterfly's flapping of its wings. For this reason, it can be stated that the film shows the fragility and helplessness of human beings against life as tragic beings. Sophocles said, "A person moves throughout his/her life without knowing his destiny. No one commits a crime voluntarily on this journey." (Erhat, 1954, p. 8).

Mr. Nobody seems to be built on this quote from the famous tragic writer Sophocles. However, this similarity is not surprising when examining *Mr. Nobody* and tragedies. Because, with the legacy of tragedies, the movie focuses on concepts such as human existence, limitations of humans, ambiguity, and the complexity of reality. Just like tragedies, in *Mr. Nobody* also, the impact of the relevant phenomenon cannot be changed after the critical event that determines a person's life (after the decision is made) and the tragic threshold (mistake) is crossed. Again, as in the tragedies, in *Mr. Nobody*, this ***tragic threshold*** is the existence of a human being, in other words being already born. To be human means to be entangled in a tragic destiny. When the conceptual and cinematic elements of the movie are considered together, it can be stated that *Mr. Nobody* contains the characteristic elements of tragedy structurally, chaos theory philosophically and scientifically, and complex storytelling as narrative and it is one of the most competent examples that can effectively transform these elements into a cinematic image.

Conflict of Interest Statement

The author of the article declared that there is no conflict of interest.

References

Akyıldız, Y. (2021). *Sinemada Karmaşık Öykü Anlatıcılığı: Christopher Nolan Sineması*. İstanbul: Doruk Yayınları.

Bianco, J. S. (2004). Techno-Cinema. *Comparative Literature Studies Dergisi*, 41 (3), 377-403.

Buckland, W. (2015). *Bulmaca Filmler* (C. Turan, Trans.). İstanbul: Say Yayınları.

Callender, C. & Edney, R. (2011). *Zaman: Saatin Neyi Ölçtüğünü Anlamak İçin Çizgibilim*. (K. Kutlu, Trans). İstanbul: NTV Yayınları.

Canan, S. (2015). *Kimsenin Bilemeyeceği Şeyler: Bize, Bilime, İnanca ve Kaosa Dair Fraktal Düşünceler*. İstanbul: Tuti Kitap.

Deleuze. G. (2014). *Sinema 1: Hareket İmaj* (S. Özdemir, Trans.). İstanbul: Norgung Yayıncılık.

Descartes, R. (2010). *Yöntem Üzerine Konuşmalar* (A. Timüçin ve Y. Timüçin, Trans.). İstanbul: Bulut Yayınevi.

Dostoyevski, F. M. (2020). *Karamazov Kardeşler* (E. Altay, Trans.). İletişim Yayınları: İstanbul.

Dürüşken, Ç. (2016). *Antikçağ Felsefesi* (2. Basım). İstanbul: Alfa Basım Dağıtım.

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

Einstein, A. (1997). *Özel ve Genel Görelilik Kuramı Üzerine* (A. Yardımlı, Trans.). İstanbul: İdea Yayınları.

Elsaesser, T. (2015). Bulmaca Filmler içinde *Akıl-Oyunu Sineması*. (Çev. C. Turan) İstanbul: Say Yayınları.

Elsaesser, T. & Hagener, M. (2011). *Film Kuramı: Duyular Yoluyla Bir Giriş* (B. Soner ve B. Yıldırım, Trans.). Ankara: Dipnot Yayınları.

Erhat, A. (1954). *Sophokles/ Hayatı, Sanatı ve Eserleri*. İstanbul: Varlık Yayınları.

Falconer, K. (2014). *Fractal Geometry: Mathematical Foundations and Applications*. United Kingdom: John Wiley & Sons, Ltd.

Freud, S., Jung, C. G. & Adler, A. (1981). *Psikanaliz Açısından Edebiyat* (S. Hilav, Trans.). Ankara: Dost Yayınevi.

Geçtan, E. (2021). *Hayat*. İstanbul: Metis Yayınları.

Güçbilmez, B. (2016). *Zaman/ Zemin/ Zuhur*. Ankara: Dost Yayınları.

Gültekin, T. & Tokdil, E. (2017). Gerçeklik ve Sanı Yaklaşımı Üzerine Karşılaştırmalaı Bir İnceleme: Denemeler Sergi Örneği. *FLSF (Felsefe ve Sosyal Bilimler Dergisi), 2017 Bahar, sayı: 23, s. 277-290 ISSN 1306-9535, www.flsfdergisi.com*

Gürsakal, N. (2007). *Sosyal Bilimler, Karmaşıklık ve Kaos*. Ankara: Nobel Yayınları

Hven, S. (2017). *Cinema and Narrative Complexity: Embodying the Fabula*. Amsterdam: Amsterdam University Press.

Kale, Ö. (2021). *Kuantum Entropileri ve Markov Durumları*. Ankara Üniversitesi Fen Bilimleri Enstitüsü. Yayınlanmamış Yüksek Lisans Tezi.

Lorenz, E. (1995). *The Essence Of Chaos.* United Kingdom: UCL Press.

Mandelbrot, B. B. (1983). *The Fractal Geometry of Nature.* New York: W. H. Freeman and Company.

Mandelbrot, B.B. (2004). *Fractals and Chaos: Mandelbrot Set and Beyond.* USA: Springer.

McClure, Bud A (2005). *Putting a New Spin on Groups.* London, Lawrence Erbalum Associates Publishers.

Parker, B. (1996). *Chaos In The Cosmos***.** Cambridge: Perseus Publishing.

Pisters, P. (2012). *The Neuro-Image: A Deleuzian Film-Philosophy of Digital Screen Culture*. Stanford, CA: Stanford University Press.

Shakespeare, W. (2020) *Hamlet* (S. Eyüboğlu, Trans.). İstanbul: Hasan Ali Yücel Yayınları:

Sofokles (2009). *Kral Oidipus* (G. Dilmen, Trans.). İstanbul: Mitos Boyut Yayınları.

Topçu G. Y. (2005). *Sinemada Yeni Yönelimler: Dogma 95 Örneği ve Anlatı Yapısının İncelenmesi.* Yayınlanmamış Doktora Tezi. Gazi Üniversitesi.

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

Uçar, S. (2010). *Kaos Teorisinin Felsefi Özellikleri*. İstanbul Üniversitesi Sosyal Bilimler Enstitüsü Felsefe Anabilim Dalı. Yayınlanmamış Doktora Tezi.

Movies

Arndt, S. (Producer) & Tykwer, T. (Director). (1998). Lola rentt. German: X-Filme Creative Pool.

Bell, G, R. (Producer). & Fincher, D. (Director). (1999). Fight Club. USA: Fox 2000 Pictures.

Bender, C. (Producer). & Bress, e. & Gruber, M. J. (2004). The Butterfly Effect. USA. BenderSpink.

Bender, L. (Producer). Tarantino, Q. (Director). (1994). Pulp Fiction. USA: Miramax.

Bruestle, M. (Producer). Chase, D. (Director / Creator). (199). The Sopranos. USA: HBO.

Cranston, B. (Producer) & Gilligan, V. (Director / Creator) (2011). Breaking Bad. USA: High Bridge Production.

Cronenberg, D. (Producer) & Cronenberg, D. (Director). (1996) Crash. USA: Alliance Communications Corporation.

Cuse, C. (Producer) & Abrams J. J. (Director / Creator) (2004). Lost. USA: Bad Robot.

Edelstein, N. (Producer) & Lynch, D. (Director). (2001). Mulholland Dr. France: Les Films Alain Sarde.

Edelstein, N. (Producer). Lynch, D. (Director) (2001). Mulholland Dr. France: Les Films Alain Sarde.

Godeau, P (Producer) & Dormael, J. V. (Director) (2009). Mr. Nobody. France: Pan Europeenne.

Golin, S. (Producer) & Jonze, S. (Director). (1999). Being John Malkavich. USA: Astralwerks.

Golin, S. (Producer). Gondry, M. (Director) (2004). Eternal Sunshine of the Spotless Mind. USA: Focus Features.

Levive, D. (Producer). Villeneuve, D. (Director) (2016). Arrival. USA: Lava Bear Films.

McDonald, P. (Producer). Spierig, M. & Spierig, P. (Director) (2014). Predestination. Australia: Screen Australia.

Nolan, C.. (Producer). Nolan, C. (Director). (2010). Inception. USA: Warner Bros.

Nolan, C.. (Producer). Nolan, C. (Director). (2020). Tenet. USA: Warner Bros.

Scorsese, M. (Producer). Scorsese, M. (Director) (2010). Shutter Island. USA: Paramount Pictures.

Silver, J. (Producer). Wachowski, L. & Wachowski, L. (Director) (1999). Matrix. USA: Warner Bros.

Todd, J. (Producer). Nolan, C. (Director). (2000). Memento. USA: New Market Capital Group.

İnternet Kaynakları

http://www.patriciapisters.com/files/sy_122_norosinema_gost_2.pdf

https://www.imdb.com/title/tt1375666/

Vol/Cilt: 8 No/Sayı: 15 2023
ISSN: 2547-9458

https://taylorholmes.com/2018/08/26/mr-nobody-untangled-decrypted-and-explained/

Images

Images-1 Escher, M.C. (1948). *Bond of Union.*

Images-2 Dymitrow, M. 2017. *Mobius Strip*. https://www.researchgate.net/figure/Graphical-representation-of-a-Moebius-strip_fig1_328150097

Images-3 Moreau, G. 1864. *Oedipus and Sphinx*

Images-4 Mandelbrot, B.B. 2004. *Fractals and Chaos: Mandelbrot Set and Beyond.* USA: Springer. p.140

Images-5 http://www.faqs.org/faqs/fractal-faq/section-6.html

Images-6 Escher, M.C. (1948).*Drawing Hands***.**

Images-7 https://kids.nationalgeographic.com/animals/invertebrates/facts/monarch-butterfly

Images-8 Falconer, K. (2014). *Fractal Geometry: Mathematical Foundations and Applications*. United Kingdom: John Wiley & Sons, Ltd. p. 223

Images-9 https://www.anews.com.tr/tech/2022/08/17/space-butterfly-by-galaxy-collision-reveals-destiny-of-our-galaxy

Images-10 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 00:32:51

Images-11 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 00:34:08

Images-12 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 00:35:09

Images-13 https://taylorholmes.com/2018/08/26/mr-nobody-untangled-decrypted-and-explained/mr-nobody-movie-explained-outline/

Images-14 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 00:02:55
Images-15 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 00:23:13
Images-16 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 00:24:39
Images-17 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 00:25:32
Images-18 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 02:00:31
Images-19 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 01:48:52
Images-20 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 02:07:02
Images-21 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 01:11:21
Images-22 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 00:43:40
Images-23 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 01:17:05
Images-24 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 01:39:16

Images-25 Dormael, J. V. (Director) (2009). *Mr. Nobody.* TC: 01:40:04
Images-26 https://www.advacohen.com/mr-nobody1