AFLUENTE: REVISTA DE LETRAS E LINGUÍSTICA
ISSN 2525-3441

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Estne sic tempus? o tempo na ficção científica segundo o diálogo entre a máquina de Wells e os túneis de Dark

RESUMO: O tempo pode ser cronológico ou psicológico. Prost, por exemplo, transforma segundos em longas páginas. Nos escritos de muitos outros autores, anos, décadas, séculos passam pelos olhos do leitor em apenas um parágrafo. O cinema joga com o tempo editando suas cenas e o espectador assiste a um produto em que tempo e espaço se dissipam e significam. Na ficção científica, o tempo tem conduzido discussões sobre o desconhecido, apresentando à ciência o campo das grandes inovações ou tem sido criador de grandes precipitações. Em A Máquina do Tempo, o tempo revela o futuro do pós-humano, algo que não se assemelha mais ao que conhecemos. Por outro lado, em Dark, produzido pela Netflix, a ciência é retratada em atmosfera sombria e como conceito de pessimismo. As duas obras discutidas a seguir parecem estar nutridas do incalculável poder que o tempo exerce sobre a sociedade. Nosso objetivo é analisar o tempo e a narrativa; ciência a partir do contexto histórico da criação das obras; viagem no tempo como uma construção usada pela ficção científica; teoria matemática da quarta dimensão; e teorias físicas sobre temporalidade.

PALAVRAS-CHAVE: Tempo, Ficção Científica, Trevas, A Máquina do Tempo.

INTRODUCTION

The human mind is an unknown maze. Therefore, throughout the history of mankind, we observed that the way time is perceived by each of us may vary. Then, what seems like seconds for some characters, for others are endless days. Happy times for some and extreme distress to others. Time can be chronological or psychological. Prost, for example, transforms seconds in long pages. In many other authors' writings years, decades, centuries pass by the reader's eyes in just a paragraph. The cinema plays with time editing its scenes and the viewer watch a product whose time and space are dissipated and signified.

Time had been understood in ancient Greek as Kronos Titan, witnessed by the ancient Egyptians priests and observed by Augustine of Hippo. However, after Albert Einstein it became a concern not only for the perception of the human being, but also in its natural essence. We have created throughout history conventions to measure it, transports to beat him, medications to fool it... Still, all was an illusion. Time is not a being that we shall master. Somehow, it still acts like Kronos, a deity with its own wills and skills.

This privation of human power over the time harboured part of Science Fiction –sometimes optimistically, sometimes pessimistically. Storytellings that offer a great travel through time, revealing the future or uncovering the past, or merely watching the time as a web that holds and victimizes the humans.

Both works discussed below seem to nourish from the incalculable power that time has on society. In *The Time Machine*, time reveals the future of post-human, something that no longer resembles what we know. On the other hand, the German series *Dark*, produced by Netflix and directed by Baran bo Odar and Jantje Friese, portrays a gloomy atmosphere, in theme and image, and a pessimism concept about science. As media, the challenge approach between the two products is in the *modus operandi*, because *Dark* is an open creation, unfinished. Therefore, our analysis corresponds only to internal aspects of the universe concerning the first and second seasons. We aim to analyse time and narrative; science

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from the historical context of the creation of the works; time travel as a construct used by science fiction; mathematical theory of the fourth dimension; and physical theories regarding temporality.

SCIENCE FICTION, BRIEF HISTORICAL APPARATUS

The first writer to venture into the dialogue between science and literature in the English language was Edgar Allan Poe in "Sonnet – to Science", written in the early 1820s. As may be observed from the poem cited below, the author begins his path by flirting with the scientific:

> Science! true daughter of Old Time thou art!
> Who alterest all things with thy peering eyes.
> Why preyest thou thus upon the poet's heart,
> Vulture, whose wings are dull realities?
> How should he love thee? or how deem thee wise,
> Who wouldst not leave him in his wandering
> To seek for treasure in the jewelled skies,
> Albeit he soared with an undaunted wing?
> Hast thou not dragged Diana from her car,
> And driven the Hamadryad from the wood
> To seek a shelter in some happier star?
> Hast thou not torn the Naiad from her flood,
> The Elfin from the green grass, and from me
> The summer dream beneath the tamarind tree?

Contemporary to Poe, Nathaniel Hawthorne embodies science in a moral and pessimistic tone in his short stories "the Birthmark" (1843) and "Rappaccini's Daughter" (1844). Both plots describe imaginary scientific procedures and their consequences ("failures") in order to exploit the excesses and perversions that could be committed for the benefit of the scientific.

According to Brian Stableford (2003), Poe's works spread in France because of Charles Baudelaire, his French translator, and authors such as Jules Verne would have their intertextual bases formed by the flirtation with the science initiated by Poe. Starting from what he knew was created by Poe, Verne proposes the imaginary journey as the best space for the scientific scenario. Thus, the French writer took

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advantage of creative extrapolation, permeated his texts with hypothetical technologies, but described in the most meticulous verisimilitude.

In England, despite Frankenstein (1818) which exists between gothic literature and science fiction, according to Sablefor (2003), British science fiction found impulse with the publication of Blackwood magazine (1817-1980), in which George T. Chesney published "the Battle of Dorking". His text manured the literary imagination because of its plot which contextualizes a hypothetical imminent future war in which the technological advance of those involved would give resourcefulness to the events narrated – being cause, means and effect.

In 1895, after some other texts, Herbert George Wells ventured to compose about *The Time Machine*. A creative exercise that, according to Sablefor, transcends the technological explorations made by Julio Verne because

> [...] Wells had not taken the trouble to make his time machine seem plausible to sympathetic readers because he expected them to take the notion seriously as an actual possibility; he knew how necessary some such device had become as a means of opening the future to serious speculative scrutiny. Wells's time machine became the first of a series of facilitating devices that opened up the farther reaches of time and space to a kind of rational enquiry that had previously been severely handicapped by its reliance on obsolete narrative frameworks. The crucial invention of *The Time Machine* was the establishment of a paradigm example of a whole new class of narrative devices. Wells's work was, therefore, an invitation to writers of action-adventure fiction enthusiastic to work on wider stages in a more spectacular manner than naturalistic fiction would ever permit, as well as to speculative fabulists. (SABLEFOR, 2003, p.15)

Thus, *The Time Machine* appears as a watershed for literary production. H. G. Wells. In 1895, with *The Time Machine* (1895) takes up a time when science fiction gained prominence in cinema which has been growing alongside technology and innovation. In the early 20th century, Georges Méliès's title *Voyage dans La Lune* (*Voyage dans La Lune*, 1902) will illustrate the presence of science fiction in the seventh art. George Pal's 1960 film *The Time Machine* will portray time travel in a Technicolor audio-visual experience that dares to predict the future of humanity. Although emerging in the academic world, time travel theories were appropriate for

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pop culture, represented in cinema, comic books, music and video games.

Some of the depictions of time travel in narratives are found in Robert Zemeckis' *Back To The Future* (1985), young Marty McFly is accidentally sent back in time from 1985 to 1955 on a time machine built from a DeLorean by eccentric scientist Emmett Brown. In Madeleine L'engle's *A Wrinkle in Time* 1962, physicist Mr. Murry finds the right frequency to teleport between universes called Tesseract. In the video game *Life is Strange* (2015) by Raoul Barbet and Michel Koch, Max Claulfield, after witnessing the murder of his best friend, the character unexpectedly retreats the minutes through his hands. If these sources of representation already produced numerous reflections on the theme, it was about time that the TV series also expanded their perceptions of temporality.

Produced by Netflix and directed by Baran bo Odar and Jantje Friese, the German series *Dark* was able to draw attention to its permanence in the *Dark* style, without oscillating to humour or irony. While the first season, released in December 2017, features ten episodes, the second season, aired in June 2019, has eight episodes. Unlike *The Time Machine* (1895), a novel that is completed and therefore capable of conclusive analysis, the web series *Dark* is not a closed work and the analyses here that correspond only to the present moment of the series, first and second seasons. The third season is currently in pre-production and we still do not know what will become of the "time".

TIME: WHO ALTEREST ALL THINGS WITH THY PEERING EYES

Time travel is a sign without a referent, a linguistic construct that manufactures a certain temporal spatialization with certain characteristics. As Mark Rose observes (1981, p. 10), the visualization of time as a line produced the idea of time travel. So, when writing a work related to time travel, the writer must first interpret the order of the spatial trajectory taken by the characters. Today it is possible to affirm the theoretical and physical possibility of the movement of bodies through space-time, however, it is here a fictional sign or construct used for the assembly of a literature whose genre is science fiction.

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In "Time and Narrative" (1990), Paul Ricoeur takes up the concept of fiction and time to think of narrative theory. While introducing his understanding of fiction, the author points out that he reserves the term fiction to those literary creations that ignore the ambition, characteristic of the historical narrative, to constitute a true narrative. For the author the formation of a historical narrative starts in a different way of a literary creation. While the historical narrative and narrative of fiction resemble each other because they depend on the same operations as mimesis II, they differ by the way they demonstrate the claim for the "truth" (RICOEUR, 1990, p. 64).

Evidently the time travel narrative mimesis of both *The Time Machine* (1895) and *Dark* (2017) bring representations of a completely different reality. While *The Time Machine* (1895) allows us to use technological advances to create a possible futuristic world within the paradigm of scientific theories of its context, *Dark* will use technology to explore theories that also refer to its own time and social configuration.

Therefore, the historicity of *The Time Machine* (1895) is in evaluating and exploring the future from the author's own studies and interests. According to Rebecca Matt, in the article "Back to the Future: The Mechanics of Temporality", Wells had a very close relationship with biology and geology.

> At the age of 14 [...] procured a scholarship to study science at the Normal School of Science (Ibid). Studying biology under Thomas Henry Huxley, a noted proponent of Darwin's theory of evolution and the study of geology, is where Wells found his real interest and inspiration for some of his books, including *The Time Machine*. (MATT, 2012, p.13)

On the other hand, in Dark, the historicity of the narrative lies both in the search for identity and in the memory of the nuclear accident, which took place on April 26, 1986, at the Chernobyl power plant, a city located in Ukraine, the former Soviet Union, to create the Dark atmosphere of the fictitious Winden. Director Baran bo Odar reported a memento of his childhood in an interview with the New York Times in which his mother forbade him from going to certain places and playing in the rain due to radiation. (The New York Times, 23 Nov. 2017).

On the other hand, what the structures of their scientific fictions have in common is the creation of logical and artificial rationality and the problematization of the ethical and moral

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implications of the directions taken by scientific and technological developments (ROSSI, 2017, p. 82). Returning to the work time and narrative (1995), Paul Ricoeur's general concern in this work is to highlight in comparison the notions of time created by Saint Augustine and Aristotle.

For Aristotle, intrigue is the foundation of history since it requires the establishment of rules that sustain the unity of time of fiction, exclusively the time lived. St Augustine refers to the other time, the one on the one side not perceptible to the naked eye, because he lives in the anima (soul, psykhé) and in the being, the inner time. Thus, Ricoeur constructs a critique of the writing of the historiographic narrative, which will not be the object of discussion of this article.

The experience of temporality related to the time lived (for Aristotle) and the inner time (for Augustine of Hippo) in the fiction of the characters, allows the reader to contact with the absolute understanding of what Ricoeur expresses as a discordant concordance. That is, it allows the reader to overcome the notion of everyday experience and linearity predicted by "mimesis I" in Aristotle's poetry and the focus of experience on both the phenomenological and the achronological level of the characters in the narrative.

Despite the objective of this article to work the sign "time travel", the notion that there is a debate in the types of narrative configuration and that it is time its main object of study seems to matter as it investigates the behaviour of temporality. As José Barros explains (2012, p. 6), Augustine of Hippo had rejected the old theory of the Greek re-routed by the understanding that the time was that of the movement of the stars, and introduces the notion that time is of the inside, from the soul, which allows it to have an impact on this human soul, with the three-fold presence of the past, through memory, the present, and by sight, and in the future, over the expected (or expect). This experience of time corresponds to a deep human experience, but at the same time it is a non-communicable experience, because it is impregnated with subjectivity.

Between the texts The Time Machine (1985) and Dark (2017), Time Travel is the central aspect of the narratives

establishing a close relationship between time and science fiction. Fictional time, as Ricoeur teaches us (1995), affects the structure of the narrative through the living experience of characters in the narrative.

By narrating the events of the journey and the flowers brought from another space-time, the scientist in The Time Machine proves his experience of temporal displacement. The discourse of The Time Traveller reveals two experiences of temporal movement in distinct futures. The first is the year 802,714 where he comes across a world divided between two species the Elois and the Morlocks; the second one happens later in that future, where it was possible to experience a reddish alien Earth with its tentacle-shaped beings. It is important to remember that the future is learned through the account of the traveller that is narrated by one of his friends, highlighting a probable "renarrativization" of the traveller's own story.

In the 2019 Dark series, the protagonist Jonas Kahnwald finds a passage inside a cave within the forest of Winden town. This passage allows the young man to travel back 33 years revealing the past of other narrative characters, including his own past. The time travel, however, is performed several times and by more than one character, among them Mikkel Nielsen, who after losing himself from the group of young people accidentally ends up traveling in time for the year 1986. Although the proof of the experience of time travel is not the main concern of the characters, it is strongly associated with the act of learning from other times, with the pretension of understanding their own roles in a story that repeats itself in a temporal loop.

Despite a limitation of experiment, the mechanism of the narrative can be exemplified with the idea of a chess match. The metaphor of a chess game shares a representation of fictional temporality as Ricoeur states: for although it is a playful activity, considered as entertainment, it awakens an ironic capacity of rationality, as it is being experienced by players. This is to say that what we call the fictitious experience of time is only the temporal aspect of a virtual experience of being in the world proposed by time, which is a transcendence immanent to the text (RICOEUR, 1990). In other words, as in all science fiction, time travel stories "can be

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characterized as either analogical or extrapolative" (HOLLINGER, 2014, p. 201).

On the one hand, The Time Machine, set in the 19th century, which although it has not yet experienced nuclear wars socially, allows us to predict a future with the utopian and dystopian representation of a doubly unwanted human evolution. On the other hand, in Dark located in a post-war context, which recovers the Chernobyl disaster, in which nuclear plants are represented as fertile economic paths, but also a great threat to life, producing in the air an atmosphere of uncertainty about the assimilation of the progress of technology, and if that, would then be one of the paths to the extinction and destruction of the human race. The two works extrapolate technological and economic conditions that develop, install and affect the Societies of their time.

SCIENCE! TRUE DAUGHTER OF OLD TIME THOU ART!

The time traveller in The Time Machine (1895) can travel through one of his latest inventions. In the work the scientist uses two objects. The first one he describes as a mechanism, a prototype, smaller and less powerful compared to what would come later. Its function was experimental, as it would be able to send small objects on a time trip. This first model is presented to a group of intellectuals who meet for dinner on a Thursday night at the traveller's home.

> he thing the Time Traveller held in his hand was a glittering metallic framework, scarcely larger than a small clock, and very delicately made. There was ivory in it, and some transparent crystalline substance. And now I must be explicit, for this that follows – unless his explanation is to be accepted – is an absolutely unaccountable thing. He took one of the small octagonal tables that were scattered about the room, and set it in front of the fire, with two legs on the hearthrug. On this table he placed the mechanism. (WELLS, 1895, digital source)

The second machine, used by the scientist to make his move to the future, was in another room of the House. A more reclusive room used to carry out his scientific inventions: the laboratory. The final version of *The Time Machine* of the Traveller has an armchair, in which the traveller assembles, in addition to a lever, which is described by explaining the functionality of his prototype. During the narrative the traveller triggers a metal lever, which can be unscrewed and disassembled

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throughout his travels. The composition of the machinery is described from the moment the intellectuals lay their eyes.

> "Would you like to see the Time Machine itself?" asked the Time Traveller. And therewith, taking the lamp in his hand, he led the way down the long, draughty corridor to his laboratory. I remember vividly the flickering light, his queer, broad head in silhouette, the dance of the shadows, how we all followed him, puzzled but incredulous, and how there in the laboratory we beheld a larger edition of the little mechanism which we had seen vanish from before our eyes. Parts were of nickel, parts of ivory, parts had certainly been filed or sawn out of rock crystal. The thing was generally complete, but the twisted crystalline bars lay unfinished upon the bench beside some sheets of drawings, and I took one up for a better look at it. Quartz it seemed to be. (WELLS, 1895, digital source)

In *Dark* (2017) there are two types of means for time travel: the passage and the temporal displacement device. The passageway is located at the bottom of one of Winden city's caves. It is made up of three heavy doors, each with the symbol of the Triquetra (image 2) and the text "Mundus Creatus Est", set out for a dug tunnel that houses the passage connecting three points in time: 1953, 1986, 2019. The time displacement device, on the other hand, is shaped like a box. It is composed of gears, springs, copper and brass. It allows you to travel to the future and the past. Through a button in the centre of the box, travellers choose to return thirty-three years or advance thirty-three years in time.

Besides the passage and the device, there is also the chair in the Bunker. The object has the appearance of an electric chair. It has a belt to restrain human's fists, another that attaches the body to the chair and power cables around the height of the human's ankle. In addition, the chair has a metal ring that covers the eyes of its users. Although the user's body travels through time, it ends up dead in the process. That happened with some of the disappeared children in Winden. After their bodies are found by the local police, it is discovered that their eyes are burned, and their eardrums are ruptured. The chair is created by Sic Mundus Est, whose purpose is to invent a prototype device created by watchmaker H. G. Tannhaus.

The Time Machine (1895) highlights the birth of a narrative that, as in other scientific fiction, science took its first steps. The dilemma of scientific evidence has given rise to the imagination of numerous 19th-century writers, Wells being one of those fertile minds. His work

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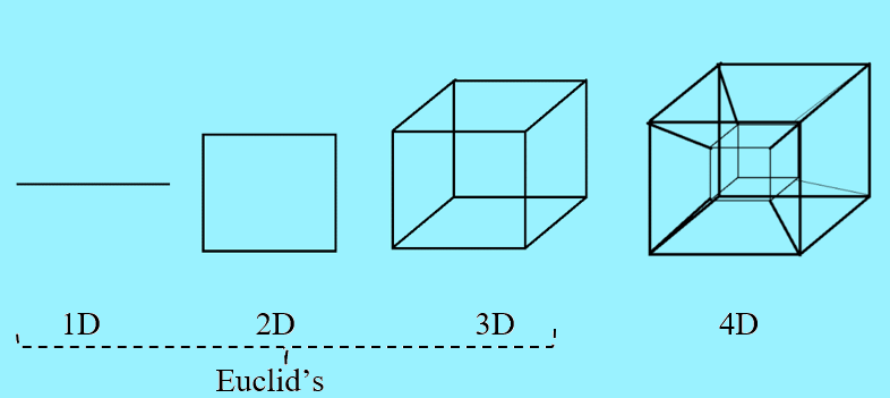
is influenced primarily by two theories: The Theory of Evolution, standing out in on The Origin of Species (1859) by Charles Robert Darwin and the theory of the fourth dimension, which relates to non-Euclidean geometry of Georg Bernhard Reinhard (image 1).

Image 1 – the four dimensions



According to Jason Colavito, *The Time Machine* proposes to develop the Victorian double into an evolutionary vision, since the human race is divided into two humanoid types. For the scholar, this portrait of the Future described by Wells underscores the idea of an unwanted future of instability and uncertainty. In his words

> Well's *The Time Machine* imagined a future in which humanity had evolved into two separate species, a civilized, effete race and a brute, animalistic one. The two forces at play in Stenvenson's, Conrad's, and Wilde's works here take definite form, with Darwinism providing a sobering explanation for one way the duality within the human soul (and between bourgoise and proletariat) could be resolved. Tellingly, the civilized and beautiful race is not the master of this future Earth but is instead food for the bestial race living below the surface. *The Time Machine* was a metaphor that applied equally to the dual nature of the human mind and the problems of social class in late-Victorian England. (COLAVITO, 2008, p. 95)

The difference between species in the work is represented both in the way of life and in the behaviour of beings. While the Elois are described as small, gentle, weak, white, and lazy inhabiting the surface of the Earth; The Morlocks are described as *Dark* chimpanzees, with a primitive walk and animalistic instincts, surviving underground and feeding on Elois' flesh.

Georg Bernhard Reimann's theory of the fourth dimension arises from the need to define the geometric situation of a curved surface. Although it works very well on flat surfaces, Euclidean

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geometry would not notice, for example, consider large distances as the surface of the Earth. According to José Pedro Silva (2017, p.21), Riemann's theory builds geometries much more general than Euclid's, and his mathematics was of great importance for the evolution of electricity and magnetism studies and for the demonstration of Einstein's Theory of Relativity.

In *The Time Machine* (1895), The Time Traveller exposes an anti-Euclidean position to the guests to display his new invention. The author explains that time travel exists, because we have already naturally travelled to the end of our lives independent of the space movement. The manipulation of the fourth dimension would, in this sense, not only be the possibility of accelerating the journey process to a future point, but also reverse the direction of the destination to the Pointer of the past.

> There are really four dimensions, three which we call the three planes of Space, and a fourth, Time. There is, however, a tendency to draw an unreal distinction between the former three dimensions and the latter, because it happens that our consciousness moves intermittently in one direction along the latter from the beginning to the end of our lives (WELLS, 1895, digital source).

In theory, the time travel proposed by Wells is given a boost of energy produced by the machine that would reverberate in being like a rocket. The traveller, stagnated in a capsule, would cross the speed of light, linearly directed either to the past or to the future, according to its user's command. It is important to stress that the two theories, which feed on the scientific discourse, go in opposition to the dogmas founded by the creationist bias of the world. The echoes of these discursive conflicts are materialized by history through numerous events that reflected the thought of the Society of the time.

In addition to numerous references to mythical theories, in *Dark*, two theories emerging from Science support time travel: the theory of general relativity and the notion of bootstrap paradox or ontological paradox. The series begins with Albert Einstein's phrase: "the difference between Present, Past and future is a mere illusion, even if persistent". Although he did not write it in any book, Albert Einsen's phrase concerns a late friend and was sent to his daughter and his friend's sister.

The researcher did not know that his poetic reference to time would motivate and inspire many researchers to study the concept of time. As the series shows, time travel is based on the idea of time dilation, which highlights the unified relationship between the units of space and time. In the first episode, the omniscient narrator with a male voice reveals that the time lived, linear and Aristotelian logic has another function in the "world of text".

> We trust that time is linear. That it proceeds eternally and is uniformly into infinity, but the distinction between the past, present and future is nothing but an illusion. Yesterday, today and tomorrow are not consecutive. They are connected in a never-ending circle everything is connected. (DARK, 2017, episode 1 (00:00:00 – 00:50:11))

In the laws of space in *Dark* it is not possible to separate the units of space and time, and if one is changed, so is the other. This is clear when traveling in time to the past Jonas gets a message from the character The Stranger saying he should not conduce Mikke back to the present or he would erase his own existence since the boy, in the past, would become Jonas' father. The hindrance of the stranger brings questions to the viewer, just as it reveals the central intrigue of the plot: time is closed, repeated, and cyclic (image 2).

Image 2 – the cycles in *Dark*

Time in *Dark*, in this sense, is not a line, but formed by cycles, resulting in a simultaneous connection in time through a 360 ° fold in the plane of space. This warp in space is located in the caves of Winden near the city's Nuclear Power Plant. It is also known as the wormhole (image 3). As Stephen Crothers (2014, P. 1) teaches in the article "Wormholes: Science Fiction or Pure Fantasy" about the relationship between relativity theory and science fiction:

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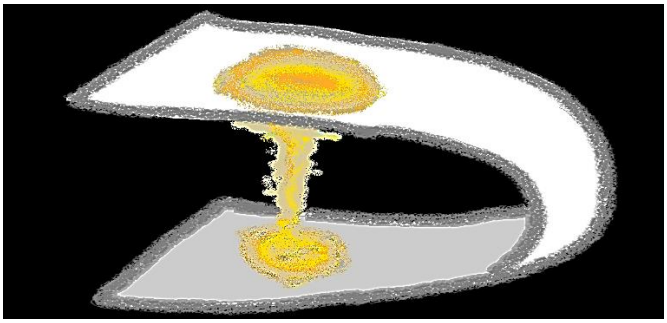
> a wormhole is a tunnel-like connection between two different parts of the universe or between two different universes. It is claimed that wormholes enable time travel, if one end of the wormhole is, somehow, accelerated and brought back to its starting position.

In the theory of relativity, the scientific justification for the occurrence of time dilation would be in the calculation of the speed at which the waves of magnetism and electricity would travel. The movement at the speed of light would be driven by two combined forces forming a field of electricity and magnetism.

Image 3 – the wormhole



In order to travel through time in *Dark*, the portal must be activated by an unusual force, such as the gravitation of a black hole or an exotic matter designated in the series as "caesium 137". According to Crothers (2014, p. 1), wormholes can only be stabilised

> [...] by the presence of what is called *exotic matter*. This 'exotic' matter is not like that of our everyday experience, not like 'antimatter', and not even like the '*Dark* matter' imagined by astrophysical magicians. Exotic matter is said to possess *negative energy density* and large *negative pressure,* or *negative mass-energy.* Wormholes not stabilised by exotic matter are not two-way tunnels; only exotic matter wormholes are *traversable* so that things can travel either way through the tunnel. Traversable wormholes are, it seems, bidirectional oral-rectal passages.

However, despite positive results in view of the proposed hypothesis and formulas, the temporal displacement of objects never had real records. Unlike the scientist who invents the time displacement device, who conveniently calls himself H. G. Tannhaus, Noah, a member of a secret cult of travellers called Sic Mundus Est, fails to make the bunker chair a means of time travel. His experiments result in the death and disappearance of the city's children.

When traveling through time in *Dark* travellers leave one space-time and arrive at another having the same form and

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consciousness. A dilemma, however, is the encounter of the duplicate, since it produces a temporal paradox. A paradox is basically something that goes against nature or defies reality. It happens when a traveller goes to another time and his actions generate impossible results. An example of a paradox is the Grandfather Paradox. Imagine you went into the past and accidentally kill one of your parent's father.

Time travel in the series takes place in a loop format, where it is not known what comes first. It is known as the story unfolds that some characters try to avoid the apocalypse and are driven by logical clues to fulfil roles they do not know and reveal the fate of their identity and of those closest to them. Another example of loop and ontological paradox occurs between the characters Charlotte and Elizabeth. Elizabeth from the future travelled to the past when she connected with Noah and had a daughter named Charlotte. Charlotte grew up and had a daughter who survived the explosion of the Nuclear Power Plant in the Bunker. When she sees the future through a wormhole, she identifies Elizabeth as her eldest daughter. This paradoxical sequence of characters is an event that exists without necessarily being created.

SOME OTHER CONSIDERATIONS: REMEMBERING A PAST NOT LIVED OR FIGHTING AGAINST A CATASTROPHIC FUTURE

The presence of the theory is a common point in the background of the narratives of H. G. Wells and *Dark*. While in *The Time Machine* The Time Traveller highlights mathematical theories and the theory of evolutionism by making a prediction of an undesirable future, The *Dark* series will focus on the physical theories, the TRE and the Wormhole effect. Much of the fictions that use relativity highlight a speculative area of the theory.

The phenomenon of time travel in *Dark* (2017) is not linear and progressive as revealed in *The Time Machine* (1985). Time is, far beyond a line that can be moved back and forth, it consists of its own diegesis that refers to the paradoxical idea based on the absence of a principle, which insists on repeating itself without letting itself understand patterns. Although the bunker chair in

Dark (2017) looks like the traveller's incredible time machine in *The Time Machine* (1895), it stubbornly fails and puts lives in danger. Creator Noah's terrible machine can be read as a reference to the atrocities committed in the name of science, since his experiments use innocent children as guinea pigs.

In *The Time Machine* (1895), the reason for time travel is known. The time traveller, in the role of the scientist, intends to visit the future and learn it, reflecting on the technological and economic structures of that society. The work has a balance between a narrative of the time lived and the interior as the stories and economic discourses are the backdrop to the dialogue with 19th-century Victorian England. In *Dark* (2017), Jonas Kahnwald does not know, to some extent, what to do with time. His journey initially begins as a rescue to Mikkel, however, turns into a journey to understand the workings of time itself; the motive of his father's death; and until then, how to avoid the apocalypse, generated by the explosion of the Nuclear Power Plant.

The frequent rains during the episodes are traces of this traumatic memory of the events and speeches of regions affected by the Chernobyl biological accident. Along with the capitalist presence of factories and chocolate brands such as Raider (The Current Twix) in the scenes. Despite the threat of ecological and environmental problems, Winden residents are convinced with the promise of employment and economic stability. However, *Dark*'s latent story is about time travel. Looping as raison d'etre makes the characters bodies necessary for the fluidity of diegesis: deaths cannot be avoided, roles cannot be changed, time acts on the characters, who are affected by the emblematic sequence of event-binding. However, hope is one of the traits often highlighted in some characters who struggle to "stop time".

The overcoming of time seems to describe a permanent and cyclical relationship about life that also foreshadows death. The approach of death due to the reach of knowledge is perhaps the maximum reflection in *The Time Machine* (1895). The closure of the story of The Time Traveller leads to the question: how far is the sacrifice for research worth? Even after his last gruesome stay in the distant future, when he lost the life of the lovely Weena and was almost killed by creatures from the

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underground, the traveller leaves for another temporal shift that result in his demise. According to the conclusions of W. Breitbart's psychiatric study (2017, p. 276), in "the inevitability of death", "in the search for Time... I find it necessary to protect myself from time to time by denying death, in subtle ways, so as not to be overrated by death and what many of us refer to as death anxiety or death terror." If seeking to understand time is a way of overreach a territory beyond materiality, then time travel might relate to an attempt of leaping the inevitability of death.

As Jonas, in *Dark*, and The Time Traveller, in *The Time Machine*, seek to escape the present and learn the future, what is exposed is but the lust for power, control and knowledge. After creating humans out of clay and water, making men in the resemblance of the Gods, Prometheus taught them all he knew: the art of construction, agriculture, philosophy, etc. That was the time when Prometheus taught them to make fire. Enraged by the knowledge humans were given, Zeus damned and punished Prometheus eternally, for he made men knew too much. The myth of knowledge shows us the bit of the dark fate ahead of those who keep in search for a true narrative of the unknown. From this perspective, knowledge might seem more like a shadowed curve on the road of future, for those who seek to fool it, control it or acquire it... The time travel trope may start as a discovery plot and then it can be transformed into a making-things-right journey, however, like the maze and the Minotaur, suddenly, it brings characters and readers together facing the mirrored reflections of a dark unfolded nature.

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Recebido em 11 de maio de 2020.

Aprovado em 14 setembro de 2020.

ESTNE SIC TEMPUS? THE TIME IN SCIENCE FICTION FROM THE DIALOGUE BETWEEN THE WELLS MACHINE AND THE TUNNELS OF *DARK*

ABSTRACT: Time can be chronological or psychological. Prost, for example, transforms seconds in long pages. In many other authors' writings years, decades, centuries pass by the reader's eyes in just a paragraph. The cinema plays with time editing its scenes and the viewer watch a product whose time and space are dissipated and signified. In science fiction, time has led discussions about the unknown, presenting science the field of great innovations or the creator of great rashness. In *The Time Machine*, time reveals the future of post-human, something that no longer resembles what we know. On the other hand, in *Dark*, produced by Netflix, science is portrayed in a gloomy atmosphere and as

pessimism concept. Both works discussed below seem to nourish from the incalculable power that time has on society. We aim to analyse time and narrative; science from the historical context of the creation of the works; time travel as a construct used by science fiction; mathematical theory of the fourth dimension; and physical theories regarding temporality.

KEYWORDS: Time; Science Fiction; Dark; The Time Machine.