

## Chapter 1

### H.G. Wells and Space-Time Warps

#### The Mystery of Space and Time

This study examines the correlation between space and time in support of making propositions about the mystery of the universe. It further explores the space-time continuum in circles. H.G. Wells's *the Time Machine* is a brief history of time, inquiring about eternity, time and its destiny, and a cycle of revolution. It is a philosophical inquiry into a coherence of time and space, which will be analyzed with the help of Bakhtin's theory of chronotope.

In Wells's novel, the Time Traveller sits along with his guests in a dining room. He explains his guests about the existence of the fourth dimension of an object, which is time. He explains his guests that most mathematicians believe in the existence of three dimensions: length, breath, and height. However, he proposes an existence of the fourth dimension. A guest argues that time cannot be considered a dimension because it cannot be altered. In his conversation with his guests, the Time Traveller claims that he has experimented with a machine that will travel in time. He takes them to his lab to reveal a full-sized version of the machine and uses the machine to travel in time.

In Wells' novel, the narrator postulates the idea that "Time is a fourth dimension and that the normal present is a three-dimensional section of a four-dimensional universe" (1). The first three dimensions are used to specify an object's location or movement back and forth, left and right, and up and down, while the fourth dimension locates its position in time. All four dimensions are used to specify a location in dynamism of an object in space. Collectively, the four dimensions are interlinked and known as a space-time continuum.

The narrator the Time Traveller, in the novel leaps into the future. He sees different civilizations from a geographic space in the future. He sees that he is caught in a thunderstorm. He lands in a garden surrounded by rhododendron, dominated by a great stone sphinx. He locates hills and buildings at a distance. He moves forward in time to get out of storm; he encounters different creatures; he persistently functions to survive outside the material world. Time is multiplicity and variability, and repeats in a circle moving over and over. The world events recurringly take place in the space-time continuum. These rules of miracle exist in the space-time continuum.

The universe consists of fundamental entities, including space-time, matter and consciousness existed independently. Hartwig Kuhlenbeck claims, "physical events and mental events occur in different space-time systems which have no dimensions in common" (81). Phenomenal space and physical space are different space. It is not that phenomenal space is abstract and physical space as real. Both are real topologically external to each other. A real space is something that moves about. The physical body moves in physical space. Images move in phenomenal space. In Wells's novel, phenomenal space fundamentally remains related with the cosmic zone. It is a dynamic spectrum in a process without specific dimensions. It covers the universe and human conscious thought is limited within it. It seems to remain constant while time is variable that moves back and forth.

Nothing can be imagined without space. If a region of space is empty of body that does not mean that it locates itself in a vacuum. Reality of space depends upon its body that it consists. Spaces are not themselves bodies, they are only the places in which bodies exist and move. Will Durant underscores a connection between the body and space, "Soul and mind are evolved with the body, grow with its growth, ail with its ailments, and die with its death. Nothing exists but atoms, space, and law; and the

law of laws is that of evolution and dissolution everywhere" (127). Like an event, the human psyche functions in relation with the space and time continuum.

Albert Einstein discovers that there is a relationship between mass, gravity and space-time. Mass is a measurement of matters that an object contains. Weight is different from the mass. Weight and mass are not same. Weight varies according to places. It is a measurement of gravity's effect on an object. Sean Carroll in *Space time and Geometry* shows "gravitational field influence by matter" (2). Mass distorts the space-time continuum. The heavier the mass, the greater the distortion, and vice versa, causing it to curve. Gravity is nothing; it is only the curve in the space-time continuum. A mathematical model comprised of space and time forms into a single interwoven continuum. Space consists of three dimensions and time with one dimension forming space-time.

In Wells's novel, layers of consciousness lead to complex meaning, which serves as a catalyst in the nineteenth century Europe, with industrial progress and technological innovation, shifting a large rural population to urban areas. Novel attempts to explore wide prospective regarding future humans who visualize infinite possibility regarding future of the world and new innovation. Such an immense rate of industrial progress prompted great minds to create innovating ideas and philosophical speculations.

Wells's novel is a warning towards civilization in the course of time to find space for existence. It is a warning to socialist what will befall on humans if the capitalist continue exploiting workers. In the novel, workers are pushed underground and appear to be nocturnal species. The upper class Eloi, remain above the ground and their civilization is stocked with amenities. As a result, they turn weak, lazy and dependent creatures. At the same time, an underground group in the act of surviving, the Morlocks, ran out of food and are forced to hunt down.

## The Conceptual Model

The chronotopic idea of time and space was coined by Russian Literary scholar Mikhail Bakhtin. He uses its central element in his theory of meaning in language and literature. It shows how the novel operated with different configurations of time and space which gave particular narrative character. The name chronotope is given to the intrinsic connectedness of temporal and spatial relationships that are artistically expressed in literature. This term is employed in mathematics, and was introduced as part of Einstein's Theory of Relativity.

Time and Space are interdependent. "Chronotopes thus stand as monuments to the community itself, as symbols of it, as forces operating to shape its members' images of themselves" (44-45). As cited by Bosso, *The Time Machine* invents time travel, the embedded chronotope foreshadows alternative history. The Time Machine with its double chronotope, attempt to reconcile the two philosophies of history that Wells left in dynamic tension side by side. The Time Traveller's journey forward into the world of 802,701 to save Weena, is only to find the changes of the world beyond recognition, with the Morlocks. It turns out that this change is the result of his previous journey.

The Traveller is lost in a maze of self-contradictory histories in every successive time-excursion splitting off more and more time-lines. And even though his first person voice creates a semblance of continuity, it quickly becomes obvious that the Traveller is a hollow, semi-amnesiac subject, futilely trying to hold the unraveling fabric of the narrative together. However, this narrative disintegration is cleverly recuperated at the end of the novel when the he is granted a vision of the entirety of history, the multiverse, jumping from one time-stream to another.

Novel neutralizes chronoclasms because it contains everything that can

possibly exist. The multiversity, in fact, been admitted as a possibility in some versions of quantum theory. But whatever its ontological status, seen as a narrative device, it re-solves the tension between time travel and alternative history by postulating a higher order chronotope, which subsumes the two chronotopes of *The Time Machine*. Time and Space can not be separated, with such seemingly harmonious resolutions, the multi-verse's narrative mediation of the ideological tension between determinism and contingency creates its own problems.

The Traveller is determined to find the only time-line that matters to him, the one in which he abandoned Weena. The real issue is not the ultimate physical nature of time-space but the psychological, social, and emotional distinction between time and space. For instance, if there were time travel, then someone could go back in time and kill his past self, but this is impossible since his future self would not exist in the first place. Wells skirts this paradox by eventually sending him into the future and not backward into the past.

Wells's suggest that the Time Traveller does not have perfect control over the Time Machine, and his adventures has not been flawless exercises because if he has a time traveling machine, why he could not go back in time just a little bit more to when dinner starts? He shows scientific methods in a variety of settings. Each time, he calmly devises an experiment with a possible hypothesis in mind, refines his ideas, and settles on a conclusion. However, he admits that nearly all of his conclusions turn out to be wrong. Finally, he gains an ally in Weena. He indicates that something bad will happen to her, but for now she is interesting as a representative of femininity in the future. Though he has previously labeled the sexes indistinct, she seems in love with him. He grows attached to her, as well, but they seem to fit into contemporary gender stereotypes, he as the strong male, and her as the dependent female.

In the novel continuing the primal regression, the Traveller has regained fire. It is ironic that this is more useful than almost any of the more modern advancements the palace displays. As he muses, the charred, ruined literature strikes him as an enormous waste of labour. While he means that the work has been in vain, since it is now ruined, he may be indirectly commenting on the worthlessness of high culture when compared to bare necessities like fire and shelter. Once again, he travels in the future ironically bring him back to a more basic way of life.

Without fire or Traveller's weapon, he reduced to the basics hand to hand combat and human ingenuity. He must reattach the levers on the Time Machine while fighting the Morlocks, once again combining modern science of present time, fixing the machine with primitive violence with past. It is also ironic that the White Sphinx is his last location in 802,701 AD. A symbolic and literal barrier for the Time Traveller, the sphinx also blocked entrance for the Greek hero Oedipus. But the sphinx has a direct relationship to his plight; a symbol of futurity and of man's submission to God, the Egyptian Sphinx faces the rising sun god Ra each day in worship. The Time Traveller, on the other hand, must in some ways defy God by embracing rational science as he gains mastery over time, and he must also break into the sphinx to escape from the future and go back in time. Finally, as he has previously noted, the sphinx still holds power in the future, much as it did in the ancient past.

With Traveller's journey into the decaying, dying future, Wells suggests the entropy; the gradual dissipation of energy within an increasingly chaotic system is the fate of the universe. It makes sense that Wells would believe this, since entropy seems at odd with evolution, evolution implies that life becomes more complex and fitter with time, whereas entropy leads to chaos and death. As he has already shown with the Eloi and Morlocks, evolution leads to dystopian imperfection, not utopian perfection, and should not be considered as a vision of progression. Moreover, this dystopia is governed by entropy; the Eloi have little energy, physical or mental, and they live in chaotic fear of the Morlocks.

The Time Traveller's ideas are turned upside down, and it makes sense that at the end of his journey he sees a life-form crawling out from sea. Just as life began in the water, so does it end? However, the universe no longer has the resources of the sun and the earth's movement to reproduce life, so his adventure ends on a highly pessimistic note. When he asks the men to take his tale as a fictional version of humanity's fate, Wells's makes a similar plea to the reader. He does not want his reader to view *The Time Machine* as a mere entertainment, but as a serious projection of the future, one plausibly backed by social and scientific arguments.

In a short dinner party of the Time Traveller none of his guests believes him, suggests that they merely find the idea too fantastic, but that they are unwilling to believe such a future waits for them. As members of the ruling class, they do not heed his warning of a class revolution. Instead, they remain concerned with the immediate future when the cabs stop running. Time travel is an exciting, seductive lifestyle, and continuing adventures would be difficult to pass up. But maybe the Traveller understands that he no longer belongs with the Victorian elite, and sees in them the beginnings of the lazy, effete Eloi. Perhaps he has even dedicated himself to preventing the class-divided dystopia he originally saw.

The narrator also expresses optimism for the future though he knows what is in store for man. This is another upbeat note that suggests humans still have free will to change the course of their lives. Wells again encourages his audience to act, and not let entropy dissipate whatever energy they have to change the future space-time. In Wells's novel the Time Traveller loses energy on his journey into the future. In this sense, humans are gradually losing their energy in relation to space time. The energy the Time Traveller leaves in the space in the process of journey days and nights reworks a transformation of energy into the celestial sphere.

The Time Traveller's energy in the journey creates the mythic space. The route he covers while travelling and the time it takes in the journey constructs a mythic space. In *Oedipus as Time Traveller*, David Ketterer makes an analogy between a solar day and the duration of human life:

The presence of the Sphinx suggests that, like Oedipus, the Time Traveler must solve a riddle. The original riddle of the Sphinx centers on an analogy between a solar day and the duration of an individual human life: in the morning or infancy, man "walks" on four legs; at mid-day or adulthood, on two legs; and in the evening, or old age, on three. To interpret the sphinx in *The Time Machine* is to extend this analogy to human evolution. (340)

A crumbling Sphinx represents the three-legged stage the decay of human in the future world. Even the memory of man is swept out of existence. In species, DNA and other micro molecules determine an organism's life cycle: birth, growth, maturity, decline and death. Nutrition is necessary but not sufficient to account for growth in size as genetics is a governing factor. At some points, an organism normally declines and dies while remaining in environment that contains sufficient amount of nutrition to sustain life. Therefore, DNA must be operative in the process of birth and death.

Wells's novel provides the best prospective on life and humans place in the universe with expanding technique. His narrative explores an understanding of the universe and how human functions within it. The initial chapter deals with the professor's trial with a model time machine and the second chapter deals with the retelling of the story to his friend who comes back for a dinner of a long time spent in the future to the year 802, 701 AD.

David Smith states that Wells's intent was putting "evolutionary theory into fictional practices" (48). The Time Traveller, on walking to the future, sees a young



woman, named Weena who is drowning, rescues her, and makes her his friend. He remains with Weena and one evening he wakes and goes outside where he sees in the distance some strange white ape-like figures lurking in the dark. Initially, he thought they might be ghosts and also speculates these must be a second kind of people who live beneath the well and he names them "Morlocks". Happy people are regarded as "The Eloi" who represent 'haves' and another race, the Morlocks as 'have-nots'. Weena is not very smart and is easily tired. She is amused by matches and frightened of the dark. She is graceful and childish. She seems getting into a dangerous situation. Weena like other Eloi gets burned to death rather than eaten.

The Eloi and the Morlocks evolved from the capitalists and the working class. Taking into an account of the organizing labor, Huxley comments as "eternal competition of man against man and of nation against nation" (169). Here, Huxley imagines the laboring monster that the Victorian society has generated. The Victorians like to clarify their social classes into three layers, the lowest being working men or labourers, then the intelligent artisan, and above them the educated working people.

Wells's novel is a broad spectrum where there lies a deep penetration. The Victorian industrial revolution, social stratification, emerging scientific and social ideas justice disparity and the origins of life and its diversity perfectly act as a catalyst to develop critical thinking and analytical skills in higher world of greater dimensions. In this regard Stephen Kern, argues, "There is nothing absolutely solid in nature" and that it is possible for a medium to penetrate all things like Wells's *The Time Machine* was able to avoid collision with solid object "Y" ray that could increase space and can take active role in transmission of energy" (154). The X-ray detects hard and soft materials by variation in transmission. It carries enough energy to ionize atoms and disrupts molecular bonds. It is an imaging technology used for full-body scans and to

detect hidden weapons. This makes a type of ionizing radiation. The X-ray is harmful to living tissues. A very high dose over a short period of time can cause radiation sickness and low dose causes cancer. The novel is a perfect vision of future, with relation to time and space.

Wells wanted to find a way through time. He builds a machine, the Time Machine by taking himself into the distant future. The Time Traveller finds himself in a new world. He finds a new race of humans which he calls the Eloi. The Time Traveller also finds another race of humans Morlocks. The human society has been divided into two groups who live above and below. The author arrives in the futuristic study to provide a frightening scenario of the shape of thing to come, the contours of which have already become apparent by the close of the twentieth century. Wells's novel aims to keep a scientific angle and analysis to the story. He recontextualizes scientific arguments of the day into the form of a narrative that aims to reinforce them. Human beings are much less significant than once thought. Despite the message on the surface of the story, the form of narrative indicates a different, opposing message. Instead of the Time Traveller's impassive acceptance of the fate of humanity, it seems that Wells himself is not as easily accepting of this verdict for the human race on one hand, the actual story paints a harsh and uncompromising scene of a future with no humans, while on the other, the form of the book itself seems to be fighting with strong message of actual narrative.

The Time Traveller describes his journeys into the future that he just returned from. At the end of his story, the narrator resumes his role, describing the aftermath of that dinner party. The story is being told three years after the event, and that the Time Traveller has subsequently vanished into time-space and has not been seen since. Then, despite humans disappearing from the story, they are still essential, and still assert their presence in the novel. Instead of affirming humanity's non-importance in

the scheme of the life of the world and universe, Wells does the opposite through the form his narrative takes.

The Time Traveller's accounts of his story show the division between cosmological time and phenomenological time. The cosmological time relates to the straight forward arrow of time in space, more or less determined by natural events like as the rising and setting of the sun, phenomenological time is a view of time seen through a human interpretation, time defined by the past, present, and future, and our relation to it. Wells uses a more phenomenological approach to time.

The Time Traveller describes a future scene; he describes it in the past tense of the story. Similarly, Wells has the narrator start from a future position and describes the past. The description of time in the book leans more toward a human, phenomenological time, time defined by how it was experienced by people. Their stories are divided into temporal categories that only make perfect logic to the people that are recounting them, again reinforcing the idea of human temporal and spatial control.

In his *The Time Machine* H.G. Wells, argues about the existence of fourth dimension time. With the help of the time machine, the Time Traveller travels either backwards or forwards in time in cultural space. This research intends to show Wells's science fiction novel with multiple timelines. The application of the theoretical ideas of chronotope: the idea of special theory of relativity and Kantian synthesis, by Mikhail Bakhtin analyzes language in the form of spatial and temporal relationship. The novel shows the relieved memory of the Time Traveller through narrative structure.

## Chapter 2

### Literary Chronotope and Space and Time in Literature

#### Bakhtin's Theory of Chronotope

Bakhtin's theory of the literary chronotope deals with an unusual features of temporal and spatial relationship. It gives the reasons how something work. It was initially arranged as a logical method of thinking about something especially by breaking all parts separately. It is a conceptual tool for diverse activities. This theory of literary chronotope is the blend of philosophy of Emmanuel Kant and Albert Einstein's theory of relativity.

Emmanuel Kant is the eighteenth century philosopher and critique of art who brought a theoretical negotiation in the traditional epistemological debate. He joints rationalism and empiricism known as Kantian synthesis. Following the empiricist line of thought, he believed that human sensibility collects and categorizes the raw sensory impression into the mind. As a rationalist, he believes that sensory impressions must come in interaction with time and space, the priori forms of consciousness into our mind so as to regulate our understanding. Immanuel Kant in his aesthetic theory in the Critique of judgments brings the idea of space and time. He postulates:

we can never know directly "things in themselves"; we cast all our perceptions into the forms of space and time, which are the spectacles we all wear but can never remove. At a higher level, further removed from direct sensation, the power of the understanding comes into play and schematizes our sensible experience according to "categories" - unity, plurality, totality, substance, causation, and so on. These categories govern our conceptual thought. Just as we cannot experience anything without putting on the spectacles of space and time. (374)

The world is perceived by sensory perception when raw sensory impressions get into stuck with the prior consciousness known as time and space. The theory shows the faculty of mind surpassing every standard of taste. The human mind can obtain sublimity when it is related to the magnitude and quantity of the concept, human experience, when their mind reacts to something that is beyond comparison to anything else in nature. Such sublime is known as mathematical sublime for Kant. Another sublime human experience is, when a supernatural or metaphysical concept strikes their mind. Their soul gets elevated at discovery of such a grand and non material concept in their mind.

Bakhtin's chronotope is the intrinsic connectedness of temporal and spatial relationships. It is artistically expressed in literature. It was introduced as a part of Einstein's theory of relativity. Luis Alberto Brandao in his article chronotope mentions, "The Einsteinian concept fulfills the function of contradicting common sense in pre-scientific thought, which conceives space and time as real things" (133). Bakhtin relates Einsteinian time-space; time is regarded as fourth dimension of space in physical and fictional worlds. He observed a part of real nature of time and space because in both the areas of interest chronology cannot be separated from events and vice versa.

Bakhtin's view of chronotope and Einstein theory of relativity express fundamental questions and problems of physics and theory of language. Both concepts efficiently synthesize the attempts to equate epistemological questions considered central to the twentieth century. Concepts of time-space and chronotope play specific roles in the histories of their respective areas of knowledge. The Einsteinian concept fulfills the function of contradicting common sense in pre-scientific thought, which conceives space and time as real things directly observable by sense experience.

The conceptual-metaphorical play is developed in Bakhtin's work. In Bakhtin's theoretical model, the chronotope acts as a concept to which specific features are attributed and, at the same time, as a metaphor that evokes aspects of the Einsteinian concept. Time-space and chronotope meet, conceptually and metaphorically, in a common epistemological field that has selected as a basic problem includes the human determination of knowledge, which includes the debate over the universal and particular, absolute and relative, fact and discourse, what can be demonstrated and what can be imagined. The thought of Einstein and of Bakhtin share in different senses.

Chronotope with relation to time and space and its significant changes is the focus of this study. As all experiences take place in time and space in circles. Time is flux, human consciousness is stream. It is chain that flows like a river called the stream of thought of consciousness. Any moment of consciousness was a synthesis of an ever changing past and future that it flowed.

Stephen Kern mentions "the material world melts back in a single flux, a continuity of flowing, a becoming" (26). The mixture of thought and perception jumps into time and space. Time and space make turns to every character. In human's triumph and tragedy, there lurks Marx's German ideology of individual's focus on the materiality of consciousness for instance, in Wells's novel, the underground Morlocks rise against the Eloi.

The human body in the three dimensions plays with three sections of time. When the body moves back and forth along with the Time Traveller, there is a matter of mixing and combining, of learning to use what humans get in order to communicate with the life. The Time Traveller vacillates between inner and outer, self and other, individual and society, feeling and thought. Everything is inescapable from the past. It provides memory that exists in every part of the body because the past character

transfers from the ancestors to the descendents. The past remains in consciousness but in modified form; in recollection therefore the body is boundary between the past and the future.

The present is the collection of imagination and past experience. It is often called as here and now with space. It is between the past and the future, which varies in meaning. It is now for one observer and at the same time now for another observer in universal timeline. Stars and heavenly bodies in the universe that takes many years to strike in human eyes; therefore, time should be taken into account while defining the present. To be aware of incidents taking place at certain points of time is the way of experiencing the present. A constant focusing in one's current time and space is the present. This prospective is explained as a reality. In any age, a powerful class intends to continue its ideology and command the authority in the society. Ideology is the collective representation of thoughts and experiences. It is not a material reality but the prospective and space in particular time of workers and bosses.

The imagination is a changing idea of time and space. In journal of conscious study Jason Brown asserts, "Mind is positioned in space of its own making" (50). Like an individual's thoughts, the Time Traveller's thoughts are constantly moving and changing with space and time depending on varying situations. The body is intertwined with space. Space is like an architecture where there are no borders between interior and exterior boundaries. There is no fixed partition. It is an extension of our capacity to perceive.

### **Chronotope and Space-Time Theories**

Bhaktin's chronotope shows, the connection and possible effect of space-time. For him, time has a great influence in literature. In Wells's novel the concept of time travel by using fictitious vehicle The Time Machine allows time traveller to travel purposefully. He reaches 802701 AD through his time machine. The characters in the

novel discuss ideas about the present and the forward future. The Time Traveller invents a machine that travels into the future. The Psychologist examines how the mind of a man changes over time, the cognitive processes of mind. The Medical Man, the Provincial Mayor, the Very Young Man, Filby and Narrator who were in dining room argue about the existence of fourth dimension time in space.

The nineteenth century was the period of scientific advances that has important role and influence in Wells's novel. The technique of narrative is shown in the novel. Despite the inspiration of different scientific ideas, The novel not only recite and agree with them but shows indication of future world. His chronotope of frame narrative leads to different conclusion than the events in the actual story. He describes time in his narrative through form with a prospect of historical lens.

Wells' scientific events of the time regarding evolution and geology inspired him to write a book that shows humans as a declining race, demonize the role of humans in the history of the earth, in time. However, studying the way he writes, a different view and interpretation on the way he considers time emerges. This view, intentional or not, shows that his depiction and explanation of time, even into the far future, depends on humans. This signifies the uncertain relationship he had with the scientific and progressions attitudes of the era. This relationship can be seen in the way novel is formed and shaped. The result of viewing the novel through a critical and philosophical lens is an understated connection to the idea of humanity's survival. This theme, marks against the plot of the book, the eventual nonexistence of humans, gives a tension to the text, opposing ideas contextualized in the form of a narrative.

Humans live in a world where everything accelerates. Time dominates and has the absolute power. It changes human's perception. The virtual world and body make the real world and physical body disappear. Matter and space fuse into one. Living the real and virtual space requires a correlation of time and space. This is the thinking in



local and global prospective. This introduces a transformation of the real and the mental space.

Newton brings the idea of Descartes's space, "there is no difference between the body and extension. There are empty spaces in the natural world, such as corporeal fluid with no pockets of vacuum in it and empty ethereal space" (7). Spaces are not themselves bodies: they are only the places in which bodies exist and move. Space is eternal in its duration, and unchangeable in its nature. Bodies alone cannot directly produce perception unless they are united to minds, and this is the relation between the body and mind. The body affects the mind, and the mind operates the entire body. The body has ability to come in the union with the mind. Parts of the brain in which minds are united are in a continual flux. This happens without creating any interruption in the person's mental life, such as bodies are incapable of entering into a mind-body union. Removing such type of collisions would obviously be turning the body into an empty space.

The body blends with space, and the gap that is occupied by the body is space itself. The body and space can alternatively be the one at the same time. Something a person does whenever he or she thinks of a vacuum. So, space is capable of having some substantial reality. Humans are surrounded by air molecules and they are floating in every direction but if air molecules and microwaves are removed, the space will be nothing, an empty void with no properties of its own. This perspective of viewing space is in fact wrong; space even in absolute vacuum possesses surprising properties and full of activities with various kinds of particles interactions. The theoretical postulation of space can be retraced to the Greek philosophers, including Aristotle who believed that space is a uniform void with three dimensions, such as length, width and height.

Newton discovered that the force of gravity depends on the mass of the bodies and the distance between them. However, he was uninformed of the working of gravity in his belief of invariable space. It was until early in the twentieth century that scientist abandoned this concept of space. Einstein developed the concept of general theory of relativity, which shows that time is a relative concept. The theory implied a four dimensional universe, where three dimensions are united with the dimension of time. Einstein asserts that "smaller bodies always move around the large objects along paths in the curved space-time" (26). General relativity shows that the gravitational attraction between objects is actually a geometric effect. The objects fall toward one another along the curves that their masses produce in space and time. The theory of general relativity cannot account for phenomena that occur at very small distances, in the realm of atoms and subatomic particles. These effects are described by quantum mechanics, which explain how atoms absorb and give off units of energy and momentum called quanta and the behavior of various particles that make up atoms. Quanta act as both particles and waves.

According to a quantum theory, "protons and neutrons, which make up an atom's nucleus, are themselves made up of tiny particles called quarks" (8). There are six known kinds of quarks, varying in mass and electric charge. This standard model also explains the electromagnetic force which holds atoms and molecules together, the strong force containing protons and neutrons and the weak force that causes certain forms of radioactive decay. The forces are transmitted by particles called bosons. For example, bosons known as photons carry the electromagnetic force. This standard model does not include a description of gravity, which in the subatomic realm is much weaker than other forces.

Soon after the concept of general relativity and the quantum mechanics, the superstrings theory developed which combined the general relativity and quantum

mechanics and described exotic entities that make up all the particles in the universe. The string theory mentions, "quarks, electrons, and other particles of matter, rather than being point like, are actually tiny line like objects called strings" (2). These strings are incredibly small. Each is approximately the size of the Planck length, the smallest possible distance in space-time less than one billionth of the radius of an electron. Just as the strings of a violin can vibrate at different frequencies and produce varying musical notes, the tiny strings in space-time continuum can vibrate in many ways to create different types of elementary particles. It is assumed that string can vibrate in six dimensions. Another membrane theory which is associated with memory of brane explains about one extra dimension. Branes are dynamical object which can propagate in space-time according to rules of quantum mechanics.

Besides making up all particles of matter in space-time, the string theory defines, "strings also make up all the force-carrying particles that act on matter" (126). It proposes that strings move within a curved space-time. Therefore, it naturally incorporates the explanation of gravity provided by the general relativity. Physicists theorize that strings interact by splitting and joining so that one string can break into two and two strings can combine to form one. In addition, open strings can close up, and closed strings can break open. These interactions and motions help determine the kinds of particles and forces the strings give rise to.

The string theory proposes that, "the space-time has either ten or twenty six dimensions" (127). In fact, the mathematical description of string theory does not work unless physicists assume that strings vibrate in ten dimensions. But where are these other dimensions, and why they cannot be seen? Physicists working on the string theory propose that extra dimensions cannot be seen because they are wrapped up in tiny balls. Each ball may be the size of a Planck length, and there is a ball at each point in the three-dimensional space that is observed. They believe that the

properties of these rolled-up dimensions determine some of the properties of the elementary particles that occur in nature.

Another approach to combine the quantum mechanics with the general relativity is known as quantum geometry, which attempts to describe the underlying quantum nature of all the particles and forces that exist in space and time. Quantum geometry describes the fabric of space-time itself as having quantum characteristics. According to this theory, space at its smallest distances resembles a weave of cloth with interlocking threads. The threads themselves make up the space-time continuum; the tiny areas between the threads are regions where space and time do not exist at all. It sees space-time as a four-dimensional background in which elementary particles exist.

In *Theory of Everything*, Stephen Hawking, brings the idea that "events cannot be predicted with complete accuracy but that there is always a degree of uncertainty. If one liked one could ascribe this randomness to the intervention of God" (131-132). This means space provides a background in which things take place, and would continue to exist even if the universe is devoid of all physical matter. Space is a pseudo-substance that changes in any shape.

Quantum mechanics explains about how space, time and gravity work. When the size of an object, or of a space like a room, is described, three numbers are used, the height, the width and the depth. The height, width and depth of a room are numbers that can vary independently from one another. That is one way to see that space is three dimensional. Another way is that three numbers to exactly locate ourselves on the earth are needed: longitude, latitude and elevation above the sea level. It also justifies the three dimensionality of space. In their deliberation of dimensions, physicists and mathematicians focus on the number of independent coordinates needed to specify any point in a given space.

If three space dimensions are consistent with current gravitational physics and interior decorating, the force law mentions about extra dimensions of space that can become undetectable or at least very difficult to detect by this world, so humans can eat the cake and hide it. Einstein's special theory of relativity, which makes classical mechanics consistent with classical electromagnetism, "treats time like a coordinate in unified space-time geometry" (1-2). If time is a coordinate, there are four coordinates to describe an event in space-time, rather than three coordinates to describe a point in space.

Einstein's theory of space-time, called the general relativity, conceptualizes a four dimensional space-time continuum. It further extends to a curved space-time, where time and space make one united fabric that is arched and stretched by the distribution of matter and energy. It predicts that, "the universe should begin with a singularity where the curvature of space time is infinite" (112). If we have  $x$  dimensions of space and one time, it can be formulated as  $d = x + 1$  dimensions of space-time. The equations of motion can be solved and classified in  $d$  dimensions just like in four space-time dimensions.

A single mathematical framework in which all fundamental forces and units of matter can be described together in a manner that is internally consistent with current and future observation. The superstring theory unifies all fundamental forces, but it requires a ten dimensional space-time, or else bad quantum states called ghosts with unphysical negative probabilities become parts of the spectrum.

In spatial relativity, when humans move through space-time, especially when their speed relative to other objects is close to the speed of light, time for them travels slower than for those individuals behind. "Any normal object is forever confined by relativity to move at speeds slower than the speed of light" (3). They will not notice this effect until humans return to those stationary people. Absolute space is the

traditional view of space, it is unchangeable and at rest. When Einstein was five years old, his father showed him a compass with its needle pointed towards North. That instance of the north-directed needle intrigues him to the mystery in the universe and its homogeneity with the nature of space.

Oswald Spengler sees culture in a unique sense that embraces every aspect of life from religion to political foundations. For Egyptians, space is a narrow path down which the individual soul moves to arrive at the end before ancestral judges. For Chinese, space is a path that wanders through the world. The depiction of space in painting and architecture mimics the values and fundamental conceptual categories of a culture. Space includes variety of forms, geographical space, atomic space, cyber space, cosmic space and space-time. It involves actions and interactions.

In the course of time, one space is dominated by another's space. Wells in real space states about the real and virtual space as, "real space is the space we find ourselves sharing with other people and things. Virtual space is space represented on a surface, space we seem to see. In fact, space can be only being represented visually as virtual, but at the same time we always encounter a virtual space in a real space" (43). Measured, real and virtual spaces form a tripolar trajectory. The real space is a zone that is shared with others. The virtual space is something that exists within two dimensions which people seem to see. The measured one is a probability space that presents the model of a particular real world situation.

Space is a social requisite of experience of different people. The meaning of something differs from one viewer to viewer, one matter to another matter, which depends upon individual's perceptions. Space can be categorized in two senses one, it varies from society to society bearing different properties in different regions that inquires space, leading to ingredients of space and to put them differently. Two, space varies from culture to culture and is imbedded in every aspect of life.

Bakhtin's chronotope includes literary artistic, spatial and temporal indicators. It has intrinsic generic significance. It shows the conceptual relationship between spatial and temporal domains. Spatial relates to space and the position, size, shape, etc. of things in it. Temporal is connected to real physical world, not spiritual matters. Time is most significant in chronotope. This study describes the concept of time in space with the help of the Time Machine. Time allows the visitor, the time traveller to visit past or future. The Time Machine is a device which brings about closed time like curves and thus enables time travel.

### **Literary Chronotope and Wells's *The Time Machine***

The plot is framed in such a way the events move through time-space. The format of the story gleans meaning from the spatial and temporal arrangement of events. The emphasis on time are situated and dominated by human presence and human influence, but a story and plot that generally indicate otherwise. This conflict between the opposite themes plays out through the entire narrative, often using temporal order. Wells's *The Time Machine* is a novel that is full of different time in different space. Technique of flashbacks to previous events, jumping into the future, and plenty of interruptions are seen. However, most of the clock time in the book is scrupulously recorded.

The novel is situated in an outer frame of the unnamed narrator, a guest at the weekly dinner parties. Initially, the story is delivered through his voice, as he describes what the Time Traveller was up to that particular week. Then, the next week, the Time Traveller takes over the story in his own words, although still being reported back to us by the frame of the unnamed narrator. The narrator, referring both to the first, unnamed dinner guest and the Time Traveller as he tells his story, is an essential part of the layout of Wells's text. While the narrator sets up and gives an order to the events of the narrative, they also influence the readers to judge the story

in a certain way. Looking back to their story from a future perspective enables them to make judgments and look at the situation with a different point of view, with the whole scope of the story in their minds to judge, not just one event at a time.

During the first meeting, the Time Traveller discusses his concept and theory, testing out a miniature time machine for his guests. The second Thursday, the Time Traveller arrives late, disheveled, and launches into a story describing his adventures in the far future. He describes traveling hundreds of thousands of years, all the way until the death of the earth, its last day. His traveling hundreds of thousands of years into the future all take place in the span of one Thursday afternoon. Here, Wells plays with concept of time-space.

The novel constantly jumps back and forth through time. The theory of literary Chronotope, assume that, "narrative texts are not only composed of a sequence of diegetic events and speech acts, but also -and perhaps even primarily -of the construction of a particular fictional world or chronotope" (4). This view of time grows confusing when simply following the narrative path of the novel, and the phenomenological ideas of past, present, and future start to merge, or at least lose their meaning. Instead of embracing this confusion and letting his readers lose their sense of relative time, Wells makes the readers reliant upon the narrators to guide them through and understand these temporal spaces using phenomenological terms and explanations, even when they do not apply. In such instances the Time Traveller refers to events in the future in the past tense. These points to his desire to control categorize and describe time strictly in a phenomenological, human manner.

The entire theme of the novel centers in one analepse; it is a temporal discordance where narrator recalls another event before the story begins. Thus, the



entire novel itself is a relived memory. The Time Traveller was discussing in the beginning of the story. The title of the book is typically understood to refer to the machine, the narrators contained memory of the events, and the narrator's memory could be referred to as a time machine. This is one of the strongest examples of how Wells reaffirms human dominance over time in space through the narrative and structure of his novel.

## Chapter 3

### The Time Traveller's Journey through Space and Time

#### The Existence of Space in Time

Wells's *The Time Machine* explores an individual's treatment with time and space. His narrative opens with the Time Traveller's conversation with a group of people, including a Psychologist, a Medical Man, and a Provincial Mayor. In the Time Traveller's perception: "There is no difference between Time and any of the three dimensions of Space except that our consciousness moves along it" (3). This shows novel as multiple timelines with spatial and temporal dimensions.

To a group of people from neighborhood at the Time Traveller's home in the mid to the late nineteenth century England, the Time Traveller sparks a conversation about the existence of a Fourth Dimension - Time. The Time Traveller reminds them of mathematicians experiment with three dimensions of space: length, breadth, and height. However, he adds that there is a fourth dimension, i.e., time. People in the room contest his argument of 'discovery' in their conviction of individuals' inability to move freely throughout time.

The guest support their claims, arguing that time cannot be a dimension on the same level as length, breadth, and height. To validate his claim, the Time Traveller leaves the room and returns with a "glittering, metallic framework" resembling some sort of contraption about the size of a clock. This model is a scale time machine he has built over the past two years. He uses the Psychologist to set the mechanism in motion. With the push of a small lever, the machine vanishes. Every one stares in disbelief.

The Time Traveller takes them to his lab and unveils a full-size time machine, nearly completed and announces his plans to explore the fourth dimension of time and indicates:

Any real body must have extension in four directions: it must have length, breadth, thickness, and duration. But through a natural infirmity of the flesh, which I will explain to you in a moment, we incline to overlook this fact. 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. (4)

Space even in absolute vacuum possesses surprising properties and remains full of activities with various kinds of particles winking in and out of existence and energy interacting with each other. Jan Koenderink and Andrea van Doorn in imaging sciences gives an idea of two spaces:

1. Visual Space: This type of space is a prospective record. This is concerned with ideology. Experience of visual world with a series of eye expressions is to bring the objects, of interest for further processing. Although such movements lead to significant displacements of the retinal image, these displacements go unnoticed.
2. Pictorial Space: This type of space reacts to the world. A person's idea, contracting and expanding personality, transforms the plane of the picture. This space is a sensitive passage. It is no longer measured by width thickness and height.

Nietzsche's critique of intellectual thought in opposition to a Platonic concept rejects the validity acquired through senses. For an example, narrow-mindedness results in a war. There is no absolute space because there is no absolute reality. Space,

which is a dynamic force, constitutes a large portion of matter and medium in accelerating the transmission of energy.

Light travels in waves through fields like around magnet. The electromagnetic waves in travel constantly changes in course of time. Stephen Kern, in *The Culture of Time and Space*, has brought the idea of new physics, "the universe is full of fields of energy in various states" (154). Based on standard model of cosmology, on mass energy equivalence, the three dimensional universe contains matter, energy and other different ordinary matter. General relativity shows the relationship between temperature, pressure, and combined matter energy and vacuum energy density. The unified whole is the universe.

The space exists in time, and the Time Traveller makes a voyage through space. His voyage in the space does not remain without time. A perfect blend of time and space is the representation of coexistence. Wells underscores relationships between the space and the fourth dimension: "here is no difference between time and any of the three dimensions of space except that our consciousness moves along it", and that "any real body must have extension in four directions: it must have length, breadth, thickness, and duration" (3). All physical events take place in space and time. It is the union of events that depends upon the observer to the observer. Nothing exists in reality; there is only atoms and space. The Time Traveller uses scientific ideas about time and relativity.

The special theory of relativity, in attempt to resolve the confused situation, arises from the complexity of problems in the universe. It is the expression of classical, spatial metaphysics that permanently imprints difficult situations. These problems are developed against the background of the temporal metaphysics that provides different bases for viewing both relativity and consciousness that Bakhtin chronotope is closely linked.

The present is a moment of physical time fixed in relation to an observing mind. What is experienced is an individual's own sensations, images and thoughts. In line with this complexity associated with time and space, Jean-Jacques Rousseau in *Story of Philosophy* argues:

nature is good , and civilization bad; that by nature all men are equal, becoming unequal only by class-made institutions; and that law is an invention of the strong to chain and rule the weak. Nietzsche, claimed that nature is beyond good and evil; that by nature all men are unequal; that morality is an invention of the weak to limit and deter the strong; that power is the supreme virtue, and the supreme desire of man ; and that of all forms of government the wisest and most natural is aristocracy. (qtd 4)

Wells's novel diagnoses problems in application to the world of mankind since man changes his environment as he himself changes. In a proposition of social Darwinism, those who succeed in a given environment are naturally superior. The Time Traveller turns into a near-primal savage in his dealings with the Morlocks. To save from Morlocks, the Time Traveller builds a fire. He lights a block of camphor with a match, and flings it at the Morlocks. He punches the white bodies of the Morlocks as they attempt to overtake him, loses his sense of direction, and decides to build a fire and camp for the night. In his fury, he is determined to kill as many Morlocks as he can to justify supremacy of civilization over savagery.

### **The Time Traveller's Treatment with Space and Time**

The novel is not only the story of the Time Traveller and his journey into the future. It is also the story of a little-known writer launching his first novel into the world. IT is a narrative of universal relevance as well as Wells' personal testament. He is a new kind of journalist, a forerunner of the obnoxious reporter in the past

hundred years, earlier in print and now inescapable on television. He confronts a man in distress, haggard and hungry in insistence on the public's immediate right to claim his experience as a narrative commodity.

The machine's illusive appearance is on Wells' part not that of the Time Traveller. It is a narrative of time in space with the Time Traveller as its protagonist. This observation is part of a pattern of self-reflexivity, culminating in the Time Traveller's later invitation to judge his tale in relation to time and space in multitudinous inference. The two little white levers controlling forward and reverse motion in time are the most distinct.

Wells's book is not functionally the equivalent of travel via magic, dream vision, mesmeric sleep, telepathy, or hallucination. It is not evidently a form of suspended animation into the future, which will not allow, among other things, the frame narrative in crucial respects on multiple fronts. The Time Traveller on a one-way trip could not report his experiences to colleagues living in the era of his departure. The novel acts as a fable about science. The establishment of plausibility, verisimilitude, and suspension of disbelief invites the reader to consider, humans to the destructive potentialities of real science.

Everything in the universe is travelling in the speed of light at a maximum speed possible. The faster humans go in the space, the slower will be the time. If they can travel in the space direction at the speed of light, they will make no progress in time direction at all. Time will stand still. If they can travel faster than the speed of light, we could travel backwards in time for instance time in commercial plane.

The Time Traveller begins his story with a few rules after bursting into his home in an amazing plight after time travelling. He appears dirty, disordered, haggard, and drawn. After a brief welcome, the Time Traveller retreats to his bedroom to get a change of clothes and then returns to have dinner "with the appetite

of a tramp" (16). When the meal is finished, the Time Traveller begins with a few rules: as he tells the story, he will not argue with his guests and permit any interruptions. The guest agrees and the Time Traveller starts telling the story. Chapter two serves to establish the mystery of The Time Traveller's adventure. Appearance in ragged and ravenous for meat, which ingrain the state of modern society; men dine on mutton and wine.

The logical confusion arises over the control of novel. If the Time Traveller has perfect control over the Time Machine, why he could not go back in time when dinner starts? In an argument with Medical Man, the Time Traveller relates:

Now I want you clearly to understand that this lever, being pressed over, sends the machine gliding into the future and this other reverses the motion. This saddle represents the seat of a time traveler. Presently I am going to press the lever, and off the machine will go. It will vanish, pass into future time, and disappear. Have a good look at the thing. Look at the table too, and satisfy yourselves there is no trickery.

I don't want to waste this model, and then be told I'm a quack. (9)

All humans travel in time. They are twenty five years old and they have move forward twenty five years. But can they go backward of time. When someone is twenty five years old, can he or she move backwards by twenty years or forward thirty years?

Einstein has developed a theory of special relativity which explains that space and time are aspects of the same thing. There is a speed limit of 300,000 kilometers per second (or 186,000 miles per second) for anything that travels through space-time, and light always travels the speed limit through empty space. Special relativity explains some surprising facts that when humans move through space-time and when speed relative to other object is close to the speed of light, time goes slower for them then the object they leave behind. When the time machine goes to the space it comes

in contact with the gravitational field and they notice dilation in time. Gravitation is the force of attraction between two heavenly bodies.

Time dilation is noticed when the Time Traveller returns to the stationary people. For instance, someone leaves the earth in space craft near the speed of light at about 99.5% at the age of fifteen. He celebrates only five birthdays during his voyage and reaches home at the age of twenty. He finds his classmate at their 60s, who are already retired with his grandchildren because time passes more slowly for the space traveller near the speed of light.

General relativity predicts that time passes more slowly in the gravitational field than for such an object far from such fields. Space and time distortion is seen in black holes where gravity is tremendous. In this sense, the time travel into the future is possible but for that advance technology should be built with tremendous energy to travel 10,000 years within a year.

The Time Traveller operates with mind, body and consciousness. The body is material physical organism extended in space and mind. The Hindu philosophy states that humans are compound of and extended physical body made of ordinary matter and of an extended psyche made of another form of matter. Human being consists of a physical body made of ordinary matter extended in physical space. There is an interaction of consciousness and body where consciousness is a different kind of matter extended in a different space. The theoretical physicist Andrei Linde marks:

... world is the composition of space-time, matter and consciousness.

In consciousness perception is the role of the brain. We do not perceive the world as it actually is but as the brain instruct it. This can be closely observed through phenomenal space-time and physical space-time which regards space having multiple dimensions. (47)



Ontology, a branch of philosophy that deals with nature of existence, is the major components of phenomenal space. The physical experience of humans is different from the space they know by experience. They need to identify space of perception and the space of physical as well as phenomenal objects. While encountering with multiple space, it does not mean that one is real and other as abstract, but both are real but topologically different to each other. In this regard, Stephen Hawking reiterates the human existence in a three-dimensional space. "That is to say, humans represent the position of a point in space by three numbers, for example, latitude, longitude, and height above sea level" (67). Besides, they experience only four dimensions. In string theory and one dimension of time, there must be ten dimensions.

The string theory has several explanations. Humans normally think why they do not perceive these extra dimensions. The theory postulates that they are compacted and are too small to be readily noticed. It is certainly true that their physical bodies are located in a three-dimensional physical space and four dimensional space- times. It is also clear that the phenomenal space of consciousness has three spatial dimensions. One needs, for example, three numbers to locate a point in the body image or in a dream. But it may well be that the co-ordinate systems for these two spaces are different. It means that the physical space and phenomenal space are different spaces.

Consciousness is located in the human psyche, which is external to the dimensions of the physical world. The human mechanism may extend beyond the physical body to include a consciousness module located in the human mind. In future journey in exploration of fourth dimension time, The Time Traveller summons, "It was of white marble, in shape something like a winged sphinx, but the wings, instead of being carried vertically at the sides, were spread so that it seemed to hover" (30).

The Time Traveller finds himself amidst a terrible hailstorm that soon subsides, allowing him to better view this future land. The first thing he sees is a giant statue, apparently made from marble and carved in the shape of a sphinx with its wings outspread. With the storm over, people that have noticed the appearance of an outsider come rushing to the time machine for a closer inspection. The first to reach him is referred to as a man and described as being four feet tall, clad in a purple tunic with some type of belt around the waistline. The inhabitants appear to be small, cherub-like, and happy people dressed in beautifully colored silk garments, but they are also fragile creatures. They seem to lack intellectual curiosity and thinking ability. He fears that he has travelled so far only to find a lesser version of humanity. On the other hand, he delights in the beautiful flowers and exquisite fruits that have evolved.

The Time Traveller begins his account of a trip into the future between ten AM and five hours later. He saw time move quickly forward shooting down some stars and across the lab. As he moved the lever, days and years passed with ever increasing speed, changing the light and the landscape, describing peculiar sensations of the Time Travel. At the start, he is travelling approximately one day per minute, but by the end of his journey that pace has increased to over one year per minute. After he feels like an eternity of swaying on the machine, the Time Traveller builds up the nerve to stop by pulling on the second of the two levers.

The inertia of the Time Traveller and the machine causes him to fly helplessly through the air as he tugs on the lever to bring his journey to a crashing halt. He is led to a tall and dilapidated building overgrown with wild and untamed nature, which shows signs; it had once been a magnificent structure. Inside the building, the little people sit on cushions at low stone tables and feed on strange, wild fruit. He determines to learn their language. However, they soon become bored with the lesson and want to play. The Time Traveller goes for a walk and contemplates the world,

searching for clues about its "ruinous splendors" (66). He notices that there are no houses, cupolas dot the landscape, and the people seem strangely alike and androgynous. He concludes that he has landed in a social paradise in which humanity is waning and mankind has been the permanently subjugated nature.

### **The Time Traveller's Journey**

The novel is the philosophical inquiry about past, present and future. Human cognitive processes of mind can travel backward into the past and forward in to the future in different point in space. Bhaktins fixates on time, "hours are dragged out, days are compressed into moments, it becomes possible to bewitch time itself. Time begins to be influenced by dreams; that is, we begin to see the peculiar distortion of temporal perspectives characteristic of dreams" (154). The Time Traveller gives his account of a trip into the future. He departed from dinning table at a little past 10 a.m. and returned five hours later. During the voage of time travel he saw time move quickly forward, shooting down some stairs and across the lab. He moves the liver days and years passed with ever increasing speed. Even light and landscape changed shows peculiar distortion of perspectives.

During his voyage he sees wonderful advances of an improved civilization which cause him to stop despite the fear that he could die landing. He felt he is caught in the thunderstorm and lands in the garden surrounded by rhododendron and dominated by a great stone sphinx. He encounters large buildings and hills. In the journey of his time travel he worries some creature might see him and pray upon him. When he was about to leave and go forward in time, he sees a group of people wearing in soft robes coming towards him. A small delicate and timid people were the Eloi, who live on fruit. Their environment seems benign, yet they are afraid of the dark, huddling against the appearance of another people, the Morlocks, who the time traveller gradually discovers are the subterranean masters of this future world. The

Morlocks are the meat eaters, feeding on the Eloi but otherwise staying below ground in deep shafts, which the Time Traveller must explore in pursuit of his time machine, the Morlocks having carried it away.

In Wells's novel, the white Sphinx can be viewed as a godlike figure. Unlike normal Sphinx, the Time Traveller makes specific note that "It was of white marble, in shape something like a winged sphinx, but the wings, instead of being carried vertically at the sides, were spread so that it seems to hover" (21). Its wings are outstretched like an angel's. The Time Traveller repeatedly notes that the eyes of the Sphinx seem to follow him everywhere. The Ancient Egyptians built and worshipped what is as the original Great Sphinx, and the presence of another large sphinx statue hundreds of thousands of years in the future could be a representative of a similar religion of some future society.

In the journey of first day in the year 802,701, the Time Traveller encounters more of the small, childlike surface dwellers, which will later be referred to as the Eloi. The Time Traveller with astonishment reveals, "For a moment I was staggered, though the import of this gesture was plain enough. The question had come into my mind abruptly: were these creatures' fools?" (35). A man looks straight into the Time Traveller's eyes, laughing and showing no fear whatsoever. Soon this man is joined by other companies who attempt to speak and touch him and the time machine.

His explorations lead him to discoveries such as a slight movement in the flow of the Thames River. He also notes the lack of individual houses and families and begins to make hypotheses on how society has changed over the past eight hundred thousand years. He accounts for the poor upkeep of the magnificent buildings and structures to a possible population growth control plan that worked all well and actually created a decrease in population. It is important to note that the Time Traveller suggests that these theories are not true at all as he says, "Very simple was

my explanation, and plausible enough - as most wrong theories are!" (49). It goes against many people's thoughts as how the Time Travel is explained. People think that it is either a long, complicated subject or just impossible. But the Time Traveller came up with this answer and also without it; the Time Traveller would not have been able to make his machine and, therefore, no story for the book.

The Time Traveller on his journey to future on the second day as he unravels, "But she dreaded the dark, dreaded shadows, dreaded black things. Darkness to her was the one thing dreadful" (65). The Time Traveller finds that his time machine has been taken. His Investigation leads him to believe that, it has been pushed into the hollow bronze base of the White Sphinx. Frustrated, the Time Traveller loses his temper and harasses some of the passing Eloi trying to reclaim his passage home. Distraught, he somehow manages to scrape together his patience and calm himself by thinking that he will somehow get the time machine back.

To understand this new world, the Time Traveller continues his exploration of, "valley of the Thames, in which the river lay like a band of burnished steel" (30). The Narrator could not see hedges, proprietary rights. He could not see evidences of agriculture. On his further forward to the future, he notices a large number of pipes protruding from the ground, both short and tall. Seeming to appear in pairs, he concludes that the smaller the set in some type of well and the larger is a type of smokestack. Weena and her actions should have been taken as a warning not to go into dark places. However, the Time Traveller was not scared of the dark as many people from his time were, and went into the dark areas and almost got him killed. This shows a difference from his time to the new time.

Weena is introduced in the fifth chapter. On his third morning, the Time Traveller is watching the Eloi bathe in the river when one of them is swept away by the weak current. When none of the pathetic little creatures attempts a rescue of the

seemingly lost member, the Time Traveller wades into the river and grabs her. He spends much of his time during the week in the future with Weena, the woman he rescued, learning the language and ways of the Eloi the Time Traveller exclaims, "My impression of it is of course, imperfect; but I know it was a dull white, and strange large grayish-red eyes; also that there was a flaxen hair on its head and down its back" (69). The Time Traveller learns that emotions are not lost on people of the future. He makes specific note of their terrible fear of the dark. Darkness to her was the one thing dreadful. Later in the chapter, the Time Traveller encounters the Morlocks, a race of subterranean humans. He describes the Morlocks as ape-like with white skin and large eyes, adaptations that most likely are the result of living beneath the surface for ages.

The Time Traveller's experience with the Morlocks left him alone to remove the whole ordeal from his memory. During his next exploration, he spies a large green building, which he refers to as the Palace of Green Porcelain. This building plays a major role. He decides to investigate this building thoroughly, but before he can do that, he convinces himself that he must first build up the courage to head underground and deal with the Morlocks. Weena accompanies him to the well, but leaves after his search into the unknown, probably out of fear of the disgusting creatures. After navigating the labyrinth of underground tunnels, the Time Traveller enters a large alcove in which he can see and hear large machinery hard at work. As the Morlocks approach him, he finds them off with a match, but soon realizes that his match supply is running low. While escaping from the underground layer of these subterranean monsters, the Time Traveller's inevitable confrontation with the Morlocks verifies the presence of the presence of the Time Machine underground which the Morlocks tend to. He also learns that meat exists in the future, and that the Morlocks eat it though he does not know what kind of meat it is.

The Time Traveller, a member of the Victorian ruling class, would have more in common with the elite Eloi than with the toiling Morlocks. The novel reads, "I had felt as a man might feel who had fallen into a pit: my concern was with the pit and how to get out of it. Now I felt like a beast in a trap, whose enemy would come upon him soon" (58). Seeking refuge from the Morlocks as the New Moon approaches, the Time Traveller and Weena head out to the Palace of Green Porcelain. Unable to reach it before the nightfall, they are forced to spend the night on a hillside, susceptible to any attack from the man-apes.

Chapter seven serves mainly as a type of open forum for the thoughts of the Time Traveller. He ponders how the Morlocks came to be dominant and why he has an instinctive hate for them. His new plans are to create some types of weapon to fight the Morlocks with, find some source of fire to fend them off, and devise a way to open the bronze base of the White Sphinx. Regarding this, Hans J. Morgenthau reasserts the problem with capitalism:

The Marxist imperialism has been constructed in three different thought; the Marxist, the liberal, and the third one called "devil" theory of imperialism. The theory of imperialism rests upon the conviction and is the foundation of Marxist thought. Capitalism is the main evil and imperialism only its necessary or probable manifestation. The devil theory of imperialism operates on lower intellectual level. (62)

In a class conscious society, individuals react to poverty in multiple ways. The Morlocks are the true masters of the Eloi. The idea about the rich being justly punished and growing power is a logical progression of the class tension. Those individuals driven by necessity are apparently Marxists with the proletariat consciousness.

In search of some type of supplies, the Time Traveller one afternoon heads toward the Palace of Green Porcelain with Weena. He finds the deserted building falling into wrecks and ruins:

Within the big valves of the door- which were open and broken- we found, instead of the customary hall, a long gallery lit by many side windows. At the first glance I was reminded of a museum. The tiled floor was thick with dust, and a remarkable array of miscellaneous objects was shrouded in the same grey covering. Then I perceived, standing strange and gaunt in the centre of the hall, what the lower part of a huge skeleton was clearly. (86)

The Time Traveler discovers that this "palace" is actually a type of museum with separate sections for paleontology, geology, and even natural history. As they reach a larger room filled with complex machines, Weena's fears alert the Time Traveller to the diminishing light and the probable presence of the Morlocks. Before leaving the Palace, the Time Traveller finds a perfectly preserved box of matches, a highly inflammable substance known as camphor, and a lever he has broken off one of the machines to be used both as a mace and a pry bar for the bronze doors. He feels a renewed sense of confidence that he has the ability to fend off the Morlocks both with fire and a club.

The Time Traveller relies on a relic to protect against the Morlocks. Blood thirsty nature, descending into the darkness and slaying the Morlocks is a blend of modern and primal impulses. Further, it is motivated with violence of a Neanderthal and a member of aristocracy, and a medieval weapon club. The Time Traveller describes the journey as, "In a moment I knew what had happened. I had slept, and my fire had gone out, and the cold bitterness of death had come over my soul" (113). He fights the Morlocks in the forest, but loses Weena, his sole companion. He returns



to a primal state of emotion of loneliness and mourning as well as the strange exultation.

### **The Future of Humans**

The novel centers on fire, one of human's most important discoveries. Here, the The Time Traveller hopes to reach the other side of the dense forest before nightfall, upon leaving the Palace of Green Porcelain and set up a camp. From there, he plans to return to the White Sphinx the following morning. He and Weena are forced to set up camp within the dark forest, but with a fire lit by the camphor to protect them. Due to extreme fatigue, they both fall asleep and the fire goes out, leaving them prone to an attack by the Morlocks. Surprisingly, the Time Traveller awakens to see the Morlocks fleeing for their lives, running awkwardly as if they were blind. An earlier fire he had used to help flee the palace had spread rapidly and was now closing in on him. He eventually reaches safety, beating the Morlocks with his iron pipe along the way, but Weena is left in the forest to burn.

With emotions of loneliness and mourning and strange exultation of violence, the Time Traveller fights the Morlocks. His membership in the ruling class binds him with the Eloi and makes him resent the Morlocks' reversal of class-based power. It also depicts the class consciousness of the Victorian individuals with greater subtlety, combining modern science with primitive violence.

A society in pursuit of security and stability pursues the wellbeing of the majority and the helpless. In the perfect world of the Eloi, there would hardly be genuine social problems, including unemployment and food crisis. The working class eventually gains a class consciousness, an awareness of the bourgeoisie oppression to overthrow the ruling class. We see no evidence that The Morlocks have this class consciousness.

The Time Traveller posits to turn to the Eloi for food when food was reduced is an adventure of ancient survivalist intelligence. In his remarks, "Nature never appeals to intelligence until habit and instincts are useless. There is no intelligence where there is no change and no need of change" (120). As he approaches the White Sphinx, he notices that the bronze panels have opened, revealing the time machine waiting for him inside the pedestal. Without a second thought, he enters the dark base and is almost immediately locked inside. Convinced that their trap has worked flawlessly, the Morlocks begin to surround him, but what they do not realize is what the machine they had found is capable of. The Time Traveller faces some difficulties in reattaching the control lever as the Morlocks attack him, but he eventually disappears into the fourth dimension, i.e. time. It is a law of nature, that intellectual versatility is the compensation for change, danger, and trouble. An animal in harmony with its environment is a perfect mechanism.

The gradual dissipation of energy within an increasingly chaotic system is the fate of the universe. Since entropy seems at odds with evolution; life becomes more complex and fitter with time. Entropy leads to chaos and death. Evolution of the Eloi and the Morlocks leads to a dystopian perfection, not utopian perfection, and not considerably a vision of progression. Dystopia is governed by entropy. The Eloi have little energy, physical or mental and live in chaotic fear. In the journey of the Time Traveller with an idea of entropy, Wells opines:

Far away up the desolate slope I heard a harsh scream, and saw a thing like a huge white butterfly go slanting and fluttering up into the sky and, circling, disappear over some low hillocks beyond, The sound of its voice was so dismal that I shivered and seated myself more firmly upon the machine. Looking round me again, I saw that, quite near, what I had taken to be a reddish mass of rock was moving slowly

towards me. Then I was the thing was really a monstrous crab-like creature. (83)

In confusion of the fight with the Morlocks, the Time Traveller accidentally pushes his lever forward himself into the future instead of his own time venturing further. He squares into the celestial sphere in the future. The moon dies in the starless dark sky; the sun burns hotter. He hears a harsh scream. Huge monster crabs stalk him. A hundred years from now, the sun has grown dull, the air more chilled, and the plants small and The Time Traveller stops many more times, propelling himself into the future to learn the earth's fate and watching even the crabs disappear from the beach and a bitter cold descent. He also sees a black object floundering on the beach and eclipse darkens the planet and the world appears silent and dead.

In the journey, The Time Traveller mistakenly pushes himself further into the future in his hurried move from the Morlocks. During his first stop, he encounters an odd display of evolution as he finds a type of centipede, three feet tall and thirty feet long. He determines to be near the end of the universe before he returns to his own time:

The idea of life-form crawling out from sea, just as life began in the water, so does it end. "The Time Traveller was not there. I seemed to see a ghostly, indistinct figure sitting in a whirling mass of black and brass for a moment - a figure so transparent that the bench behind with its sheets of drawings was absolutely distinct; but this phantasm vanished as I rubbed my eyes. (144)

Wells's novel is a serious projection of the future packed by social and scientific arguments. Though the idea is fantastic, but such future awaits humans about the warning of class revolution and interconflict. Choosing the future as largely unknown for humans whose mind and strength had gone, but a seed of gratitude and a mutual

tenderness still exists in the heart. His novel is a story of a human wrap with inhuman conduct. It is a plea to look at their society where the class consciousness meant for the future generation.

Much of the novel concerns the Time Traveller's horrifying discovery of this divided world. It gradually becomes apparent that the novel is more than an adventure story, more than a book about the wonders of scientific speculation; it is also a parable about the oppressed, about the ultimate kind of society stratified by class, by those who have and those who do not. Quite explicitly, near the end of the novel, the time traveler speculates that this is where history is headed: toward the division of two parts of humanity, this division of the powerful and the powerless, in which humanity will literally construct a society that feeds upon itself.

After a narrow escape from Morlocks, the Time Traveller travels to a more distant future, a land where all trace of humanity has disappeared and where the earth is inhabited by large monsters and plants. As in his earlier adventure, the confident scientist is confronted with a future that belies contemporary faith in perfectibility, in the power of science to give humanity control over its environment. He returns to the present as a chastened and exhaust man. His tale is greeted with enormous skepticism, except for one of his friends, who conveys his story and who witnesses his departure for an unknown destination.

The novel ends with no sign of the Time Traveller, no assurance that he will return, and with the cautionary word that human beings must act as if they can still positively affect the future. It is an extraordinarily frail forecast, a foreboding glimpse of both the power and the limitations of science and of Wells's own doubts over whether the new discoveries of science would, in the long run, prove beneficial. It is a brief account of his total immersion in another world, making the assumptions of humans frighten scenario in near future.

The novel shows number of issues at the end of nineteenth century era. This was the time when social, political, economic and scientific forces were operating. This was the era when there was a great advancement in technology and people were highly conscious to go forward at the same time there was pessimism stream from scientific discovery in geology. Wells gives the thought of end of century and interprets the future. Humanity get extinct, lost and forgetton in wide expense of time. Horrible situations like only traces of crumbling landmarks may come into existence.

Wells gives the picture of progression, which is not always beneficial. He shows some larger issue of time in the novel. In one way his idea of time stems from scientific research and idea that were developed in nineteenth century, on the other hand Wells's narrative includes thoughts and developments on temporality that moves past simply expressing a geologic view of time. Study of geology was the highly interest of the people of nineteenth century. Victorians view time and history that rejected the notion of biblical aspect.

“Through Science to Despair: Geology and the Victorians”: For many Victorians, geology had a further use, revealing to them (as it seemed) the nature and manner of God’s creative intentions in fashioning the earth as a fit abode for man, However, when increasing geological evidence made this comfortable assumption suspect, anxious Victorians began to wonder what further, unexpected, even loathsome, revelations of divine neglect geology would bring forth next. (111)

At the end of nineteenth century, there was a conflict between science vs. religion. Religious minded people with the Dean words were put into difficulty. People started to think as a scientific exploit. The whole public was involved on the debate and advances of the scientific community, and what that meant to their own lives and beliefs. Advances in the scientific realm pointed to a happy future for the study of

natural history, biology etc which indicated a more negative perspective on humans. Human's purposeless existence in the world which is reflected in Wells' work.

In creating form narrative and story that revolves around the character of the Time Traveller, Wells unarguably shows allegiance to the modern scientific thoughts of the turn of the century. His whole story details the discovery of the decline and extinction of the human race. He uses narrative time as a tool to communicate this message to his readers. The main way he employs time in this context is by arranging the narrative to refer back and forth to different temporal points in the story.

There is a strong contrast between what seems to be a normal, modern day world, and the future world of three dimensions connected with time of the Eloi. The Time Traveller takes great care to explain that the machine travels only through space-time. The dramatically different world he experiences in the future takes place in the same space where the guests are enjoying their dinner. Wells uses temporality in his narrative to shock the readers into the recognizing the new found scientific thought that humans are merely a moment in the lifespan of the earth. These temporal based details, found consistently throughout the story, emphasize the main point.

Wells wants to communicate to his readers: the insignificance and decline of humans in the world. In the social and scientific context of the time, this was a terrifying thought, looming on everyone's mind. He uses this to his advantage not by creating a story about an alternate world where humans never existed, but by using time as a means to both show and explain the reason for our decline and disappearance. The realization of a future reality without the presence of human beings slowly dawns on the Time Traveller.

## Chapter 4

### Science and the Future of Humans

Numerous critics have received Wells's *The Time Machine* as a science fiction. It initiates innovation and new technology. It explores the potential content, such as futuristic settings, futuristic science and technology, space travel, time travel, parallel universes and extraterrestrial sphere. It has a relationship with the principles of science which includes fictitious theories of science. The plot creates situations different from both the present day and the unknown past. The novel includes a human element, explaining what effect new discoveries, happenings and scientific developments will have on humans in the future.

Wells's novel is characterized by a rigorous attention with accurate details in the natural sciences, especially physics, astrophysics, and chemistry. It accurately depicts the world that more advanced technology is possible. In the novel, a vehicle allows an operator to travel selectively on purpose. A forward move to the future and backward surge to the past can be considered one of the most popular franchises of science fiction category.

The novel can also include cyberpunk and cyberspace. It is a science fiction genre in which the future world is portrayed as one in which society is controlled by computers and advanced technology. It crosses many disciplinary boundaries to create a holistic approach. This often includes the view that systems function as wholes and their functioning cannot be fully understood solely in terms of their component parts.

Wells, in the novel, depicts Einstein's view of three dimensions of space and a single fabric of space time, forming four dimensions of space-time continuum. In geometry of four dimensions of space-time, things move along with their in the surface in space time fabric. The unified space time fabric creates a trembling result,

curving of space time that creates what humans feel as gravity. Einstein calculated ripples of gravity travel exactly in the speed of light.

The Time Traveller establishes the relation of upper world and underworld with an experiment of fourth dimension time with a miniature time machine. Space built up with three dimensions, including length, breadth and height and fourth dimension, such as time takes man on a travel into the future. The Time Machine crashes landing in the year 802701. He finds a decadent master race of indolent vegetarians, serviced from the underground by a community of restless slaves. Wells explores a human society, divided into two groups who live above and below the ground.

The author explores basic questions about human progress, the meaning of culture and civilization. The novel portrays whether man necessarily becomes better and more understanding with the passage of time. It provides a frightening scenario of the shape of thing to come and warns human nature. It also explores the change in universal processes. Humans need to change in course of time and space. Human values, customs, religion and traditions seem to control them. Sometimes, they go against these values and ideas to find their identity. It is very difficult to change positive attitude in their life. It can be in behavior, pattern or way of thinking. It encompasses acting and reacting. They act according to their wish, intentions and premises. This change is going on and on. They become new and new because everything is going on and on together.

The cyclic process of nature is unavoidable from the primitive to the modern era, which is flowing like a river. All theories, laws, and universal systems come with in time and space. Human creatures need to follow the systems, rules and regulations in order to survive. Heavenly bodies, animals and plants all are bounded with space-time for change to happen. Planets revolve around the sun in their own orbit. They



follow curve in the space of fabric caused by suns presence and gravitation.

Disturbances create a wave that travel across the space of fabric. They create lots of disasters. Space-time is the foundation where everything accelerates which drives all the forces.

Wells's novel is set at distant future. An isolated hero encounters mystery of future during time travel. The Time Traveller encounters mystery and fights with the monsters like Morlocks. The novel creates danger and shows mysterious creatures lurking in the shadows. It emphasizes on supernatural things with the aim of frightening the readers, showing a graphic violence.

The novel takes three parallel views. Einstein's theory of relativity and Kant's epistemological philosophy jointly work in the best interest of the common concept "chronotope" as developed by Bakhtin. Einstein's theory of relativity explains about universe. It includes planets, stars, subatomic particles, matter and energy. Generally, the physical space can be measured in three dimensions, length, breadth, and height. Einstein adds one extra dimension time in space known as space-time.

Art is always complementary to the forces that work in human social relationship. The class which has the means of production, natural resources, technology and social power can therefore regulate and reshape the ideology to its favor. If the oppressed class once to have control over the contemporary ideology, it should start with the restructuring of the social reality. Every moment of universe is a continuous flow. It is like a series of snap shots, unfolding of moment after moment. All things happen in every moment of location space and moment time. Physical matter, a democracy, a dictatorship, capitalism and socialism cannot remain stable for a long period of time. One system is replaced by another system.

This study explores the natural process which is irreversible. Time and space, like entropy, is a natural trend. The time stored in relations and events has created

biodiversity. The role of time in space is fundamental. A blade of grass is energy manifesting as the matter, the material grass. The spirit of grass is invisible that produces the species grass. The relations of biogeochemical system are life.

Wells's novel deals with three types of chronotopes; the chronotope of frame narrative, the chronotope of the future world of 802,701, and the chronotope of the post apocalyptic world. The chronotope of the frame narrative is the time travel chronotope, in which temporality and spatiality fuse together. Time is fourth dimension in space having length, breadth and height. It is a nexus in which both time and space are isotropic. A corollary of this unified space time continuum is predestination, because the ability to travel through time presupposes a fixed history. It is a mix idea of social and scientific interests borrowed from Einstein and Philosopher Emmanuel Kant of the time. The novel explores the issue of human progress and its decline. It opens with a hope to see utopian future where human do not have any problem with scientific achievement but instead of sparkling utopian future, the novel depicts horrible time which is more disturbing to humans. It describes future where human no longer exist. It starts with utopian and collides with dystopian future.

The novel is a science fiction that deals with dystopian future. It is set in a world where scientific achievements and civilization extends to great height. Different phenomena like resources depletion, climate change, cybernetic revolt, technological singularity, disasters, ecological imbalance, and a supernatural phenomenon leads to ultimate fate of the world. Post-apocalyptic fiction is set after the ruins where scattered beam of technology remains.

According to the theory of relativity, the rate at which time passes in space depends on the relative motion between observers, and also on the strength of gravitational field in space-time. Time is a measure in which events can be ordered

from the past to the present into the future. It is a measure of duration of events and intervals between them. It is regarded as fourth dimension. It is an observed phenomenon by which humans sense record changes in the environment and the universe. Literally time is often considered illusion, a dimension, and a smooth flowing continuum. It is an expression of separation among events like the events in the novel that occur in the same physical locations. Time is a practical event that allows people to coordinate events.

Bakhtin's literary chronotope fuses spatial and temporal indicators and comes in conclusion that when time when thickens, it takes the form of flesh, which is artistically visible. Space on the other hand charges and is responsible to the movement of time. It deals with fictional world of space-time, that is, chronotope. He fuses prior concept of human from Kant and Einstein space-time continuum where both physical and fictional world are connected. Events cannot be separated with both views. It is a dialogic unit. Something happens when there is a change in time and space.

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