

INTERFACE OF SCIENCE AND PHILOSOPHY: A CRITICAL STUDY OF H. G. WELLS' *THE TIME MACHINE*

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Abstract: This paper examines the amalgam of scientific and philosophical ideas in H.G. Wells' *The Time Machine*. It manifests the evolutionary vision of a time machine and the material world's realism. In its science parable, H.G. Wells' approach in this novel is purely scientific as science displays time as the fourth dimension. With the use of scientific methods there is at the same time degradation of humankind as it is reflected in Eloi and Morlocks. Darwin and Huxley use scientific ideas, and philosophical ideas are also used by Wells' interest in Carlyle and Max Nordue's *Degeneration*: this novel glimpses society's horrors and the outcome of industrialization and technology. The text manifests the forthcoming apocalypse to the readers who remain skeptical and unbelieving. The philosophical inquiry in *The Time Machine* displays how man lost the capability of abstract thought by indulging in technological processes and how fear triumphs over humans. Technological progress can improve lives and, at the same time, can destroy the conditions that make humans capable of thinking. This paper will examine how this novel starts as Utopia and ends as Dystopia in the world of 802,701AD, the human condition, the role of scientific society, and the purpose of life. This paper also examines how technology should be used carefully for the benefit of humanity. If not used properly, the consequences will be fatal, such as how human intelligence disappeared due to technology and how Humans resort to mere cannibalism. The paper shall further attempt and discuss the pros and cons of technology.

The present paper proposes to focus on the science-philosophy interface in the backdrop of H. G. Wells's *The Time Machine* (1895). The amalgam of science and philosophy is very conspicuous in *The Time Machine*. It is a work of science fiction and, at the same time, a job that manifests the themes of the degradation of humankind, the horrors of society, and the outcome of technology. This paper attempts to acknowledge some philosophical questions related to *The Time Machine*. The questions are: To generate a fundamental truth about humanity's future decline and why? To understand the mysteries of existence and reality of future humanity—like that of Elio and Morlocks? Would it be possible for science to make it to travel in the future? If yes, what will the conditions be for future humankind? Can technology help us to travel in the future? Is the future already there? Is it possible to have only one sex in the future, as in Elio in *The Time Machine*? If yes, how would they reproduce? Was technology not sufficient for them to make them smarter than time travelers? This paper also attempts to draw an analogy between philosophical and scientific ideas in consultation with H. G. Wells's *The Time Machine*.

Philosophy Science Interface: When human civilization develops the skills to adapt to hostile nature, develop some instruments, and learn how to store things for future use, it could find a solution to the problem and have some supra-animal capacities. They had a developing nature called Scientific in essence. They began to feel superiority over other animals. To conquer nature was one of the earliest tasks of science. To have control over everything, even one fellow man. Nothing should be out of reach for science. So, human civilization began with science. Then, when the human intellect became mature enough to raise several questions about the origin of the world, what the things that give rise are, and

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how to confuse many things (abstract thoughts) – this was the point of time when philosophy came into existence.

History regards Thales of Miletus as the first philosopher in Asia Minor (c. 640-546BC). Not surprisingly, he is also regarded as the first Scientist. It was Thales who dared to challenge the mystery of the world. He thought humankind could unearth the cause and reason underlying the phenomena of nature. Instead of bringing in animistic faith in supra-human powers and deities to explain the events of the world, He supposed that they could be explained in natural terms. The Western tradition, from the ancient Greeks through Plato and Aristotle, then through Descartes and Leibniz to Newton and the present-day quantum Physicists, has maintained a continuous chain of development to establish itself as a prominent, if not only Scientific Tradition. (Goswami, 2018, 68)

Bertrand Russell, in his book *Introduction to Mathematical Philosophy* (1919), says:

It is however not to be inferred that philosophy is equivalent with science as it is lying in the 'No Man's Land' between science and theology. Philosophy and science share common platform so far as the outlook is concerned. Philosophy is a search for knowledge (of reality, of truth.), so also science is a relentless technical journey to the nature of reality and truth. Hence science and any other enquiries were called as philosophy. Newton's famous book was entitled *Mathematical Principles of Natural Philosophy*. What philosophy shares common with science is its critical approach -to life, world, and their interrelations. (Russell, 1919, 69)

However, one thing needs to be clarified here since the apparatuses with which philosophy works are critical thinking and analysis rather than scientific equipment, and philosophical investigations do not consist of experimental verification of empirical data. Philosophical conclusions cannot claim the certainty of natural sciences, and it is possible to refute any philosophical theory with arguments equally strong to those that establish it.

Apart from empirical data collection, mathematics, and geometry are the chief apparatuses of scientific investigations. Both were in their early stages of development during Thales's time.

Mathematics owes its development as a demonstrative and deductive science to another Greek – Pythagoras (c.582- 500BC). For him, it was all nut numbers. He saw numbers as having shapes – triangular, circular, etc. However, he could not solve the geometrical problems. Geometry was developed by Euclid (c. 300BC). Moreover, it was a precious gift from him to the field of scientific investigation. His axioms like “the whole is equal to the sum of all parts” [whole is the philosophy and parts is the science]. Russell points out that this success of mathematics indirectly helped science and philosophy rise above the level of sense experience. (Russell 1919, 70)

We find imperfect shapes that roughly mimic these perfect shapes. This leads to the philosophical conclusion that empirical things are inferior to thought-generated ideas. Russell also points out that the ideas of eternal and absolute truth and supra-sensory intelligible world are the results of the development of mathematics since the concepts of supra-sensibility and eternity apply to geometrical figures and mathematical numbers alone, empirical things being all sensible and perishable. The same background was at work when Aristotle wrote his books *Physics* and *On The Heavens*. “Aristotelian physics was the science of the Greek ‘phusis’ or the nature. ‘It is the nature of the seed to grow into a tree’, that is, a teleology was involved in the meaning of the word physics. The nature of the thing is its goal or end for which it exists” (Aristotle, 1919, 72).

H. G. Wells's *The Time Machine* is an epic in science fiction. Like other novels of the Victorian era, this one represents the undiscovered realities of Mankind, where a line is drawn between civilized humans and primitive savages. Science fiction goes beyond the boundaries of time and space, which makes it possible for readers to travel in the future to

explore new realities. “The genre was introduced in the mid-1600s with the fantasy work *The Blazing World* (1666) by Margret Cavendish. It was born in its modern form in 1818, with the publication of Mary Shelley’s *Frankenstein* (1818). As a social force, it draws much of its power from its tendency to become “a mirror of common opinion” in popular realms of critical thought and the ability to expand those commonly held ideas into something magnificent and enduring” (Vugrincic, 2014, 43). The genre was very much influenced by the period of the 19th century, in which technological flow was abundant. It was the period in which Romanticism and social Darwinism emerged. This genre combined the possibilities of good and evil because science was a driving force after everything.

Rapid industrialization made its center in the lives of people. Enlightenment was in the form of social critique. This paper analyses how the novel begins with Utopian ideals and ends with the mere “sunset of Mankind.” The novel talks about how a man can visit the future with the help of scientific inventions, as time travelers did, and how human values degrade due to technological progress. Technology and industrialization bring ease, wealth, and comfort to humans but at the cost of humanity and loss of intellectual instinct. On the one hand, technological progress can improve the lives of humans, but on the other hand, it can destroy the conditions that make humans vibrant and capable. It is due to science that makes it possible for humans to travel in time and space where they can see both fantastic and horrific possibilities- possibilities beyond humanity’s grasp. Science fiction has attracted much attention in modern technology.

Critics such as Bernard Bergonzi and Nicholas Ruddick argue that the party does not understand, and therefore cannot accept, the possibility of time travel. It has been said that the frame narrative, where we are introduced to the idea of time travel, exists to give the reader a sense of familiarity and an “everyday feeling” to present a juxtaposition to the remarkable tale to come. Ruddick claims that: “Wells reserves the full measure of his scorn for those of the dinner guests, who, like the Editor, have scientific imagination, and who consequently cannot understand that the Time Traveller has visited a future in which our descendants could not be less concerned with horse racing or election results. (Hanstrom, 2013, 2)

Time traveler starts his journey to a degenerated future. H. G. Wells uses *The Theory of Degeneration*: “As a result of Darwin’s theory of evolution, a fear of degeneration arose. The theory of evolution claims that through tiny genetic mutations, life seems to adapt to the surrounding environment to move forward, evolving into new species and new shapes that are more suitable to the changing world”. As given by Immanuel Kant:

Degeneration Theory meant that instead of moving to something better and more suitable, life would instead regress and fall back to previous more primitive shapes. The Victorian scientists thought they already had proof of existence of degeneration; Ray Lankester, a contemporary scientist, has traced the regressive evolution of a kind of Mollusk. The evolved mankind always carried with them the possible seed of regression to beastliness and savagery. (Quoted from Hanstrom, 2013, 3)

The same theory could be applied to the evolution of society, it was not until humanity organized itself into a society that it became civilized. Hence, degeneration theory also included that if Morlocks degenerated, society would revert to the primitive stage of chaos and primal needs. So, we see this reversal in the future generation of Eloi and Morlocks in H.G. Wells’s *The Time Machine*. The time traveler announces: “It seemed to me I had happened upon humanity upon the wane. The ruddy sunset set me thinking of the ‘Sunset of Mankind’. For the first time I began to realise an odd consequences of the social effort in which we are presently engaged” (Wells, 1895, 26). *The Time Machine* explores the theme of the journey into the future. Here, the question arises: Is the Future already there?

If science can prove it, then certainly man will be able to visit in the future because of the time machine as a narrative; a time traveler experiences his present in the future; the future is relative. Elbert Einstein's view holds that the passage of time is an illusion. There is no difference between the future and the past—both are set in stone. Science has evolved through decades, and if science can invent equipment to travel in the future, then man can visit the future, as a man can revisit the past due to scientific inventions as certain drugs are used to bring back some memories. The time traveler says when landing upon futurity: "What strange developments of humanity, what wonderful advances upon our rudimentary civilization, I thought, might not appear when I came to look nearly into dim elusive world that raced and fluctuated before my eyes" (Ibid., 33). Wells raises some challenging questions concerning social behavior, evolution, and human nature. The *Time Machine* talks about lingering ideas of the 19th century, such as Enlightenment ideals to Romanticism, industrialization to social Darwinism, and a divide between capitalism and labor. The most important theme of *The Time Machine*, which calls the attention of every reader, is topics from social class to industrialization and the nature of humanity, as, in the novel, there is social stratification of Eloi and Morlocks. Wells never poses directly—"What makes a human?" but indirectly, he arouses the idea as:

What might appear when that hazy curtain was altogether withdrawn? What might not have happened to men? What if cruelty had grown into common passion? What if in this interval the race had lost its manliness and had developed into something inhuman, unsympathetic, and overwhelming powerful? I might seem some old-world savage animal, only the more dreadful and disgusting for our common likeness- a foul creature to be incontinently slain. (Ibid., 35)

Future Generations in *The Time Machine*: As the time traveler reaches the future in 802,701AD. He meets the fragile, childlike Eloi who lacks intelligence; he considers them less advanced and on lower existence, "humanity on the wane." Then he meets the underground Morlocks, Savages, who represent cannibalism, primitive, and less favorable by Wells. The time traveler says:

it was impossible, somehow, to feel any humanity in the things. He remarked them as "sickening quality of Morlocks", which makes them "inhuman and malign". Their adoption of savage life makes them lost the instincts and intelligence that separates humans from animals. They were always busy in malign works which makes them so sick that they lost the capability of human instincts. Wells suggests that humanity is something beyond ancestry and pure science. It is this aspect of humans which distinguish mankind from rest of animals. To be human, it involves intelligence and inspiration, drive to create, power to destroy. Humanity is capability of human values, ability to have abstract thinking, freedom and struggle, thought and desire. "For Wells, 'the tragedy is that glorious humanity is fleeting, doomed by fatalistic universe to eventually be extinguished by the inhuman duration of time. (Ibid., 54)

The Time Machine manifests a story of humanity void in an absurd/ meaningless world. In this novel, Wells represents the 'Sunset of mankind' by indulging in Leisure, ease, and material affairs. "The scientific underpinnings of *The Time Machine* are enhanced by the sentiments that emerged at the end of the 19th century. According to American author and science historian James Gleick in his book *Time Travel: A History* (2020), Wells has a broad-line obsession with the future. Gleick adds that in the age of steam and machine, with the increase in globalization and industrialization as well as electric light putting an end to the night, the future was becoming an "object of interest" even before the term "turn of century" was used" (Pavey, 2016, 7). Initially, the time traveler, in the future,

shows the Utopian world by manifesting human values, or we can say the triumph of humanity as:

strength is the outcome of need; security sets a premium on feebleness. The work of ameliorating the conditions of life -the true civilizing power that makes life more and more secure- had gone steadily on to a climax. One triumph of a united humanity over nature had followed another. Things that are now mere dreams had become projects deliberately put in hand and carried forward. And the harvest was what I saw. (Wells 1895, 48)

Then, Wells talks about the organized structure of life. The time traveler displays the superficial life of the future as; “The air was free from gnats, the earth from weeds or fungi; everywhere were fruits and sweet and delightful flowers; brilliant butterflies flew hither and thither. The ideal of preventive medicine was attained. Diseases had been stamped out. I saw no evidence of any contagious diseases during all my stay. And I shall have tell you later that even the processes of putrefaction and decay had been profoundly affected by these changes” (Ibid., 49). Utopian ideals were on display everywhere. Wells also talks about how they got everything without toil; maybe technology and science had triumphed to such limits that humans had been left to no work at all;

social triumphs, too, had been affected. Time traveller says mankind were housed in splendid shelters, gloriously clothed, and as yet I had found then engaged in no toil. There were no signs of struggle, neither social, nor economic struggle. The shop, the advertisement, traffic, all that commerce which constitute the body of our world, was gone. It was natural on that golden evening that I should jump at the idea of social paradise. The difficulty of increasing population had been met, I guessed, and population had ceased to increase. (Ibid., 49)

In the time traveler’s future the oppressed people would turn upon their oppressors, allowing the exploited classes, who always have struggled in the shadows, to take advantage of the complacent upper classes. Wells repeatedly warns that the separation between Eloi and Morlock is due to the gap between capitalists and laborers. He reminds us that the generation of people who want to get ease, leisure, and wealth from technology and do not indulge in work will degrade the mind. What will remain then is a bleak future- a Dystopian world. Indeed, Wells’s humanity is fated to disintegrate into nothingness, but only because it lies on a built foundation—the novel critiques social behavior and humanity. Wells takes readers to 802,701AD, a time at the height of human society, where man is split into two races- the beautiful and helpless Eloi and horrifying ape-like Morlocks.

This novel also reflects rapid industrialization and the degradation of nature. There are also glimpses of 18th-century Romanticism. Much of the Romanticism in Wells’s *The Time Machine* is motivated by rejecting industrialization. The Morlocks represent time travelers’ fears, which are aligned with technology and industrialization; they are of “mere mechanical industry” and banished, in the futuristic society, to the underground with other horrible things. Morlocks represent industrial powers. During the Industrial Revolution, some favored the bleakness of industrial towns, clouded with smog, and the lives of thousands of workers crammed together simultaneously. It was a departure from the golden days of the old world order. The glory of industry and sentimentality of nature is very well represented by Morlocks and Eloi, “the thought of the years I had spent in study and toil to get into the future age, and now my passion of anxiety to get out of it. I had myself the most complicated and the most hopeless trap that ever a man devised. Although it was at my own expense, I could not help myself. I laughed aloud” (Ibid., 58).

For the time traveler, technology has become a trap; being obsessed or fixated only on the technological world will lead to anxiety in the mind. Rapid industrialization led to social stratification -it made the widening gap between capitalists and laborers, or haves and have-nots: And this same widening gulf-which is due to the length and expense of the higher educational process and the increased facilities for and temptations towards refined habits on the part of the rich -will make that exchange between class and class, that promotion by intermarriage which at present retards the splitting of our species along lines of social stratification, less and less frequent. So, in the end, above ground, you must have the Haves, pursuing pleasure and comfort and beauty, and below-ground -Have-nots – workers. When the time traveler meets Eloi, he is fascinated by their innocence, as for him, it represents the Utopian ideals that are in his mind while traveling into the future; later, he finds the Eloi-who lack language, technology, and physical strength- they are lazy, they do not struggle to meet basic needs as technological Utopia is free from worry or deprivation. On the other hand, he meets Morlocks- who represent cannibals; their basic needs have not been met, which makes it clear that technology has not been a liberating force for everyone. Wells imagines something more complex: That technological progress could create living conditions so idyllic that human progress and intelligence disappear and so disastrous that humans could resort to cannibalism. Technology in *The Time Machine* is directly linked to progress, intellectual decay, and violence.

Wells says:

the great triumph of humanity I had dreamed of took a different shape in my mind. It had been no such triumph of moral education and cooperation as I had imagined. Instead, I saw a real aristocracy. Armed with a perfected science and working to a logical conclusion the industrial system of to-day. Its triumph had not been simply a triumph over nature and fellow-man. This, I must warn you, was my theory at the time. I had no convenient cicerone in the pattern of the Utopian books. But even on this supposition the balanced civilization that was at last attained must have long since passed its zenith, and now fallen into decay. The too-perfect security of the upper-world had led them to slow movement of degeneration -to a general dwindling in size, strength. And intelligence (Ibid., 73).

The difference between the lives of Eloi and Morlocks is more broadly symbolic of the dueling promise and peril of technological innovation, and this directly reflects the social conditions of Victorian England in which technology created ease, wealth, and freedom for the upper class, punishing more to the living conditions of the lower class. This duality is to be seen in *Time Machine* itself, which is both liberating (in that it makes time travel possible, which could before only be imagined) and perilous (the time traveler could materialize inside a solid object in the future and could be stranded in dangerous conditions).

Rise and Fall of Mankind in H. G. Wells's *The Time Machine*: The Time Traveller can be seen as an emblem of science itself; he forms hypotheses about the future—what it would be like as all Utopia and then readjust them based on observation to generate knowledge -like it was all bleak: “The advancement of Mankind, and saw in the growing pile of civilization only a foolish heaping that must inevitably fall back upon and destroy its makers in the end if that is so, it remains for us to live as though it were not so. But to me the future is still black and blank-is a vast ignorance, lit a few casual places by the memory of his story” (Ibid., 130). Wells talks about human values and the great flood of humanity in the older days. With the advent of technology/science, human values deteriorated, and selfishness triumphed over humans and nature. The horrors were visible, and the upcoming apocalypse to humans was unbelievable, as the time traveler sees:

Even now man is far less discriminating and exclusive in his food than he was—far less than any monkey. His prejudice against human flesh is no deep – seated instinct. And so these inhuman sons of men- I tried to look at the thing in a scientific spirit. After all they were less human and more remote than our cannibal ancestors of these or four thousand years ago. And the intelligence that would have made this state of things a torment had gone. (Ibid., 90)

Man has become so selfish that he can get ease and delight by inflicting pain on his fellow man. Necessity has been made as an excuse: “then I tried to preserve myself from the horror that was coming upon me, by regarding it as a rigorous punishment of human-selfishness”. Now that science made it possible for time travelers to visit in the future, the future conditions are very much degraded. The central tenets of humankind are nowhere found in *The Time Machine*. The future society is unfamiliar with family, friendship, sex, gender, religion, art, politics, money, work, private property, and other characteristics that make human social behavior. Eloi and Morlocks have human and animal traits, making them a great subject of evolution and degeneration. It becomes difficult for us to determine whether the world will progress or degenerate in the future because the novel is ambiguous, or we can say science remains silent on such issues. Science makes it possible for us to travel in the future- but philosophy is an inquiry into how this future is. It promises humankind that something has to change to avoid such a degraded future where they lose intellectual capability.

As Yeast says in *The Second Coming*, “one gyre, or epoch of history, is about to come to an end, giving way to another.” This is the epoch that has lasted since the birth of Christ. In its place will arise a completely different era, one characterized by bloodshed, chaos, and violence. It would be such a period where very few would like to live. Oswald Spengler, a philosopher, analyses the concept of culture and civilization in the book *The Decline of The West* (1926). According to him, “Cultures rise and fall, leaving nothing behind. Once a culture becomes a civilization, a human being has achieved their highest form. Due to cyclical theory Spengler believes that all civilizations will decline, sooner or later, and will be either reborn, or replaced by another civilization. Our Western civilizations suffer from capitalism, which will ultimately destroy it” (Spengler, 1926, 6). People have progressed politically, socially, and economically but have become too focused on making money and obtaining material goods. At the same time, traditional values vanish. As Spengler says, “Western civilization is slowly dying, and he wonders which civilization will replace it and when” (Ibid., 7).

H. G. Wells refers to Thomas Carlyle, a Victorian philosopher, who wrote the essay “Great Man Theory of History1” (1840), which contends that history is shaped by exceptional individuals- followed by fellows, calling for noble chivalry of work in which ‘captains of industry lead and laborers follow.’ “I even tried a Carlyle-like scorn of this wretched aristocracy in decay. But this attitude of mind was impossible. However great their intellectual degradation, the Eloi had kept too much of the human form not to claim my sympathy, and to make me perform a sharer in their degradation and their fear” (Wells, 1895, 91). With the imbalance of human life and nature, the wealthy class is lured more toward comfort, and in contrast, the working class is more drawn to the mechanical industry. All of them have become more disjointed. “I grieved to think how brief the dream of human intellect had been. It had committed suicide” (Ibid., 110). Suicide is considered to be the most philosophical aspect. “Man,” in the sense of humankind, is also the answer to the riddle of the future as the time traveler who discovers first that the Eloi, then the Morlocks, is “heir to all the ages” (Ibid., 69). Even humanity’s unwillingness is to heed the lessons of seers such as Wells and Carlyle, whose spirit the time traveler invokes. Perhaps the most optimistic reading of *The Time Machine* would be taken as a warning--

an intervention: if humanity does not tackle economic inequality and poor education, then this future will be the result- but it is not too late for another future. (Ibid., 139).

Conclusion

The Time Machine is just one of many novels based on time traveling. In his critical approach, Wells analyses the lives of the creatures from the future and knowledge about the shocks of the new world. Wells is trying to express how terrible the world could be if humanity carries on in the manner it still is or if it relies only on technological inventions. Wells is trying to show the world's apocalypse in its terrific, desolated, imperfect vision. The world is decaying and undergoing vast degradation as it looks destroyed and ruined. Humanity and all its signs seem to have become extinct. Human life and all other signs of liveliness have been destroyed. So, the book *The Time Machine* conveys to current civilization that we must use our intellect to be original. Wells believes that if a class system rules society, humanity will divide and destroy itself like in the time machine. Continue to work hard, and humankind will be strong. Recognize the need for balance with nature, and nature will not overtake the world. We may understand that man is flawed and that the future is what we make it.

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