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Scientism, Progressivism, and Positivism in selected works of H. G. Wells

Jan Benedikt

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Z á s a d y p r o v y p r a c o v á n í :

Jan Benedikt se ve své práci zaměří na problematiku Scientismu, Pozitivismu a Progresivismu v díle Herberta G. Wellse. Úvodní kapitola poskytne vhled do kulturně-historického kontextu přelomu 19. a 20. století s důrazem na dopad technologického pokroku na tehdejší literární tvorbu v Británii. Pro účely následných rozborů zde autor práce také jasně a s pomocí sekundární literatury vymezí termíny Scientismus, Pozitivismus a Progresivismus. Hlavní část bude obsahovat detailní rozbor vybraných románů a neliterárních textů H.G. Wellse zacílené na zmapování míry a podoby ovlivnění tohoto romanopisce myšlenkami Scientismu, Positivismu a Progresivismu. Závěrem této části autor svá zjištění odůvodní se zřetelem na různé názorové etapy v životě H. G. Wellse. Práci završí kapitola, která z dílčích zjištění vyvodí obecnější závěry.

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Vedoucí bakalářské práce:

PhDr. Ladislav Vít, Ph.D.

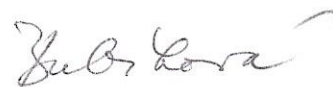
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prof. PhDr. Karel Rýdl, CSc.
děkan



doc. Šárka Bubíková, Ph.D.
vedoucí katedry

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TITLE

Scientism, Progressivism, and Positivism in selected works of H. G. Wells

ANNOTATION

This bachelor thesis deals with the occurrence of ideas from Scientism, Positivism, and Progressivism in selected works of H. G. Wells, both science-fiction and non-literary works. Concepts are defined, then sought after in analyses of chosen works. Gathered facts are evaluated and their occurrence in the selected literary work is explained with respect to Wells' stage of life.

KEYWORDS

scientism, progressivism, positivism, wells, science-fiction

NÁZEV

Scientismus, Progresivismus a Pozitivismus ve vybraných dílech H. G. Wellse

ANOTACE

Bakalářská práce se zabývá výskytem idejí z učení scientismu, progresivismu a pozitivismu ve vybraných dílech H. G. Wellse. Témata z daných konceptů jsou hledána jak ve vědeckofantastických, tak i neliterárních dílech. Koncepty jsou jasně vymezeny a získané informace aplikovány na vybraná díla, zjištěná fakta jsou poté vyhodnocena a vysvětlena jejich přítomnost v díle s přihlédnutím k životní etapě H. G. Wellse.

KLÍČOVÁ SLOVA

scientismus, pozitivismus, progresivismus, wells, science-fiction

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Introduction

The aim of this bachelor thesis is to find themes from Scientism, Progressivism, and Positivism in selected works of H. G. Wells. Wells is one of the most important writers of the science fiction genre and is often referred to as the “father of the sci-fi”, alongside with J. Verne. Wells’ literary works, both science-fiction and non-fiction are, to this day, very popular and frequently read. Many of his works are considered timeless and topical, even after 70 years after Wells’ death. Certainly, owing to Wells’ unmatched skill in explaining and describing things not yet seen. Thanks to his interest in science, he was able to deliver fictive things and events with pinpoint precision in their description. Wells created the genre of science fiction, enriched and influenced many future writers, yet his legacy is fading away. His contribution to the science fiction, dystopias, utopias and visionary literature is being forgotten. Wells is being replaced by A. Huxley, G. Orwell from the past authors, and, for example, by D. Ghlukovsky from the modern authors. Yet, it was Wells, who was first to describe fictive scientific breakthrough as vividly, as possible. Apart from being a scientist and writer, Wells was also a visionary and a prophet. Wells was a sensitive person, always battling his fear of the future mankind is marching towards. Many of his books are an open and desperate call for a change in human affairs. Yet, many of his warnings remain unanswered, to this day. Because Wells was a prolific scientist, all his works were dealing in one way or another with topics of scientific progress and its beneficial or destructive impact on society. Scientific progress and science generally are also the main concern of Scientism, Progressivism, and Positivism. They all deal with the influence of science on society, validity of scientific enquiry, and ethics of science.

Thesis will be divided into two parts, theoretical and practical. In the theoretical part the concepts will be defined with the help of secondary sources, the concepts will be defined. Then an outline of influence of science on British literature will be made, to provide the thesis with sociological and cultural background of the age during which Wells was writing. Then, in the practical part, the defined concepts will be searched for in the analysed works. Firstly, in chosen science-fiction novels, which are *The Time Machine*, *The Invisible Man*, and *The War of the Worlds*. Books in this section were selected randomly. Secondly, Wells’ non-fiction works will be analysed. The chosen are: *The World Set Free*, *The Salvaging of Civilisation*, and *The New World Order*. This set of books was chosen for it creates a timeline of Wells’ visionary literature, from 1913 to 1939. The thesis will be concluded with the evaluation of all conducted analyses with recourse to Wells’ stage of life.

1. The influence of science on British literature from 1850's to 1940's

Industrialisation was in full swing during the Victorian period and brought into the society a whole new class and several new social issues. The new class was the Working class, and thanks to new inventions and machines, this class was the poorest in Britain. H. G. Wells, among others, commented on ills and flaws of the laissez-faire Capitalism in Britain, which was the cause of poverty. Most of British writers have not limited their works to British social ills, but also reflected increasing political tension in Europe. A new literary genre was born from unsure relations between European countries. Named the Invasion literature, it reflected tense political relationships between European countries during the 19th and 20th century. Mostly because the public started to doubt their country's ability to defend itself due to new inventions in science. H. G. Wells and his *War of the Worlds* is also a part of the genre, in which he brought in a new kind of enemies. Wells introduced extra-terrestrial beings, technically superior to humans. Another influential event, that changed the worldview of British writers was publishing of Darwin's *On the Origins of Species*. The impact it had on the Victorian Britain was immense. Apart from imaging a world driven by evolution and struggle for survival, it evoked a darker theme. Writers, including Wells, were afraid of "devolution". In *The Time Machine* Wells depicted a society which devolved into primal behaviour. Herbert Spencer and Francis Galton created new theories connected to Darwin's evolution theory, named Social Darwinism and Eugenics. Both theories occurred in science – fiction novels in the 20th century. Sci-fi was founded by H. G. Wells and Jules Verne, hence both are considered its fathers. Among Wells' famous science fiction novels belong *The Time Machine*, *The Invisible Man*, and *The War of the Worlds*, which he used them to comment and criticise on flaws of Victorian Britain.

In the beginning of the 20th century, dystopia and utopia began to be famous. Wells' *When The Sleeper Wakes* and *The Story of The Days to Come* mark the beginning of modern dystopias. The beginning of the 20th century was generally seen promising:

For many, humankind was entering upon an unprecedented era. H.G. Wells's utopian studies, the aptly titled *Anticipations* (1901) and *A Modern Utopia* (1905), both captured and qualified this optimistic mood and gave expression to a common conviction that science and technology would transform the world in the century ahead.¹

¹ "English Literature: The 20th Century," The Editors of Encyclopaedia Britannica, accessed January 25, 2017, <https://www.britannica.com/art/English-literature/The-20th-century>.

The common joy and expectations of positive outcome of the 20th century vanished with the pre-war crises that arose around the whole Europe and with the eventual Great War.

After the WWI, many authors reflected on the war and the vast destruction it brought due to excessive use of new scientific inventions (tanks, yperite, aerial bombing). During the Interwar era, many writers returned to the genre of Dystopia. Among them was A. Huxley and his *Brave New World*, which portrayed a science-governed world.

2. Concepts of Scientism, Positivism, and Progressivism

Greek philosophers Plato and Aristotle were the first to express the idea that all human knowledge is based on sensory experience. Aristotle's *Tabula Rasa* was one of the first notions, that would later develop into an epistemic philosophy – Empiricism. The fundamental claim was that knowledge of the whole humanity is based on sensory experience. In the half of the 19th Century, a French philosopher, Auguste Comte, compounded a theory, which he named *Positivism*. Comte's description of Positivism, provided in his book *A General View of Positivism* from 1856, is:

Positivism consists essentially of a Philosophy and a Polity. These can never be dissevered; the former being the basis, and the latter the end of one comprehensive system, in which our intellectual faculties and our social sympathies are brought into close correlation with each other.²

John Stuart Mill explained what is the fundamental claim and concern of Positivism. In his book, *Auguste Comte and Positivism*, he explains:

We have no knowledge of anything but Phaenomena; and our knowledge of phaenomena is relative, not absolute. We know not the essence, nor the real mode of production, of any fact, but only its relations to other facts in the way of succession or of similitude. These relations are constant; that is, always the same in the same circumstances. The constant resemblances which link phaenomena together, and the constant sequences which unite them as antecedent and consequent, are termed their laws. The laws of phaenomena are all we know respecting them. Their essential nature, and their ultimate causes, either efficient or final, are unknown and inscrutable to us.³

The process of gaining positive knowledge could be defined as a linear sequence of actions and events that result in a Law. The sequence is: Observation, Logical Analysis, Reasoning, Application, Reassuring, and eventually a Law, as a representation of all the information the subject has learnt and derived throughout the whole process. The sequence is the foundation of Empiricism and Positivism alike. What Comte brought in as a new idea was application of the same sequence on sociology, which was not a part of the Empiric paradigm. In a series of books, *Course in Positive Philosophy*, Comte explained his “Law of Three Stages”. Here, Comte states that every society must undergo three stages in its development. First being the Theological stage, followed by the Metaphysical stage, concluded by the Positive stage. Firstly, the Theological stage, where deities are the source of all knowledge. Secondly, the Metaphysical

² Comte, Auguste. “A General View of Positivism” (London: Cambridge University Press, 2009), 1.

³ Mill, Stuart John, *Auguste Comte and Positivism* (Illinois: Project Gutenberg, 2009), 3, accessed October 15, 2016, <http://library.umac.mo/ebooks/b21819853.pdf>.

stage, representing the uprising of realisation that only one spiritual deity is behind the world's organization. Thirdly, the Positive stage, where both social and scientific Laws are based on science and the linear sequence.

Positivism was a base to a second philosophy, that will be sought after in Wells' literary works, Scientism. The roots of Scientism are in the Logical Positivism, which originated on the premises of Vienna University, in a group of scientists named the Vienna Circle. They claimed that:

there are only two kinds of meaningful statements: analytic statements (including logic and mathematics), and empirical statements, subject to experimental verification. Anything outside of this framework is an empty concept.⁴

Scientism originated in their claims and developed into a "belief that science and its method of sceptical inquiry is the most reliable path to the truth."⁵ Scientism, as an ideology, is a belief that sciences, which cannot be measured via natural science (e.g. Theology, Metaphysics, and Philosophy) are meaningless. Scientism is generally used to entitle negative attitude to non-natural fields of science. The tendency followers of Scientism have is to spread the positivist enquiry to other fields of science, which are predominantly based on theories or abstract claims. For example, Scientism and Positivism alike, are concerned with the source of meaning and purpose of the humankind, which is natively reserved for Philosophy. Thus, Scientism is a belief, that science holds all answers about the World. Scientism, from its very beginning, faced a heavy critique for its doctrine, which could be summed up as a science, that left the sphere of exploration and became directive.

The third concept, that will be searched for, is Progressivism. Progressivism is a collective name for many concepts, all of which are based on the Idea of Progress. Presumably the most noteworthy was a political movement, which rose in the U.S.A. in the late 1800s and faded away in the 1920s. The whole period from 1890's to 1920's is called the Progressive Era. This political movement rose also as an answer to Spencer's and Galton's Social Darwinism and changing social conditions started by industrialization. The movement was focused mainly on the improvement of living conditions of U.S. citizens through scientific development, using the U.S. government as a "vessel" through which the development will be carried out. Progressives,

⁴ "What is Scientism?," American Association for the Advancement of Science, accessed January 28, 2017, <http://www.aaas.org/page/what-scientism>.

⁵ "Scientism: A system of ethics based on reason without recourse to supernatural belief," accessed December 17, 2016, <http://cns-alumni.bu.edu/~slehar/Scientism.pdf>.

as members of the Progressive movement are titled, call for equality of genders and classes, elimination of poverty, governmental regulations of monopoly, educational reform, fiscal reform and other. Many important American politicians and reformists were a part of the Progressive movement, including “William Jennings Bryan, Theodore Roosevelt, Robert M. La Follette, and Woodrow Wilson.”⁶ Progressivism is often compared to Socialism. These two concepts have many similar features and are dealing with nearly the same social ills. Yet, they differ in the way they seek remedy. Socialism proposes a government-driven businesses, where everything concerning the state’s economy is government organized. Socialists want to get rid of Capitalism. Progressives, on the contrary, want to use the government to regulate business and to get rid of monopoly, but keep the private sector active. They are not against Capitalism, but not pro. They recognize it as a tool for the fastest way to earn money.

Progressivism has also a sociological aspect. As previously stated, Progressivism as a concept is based around the Idea of Progress. The prototypical values of the progressivist doctrine state that the quality of human life may improve only when these four aspects are developed: technology, society (sociology), science, and economy. Thus, the term “Developed country”. J. B. Bury explained, that the Idea of Progress is “the animating and controlling idea of western civilisation”⁷. Bruce Mazlish proposed that Progressivism was, at first, native to the British and French. In his article for the *Daedalus* journal, he wrote about the Idea of Progress in the 18th century:

a closer look reveals that it (progress) was a European and not a universal phenomenon (...) for the predominant expanding nations of that age were France and England. It is hardly surprising that these countries identified their ways with the progress of mankind, nor that the foci of the new science were the English Royal Society and French Academy of science⁸.

But the country, which was eventually influenced the most by Progressivism was The United States. British Progressivism existed, but its members never called themselves Progressives. Progressivism in Britain was represented by the Efficiency movement, which had the same doctrine as Progressivism.

⁶ Nugent, Walter, *Progressivism: A very short introduction* (Gosport: Ashford Colour Press Ltd., 2010), 1.

⁷ Bury, John Bagnell, *The Idea of Progress: An inquiry into its Origin and Growth* (London: Macmillan and Company, 1920) Preface.

⁸ Mazlish, Bruce, "The Idea of Progress," *Daedalus* 92, no. 3 (1963): 447-61.
<http://www.jstor.org/stable/20026791>.

3. Analyses of selected Wells' science-fiction novels

3.1 Positivism

The first book to be analysed is Wells' science-fiction novel *The Time Machine*, published in 1895. The concept of the positive knowledge is present mainly in the opening chapters of the book, when the Time Traveller describes how he invented time traversing. Time, as described by the Wells, is a Fourth Dimension. "There are really four dimensions, three which we call the three planes of Space, and a fourth, Time."⁹ The three planes of Space represent positive knowledge, for they are based on an observation of natural phenomena – object dimensions. The fourth plane, the Time, is also revealed as a positive information, for Wells used precise description of the plane's discovery. He states that there is "no difference between time and any of the three dimensions of Space except that our consciousness moves along it."¹⁰ His explanation states that the humankind was not yet able to see the phenomena, so the Law about Time is non-existent. The Time Traveller conducted a research using the linear sequence and formulated a Law:

(...) I have been at work upon this geometry of Four Dimensions for some time. Some of my results are curious. For instance, here is a portrait of a man at eight years old, another at fifteen, another at seventeen, another at twenty-three, and so on. All these are evidently sections, as it were, Three-Dimensional representations of his Four-Dimensioned being, which is a fixed and unalterable thing. "Scientific people (...) know very well that Time is only a kind of Space. Here is a popular scientific diagram, a weather record. This line I trace with my finger shows the movement of the barometer. Yesterday it was so high, yesterday night it fell, then this morning it rose again, and so gently upward to here. Surely the mercury did not trace this line in any of the dimensions of Space generally recognized? But certainly it traced such a line, and that line, therefore, we must conclude was along the Time-Dimension."¹¹

From this extract, the positive approach Wells has taken is obvious, for the whole idea of the Fourth Dimension comes from the observation of other natural phenomena: Length, Breadth, and Thickness. To explain the process of the discovery of the Fourth Plane, Wells used a barometer as an example. While observing it, he points out that the barometer does not only follow the rise and fall in the atmospheric pressure, but it also follows a line in means of time – yesterday morning, yesterday evening, today's morning and so on. Wells used this example to show that humans see only the directional movement – up, down, but fail to recognize the

⁹ Wells, Herbert George, *The Time Machine* (London: William Heinemann, 1895), 3, accessed October 9, 2016, <http://www.gutenberg.org/files/35/35.txt>.

¹⁰ Wells, *The Time Machine*, 5.

¹¹ Wells, *The Time Machine*, 6.

movement in time, through hours and days, which he describes as a Fourth Plane – Time. The Time Traveller saw the relation to natural Laws (the three planes of space and created a new Law. The Law of the Fourth Dimension, Time, is directly connected to the other three dimensions and follows them in their respectable directions. On the other hand, the Time Traveller's knowledge about the phenomenon is not absolute, for he is unsure to which direction in time will he travel. Wells' description provided in the book states, the Time is a dimension that conjoins the others and flows in the background, unstable and without any hint of its safe traversing or precise measuring.

The previously analysed book concerned theoretical physics, *The Invisible Man* regards optics. Similarly, to *The Time Machine*, the part of the book containing the clearest depiction of positivist epistemology, and the linear sequence is when Griffin explains his discovery. The whole part about the invention of invisibility potion contains a very detailed and, for the age Wells was writing in, highly advanced knowledge about optics, optical density, and its sub-fields: Refraction and reflection. As Griffin describes his discovery, he uses a familiar expression – the Fourth dimension - although, in this case it does not represent time as in *The Time Machine*. As he explains:

“I found a general principle of pigments and refraction—a formula, a geometrical expression involving four dimensions. (...) it was an idea, that might lead to a method by which it would be possible, without changing any other property of matter—except, in some instances colours—to lower the refractive index of a substance, solid or liquid, to that of air”¹²

After this statement, Griffin explains the refractive index and reflection— a scale, that shows the amount of light that passes through matter and the angle of the leaving rays and the amount of rays that pass to the next object. Reflection, on the other hand, is the amount of light rays that are sent back from the matter – reflected to the reversed direction. Refraction and reflection are key phenomena to turn things invisible. When these two phenomena are lowered to a very small level, the observed thing becomes invisible, allowing light rays to travel through it without obstruction. If an object is deflecting light rays, it is visible, because humans see only deflected rays. This represents the “logical analysis” and “application” parts of the linear sequence. Griffin created a mixture of chemicals that he injected into his veins. The mixture turned his

¹² Wells, Herbert George, *The Invisible Man* (London: C. Arthur Pearson, 1897), 87, accessed October 9, 2016, <http://www.feedbooks.com/book/34/the-invisible-man>.

blood and every tissue of his body invisible, minimizing the refraction and reflection of every cell. Wells took a very positivist approach to describe the whole process of turning invisible:

(...) visibility depends on the action of the visible bodies on light. Either a body absorbs light, or it reflects or refracts it, or does all these things. (...) if you put a sheet of common white glass in water, still more if you put it in some denser liquid than water, it would vanish almost altogether, because light passing from water to glass is only slightly refracted or reflected or indeed affected in any way. (...) ¹³

Again, Wells used the positivist enquiry. As in *The Time Machine*, Wells took natural phenomena and their existing Laws, used the linear sequence and concluded with a new Law. Here, a Law about invisibility, which states that by minimizing the reflection and refraction, an object is completely invisible.

Just as in *The Time Machine*, the knowledge Griffin has about the new Law is not absolute – he does not know how to reverse the process. In the end of the book, it is revealed that to reverse the invisibility, one must die. The blood carrying the chemicals no longer delivers them into bodily tissues.

Both novels prove that Wells used the positivist enquiry and the linear sequence to describe inventions that appeared as magic in the 19th century. He always masterfully used his knowledge of natural sciences and with the help of already known natural Laws, he created new Laws for things not yet seen. Thanks to this, the fictive inventions seemed plausible and awaiting their imminent discovery.

The last novel to be analysed is *The War of the Worlds*, a novel that differs from the previous two. In parts where the linear sequence is used, and ways it is described. The first signs of the positive knowledge are found in the opening chapters, where the Martians journey to the Earth is described. Firstly, the narrator observes an odd phenomenon in the atmosphere of Mars: “That night, too, there was another jetting out of gas from the distant planet. I saw it. A reddish flash at the edge, the slightest projection of the outline just as the chronometer struck midnight”¹⁴. These flashes, as he later explains, were projectiles fired from gigantic, cannon-like devices. Each missile contained a crew of Martians and a Tripod. Later, through the linear sequence, the protagonist learnt a Law – that each flash that occurred in the atmosphere of Mars meant another projectile, another group of invaders. This example shows how even simple events can evoke

¹³ Wells, *The Invisible Man*, 88.

¹⁴ Wells, Herbert George, *The War of the Worlds* (London: William Heinemann, 1898), 10-11, accessed October 9, 2016, <http://www.planetpdf.com/mainpage.asp?webpageid=2901>.

positivist enquiry. In this case, an event led a person to study it, using his senses, applying logical analysis and scientific enquiry, here concerning mathematics and physics.

Another sign of the positivist enquiry is concerning the Heat-Ray. At first, the narrator is unsure about the device: “It was as if some invisible jet impinged upon them and flashed into white flame. It was as if each man were suddenly and momentarily turned to fire.”¹⁵ Throughout the story, the narrator learns the distance the Heat-Ray can fire on, that it is powered by a generator, after the latter its shot loose when the narrator flees after an encounter with the Martians. During this encounter, the narrator also learns that the Heat-Ray is volatile when exposed to water, as he observed: “when the Heat-Ray hit the water, the latter had immediately flashed into steam”¹⁶. The next thing the narrator observed was that the Martians had only a limited use of the Heat-Ray, because they did not used it one night. Although the narrator gathers a lot of information he is eventually not able to create a Law about it. The scientific enquiry fails him and the information he gathered is “too puzzling” to him. This is also a part of positivist epistemology – the humans’ knowledge cannot be absolute, and even with the whole linear consequence process done, one may not find suitable Law.

The same eventual failure is present, when humanity is trying to create a Law for the “Black Smoke”. They know that it suffocates those who breathe it, but its composition is not fully recognized, as stated in the epilogue of the book:

laboratories have disinclined analysts for further investigations upon the latter (Black Smoke). Spectrum analysis of the black powder points unmistakably to the presence of an unknown element with a brilliant group of three lines in the green, and it is possible that it combines with argon to form a compound which acts at once with deadly effect upon some constituent in the blood.¹⁷

Yet again, failure in the scientific enquiry led to empty outcome. Wells used these two examples to show how limited the knowledge of humankind is, even with the most advanced techniques the modern science offers.

¹⁵ Wells, *The War of the Worlds*, 36.

¹⁶ Wells, *The War of the Worlds*, 101.

¹⁷ Wells, *The War of the Worlds*, 288.

3.2 Progressivism

The first book to be analysed is *The Time Machine*. The future London the Time Traveller arrives to is a nightmare scene for all Progressives. A society built on fear, individualism, lack of communication, sympathy and empathy. Values it is lacking are the core values that Progressives sought after to ensure well-being of all the humanity. This book contains nearly every aspect of society that Progressives were trying to change and fix. The sociological theme is Wells' warning about the mankind's future. The modern world demonstrates how will the British society end up, should the gap between the working class and the upper class continue to deepen. The trend came with the Industrial revolution, alongside with the shift of industry from farming to manufacturing. The book is an allegory of the Victorian Britain, as is mentioned within the book when the Time Traveller describes his impression of the future society he encountered. He compares the relationship between the two races of Morlock and the Eloi to that between the working class and the upper class in England. Differences between the future classes were so significant, the Time Traveller thought that the society he discovered is in its last years, as he presumes: "the balanced civilization that was at last attained must have long since passed its zenith, and was now far fallen into decay."¹⁸.

One of the social ills in the Victorian Britain, which also was pain in the Progressives' side, was the relationship between members of working class and upper class. Relationship resembling the tension between Eloi and Morlock. Elois treat Morlock as vermin, something that must be treated with disgust and feared. The same attitudes were between the upper-class and the working class in late 19th century Britain. Progressivism is a movement that "as a reform tradition has always focused its moral energy against societal injustice, corruption, and inequality."¹⁹ Unfortunately, Wells does not provide any remedy to this particular social issue in his book.

Another social ill, apart from the hateful relationship, was individualism of the upper class. The upper class in the *Time Machine*, the Eloi, are a race that is almost completely self-oriented, not caring about other members of its own society. A behaviour, again, resembling the upper class of the Great Britain. The British upper class members were well mannered, gentleman-like groups of well-established people. Some of which were not related to the aristocracy, the native

¹⁸ Wells, *The Time Machine*, 80.

¹⁹ Halpin, John, and Cook, Marta, *Social Movements and Progressivism: Part Three of the Progressive Tradition Series* (New York: Americanprogress.org, 2010), Preface.

caste of the upper class. The non-original members of the upper class were factory owners, who paved their way up to the upper class with immense profits they made during the industrialization. They were treated the same as the Morlock, for they lacked the aristocratic title and lineage. The factory owners made fortune on backs of factory workers. Knowing this, Wells' social critique of the Victorian England is then easy to explain. Although the reader would most probably see the Eloi (representing the upper-class) as the "good" race, the further the plot develops, the more he starts to feel sympathy for the Morlock (the working class). Despite their look, they could be considered a "better human" compared to the Eloi. Not only because they do all the work, but because the only thing that limits them from revolting and eventually taking the world under their control is a fear of sun and necessity of nutrition. Yet again, same situation as in England, where workers were at first afraid to protest and revolt. They feared being fired and falling into even greater poverty. Like the Morlock fear the sun and lack of food.

The races in the distant London live in a kind of twisted symbiosis. The Eloi do not have to work, the Morlock do everything. In return, the Morlock are free to take and devour any Eloi they find outside during the night. Cannibalism was a taboo during the Victorian period, but Wells used it nevertheless, to show the importance of a much-needed change in the class system. The symbiosis represents the fact that sooner or later, the working-class will start to revolt and protest, thus will "devour" an upper-class member, make him either fire them or close his factory. A conclusion, that leads to poverty and even deepening of the class difference, which is opposing to the Progressives' doctrine. Wells' warning was aimed at social ills Progressives sought to remedy. All the presented cases of social issues are very exaggerated in the book, hinting that Wells wanted readers to realize its seriousness.

The Time Machine deals with a class war, *The Invisible Man*, on the other hand, deals with a broader issue. Individualism and search for one's own good. Yet, Wells warns about them in the same spirit as in *The Time Machine*. By exaggerating them and making them character traits of the main character. The protagonist, Griffin, turns from a scientist to a power-thirsty, greedy, and brutal man with no other feelings but rage and hate. He invented a new, beneficial, potion. Instead of sharing his discovery with the broad public, Griffin decides to keep it for himself, using it as a tool to wreak havoc upon innocent people.

Again, as in *The Time Machine* and its society, the most apparent social ills Griffin represents are individualism, selfishness and greed. McGarty explains Progressives' opinion about individualism and selfishness as following:

Progressives believed in the existence of a common good to be sought after by the society for all people. It denies the existence of the individual and the individual good, especially if such a good contradicts what those who have defined the common good have determined.²⁰

In the 19th and 20th Century, the common good Progressives were seeking included gender equality, elimination of poverty, prosperity, cooperation and equality of classes. What Griffin seeks is fame and power. He is so blinded by it that he puts everything else aside. During the pursuit of his individual good, he drives his father to commit suicide by stealing money his father looked after. He stole it to support his research and feels no remorse for doing so, as he later explains to Dr Kemp "I did not feel a bit sorry for my father. He seemed to me to be the victim of his own foolish sentimentality. The current cant required my attendance at his funeral, but it was really not my affair."²¹ Due to his obsession with power and personal good, Griffin becomes a psychopath and a serious threat to the society. He is using science to achieve his goals, instead of sharing it to do good for society. His actions are contradicting with the Progressives' doctrine – use science to achieve general good.

Progressives also promoted the idea that every member of a society is free to enjoy its advantages only if he contributes afterwards. Because Griffin never truly contributed into the society, he was excluded. He feels anger and hatred towards the whole humanity, and when he eventually fails to reverse the effects of his invisibility potion, the rage only escalates. Even though some readers may sympathise with Griffin and blame the society for his actions, it was truly Griffin's doing that sent him to his doom. By not obeying the rules of society he was excluded. He never did anything to repay for his actions. He never said he regrets his actions, so the blame for his end is only on him.

Social ills concerning science and the behaviour of those endowed with it are also topical in the next analysed book, *The War of the Worlds*. The novel was marked as the "allegory of the British colonization" numerous times. Some argue that the book depicts the British colonization of Africa, yet the generally accepted truth is that the novel is an allegory of the British

²⁰ "Individualism vs. Neo progressivism," accessed January 22, 2017, <http://terrymcgarty.blogspot.cz/2010/06/individualism-vs-neo-progressivism.html>.

²¹ Wells, *The Invisible Man*, 92.

colonization of Tasmania. British forces began the colonization of Tasmania in 1830. Their behaviour towards the native Tasmanians was nearly matching that of the Martians. Colonists in Tasmania were brutal and barbaric: “The men were shot, children forced into servitude and the women kept for the Europeans’ sexual relief.”²² Further evidence that the book is an allegory of the Tasmanian genocide (as is the colonization of Tasmania often referred to) is in the novel itself:

And before we judge of them (the Martians) too harshly we must remember what ruthless and utter destruction our own species has wrought, not only upon animals, such as the vanished bison and the dodo, but upon its inferior races. The Tasmanians, in spite of their human likeness, were entirely swept out of existence in a war of extermination waged by European immigrants, in the space of fifty years. Are we such apostles of mercy as to complain if the Martians warred in the same spirit?²³

Wells opts out that humans are, at least, like the Martians. From Progressives’ point of view, colonization had unbearable flaws. The first was the fact that scientific discoveries and inventions were used to kill and enslave people. Progressives wanted the exact opposite, to use technology and science as tools and the government as a vessel to spread development to all the countries in the world. As could be seen in the approach of the U.S. Progressives to the colonization of Haiti: “The military occupations incorporated elements of the Progressive program, attempting to establish effective local police forces, reform land laws, build public infrastructure, and increase public access to education”²⁴ Wells shared this idea, as he stressed out in *The World Set Free*, where he uses education and technology to establish a world peace.

Martians, similarly to British colonists, use their technological supremacy to kill, conquer, and enslave. Some of British philosophers, including Herbert Spencer and Francis Galton, justified genocides of native people in colonized countries by using Darwin’s theory of evolution and struggle for existence. Spencer, influenced by Darwin’s evolution theory, extended its teaching to Sociology, Galton named it Social Darwinism, and created one of the reasons which led to the uprising of the Progressive movement. Social Darwinism states that solidarity and collectivism is keeping the “low lives” alive and hinders evolution. Same statement is applied to less developed nations. Should they not be wiped out, they would cause “devolution”. Darwin and Wells were against Social Darwinism, same as the Progressives. Even though the same

²² “Imperialism and War of the Worlds,” accessed February 13, 2017, <http://www.ipsnews.net/1998/02/literature-imperialism-and-war-of-the-worlds>.

²³ Wells, *War of the Worlds*, 7.

²⁴ “The Progressive Movement and U.S. Foreign Policy, 1890-1920s,” U.S. Department of State, accessed January 17, 2017. <https://2001-2009.state.gov/r/pa/ho/time/ip/108646.html>.

attitude towards Social Darwinism is in Socialism, this critique is more Progressive-like. Wells, as will be explained in next chapters, wanted a “Westernized” Socialism, which would look more like the Progressive movement. By criticizing the British Imperialism and by making it suffer an invasion, he openly points out that colonization must stop.

Again, as in *The Time Machine*, Wells uses the topic of cannibalism. Cannibalism is a symbol of barbarism and primal behaviour. Those practising it are deemed savage, uncivilized, brutal. He used the theme to evoke mixed feelings towards a certain race. Morlock in *The Time Machine*, Martians in *The War of the Worlds*, both seen as negative and positive at the same time. Martians are colonizing earth, because they must. Their world might be dying and they are just trying to survive and preserve their race, which they eventually fail to accomplish.

3.3 Scientism

This section will be dealing with the use of Positivism’s offspring, Scientism, and will begin with *The Time Machine*. The future London is a depiction of a world without science and reason. This book is a vision of a society which abandons science, leading it to devolution, primal behaviour and cannibalism. Morlock do not know how machines they operate work. When the Time Traveller finds remnants of a long decayed museum, readers learn that Eloi are completely uninterested in science. The museum is a symbol of the loss of reason and science, for everything in it is long-decayed and rusty, hinting that the Eloi never used it as a source of knowledge.

The Time Machine is also the first analysed book containing a theme of gender equality and abolition of sexual love. Scientism’s aim is to make sexual love prosaic. When the Time Traveller observes that the Elois’ sexes are similar in visage, he theorises why did the humankind evolved to such state:

I felt that this close resemblance of the sexes was after all what one would expect; for the strength of a man and the softness of a woman, the institution of the family, and the differentiation of occupations are mere militant necessities of an age of physical force; where population is balanced and abundant, much child bearing becomes an evil rather than a blessing to the State²⁵

Unfortunately, the Time Traveller does not investigate any further. However, his theory can be explained using A. Huxley’s *Brave New World*. There, families are non-existent and sexes are, to a certain point, equal. The abolition of basic concepts concerning family, sex, and sexual

²⁵ Wells, *The Time Machine*, 46.

love are necessary. As Anthony Astrachan explains in his notes on *Brave New World*: “In this Utopia, what we think of as true love for one person would lead to neurotic passions and the establishment of family life, both of which would interfere with community and stability.”²⁶ Community is the most important value of Huxley’s fictional state. To ensure its well-being, genetic engineering was conducted to breed only “fit” citizens. Children are indoctrinated to believe that “everyone belongs to everyone else.”²⁷ This doctrine, however, cannot be applied on the Eloi’s life: they do not feel love, empathy, compassion or any kind of social bond. On the other hand, Eloi, similarly to the community in *Brave New World*, treat sexual intercourse as a game. The Time Traveller observed: “They spent all their time in playing gently, in bathing in the river, in making love in a half-playful fashion, in eating fruit and sleeping.”²⁸ Half-playful, meaning that the emotional aspect of sexual intercourse has depleted to a game, as was the doctrine in *Brave New World*. Wells used a motive of genetic engineering again in *The Island of Dr Moreau*. Year after the *Time Machine* was published, he released the *Island of Dr Moreau*, where he depicts a society of animal men, that Dr Moreau “sewn together”. Dr Moreau attempted to make humans from animals through vivisection. The Beast men, after the death of Dr Moreau, returned to their primal behaviour and became animals again. That is the missing link between Huxley’s and Time Machine’s society. With the help of *Brave New World*, Wells’ warning in the *Time Machine* about devolution strikes back at his ideas about scientifically governed world. The devolution he is warning about, is caused by the same governmental system he proposes in his non-fiction works.

Thomas Sorell described Scientism as "a matter of putting too high a value on natural science in comparison with other branches of learning or culture."²⁹ In *The Invisible Man*, Griffin is an embodiment of Sorell’s words. The invisible man is putting too high value on his discovery and science. Also, he is ignorant to the society’s moral code, and other aspects like community and socialisation. As mentioned in the previous analysis of this book, he is self-oriented. Self-orientation and secretiveness are, too, virtues of Scientism, which is focused only on natural sciences, ignoring and criticizing concepts of Philosophy and Metaphysics. This book is a

²⁶ “Aldous Huxley’s *Brave New World*,” accessed February 12, 2016, <https://www.huxley.net/studyaids/bnwbaron.html#theme>.

²⁷ “Aldous Huxley’s *Brave New World*”

²⁸ Wells, *The Invisible Man*, 66.

²⁹ Sorell, Thomas, *Scientism: Philosophy and the Infatuation with Science*, (Abingdon: Routledge, 1994), pp. 1 ff.

demonstration of Scientism's folly and its devastating impact on both the scientist and the society around him. As Walker stated about the relation between the scientist and society:

According to *The Invisible Man*, the isolation required for experimentation grows out of the scientist's need to set himself against the common pattern of thought in society. (...) Therefore, scientific investigation requires an initial act of shutting out society, of entering isolation.³⁰

What Walker implies is that experimentation requires to abandon society and become self-oriented during the whole process. However, Griffin never returns to the common pattern of thought in society. By considering everything but his experiment meaningless, he embodies Sorell's description and becomes a follower of Scientism. Griffin starts out as a possible scientific hero, able to enhance the whole society with his genius. Instead, he turns into a monster, adopting ideas of Scientism and planning to wreak havoc upon all humanity. All due to the ironic fact that to turn invisible, he had to become invisible. This book demonstrates that science cannot be "produced" without recourse to other key parts of the society, ranging from the political system to the individual moral standards and rules.

Another negative value from Scientism is the inability of cooperation between its followers and the public. Scientists treat common folk as "stupid" for lacking the skill to comprehend scientific explanations. Common folk, on the other hand, treat scientists as freaks, for they do not understand their professional information. Walker describes this dispute between society and scientist in *The Invisible Man* as:

(...) he (Wells) explores the problem "who is at fault for the misuse of scientific knowledge?" and "who is responsible for its proper use?" Everyone is responsible, Wells answers, the scientist and society. If science becomes a tool to alienate the individual, if the imaginative space in which scientific theory is created grows unendurably small and empty, if exchange fails, if the scientist turns his work against society, everyone is at fault.³¹

Walker points out that Wells meant the both opposing forces to be blamed for Griffin's fate. Yet, in the novel, it is only Griffin, who receives capital punishment, by no other means than by the hands of public.

Misuse of technology and science is also a concern of the third analysed novel. *War of the Worlds* shows highly developed, science-based society. As was previously stated, the Martians

³⁰ Walker, Jeanne Murray. "Exchange Short-Circuited: The Isolated Scientist in H. G. Wells's "The Invisible Man,"" *The Journal of Narrative Technique* 15, no. 2 (1985): 156-68. <http://www.jstor.org/stable/30225123>.

³¹ Walker, "The Isolated Scientist in H. G. Wells's 'The Invisible Man'", 167.

are highly efficient, cruel and amoral. As much as the race of Martians represents Imperialists, they as well represent a society based upon the dogmas of Scientism. Dogmas of pure empirical teaching across all fields of science, absence of emotions, community. Martians are highly efficient, because they lack compassion and only act based on crude facts. Humans probably will, one day, get to the level of Martians:

We men, with our bicycles and road-skates, our Lilienthal soaring-machines, our guns and sticks and so forth, are just in the beginning of the evolution that the Martians have worked out. They have become practically mere brains, wearing different bodies according to their needs just as men wear suits of clothes and take a bicycle in a hurry or an umbrella in the wet.³²

The Martian society is an extreme opposite to *The Time Machine*'s society. Eloi and Morlock have “devolved” due to absence of science, whereas Martians have “over-evolved” by overusing it. Signs of their overdevelopment are seen in their behaviour, interactions, reproduction, and body structure. Martians represent a society under a long-lasting rule of scientific dictatorship. Their amorality is caused by the absence of social bonds. To communicate, Martians use telepathy, as the narrator observes:

I have a certain claim to at least an elementary knowledge of psychology, and in this matter I am convinced—as firmly as I am convinced of anything—that the Martians interchanged thoughts without any physical intermediation.³³

Telepathy is just another step of development of (then) modern radio technology. This is the first sign of overdevelopment. With the absence of speaking, Martians do not make any sounds except for “Aloo, aloo”. The ability to speak is a feature original only to humans. Speech is fundamental for interactions between individuals. Wells’ Martians use telepathy, because they are far more developed and speech was deemed pointless. The same applies to their body structure:

The greater part of the structure was the brain, sending enormous nerves to the eyes, ear, and tactile tentacles. Besides this were the bulky lungs, into which the mouth opened, and the heart and its vessels. The pulmonary distress caused by the denser atmosphere and greater gravitational attraction was only too evident in the convulsive movements of the outer skin.³⁴

They evolved like that because they were specialised, as Darwin explained evolution on birds from the Galapagos. Species adapt to whatever they do the most. Judging from their enormous

³² Wells, *War of the Worlds*, 207.

³³ Wells, *War of the Worlds*, 206.

³⁴ Wells, *War of the Worlds*, 199-200.

brain and nerves, gigantic eyes and ear, Martians only think, observe, and invent. Other organs are missing, because they were not vital for survival. Their internal structure illustrates Scientism's ideal follower. They have adapted to think and observe only. They do not have even the feeling of sexual desire, most presumably. Whereas in *The Time Machine*, the society of Eloi treat sexual intercourse as a game, Martians do not have sex at all. Birth of a Martian is described as: "it was found attached to its parent, partially BUDDED off, just as young lily bulbs bud off, or like the young animals in the fresh-water polyp."³⁵ This type of asexual reproduction is only a more developed system of that in Huxley's *Brave New World*. In there, kids are bred in bottles, because due to families, "the world was full of fathers-was therefore full of misery; full of mothers-therefore of every kind of perversion from sadism to chastity; full of brothers, sisters, uncles, aunts-full of madness and suicide."³⁶ Martians strongly resemble a society of Huxley's *Brave New World*, only more developed. They are humans, that have evolved under the rule of Scientism, Eugenics, and Social Darwinism.

³⁵ Wells, *War of the Worlds*, 202.

³⁶ Huxley, Aldous, *Brave New World* (London: Chatto and Windus, 1932), 28, accessed October 12, 2016, <http://www.idph.com.br/conteudos/ebooks/BraveNewWorld.pdf>.

4. Analyses of selected Wells' non-fiction works

The following set of Wells' non-fiction works ranks amongst his "visionary literature". He was much concerned with the mankind's future and reflected his fears in literature. Although the number of misses in predictions outnumber the hits, Wells managed to predict events such as the use of atomic bombs, which name originated in *The World Set Free*. He also predicted WWII in *The Salvaging of Civilisation*.

4.1 Positivism

The World Set Free, written at the very eve of the WWI in 1913, is a direct reflection of fear from the imminent war. War, that was coming and inevitable. As Wells noted in the preface, added in 1921:

The World Set Free was written under the immediate shadow of the Great War. Every intelligent person in the world felt that disaster was impending and knew no way of averting it, but few of us realised in the earlier half of 1914 how near the crash was to us.³⁷

From the positivistic point of view, the book starts with Darwinist lineage of science on the outline of Comte's Law of Three Stages. Starting with cavemen in the Theological stage, who were not yet developed to see the scientific possibilities in the World around them. Followed up by the Metaphysical stage, where the public "laughed at these eccentric beings (scientists), or found them annoying and ill-treated them, or was seized with fear and made saints and sorcerers and warlocks of them"³⁸. Concluding with the Positive stage, depicted in the closing chapters. Comte's Positivist Calendar is used for the purposes of the World Republic, as is mentioned in the book: "The year was divided into thirteen months of four weeks each."³⁹

The World Republic, as is the newly born single-government state called, is a representation of a Technological utopia. Techno-utopia is a state based solely on the positive knowledge. Everything in the fictive Republic is made, governed, accepted, invented, decided upon by committees of scientists. As a Technological utopia is considered a state, where any idea not based on positivist inquiry is meaningless. In such state, science is used solemnly to succeed in the pursuit of general good. Post-scarcity is implemented due to lack of labour. Technological utopias are considered Utopias, thus only ideals one may imagine, but ideals that must necessarily fail upon their realization. Nevertheless, Wells was very optimistic about the

³⁷ Wells, Herbert George, *The World Set Free* (New York: Macmillan & Co., 1914), 1, accessed October 9, 2016, <http://www.gutenberg.org/ebooks/1059>.

³⁸ Wells, *The World Set Free*, 12.

³⁹ Wells, *The World Set Free*, 105.

possibility of this Utopia happening in the near or distant future, as Karenin says: “This Modern State of ours, which would have been a Utopian marvel a hundred years ago, is already the commonplace of life.”⁴⁰ Here, it is apparent that Wells truly believed in science as a tool to create a world of peace.

Similarly to *The World Set Free*, the next book, *The Salvaging of Civilisation*, revolves around the idea of a world under the rule of one, supreme government. Government composed by committees, deciding about everything concerning the state. Again, the way the World State will be established is written with a great similitude to *The World Set Free*. What is positivist about Wells’ approach is the way he wanted to reach his goal of united nations. Wells inherited the idea of famous Czech person, Comenius (who he calls Komensky). In *The Bible of Civilisation: Part One*, Wells states: “his (Comenius’) idea (...) of a common book, a book of history, science and wisdom, which should form the basis and framework for the thoughts and imaginations of every citizen in the world.”⁴¹ Comenius, Bacon’s student (who was a supporter of the empirical inquiry),

believed that true knowledge could be found in things as they existed in reality and when one came to understand how they came about. As a result, Comenius urged all people to recognize the interconnections and harmony among philosophical, theological, scientific, social, and political facts and ideas.⁴²

The process mentioned in the excerpt is called Pansophy. Comenius wanted, with the use of pansophy, to unite all known information about the world and reshape it into a “universal education”. Thanks to “universal education”, people would stop arguing about truths each field (philosophy, theology) holds. Wells outlined a very similar book, which he named *The Bible of Civilization*. His Bible was to be composed similarly to the original Bible, but with contents updated to suit modern world needs. The original Bible is used as a template, because “(the Bible) made a citizen with a code of duties and expectations.”⁴³ The beginning of Wells’ Bible would be made as a story about human evolution, using positivist inquiries as a base for its stories. Inquiries such as the harnessing of steam. Each story would contain a certain set of Laws. From this series of stories, Wells hopes: “we restore again to our people the lost basis

⁴⁰ Wells, *The World Set Free*, 126.

⁴¹Wells, Herbert George, *The Salvaging of Civilisation*, (New York: Macmillan & Co, 1921), 40, accessed October 9, 2016, <http://www.gutenberg.org/files/33889/33889-h/33889-h.htm>

⁴² “Johann Comenius (1592–1670)”, StateUniversity.com, accessed February 24, 2017, 2017, <http://education.stateuniversity.com/pages/1868/Comenius-Johann-1592-1670.html>.

⁴³ Wells, *The Salvaging of Civilisation*, 42.

of a community, a common idea of their place in space and time.”⁴⁴ Basically the whole *Bible of Civilization* would be a rewritten, updated version of the original Bible, but with positivist inquiries from modern times. Why using Positivism? Because Wells believed it is the best way to explain natural phenomena. By using great scientific discoveries and inventions from his time (Darwin’s evolution theory, harnessing of steam, etc.) a kind of patriotism towards the whole humankind would be awoken. Wells’ belief was that when people know about the scientific successes of their ancestors, they would do their best to be even better. Moreover, they will feel pride for the whole race, rather than only for their nation.

The next book, *The New World Order*, written in 1939 and published a year later is again Wells’ call for a World State. Wells’ lifelong dream was for humanity to be reborn into a united community, that would know no individual states and boundaries. In *The New World Order*, he stresses out the social problems and causes for the WWII and the necessity to create a World State through “scientific socialism”. He saw causes of the Great War in the incompetence of governments to keep up with the lightspeed progress of the science. Wells used the motive of the “scientific socialism” more than once, most notably in *A Modern Utopia* (1905). From the viewpoint of Positivism, Wells proposed a world state, that would use positive inquiry and its claims to organize its affairs. Positivism and Legal Positivism would then play a very important role. Wells often described a government that was composed entirely of scientists – Technocracy.

In the opening of the *Unsalted Youth* chapter, Wells states:

WE HAVE NOW TO examine these disruptive forces a little more closely, these disruptive forces which are manifestly overstraining and destroying the social and political system in which most of us have been reared. At what particular points in our political and social life are these disruptive forces discovering breaking-points? Chief among these breaking-points, people are beginning to realise more and more clearly, is the common, half-educated young man.⁴⁵

As disruptive forces are meant two negative aspects of science and the rapid evolution of scientific techniques. Wells named them “the abolition of distance” and “the change of scale” in human operations⁴⁶. The abolition of distance is, shortened and simplified, the ability to bomb any capital city on the planet within hours. To bomb it and wipe it out of the surface,

⁴⁴ Wells, *The Salvaging of Civilisation*, 44.

⁴⁵ Wells, Herbert George, *The New World Order*, (London: Secker & Warburg, 1941), 33, accessed October 9, 2016, https://www.voltairenet.org/IMG/pdf/Wells_New_World_Order-3.pdf.

⁴⁶ Wells, *The New World Order*, 16.

using planes and HE shells. The change of scale is the increased scope of everything concerning human affairs. Everything, including politics, warfare, production, economics, etc. Due to the change in scale, humanity is exhausting the world resources, and most importantly destroying itself at an incredible speed. Thanks to scientific discoveries and inventions, the scale of human operations has reached absurd broadness, compared to, e.g. 18th century. Both disruptive forces are entwined and gave birth to a certain type of person, who would be a new leader of the world. The common, half-educated man. Wells seen this “class” of young men as the remedy for the decaying society. They were born due to increased use of machines in industries, it’s prototypical member was a man, fairly educated in an elementary school, unable to find working place, for the state traded human workers for machinery. These men are able and willing to work, thinking critically about the world. They are the easiest to involve in a radical organization (such as the KKK, Nazis, etc.). They are young, naïve, and when not properly led cause mayhem. To contain and use the potential of the youth, an educational reform is proposed. Thanks to the education, the class of young men will change into followers of the Positivist legacy. Naïve, critically thinking, and well-educated, the class of young men would find Positivism as a reasonable doctrine to live by. Not only because Positivism is concerning science and epistemology, but is also radical in its own way. Comtean Positivism has its own determination on who is fit to be a “Positivist researcher”. As H. B. Acton wrote:

Comte saw that certain features of the behaviour involved in scientific research have at any rate the appearance of being morally desirable. The master-virtue of the scientific enquirer seems to be "open-mindedness." This is the willingness to follow the argument where it leads, and to pocket one's pride when it leads in a different direction from what one had predicted.⁴⁷

Interestingly, Wells’ process of collectivisation and the means used fits Comte’s vision of reorganized society. Comte, similarly to Wells, wanted to reorganize society in the third, Positive, stage. In his book, *System of Positive Polity* (1851-54), Comte “completed his formulation of sociology. The entire work emphasized morality and moral progress as the central preoccupation of human knowledge and effort and gave an account of the polity, or political organization, that this required.”⁴⁸. With a great similitude in both *The New World Order* and *The Salvaging of Civilisation*, Wells used the idea of a global education. Global education that would share the legacy of humanity through its historical scientific successes.

⁴⁷ Acton, H. B. "Comte's Positivism and the Science of Society." *Philosophy* 26, no. 99 (1951): 291-310, <http://www.jstor.org/stable/3747190>.

⁴⁸ “Auguste Comte”, The Editors of Encyclopaedia Britannica, accessed February 17, 2017, <https://www.britannica.com/biography/Auguste-Comte#ref27671>.

That would create common moral and other standards, on which the World State would be erected. After the education phase, the young, now fully educated man, will know only one dictatorship: “the dictatorship of the plain understanding and the invincible fact.”⁴⁹. Wells proposed new, Positivist, government. Before, and after the World War I, Wells never ceased his critique of European governments.

4.2 Progressivism

The Great War was seen as a necessary evil to destroy old governmental systems. In the *World Set Free* a new, reborn political system was established as a response to the nuclear holocaust. Use of atomic bombs was a catalyst which made humans recognize the incompetence of the old systems (imperialism, autocracies, lawyer-driven governments) to keep pace with the scientific revolution. In the book’s plot, when the power of atom was harnessed, everything in the society changed but the government. As Wells describes the prototypical pre-war government, both his fictional and European:

Government was a treaty, not a design; it was forensic, conservative, disputatious, unseeing, unthinking, uncreative (...) I was in the hands of the predominant caste of lawyers, who had an enormous advantage in being the only trained caste.⁵⁰

Wells’ and the Progressive movement’s aim was:

shifting to merit-based government by experts provided by theoretically nonpartisan appointed commissions or city managers systems that would apply businesslike expertise and fiscal efficiency to government.⁵¹

In the book, the lawyer-driven government leads the world into the Last War in 1956. Wells rightly predicted that the humankind would use atomic bombs on capital cities. Rigid old state systems, which resided in the prevailing opinion that whoever has the most powerful weapons is the World power, are to blame. Countries were stuck in an endless loop of arms race, warring, and pacts. When the war eventually came, involved states have not hesitated to use atomic bombs to devastate their opponents. In reality, the rising fear of Progressives, Socialists and other movements was:

⁴⁹ Wells, *New World Order*, 74.

⁵⁰ Wells, *New World Order*, 27.

⁵¹ Flanagan, Maureen A. “Progressives and Progressivism in an Era of Reform” Oxford Research Encyclopaedias. accessed February 27, 2017, doi: 10.1093/acrefore/9780199329175.001.0001.

The legal and political organisation of the earth in the middle twentieth century was indeed everywhere like a complicated garment, outworn yet strong, that now fettered the governing body that once it had protected.⁵²

Now, focusing on the establishment of the World Republic, reader observes the very birth of a Technocratic state. Progressives presumed Technocracy to be a “natural and inevitable consequence of social evolution.”⁵³ To be deemed Technocratic, the state must bear distinctive features. Technocracy is a form of organizational structure or system of governance in which decision makers are selected based on technological knowledge.⁵⁴ After the establishment of the Council during the Brissago conference, the governmental power it represented slowly shifted to the hands of various committees. Similarly, as Progressives tried to implement into the social system. In the United States, president T. Roosevelt introduced various departments to reduce monopolistic features of trade and also with the intention to establish a governmental overview of markets. One of such Department, established in 1906, was the Department of Agriculture. Its task was to “inspect and set standards in meat production”⁵⁵, but also to prevent rise of monopoly. A very similar approach to ills in the agriculture were taken in the novel:

(the council) developed a scheme for the progressive establishment throughout the world of the 'modern system' in agriculture, a system that should give the full advantages of a civilised life to every agricultural worker. The central idea of the modern system is the substitution of cultivating guilds for the individual cultivator, and for cottage and village life altogether.⁵⁶

Creation of private, individual farmers to ensure fair competition is a technique to end monopoly and ensure general good.

Another motive from the Progressive movement is the topic of equality between women and men. The Women Suffrage in the Progressive Era was not as recognized and famous as in the early 20th century, yet it was powerful. Suffragettes sought the right to vote, and to erase inequality of men and women. Progressives also called for equality of race and nationality. A critique of over sexualisation, and the increasing distinction of women in society is matching Wells' vision. Karenin, when asked about the future of women, replies:

⁵² Wells, *New World Order*, 30.

⁵³ "Technocracy." International Encyclopedia of the Social Sciences, accessed February 16, 2017, <http://www.encyclopedia.com/social-sciences/applied-and-social-sciences-magazines/technocracy>.

⁵⁴ "Technocracy." International Encyclopedia of the Social Sciences.

⁵⁵ Flanagan "Progressives and Progressivism in an Era of Reform".

⁵⁶ Wells, *The World Set Free*, 104.

I do not care a rap about your future - as women. I do not care a rap about the future of men--as males. I want to destroy these peculiar futures. (...) Humanity is not only naturally over-specialised in these matters, but all its institutions, its customs, everything, exaggerate, intensify this difference. I want to unspecialise women.⁵⁷

Thus, Wells through the words of Karenin summarized the whole idea of the Woman Suffrage in the Progressive Era and its offspring, modern Feminism.

Wells again, as in *The World Set Free*, returns to united world under one government. *The Salvaging of Civilisation* is a collection of essays Wells wanted to bring forward during his lectures in the U.S. He never got to use them as a lecture, for he was diagnosed with tuberculosis and had to recover, thus cancelled his visit in the U.S. In his essays, written in 1921, Wells reacts on social conditions in Europe changed by the Great War. He stresses out the necessity of an educational reform. An educational reform that is in the spirit of the Progressive educational reform, created by John Dewey. The Progressive Era, alongside with fiscal, governmental, and other reforms, brought into the light the issue of education. The goal of Progressive education was:

active participation by all citizens in social, political and economic decisions that will affect their lives. The education of engaged citizens, according to this perspective, involves two essential elements: (1). *Respect for diversity*, meaning that each individual should be recognized for his or her own abilities, interests, ideas, needs, and cultural identity, and (2). the development of *critical, socially engaged intelligence*, which enables individuals to understand and participate effectively in the affairs of their community in a collaborative effort to achieve a common good.⁵⁸

In *The Bible of Civilisation*, Wells uses the idea of Progressive education in a similar sense, yet takes different approach. As he says: "It is a modern error that education exists for the individual. Education exists for the community and the race; it exists to subdue the individual for the good of the world and his own ultimate happiness."⁵⁹ Wells modified the Progressive education idea to fit his concept of one world state. No longer is the education used to create an "aware" individual, but in Wells' vision, education should be

human brotherhood and a common law and rule for all mankind (...) a common control of human affairs must become part of the universal education. It must speak through the school and university. It is too

⁵⁷ Wells, *The World Set Free*, 129.

⁵⁸ "A Brief Overview of Progressive Education". University of Vermont, accessed January 15, 20017, <http://www.uvm.edu/~dewey/articles/proged.html>.

⁵⁹ Wells, *The World Set Free*, 102.

often forgotten, in America, perhaps, even more than in Europe, that education exists for the community, and for the individual only so far as it makes him a sufficient member of the community⁶⁰

The Progressive way of teaching is a tool to create a common ground for the world state. The whole *Schooling of the World* essay is dedicated to a plan concerning the necessary changes in the educational system. Many of Wells' remarks are also found in the reform traditions Progressives supported. Firstly, the necessity to adapt teaching techniques to each individual pupil. Wells stressed this out, using his own school experience:

(...) when I ran up a column of figures to add them I would pass from nine to seven quite surely and say sixteen; but if I went from seven to nine I had a vicious disposition to make it eighteen. Endless additions went wrong through that one error. I had fumbled into this vice and--this is my point--my school had no apparatus, and no system of checks, to discover that this had occurred. (...) Nobody ever put me through a series of test sums that would have analysed my errors and discovered these besetting sins of mine that led to my inaccurate arithmetic. And another thing that made my arithmetic wrong was a defect in eyesight. My two eyes haven't quite the same focal length and this often puts me out of the straight with a column of figures. But there was nothing in my school to discover that, and my school never did discover it.⁶¹

Secondly, its community, and the importance of education for community. A. Khon states about the approach of the Progressive education towards community: "Learning isn't something that happens to individual children - separate selves at separate desks. Children learn with and from one another in a caring community"⁶². The theme of community and education is used in a slightly different way. For Wells, uniform and modern way of education would work as a "cement" of society in his world state. All the pupils in the world would be taught the same history of the world, using the same prospects and learning materials. An interesting analogy is connected to this topic. In the earlier analysis of this book, it has been stated that Positivism would be the driving idea of the modern state. Thus, Progressive education will create positivist enquirers that would lead the world.

There are more themes from the Progressive education reform in Wells' essays, but their significance is not as appealing as those previously mentioned. In short, he also proposes economical school reform to help teachers, use of (then) modern devices like gramophones and

⁶⁰ Wells, *The Salvaging of Civilisation*, 12.

⁶¹ Wells, *The Salvaging of Civilisation*, 60-61.

⁶² "Progressive Education: Why It's Hard to Beat, But Also Hard to Find," accessed February 3, 2017, <http://www.alfiekohn.org/article/progressive-education/>.

cinematographs to make education more empirically based – they make studying more descriptive.

Apart from educational reform and monopoly control, Wells was also concerned about ecology. *The New World Order* was written in the 1939, when the Progressive movement passed its zenith. Yet, peculiar ideas and themes from it are present in this book. The most important is the theme of ecology and the need of conservation and preservation of natural resources. In the *Disruptive Forces* chapter concerning the change in scope, Wells describes the impact scientific and sociological progresses had on the Earth:

The new power organisations are destroying the forests of the world at headlong speed, ploughing great grazing areas into deserts, exhausting mineral resources, killing off whales, seals and a multitude of rare and beautiful species, destroying the morale of every social type and devastating the planet. (...) Quite apart from war, our planet is being wasted and disorganised. Yet the process goes on, without any general control, more monstrously destructive even than the continually enhanced terrors of modern warfare⁶³

Progressives, more specifically Theodore Roosevelt (founder of the U.S. Progressive Party), were among the first to fully realize the impact of the rapid increase of industrial production. The American Conservation movement was created to stop misuse and exploitation of land by the laissez-faire system. Roosevelt, who was the movement's most notable protagonist, established number of wildlife reservations, monuments, national parks, and more. Conservationists were the first in the human history to deal with such a large devastation of the planet Earth. Devastation threatening both natural resources and fauna.

Wells refers to one specific event that occurred in America. By “ploughing great grazing areas into deserts” is meant the Dust Bowl. A catastrophe, that happened in 1930's, during the presidency of Franklin Delano Roosevelt, T. Roosevelt's cousin. Dust Bowl were a series of disastrous droughts and erosions that climaxed in enormous dust storms, leaving the prairie soil unusable. Dust Bowl is a horrid display of agriculture without recourse to local wildlife and ecology. Events that led to the Dust Bowl were connected to new technologies and their misuse. Farmers on American and Canadian prairies used tractors to plough the land. What they failed to predict was the fact that by deep ploughing, they destroy low-grass plants. Unfortunately, it held water in the soil, and worked as a cement, that fastened the ground during winds. By destroying it, the soil eroded, and when winds came, the mixture created immense dust storms

⁶³ Wells, *The New World Order*, 19.

that veiled prairies in dust. Also, triggered a migration of farmers. Not only to counter the devastating effect the Dust Bowl had, F. D. Roosevelt created *The New Deal*.

As stated in the Theoretical chapter, Progressivism and Socialism are dealing with same social flaws, yet they differ in ways they want to achieve remedy. On the account of Roosevelt's *New Deal*, Wells wrote:

The New Deal is plainly an attempt to achieve a working socialism and avert a social collapse in America; it is extraordinarily parallel to the successive "policies" and "Plans" of the Russian experiment. Americans shirk the word "socialism", but what else can one call it? ⁶⁴

F. D. Roosevelt was influenced by his cousin, the "progressive champion". "In the New York Senate Roosevelt learned much of the give-and-take of politics, and he gradually abandoned his patrician airs and attitude of superiority. In the process, he came to champion the full program of progressive reform."⁶⁵ *The New Deal* was a set of reforms, that was supposed to lead America out of the crisis, which rose at the end of the "roaring twenties". Wells demonstrated, how thin the boundary between Progressivism and Socialism is by comparing *The New Deal* with Communism.

4.3 Scientism

An idea from Scientism is found in the ending chapters of *World Set Free*. Wells, through the words of Karenin, expresses the necessity of Eugenics. Karenin shares his thoughts about "deformed" people. He was born, presumably, with polio and has deformed body and is nearly immobilized. When he arrives at a clinic where he should be treated, he says to Dr Fowler:

You make me feel as though I was the last of deformity - Deformity is uncertainty – inaccuracy. My body works doubtfully, it is not even sure that it will die or live. I suppose the time is not far off when such bodies as mine will no longer be born into the world.⁶⁶

After Dr Fowler remarks that body is but a vessel for the human spirit, Karenin expresses his hope: "But some day perhaps you will be able to put a body that is wrong altogether right again. Your science is only beginning."⁶⁷ In the Section 8 of *The Last Days of Marcus Karenin* chapter, Fowler mentions an experiment, that closely resembles assisted reproductive technology:

⁶⁴ Wells, *The New World Order*, 38,

⁶⁵ "Franklin D. Roosevelt," The Editors of Encyclopaedia Britannica, accessed January 24, 2017, <https://www.britannica.com/biography/Franklin-D-Roosevelt>.

⁶⁶ Wells, *The World Set Free*, 118.

⁶⁷ Wells, *The World Set Free*, 118.

(...) Tchen, who was beginning to define clearly the laws of inheritance and how the sex of children and the complexions and many of the parental qualities could be determined.

'He can actually DO----?'

'It is still, so to speak, a mere laboratory triumph,' said Fowler,

'but to-morrow it will be practicable.'⁶⁸

Assisted reproduction technology is perfectly fit for practising selective breeding, for it allows to choose the best genes to be used to breed only the “fittest”. Such act would then speed up the Darwin’s evolution process. John Galton, friend of Herbert Spencer and C. Darwin’s cousin created Eugenics as a “tool” for Social Darwinism. The birth of Eugenics as a science dates to the beginning of 20th century. Bruce Thornton explains the initial success of Eugenics:

For the first three decades of the twentieth century, eugenics was accepted as “settled science,” and adherence to its theories was a sign of intellectual sophistication and superiority. Professors and esteemed scholars from the nation’s most prestigious universities published eugenics research and started academic programs teaching this new “science.”

An interesting connection to *World Set Free* is found in A. Huxley’s *Brave New World*. The whole world of the *Brave New World* seems like the one described in *The World Set Free*. Although Wells wrote the book in 1913 and Huxley in 1932, Huxley’s vision of a future world seems like Wells’ vision, only more developed. Huxley’s book is more sceptical about the importance of science for society, contrary to Wells’ positive portrait of a society based on science. Wells describes a world, in which science is the only way of salvation for humankind. A world, in which science can solve anything and is a way to absolute freedom and general good. Huxley offers a very different sight. World under scientific dictatorship, that organises its every part with recourse to science.

Apart from Eugenics, the books share another common idea. The society needs to get rid of sexual love and erotic themes. In the *World Set Free*, Karenin explains the necessity of abolition of sex. He says to the young poet Kahn:

We carry an excessive burden of sex and sexual tradition still, and we have to free ourselves from it. We do free ourselves from it. We have learnt in a thousand different ways to hold back death, and this sex, which in the old barbaric days was just sufficient to balance our dying, is now like a hammer that has lost its anvil, it plunges through human life.⁶⁹

⁶⁸ Wells, *The World Set Free*, 133-134.

⁶⁹ Wells, *The World Set Free*, 128.

In *Brave New World*, reproduction is done through Eugenics and breeding in bottles. The abolition of sexual intercourse as a tool of reproduction is done through contraception and/or sterilization. The value of sexual love is diminished into a game, which is played by small children:

two children, a little boy of about seven and a little girl who might have been a year older, were playing, very gravely and with all the focussed attention of scientists intent on a labour of discovery, a rudimentary sexual game.⁷⁰

Why is it important to abolish and diminish sexual love and strip it of its emotional value? Khan, a young poet from the *World Set Free* remarks: “Quite apart from reproduction the love of the sexes is necessary. Isn't it love, sexual love, which has released the imagination?”⁷¹ Apart from the fact that Scientism does not include emotions into its epistemology, a world ruled by scientists, Technocracy, despises imagination, for science is based on empirical enquiry. In Huxley’s novel, love and erotic themes are generalized for the very same reason. Using imagination may bias the outcome of the conducted scientific inquiry. Karenin in *The World Set Free* defends the idea of sexual love abolition, as a tool to end the differences and inequality of genders. A topic, which Huxley also used in his novel, yet stressed out that there will always be a difference between genders, as Franck stated: “And yet, the equality is not quite complete — we never hear of a female World Controller or another high official.”⁷²

Wells used the topic of Eugenics also in *The Salvaging of Civilisation*. He briefly mentions it, but does not investigate any further, stating:

one has to remember one entire difference between the possible breeding of human beings and the actual breeding of dogs and horses. We breed dogs and horses for uniformity, for certain very limited specified points--speed, scent and the like. But human beings we should have to breed for variety: we cannot specify any particular points we want. We want statesmen and poets and musicians and philosophers and swift men and strong men and delicate men and brave men. The qualities of one would be the weaknesses of another.⁷³

This statement sums up that Wells was convinced Eugenics are not yet ready to be implemented into the society, but might be introduced later.

⁷⁰ Huxley, *Brave New World*, 23.

⁷¹ Wells, *The World Set Free*, 129.

⁷² Matthew J. Franck, "Brave New World, Plato's Republic, and Our Scientific Regime" (The New Atlantis, Number 40, Fall 2013) 73-88.

⁷³ Wells, *The Salvaging of Civilisation*, 57.

Interestingly, compared to the two previous books, the *New World Order* is scarce with nods to Scientism. Interestingly, because Wells did not use topics of Eugenics or abolition of love, which were in the previous books. On the other hand, Wells is very concrete how should be his World State organized and by whom. As previously stated in the Positivism analysis of this book, Wells called for educational reform to create positivist enquirers. What would be the consequences, should positivist enquirers be governing the world? Wells does not provide that in *The New World Order*, but in his other book, *A Modern Utopia* (1905), his vision is very clear. In the modern utopia, science is the only way the whole world is governed. A previously stated Technological Utopia ruled by a Technocratic society. Concerning, for example, the previously stated Progressive ideas in *New World Order*, the scientific government will have absolute power over the natural resources. “In Utopia we conclude that (...) all natural sources of force, and indeed all strictly natural products, coal, water power, and the like, are inalienably vested in the local authorities”⁷⁴

⁷⁴ Wells, Herbert George, *A Modern Utopia* (Chapman and Hall, 1905), 51, accessed October 9, 2016, http://www.hubertlerch.com/pdf/Wells_A_Modern_Utopia.pdf.

5. Evaluation of conducted analyses with recourse to Wells' life stages

The outcomes of conducted analyses of Wells' sci-fi novels all state that Wells used the "positivist way" in explaining what was not yet discovered. Thanks to his years at the Royal College, he knew outlines of most natural sciences, including theoretical physics. Because Positivism is concerning natural sciences and sociology, Wells used the natural Law system and natural phenomena to explain fictive inventions in his sci-fi works. The reason why he used positive epistemology is to make the non-existing phenomenon seem vivid and real. It is almost certain that readers in the 19th century must have truly believed in time travelling, Griffin's invisibility potion and the Heat-Ray of the Martians. These three were not primarily invented by Wells, but he took a very scientific approach to their description, thanks to his education in natural sciences.

During his school years, Wells learnt another virtue, that was a reason he used Positivism. Unity in all human affairs. Positivism is organized and offers unity of all through one system of epistemology. When describing his life-long dream of united world under one government, Wells always saw positive knowledge as the base stone on which his dream state will be built. In *The World Set Free*, Wells uses the Positivist Calendar to show that everything in his world will be outlined. In *The Salvaging of Civilisation*, he proposes to create a new Bible based on positive knowledge. In *The New World Order*, positivist epistemology is proposed to breed future leaders of the world. Wells wanted to change the world using that he relied to the most: Science. Unfortunately, Wells' scientific education made him use topics of Scientism, which is now seen with a pejorative mood to its name and claims. Wells warned in *The War of the Worlds* about cruel misuse of scientific inventions. He was pro-eugenics, because it was the "scientific" way to deal with overpopulation and biased scientific enquiries. He proposed to abolish physical love and sex, the explanation of this cause was given by Haynes, Wells' biographer:

In *The Days of the Comet* has as its major theme a study of jealousy and the evil passions it (sexual love) spawns in the lives of individuals and of society, but again Wells knows of no means to overcome it by an act of will. He can only juxtapose the portrait of a new society where such passions no longer exist (...)⁷⁵

⁷⁵ Haynes, Roslynn D, *H.G. Wells: Discoverer of the Future: The Influence of Science on His Thought* (London, The Macmillan Press, 1980), 189.

In the Days of Comet was published in 1906. Wells found out the way to overcome the ills – by abolition of sexual love. There is an interesting analogy in Wells' and A. Huxley's works. *The World Set Free* is a start of a Technocracy, *Brave New World* is the same state but more developed and led by science. Last is *The Time Machine*, where the society still has some of the customs from *Brave New World* (e.g. treating sexual intercourse as a game) but abandoned science. This analogy shows how would a society develop under the totalitarian rule of science. In the first stage, science would bring joy and happiness. Then, in the second stage, the totalitarian regime controls everything using various scientific fields. The last stage is recourse to primal behaviour and retardation of knowledge. Topics of evolution and devolution, present in *The Time Machine* and *The War of the Worlds* are also a direct outcome of Wells' education. The most influential teacher of Wells, T. H. Huxley, was a notorious promoter of Darwin's evolution theory. After Wells shifted to atheism, the evolution theory held all answers to his questions about human origins and further development.

And last, why did Wells wanted to create a “scientific” socialism? The answer is, again, given by Haynes: “they (Wells' sociological proposals) may nevertheless all be seen as emanating from the desire for order and efficiency with which he had been imbued as a science student.”⁷⁶

Wells' political views are best known to be Socialistic. He became a socialist because he saw the incompetence of old governments to cope with the progress of science and technology. During the writing of his science fiction novels, he was almost a fanatic socialist. There, his social critique of British Imperialism was born. Yet, Wells left the socialist Fabian society. Firstly, because it was not radical enough, secondly, because it did not offer as advanced reforms as he imagined. Wells wanted an educational reform, for he was a teacher himself. Progressives created an educational reform, which he mentioned in his books. He used not the whole idea of Progressivism, but individual themes he thought were fundamental to establish his dream state. The critique of British class system in *The Time Machine*, British Imperialism in *The War of the Worlds*, or his demonstration of virtues that are important for society in *The Invisible Man*, are all outcomes of his observations of social ills. Ills, that both Socialism and Progressivism sought to remedy. His science-fiction novels do not contain any kind of solution to the issue they stress out, but Wells proposed countermeasures in his non-fiction books.

⁷⁶ Haynes, H.G. *Wells: Discoverer of the Future*, 82.

In *World Set Free*, Imperialism leads to a world war and is destroyed, as are social classes. “Good” virtues are established across the society, and all leads to a “happy end”. In *Salvaging of Civilisation*, Progressive educational reform creates a new and better world, and in *New World Order*, the Progressives’ legacy is carried out in the form of ecology. In *New World Order*, Wells proposes to “Westernize” the collectivisation. Progressivism is, as was stated in the theoretical part, “the driving idea of the Western civilization”. Wells, who was aware of the American movement, emphasized W. Wilson’s contribution to his dream of a World State in *The Salvaging of Civilisation*:

(...)President Wilson's advocacy of the League of Nations idea, in its first phase in 1918, before the weakening off and disillusionment of the Versailles Conference. Just for a little while it seemed that President Wilson stood for a new order of things in the world, that he had the wisdom and will and power to break the net of hatreds and nationalisms and diplomacies in which the Old World was entangled.⁷⁷

Wells took liking in some of the Progressives’ reforms and used them in his books to battle the society’s ills. His life was turbulent, yet his political views were stable. In all analysed non-fiction works, he proposed the same World State. Analysed books are a representation of Wells’ responses to major events in Europe’s history. *The World Set Free* was written on the eve of WWI, in 1913 and echoed Wells’ fear of destruction of humankind. Same as *The Salvaging of Civilisation* in 1921, and the *The New World Order* in 1940. In the first two, Wells predicted a second war to follow the Great War. In *The New World Order*, when WWII was in full swing, Wells’ vision have not changed a bit. Still, he urged people to create a collective world based on science, that would know no war, only peace. Progressivism worked as a counterweight to Socialism and Communism in Wells’ visionary literature.

⁷⁷ Wells, *The Salvaging of Civilisation*, 9.

Conclusion

In the theoretical part, events that influenced British literature the most were determined as: Industrialization and connected social changes, the fear of scientifically superior invaders in Invasion literature, C. Darwin and the evolution and devolution, science-fiction novels, utopias and dystopias. The concepts of Scientism, Progressivism, and Positivism were defined as: Scientism is an act of believing that natural sciences hold all answers to the world and can solve anything, including that what is not reserved for science to solve. Progressivism was an political movement, which sought to remedy social ills by using science as a tool and government as a vessel to carry out reformation. Positivism is an epistemological philosophy, that believes sensory experience and linear sequence are the only path to knowledge. The same applies to sociology.

In the practical part, the analyses state that Wells used Positivism to vividly depict non-existent inventions as well as to show the limitation of human knowledge. On the other hand, Positivism was used also to create an ideal society for his dream world. The use of Progressivism was also to show social problems. Progressivism was serving as an equalizer between Socialism and Communism in Wells' dream world. With the use of Positivism, Wells had to use themes from Scientism. He saw Eugenics as the scientific way to deal with social problems, abolition of sexual love to eradicate jealousy and negative feelings, which were its side effects.

In the final chapter, it is explained that Wells used themes from Positivism because he was a scientist and wanted unity of world, which Positivism offers. With the use of Positivism, he inevitably used themes from Scientism. He implemented Eugenics and abolition of sexual love to his works because they were interfering with his idea of unity. Lastly, Wells used Progressivism because it offered reformation he was missing in Socialism.

Resumé

Tato bakalářská práce je zaměřená na přítomnost témat z konceptů Scientismu, Progresivismu a Pozitivismu ve vybraných dílech Herberta George Wellse. Wells je považován za zakladatele žánru vědeckofantastické literatury, který stále nabírá na popularitě. Jeho díla, jako např. *Válka světů*, *Neviditelný* a *Stroj času* jsou stále populární a mnohokrát zfilmovaná. Wells byl kromě literárního tvůrce také vizionář a prorok, který celý svůj život zasvětil vědě a technice. Pomáhal utvořit svět, ve kterém se nyní nacházíme, i když je často opomíjen ve prospěch slavnějších spisovatelů druhé poloviny 20. stol. Koncepty Scientismu, Progresivismu a Pozitivismu byly vybrány proto, že se stejně jako Wells zabývají zkoumáním vědy a jejího dopadu na lidskou společnost. Ve svých dílech o budoucím směřování lidstva Wells vždy kladl důraz na pokrok ve vědě a technice jako vedoucích aspektů budoucích civilizací.

Práce je rozdělena do dvou částí, teoretické a praktické. V teoretické části je popsáno ovlivnění britské literární tvorby vědou, a to od poloviny 19. stol. do poloviny 20. stol. Dopad na literaturu v 19. století měla hlavně industrializace a násilné změny v sociálním rozdělení Británie. V tomto období vznikla řada literárních děl, zabývajících se problematikou dělnické třídy. Wellsova kniha *Stroj času* se k této kritice sociálních poměrů jednoznačně řadí. Díky pokroku ve vědě a z nejistých a napjatých vztahů mezi Evropskými státy vznikl nový žánr knih, tzv. Invazní literatura, kterou Wells obohatil knihou *Válka světů*. V ní představil mimozemské kolonizátory. Dále pak britskou literární tvorbu ovlivnila kniha *O původu druhů* Charlese Darwina. Darwinova teorie evoluce dala vzniknout mnoha spekulacím a adaptacím. Jednou z nich byl tzv. sociální darwinismus, na který Francis Galton reagoval vytvořením vědy nazvané Eugenika. Sociální darwinismus podporoval kolonizace jako akt vítězství silnějšího druhu nad slabším, což Wells kritizoval ve své knize *Válka světů*. V předválečném období se Wells zabýval hlavně žánrem utopií a dystopií. Po první sv. válce vznikla celá řada dystopií, z kterých je asi nejznámější *Konec civilizace* A. Huxleye.

Teoretická část pokračuje vysvětlením užitých konceptů. Pozitivismus je vymezen jako gnozeologie, která chápe sensorické vjemy jako jediný validní způsob získání informací. K účelům této bakalářské práce byla vybrána pozitivní filozofie Augusta Comta, protože jeho učení bylo nejvlivnější v období, kdy Wells literárně tvořil. Podle definice Comta a Johna Stuarta Milla je pozitivní gnozeologie definována jako lineární sekvence akcí a událostí, která je završena formulací Zákona reprezentujícího validní informaci. Lineární sekvence je: Pozorování, Logická analýza, Zdůvodnění, Aplikace, Znovuověření, z kterého závěr tvoří Zákon. Mill zdůraznil, že lidské vědění není a nikdy nebude absolutní. Comte, mj. také

zakladatel sociologie, rozšířil gnozeologii pozitivismu právě i do sociologie, kde tvrdí, že stejná lineární sekvence se vztahuje i na mezilidské vztahy.

Učení pozitivismu dalo vzniknout další ideologii, a to scientismu. Scientismus je vymezen jako přílišný důraz na přírodní vědy a ignorace ostatních věd, které se zabývají neměřitelnými ideami a hodnotami, jako např. teologie nebo metafyzika. Paradigma scientismu odmítá jakékoli teorie a spekulace nezaložené na přírodních vědách, a také se zasazuje o to, aby se přístup k informacím převzatý z pozitivismu rozšířil i do dalších věd. Důsledkem byla již zmíněná eugenika, která se snažila řídit lidský vývoj a jeho směřování, což bylo implicitně rezervováno pro teologii a metafyziku.

Jako poslední je vymezen progresivismus, a to jako politické hnutí v Americe, činné od roku 1890 do roku 1920. Progresivisté chtěli reformami ukončit ekonomiku laissez-faire, docílit rovnoprávnosti žen a mužů, smazat rozdíly mezi sociálními třídami, zavést tzv. Progresivní reformu vzdělávání a více. Progresivismus vznikl jako odpověď na sociální změny způsobené industrializací a laissez-faire ekonomikou. Jeho ideje jsou velmi podobné Socialismu, také se snaží se změnit stejné sociální a ekonomické problémy ve státě. Liší se však ve způsobu, jakými má náprava proběhnout. Dále má pak progresivismus filozofickou část. Ta praví, že každý stát musí mít rozvinuté čtyři hlavní pilíře, tj. technologii, sociologii, vědu a ekonomiku, aby byl považován za vyspělý a mohl dosáhnout veřejného blaha.

Praktická část je rozdělena na dvě sekce, v první sekci je analyzována Wellsova vědeckofantastická literatura, v části druhé jeho neliterární díla. Obě sekce jsou rozděleny do třech podkapitol, v každé jsou díla analyzována kvůli přítomnosti daného konceptu. Obě sekce obsahují analýzy tří děl.

V první podkapitole první části praktické části je hledána přítomnost myšlenek pozitivismu ve sci-fi románech. Po analýze byla zjištěna přítomnost gnozeologie pozitivismu v dílech *Stroj času* a *Neviditelný*, a to v částech popisujících nové vynálezy, tj. stroj času a lektvar neviditelnosti. Jako důkaz toho, že se jedná o pozitivismus, je předložena daná část z románů a je srovnána s myšlenkami pozitivismu. Jako výsledek této analýzy je fakt, že Wells použil přístup pozitivismu k získávání informací, tj. užití existujících přírodních jevů a zákonů a následná formulace nového zákona na základě lineární sekvence. Užitím pozitivismu se Wells snažil zvýšit opravdovost svých vynálezů. Proto jeho fiktivní vynálezy projdou kompletní lineární sekvencí založené na reálně existujících přírodních zákonech. Třetí analyzované dílo je *Válka světů*, kde jsou prvky pozitivismu nalezeny ve Wellsově tvrzení, že lidská vědomost

není absolutní, reprezentovaná popisem lineární sekvence k určení zákonů pro paprskomet a černý kouř, které selžou na předposledním stupni, tj. na Aplikaci. Motiv selhání vědy užil proto, aby čtenářům ukázal, že lidské vědění je omezené a nebude nikdy absolutní, ani s pomocí nejvyspělejších vědeckých metod.

Druhá podkapitola se zabývá hledáním prvků progresivismu ve stejných dílech jako podkapitola předešlá. Progresivismus byl po obsahové analýze díla *Stroj času* nalezen v kritice britského imperialismu, který je v knize reprezentován společností dvou ras, Eloiů a Morloků. Jejich vztah reflektuje třídní rozdíly viktoriánské Anglie. Wells použil motivy jako absence empatie a sympatie a uzavřenost, které byly vlastní anglické vyšší třídě. V díle kritizuje to samé, co členové hnutí progresivismu. Vymezení progresivismu je užito pro vysvětlení motivu kanibalismu a strachu, který ovládá Morloky. Morloci jsou představiteli dělnické třídy, kteří mohou mít moc ve svých rukou, ale kvůli jednoduchému strachu se uchylují ke zvrácené symbióze se svými nepřáteli, rasou Eloiů. V díle *Neviditelný* byly nalezeny prvky progresivismu v kritice individualismu a hledání dobra pro jednotlivce. Wells zde znovu kritizuje to, co členové hnutí progresivismu, a to zneužití vědy pro dobro jednotlivce místo celé společnosti. Negativní charakterové vlastnosti jsou v knize přehnané, aby byla kritika patrná. Poslední analyzované dílo v této podkapitole je *Válka světů*. Srovnávání lidských kolonizátorů s marťany poukazuje na kritiku sociálního darwinismu. Wells zde dále kritizuje britskou kolonizaci Tasmánie a znovu se shoduje s progresivisty v odsouzení zbytečné brutality a ničení kolonizované země. Progresivisté se snažili využít kolonizace jako nástroje k rozšíření rozvoje do dalších částí světa.

Třetí podkapitola se zabývá výskytem scientismu. V prvním analyzovaném díle *Stroj času* byly prvky scientismu nalezeny v devoluci, která je završena absencí vědy ve společnosti. Devoluce scientistické společnosti je vysvětlena pomocí děl *Ostrov Dr. Moreaua*, *Konec civilizace* a *Stroj času*. Dílo *Konec civilizace* představuje počátek scientistické společnosti, její úpadek a návrat k primitivnímu chování je prezentován v *Ostrově Dr. Moreaua*, a následná absence vědy a kanibalismus ústí ve společnost v díle *Stroj času*. V této knize je poprvé zmíněna rovnoprávnost žen a mužů spolu s absencí emocí spojených se sexem. *Stroj času* je z tohoto hlediska doplněn o informace z díla *Konec civilizace* A. Huxleye, které vysvětluje, proč se scientistická společnost snaží vymazat sexuální emoce a devalvovat sex na pouhou hru. Kritika scientismu byla také nalezena v knize *Neviditelný* i ve *Válce světů*. V prvním případě je představena rozporem mezi vědou a technikou spolu se ztělesněním negativních vlastností scientismu hlavní postavou díla. *Válka světů* zase poukazuje na zneužití moderních technologií k masakrování

jiných druhů. Na základě analýzy chování Mart'anů a jejich důrazu na vědu, je jejich společnost utvořena na dogmatech scientismu. Znovu je použito jako příklad dílo Huxleye, které reprezentuje možné počátky civilizace, která se vyvinula až do podoby mart'anů. Vnitřní tělesná stavba a rozmnožování mart'anů poukazuje na civilizaci, jejíž vývoj byl řízen eugenikou.

V druhé části jsou stejným způsobem analyzována neliterární díla. V první podkapitole druhé části byly v dílech hledány prvky pozitivismu. V prvním díle *Osvobozený svět* Wells použil hned dva koncepty z učení pozitivismu, a to Zákon tří stádií a Comteho Pozitivistický kalendář. Po kritické analýze je společnost budoucnosti, kterou zde Wells navrhuje, vymezena jako technologická utopie, a to kvůli použití vědy jako hlavního měřítka pro organizování státu, což byla zásada Comteho definice pozitivismu. Stejně tak i v druhé analyzované knize, *Záchrana civilizace*, kde používá ideje J. A. Komenského o univerzálním vzdělání a navrhuje svou vlastní knihu, *Bibli civilizace*. *Bible civilizace* by měla být souhrn nejdůležitějších lidských objevů a přírodních zákonů, popsaných pozitivistickou metodou lineární sekvence. Na základě učení této knihy dojde k vymazání jednotlivých států a hranic, a díky globální hrdoosti a pýše vůči celé lidské rase vznikne unitární společnost. Třetí dílo, *Nový světový řád*, se také zabývá vzděláváním. Wells popisuje, jak a z koho vytvořit nové vůdce světa a nastiňuje, jak vytvořit globální vzdělávací systém vedoucí k propagaci pozitivismu. Navrhuje také revoluci, nápadně se podobající Comteho státní revoluci, která se měla udát ve třetím stádiu jeho Zákona tří stádií.

Druhá podkapitola se zabývá prvky progresivismu. Za pomoci sekundárních zdrojů je v díle *Osvobozený svět* nalezeno několik prvků progresivismu. Prvním je Wellsem navrhovaný nový systém vlády, tzv. Technokracie, která byla podle progresivistů nevyhnutelnou budoucností. Také navrhuje reformu zemědělství, kterou progresivisté úspěšně použili v Americe. Dalším prvkem je téma rovnoprávnosti žen, které zde Wells propaguje. Jako poslední je kritika vládních systému v neschopnosti držet tempo s rychle se vyvíjející vědou a technikou. Druhé dílo, *Záchrana civilizace*, se z progresivistického hlediska zabývá součástí Progresivního hnutí, a to Progresivní reformy vzdělávání, kterou navrhl John Dewey. Wells zde tuto reformu téměř přesně popisuje, a to jako odpověď na problémy, které sám jako žák zažil. Ve třetím díle, *Nový světový řád*, je použit motiv ekologie. Stejně jako Wells, se i progresivisté jako první zabývali tématy ekologie a ochrany životního prostředí. Přírodní katastrofa Prachová pánev je použita jako upozornění na nadměrné využívání a ničení přírodních zdrojů. Citací souborů reformy *Nový úděl* F. D. Roosevelta Wells poukazuje na velkou podobnost mezi socialismem a progresivismem.

Třetí podkapitola se zabývá prvky scientismu. V *Osvobozeném světě* je scientismus přítomen v absenci emocí spojených se sexem a jeho devalvace na hru, dále pak v eugenice. V prvním případě Wells zdůrazňuje, že teprve až se lidstvo zbaví emocí spojených se sexem, může nastat absolutní rovnoprávnost pohlaví. Poté vyjadřuje naději, že eugenika bude brzy schopná „tvořit“ lidi bez deformací či nemocí. Wells použil téma eugeniky i v pořadí druhém díle, *Záchrana civilizace*, ale nijak jej nerozvádí. Poslední analyzované dílo, *Nový světový řád*, neobsahuje žádné známky použití prvků z učení scientismu.

Třetí část je věnována vysvětlení závěrů předešlých analýz s ohledem na životní etapu Wellsova života. Jako důvod, proč Wells použil pozitivistickou lineární sekvenci ve svých vědeckofantastických románech, je uveden jeho celoživotní vztah k přírodním vědám. Jako žák se naučil spoustu o disciplínách zkoumající přírodní zákony, což využil při popisu fiktivních vynálezů. Díky tomu jsou jeho popisy věrohodné a lehce představitelné. V neliterárních dílech Wells použil pozitivismu proto, že nabízí jednotu, a to jak ve společnosti, tak ve vědě. Myšlenku potřeby jednoty Wells získal při studiu na vysoké škole. Naneštěstí díky své lásce k vědě použil i myšlenky scientismu, a to eugeniku a zrušení sexuálního vztahu. Eugeniku proto, že to byla vědecká cesta k dokonalosti a jednotě společnosti, zrušení a devalvace sexu užil proto, že nevěděl, jak jinak s emocemi se sexem spojenými naložit.

Prvky progresivismu v jeho science fiction můžou být chápány stejně jako prvky socialismu. Protože Wells nenabízí žádnou odpověď, jeho kritika se dá chápat z pohledu obou konceptů. Kritizoval to, co socialismus i progresivismus. Ve svých neliterárních dílech, psaných jako odpovědi na důležité momenty v historii Evropy byl již přesvědčen o selhání komunismu a socialismu v Rusku. Proto používal prvky progresivismu jako protiváhu k mnohem radikálnějšímu socialismu. Za celé období své tvorby se Wells nevzdal svého snu o světovém státě založeném na vědě a míru.

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