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Are Human Beings Ultimately Ignorant?

Huxleian Preoccupations in

H. G. Wells's The Time Machine and The War of the Worlds

This paper analyzes that part of Huxley's theories which denied the absoluteness and certainty of science and compares it to the representation of science given in the fin-de-siècle novels The Time Machine and The War of the Worlds by H. G. Wells. I shall argue that the scientific and the agnostic enterprises aimed at the explanation of knowledge as conducted by Huxley in the last decades of the nineteenth century inexorably led to an admission of ignorance. The same concerns are present in the scientific romances of Wells. In order to affirm this, I shall initially investigate how the scientific journalism that underpins Wells's early fiction shares Huxley's insistence upon the contingency of human knowledge, and then demonstrate how his novels take up these Huxleian preoccupations. This is achieved by means of the representation of the protagonists' accounts as not completely accurate and reliable because they are passionately involved in the events they witness. Moreover, Wells characterizes human knowledge of the external reality as imprecise and not offering any certainty which could guarantee lasting safety and comfort for human beings. Science and its method are finally represented by Wells as offering no definitive and useful knowledge of reality.

During the final decades of the nineteenth century, the debate over whether knowledge could be complete or was actually limited became central. The faculties of perception were put under analysis in order to establish the limits which prevented the human mind from reaching the "final truth." The study and application of the scientific method as advocated by the scientific naturalists was deemed to be conducive to an improvement of the individual's character, forging it with the discipline of reason, imagination and patient industry, and leading it to a rational, empirical and objective approach to reality. Nevertheless, the results of scientific research and the dissemination of knowledge advocated by the scientific naturalists were contradictory: on the one hand, science was deemed to better human life. According to Thomas Henry Huxley, in fact, science was extremely useful in the very material products it could furnish to the individual in everyday life, in the simple occasions of his daily actions. Huxley argued that practical life was being, and would increas-

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ingly come to be in the future, permeated by the ideas and subsequent products of science, in a sort of continual mutual exchange of facilitations between science and industry, because, since their interests were identical, the advances of both would contribute to each other's progress.¹

On the other hand, the scientific method brought no objective and ultimate knowledge of reality. All of the most brilliant scientists and agnostics of the age, such as John Tyndall, Herbert Spencer, Leslie Stephen and Karl Pearson, confessed that they were unable to furnish any final explanation about the reality surrounding human beings, nor any ultimate solution to the problem of the existence of God. What was asserted were basically "the demonstrated limitations of human intellect, which bounded the thought and knowledge of all people," as Bernard Lightman has argued.2 Humanity was then condemned to be confined to physical phenomena and natural laws because of its own physicality and its being grounded in temporality. This was explicitly stated by Huxley in the phrase "outside the boundaries of [the province susceptible of clear intellectual comprehension, scientific people] must be content with imagination, with hope, and with ignorance."3 Huxley argues that the universal laws that could be extrapolated from the order of nature are human explanations of the phenomena, not their actual causes: they are only the human expression of the order in the universe, not the illustration of its first causes.4 Ontological issues were therefore ignored in favour of a mere re-statement of reality according to formulas and phrases which could help the practical development of each individual's life through the subsequent inventions made by industry, but which could not explain life's origins, its end, nor its scope. As Huxley states, science "takes as its province only that which is susceptible of clear intellectual comprehension." 5 Science being a methodology artificially created by human beings which is based on the rules of inductive and deductive logic, a product of the supremacy of human reason, it deals only with that which is compatible with human intellect. In this respect, therefore, human intellect being limited by its physicality and temporality, science and its method cannot transcend them and, consequently, absolutely certain knowledge cannot be obtained.

Especially in the works published in the 1880s and 1890s, Huxley explicitly insists, in effect, on the fact that the knowledge laboriously acquired about external as

^{1.} Thomas Henry Huxley, "The Progress of Science 1837–1887," in *Collected Essays*, Vol. 1 (London: Appleton, 1898), 42–129, p. 55.

^{2.} Bernard Lightman, *The Origins of Agnosticism: Victorian Unbelief and the Limits of Knowledge* (Baltimore, MD: Johns Hopkins University Press, 1987), p. 135.

^{3.} Thomas Henry Huxley, "The Interpreters of Genesis and the Interpreters of Nature," in *Collected Essays*, Vol. 4 (London: Appleton, 1893), 139–163, p. 161.

^{4.} Thomas Henry Huxley, Science Primers: Introductory (London: Appleton, 1880), p. 13.

^{5.} Huxley, "The Interpreters," p. 161.

well as mental phenomena can aspire only to a maximum level of probability, because the human faculties involved in such a study are limited. He admits that he is not capable of furnishing any explanation about the conditions of the appearance of life on earth by arguing: "I find no record of the commencement of life, and therefore I am devoid of any means of forming a definite conclusion as to the conditions of its appearance." Similarly, by stating that "the limitations of our faculties are such that we never can be in a position to set bounds to the possibilities of nature," Huxley affirms the insolubility of the forces underlying the phenomena witnessed by humankind.7 On the one hand, according to him, knowledge of what extends beyond the human faculties of observation and experiment is a priori excluded from the subject-matter of the natural sciences. On the other hand, and most importantly, even the phenomena forming part of what can be grasped by human faculties cannot be observed in an "absolutely exact and exhaustive" way.8 In this respect, the limits of human knowledge prevent final gratification of the intellect: the method of observation of reality is valuable only in terms of approximation to the real nature of things, in terms of probable description of the external appearance of things-inthemselves as they are observed by the individual. Humankind, and men of science as part of it, have no other choice but to adapt to such conditions, to the lack of definitive knowledge.

In his writings on agnosticism too, Huxley repeatedly reaches the conclusion that an agnostic in the end "has no positive knowledge, [but only] . . . more or less probable ground for accepting any given hypothesis about the spiritual world." Knowledge thus seems to be based on probability rather than certainty, and, for this reason, agnosticism is presented not as a creed, but, in the same way as science, as a method. Such a method is based on the single principle of following reason and distrusting everything that is "not demonstrated or demonstrable:" the individual must affirm no truth unless supported by the logically-justifiable certainty offered by evidence.¹¹o In this way, the scientific and agnostic enterprises aimed at the explanation of knowledge as conducted by Huxley inexorably led to an admission of ignorance, to "a tolerably strong opinion as to the probabilities of

^{6.} Thomas Henry Huxley, Address to the British Association for the Advancement of Science (London: Appleton, 1870), p. 17.

^{7.} Thomas Henry Huxley, "Possibilities and Impossibilities," in *Collected Essays*, Vol. 5 (London: Appleton, 1894), 192–208, p. 198.

^{8.} Huxley, "The Progress," p. 63.

^{9.} Thomas Henry Huxley, "Agnosticism and Christianity," in *Collected Essays*, Vol. 5 (London: Appleton, 1894), 309–365, pp. 327–328.

^{10.} Thomas Henry Huxley, "Agnosticism," in *Collected Essays*, Vol. 5 (London: Appleton, 1894), 209–262, p. 245.

the case," not to a final generalisation transcending the single cases or underlying them. $^{\scriptscriptstyle 11}$

The preoccupation with epistemology and ignorance is central in H. G. Wells's works as well. Firstly, we should consider that Wells himself was a student of Huxley, whom he defined as "the greatest man I was ever likely to meet," and whose teachings he described as "three years of illuminating and good scientific work."12 Such an encounter with the scientific naturalist definitely formed Wells and his positions on scientific matters, which came to reflect his mentor's assumptions. In his article "The Scepticism of the Instrument," Wells clearly affirms that man is "finite and not final, a being of compromises and adaptations." As he argues, this is primarily caused by the imperfection of the human senses and their limits: "we distinguish between an external reality and the poor sides of it that our senses perceive."14 Furthermore, according to Wells, human reasoning is fallacious because it is often based on the belief in the existence of concepts such as the Absolute and the Infinite that are finally unprovable. Specifically, Wells thinks of what he calls the "Instrument of Thought" as imperfect as the human senses: "Human reason, in the light of what is being advanced, appears as a convenient organic process based on a fundamental happy misconception, and it may ... take us away from, rather than towards, the absolute truth of things."15 An explanation of things-in-themselves cannot be reached by the human mind, a concept which was formulated by Huxley as well.

Wells thus argues that ignorance is the final result of many investigations conducted by the human being both on the external reality and on the human mind itself. In his 1895 article "Bye-Products in Evolution," for example, he affirms: "with regard to the subtle mechanism of mind, we are even more in the dark than when we deal with the chemical equilibrium." ¹⁶ Therefore, man's confidence in his understanding of the external reality as well as in his capacity to subjugate nature and to evolve towards an improvement of the individual self and of society is questioned by Wells. He does not offer a pleasant picture of the future of humanity and expresses his doubts on the

^{11.} Huxley, "Agnosticism and Christianity," p. 311.

^{12.} Respectively: H. G. Wells, "Huxley," *Royal College of Science Magazine* 13 (April 1901) 209–211, p. 209; and H. G. Wells, "The Scepticism of the Instrument," eBooks@adelaide http://ebooks.adelaide.edu.au/w/wells/hg/w45mu/appendix1.html (accessed 26 November 2010)

^{13.} Wells, "The Scepticism of the Instrument."

^{14.} H. G. Wells, "Intelligence on Mars," in *H. G. Wells: Early Writings in Science and Science Fiction*, ed. Robert M. Philmus and David Y. Hughes (Berkeley, CA: University of California Press, 1975), 175–178, p. 177.

^{15.} H. G. Wells, "The Rediscovery of the Unique," in H. G. Wells: Early Writings, 21-31, p. 25.

^{16.} H. G. Wells, "Bye-Products in Evolution," in H. G. Wells: Early Writings, 203-205, p. 205.

enduring safety and happiness of humankind. Indeed, in his 1894 essay "The Rate of Change in Species," he argues:

Man, for instance, is indisputably lord of the world as it is . . . but his capacity for change as a species is, compared with that of a harvest mouse or a greenfly, infinitesimal. He would very probably go before the majority of such slight and flexible creatures. No doubt man is lord of the whole earth of today, but the lordship of the future is another matter.¹⁷

The present state of humanity, the contemporary advancement of knowledge and progress of science are thus seen in a positive way by Wells, but he does not believe with definitive certainty in the continuation of such a path in the future. Wells's scientific journalism thus apparently praises the present supremacy of the human being over the external world, but, instead of confiding in progress and development, presents the future as uncertain for humanity.

Such epistemological concerns are also reflected in the fin-de-siécle literary works of Wells. Indeed, science is the very foundation of both novels *The Time Machine* and *The War of the Worlds* according to different critics of the past decades. *The Time Machine*, for example, has been considered as a narrative which is "invested in evolution" but simultaneously undermines the concept of continual improvement of the species.¹8 Apart from its concern with technological advancement (as represented by the aliens' machines and weapons), *The War of the Worlds* has also been interpreted as reproducing "the perfect nineteenth-century myth of the imaginary war," or as an "anti-imperial satire" that allegedly offers a "postcolonial" perspective on the culture of the late-Victorian period by depicting a contrary colonization of the British Empire.¹9

^{17.} H. G. Wells, "The Rate of Change in Species," in H. G. Wells: Early Writings, 128–131, p. 131.

^{18.} Sylvia A. Pamboukian, "What the Traveller Saw: Evolution, Romance and Time-Travel," in *H. G. Wells: Interdisciplinary Essays*, ed. Steven McLean (Newcastle, UK: Cambridge Scholars Publishing, 2009), 8–24, p. 8. David C. Smith affirms that Wells's intention was to put "evolutionary theory into fictional practice": David C. Smith, *H. G. Wells: Desperately Mortal* (New Haven, CT: Yale University Press, 1986), p. 48. Emily Arder argues, instead, that in *The Time Machine* Wells mainly addresses "the discourse of degeneration": Emily Arder, "'Building of the New Age': Dwellings and the Natural Environment in the Futuristic Fiction of H. G. Wells and William Hope Hodgson," in *H. G. Wells: Interdisciplinary Essays*, 114–129, p. 115.

^{19.} Keith Williams, "Alien Gaze: Postcolonial Vision in The War of the Worlds," in *H. G. Wells: Interdisciplinary Essays*, 49–73, respectively pp. 53 and 69. See also Alexander C. Irvine, "War' and the Disease of Imperialism," in *Flashes of the Fantastic: Selected Essays*

These novels' investment in science is firstly visible when we consider that the protagonists of both tales are described as learned and practical men and, thus, they represent the nineteenth-century intelligentsia that was born out of the scientific milieu. In this way, they are presented as possibly capable of an effective, factual and truthful narration of the events they witness and experience. Nevertheless, they are often portrayed as irrational and not objective, and are therefore also characterized as unreliable narrators, whose testimony is questioned by the other characters of the story and (indirectly) by its reader. In The Time Machine, the Time Traveller is presented by the narrator as "one of those men who are too clever to be believed" (11).20 The protagonist is "a master of several sciences" by which he can build the machine capable of travelling through the fourth dimension which is time.²¹ However, as Patrick Parrinder has noted, he "often fails to live up to his ideal of scientific detachment."²² Although he frequently attempts to look at things "in a scientific spirit," (68) his reactions are rarely those of a man of science and "[his] behaviour in moments of crisis is typically hysterical, panic-stricken, negligent."²³ He often lingers on the description of the moments of "hysterical exhilaration," (20) "panic fear" (23) and "anguish of mind" (39) rather than on an effective analysis of the new world around him. He does not hesitate to describe the "kind of madness growing upon [himself]" (20) during the journey through time, the "passion of fear" (38) seizing him when suspecting that the Time Machine has probably been stolen, or his being "oppressed with perplexity and doubt" (55) at the discovery of the existence of the Morlock species. It would seem then that he fails to live up to the improvement of character guaranteed by the study and application of the scientific method as advocated by Huxley, although science is the discipline he appeals to in order to understand the world of the future.

However, the scientific theories elaborated by the Traveller are never based on facts, on the verification by experiment considered by Huxley to be the foundation of

from The War of the Worlds Centennial, Nineteenth International Conference on the Fantastic in the Arts, ed. David Ketterer (Westport, CT: Praeger, 2004), 33–41, p. 38.

^{20.} All parenthesized references are to this edition: H. G. Wells, *The Time Machine: An Invention* (London: Signet Classics, 2007 [1895]).

^{21.} Patrick Parrinder, Shadow of the Future: H. G. Wells, Science Fiction and Prophecy (Liverpool: Liverpool University Press, 1995), p. 44.

^{22.} Parrinder, Shadow, p. 44.

^{23.} Parrinder, *Shadow*, p. 44. See also J.R. Hammond, "Time as a First Novel: Myth and Allegory in Wells's Romance," in *H. G. Wells's Perennial Time Machine: Selected Essays from the Centenary Conference 'The Time Machine: Past, Present, and Future*, eds. George Slusser, Patrick Parrinder and Danièle Chatelain (Athens, GA: The University of Georgia Press, 2001), 3–11.

the scientific and human understanding of reality. As Peter Firchow has pointed out, in fact, "The Traveller's understanding of the future is solely based on his deductions, which . . . remain mere hypotheses to the very end." None of his theories is a finally verified and assured certainty. The several hypotheses formulated during the tale about the causes of the Eloi' and the Morlock's behaviour and appearance, such as vegetarianism (29) and communism (31), are recognized by the Traveller himself to be "very simple . . . and plausible enough – as most wrong theories are" (36). On another occasion, he admits: "this . . . was my speculation at the time. Later, I was to appreciate how far it fell short of the reality" (32). These phrases seem to recapitulate Huxley's epistemological thought regarding the fact that natural laws and formulas are but the human explanations of the phenomena registered by the senses which have no actual correspondence with the phenomena themselves.

By the end of the tale, no ultimate knowledge shall be presented then to the Traveller's circle of listeners or to the reader about the causes of such radical mutations of human beings in the year 802,701 AD. Since there is no proof about such a reality either, we are not able to establish with certainty any part of the Traveller's tale as true and clearly explained. His are, in the end, human explanations of the witnessed phenomena – explanations which do not reveal the real nature of the external reality, the things-in-themselves, and which, considering the only support of his senses as a guarantee of the facts he reports (reason for which he decides to prove such a reality by going back into that future with a photo-camera), are therefore limited by the insecure capacity of understanding assured by the human body. The scientific method which, according to Huxley, allows us to interpret and deal with daily occurrences "by inductive or deductive reasoning" seems to be applied only to the organization of a daily plan by the protagonist, when he orders in his mind the important things to do in order to feel safe and secure a way out of the Eloi's world.²⁵

Besides, the Traveller himself doubts the truth of his own adventure. When returning to his laboratory, he spends a couple of minutes wondering about the reality of his experience in the future and asks himself: "Did I ever make a Time Machine, or a model of a Time Machine? Or is it all only a dream?" (99) The reader is left to wonder whether it really has been a fantastic journey of the Traveller's mind rather than of his whole persona. The testimony of the narrative given by the Traveller is therefore severely questioned as merely based on the limited understanding of reality that can be obtained by human beings. This is specifically epitomized by the fact that the Time

^{24.} Peter Firchow, "H. G. Wells's *Time Machine*: In Search of Time Future – and Time Past," *The Midwest Quarterly* 45.2 (Winter 2004) 123–136, p. 127.

^{25.} Thomas Henry Huxley, "Scientific Education: Notes of an After-Dinner Speech," in *Lay Sermons*, *Addresses and Reviews* (London, 1870), 60–79, p. 73.

Machine arrives in the future in front of a gigantic white marble sphinx, a mythological creature associated with riddles and unsolved enigmas.²⁶ In the Greek myth, the sphinx is a malevolent monstrous hybrid being, who asks "lethal questions" and kills those who cannot give the right answer to her riddle.²⁷ In *The Time Machine*, the sphinx is described as a sort of silent observer of the Traveller's actions, which also stimulates his reflections on the journey in the future. Indeed, he reports that "the sightless eyes seemed to watch me; there was the faint shadow of a smile on the lips. ... the full temerity of my voyage came suddenly upon me" (22). He later adds: "[the sphinx] had seemed to watch me all the while with a smile at my astonishment" (27). After the Machine is stolen by the Morlocks, the protagonist is almost convinced that it "seemed to smile in mockery of my dismay" (38). It is the Traveller himself who interprets the inexpressive and silent sphinx as an arbiter of his own actions, and therefore inexplicitly associates his own mission with the insolubility of a riddle. We could interpret this as a metaphorical representation of the veracity of the Traveller's ineffectual pretensions to advance human knowledge through his invention and journey. This is particularly true if we consider that, in the Greek myth, the answer to such a creature's famous riddle is "Man." Therefore, the Traveller is silently confronted by a representation of a being hypothetically reminding him that he is just a man, with all the cognitive limits implied by his nature as a human being.²⁸

Furthermore, an opinion contrary to the possible veracity of the Traveller's theories and account of the events is expressed by the various components of the circle of his listeners. Filby argues: "It's against reason . . . you will never convince me;" (5) the Psychologist comments: "of all the wild extravagant theories," (6) and the Medical man thinks of the disappearance of the Machine's miniature model as "a trick" (10). The unacceptability of the Traveller's version of the events is further stated in the second chapter of the novel, when the narrator explicitly states: "at the time none of us quite believed in the Time Machine. . . . We distrusted him" (11). The second group of people reunited to listen to the protagonist's story is equally sceptical about the truth

^{26.} Jan Bremmer, ed., "Oedipus and the Greek Oedipus Complex," in *Interpretations of Greek Mythology* (Beckenham, UK: Croom Helm, 1987), 41–59, pp. 46–47. See also David Leeming, *The Oxford Companion to World Mythology* (Oxford: Oxford University Press, 2009), p. 365.

^{27.} Willis Goth Regier, *The Book of the Sphinx* (Lincoln, NE: University of Nebraska Press, 2004), p. 42.

^{28.} David Ketterer affirms: "the presence of the sphinx suggests that, like Oedipus, the Time Traveller must solve a riddle": quoted in John S. Prince, "The 'True Riddle of the Sphinx' in *The Time Machine*," *Science Fiction Studies* 27:3 (Nov. 2000), 543–546, p. 543. See also Frank Scafella, "The White Sphinx and *The Time Machine*," *Science Fiction Studies* 8:3 (Nov. 1981), 255–265, p. 255.

of the Traveller's affirmations: the narrator reports that "the Journalist, too, would not believe at any price, and joined the Editor in the easy work of heaping ridicule on the whole thing" (14-15).

In The War of the Worlds too, the figure of the narrator is portrayed as possibly unreliable in the accuracy of his presentation of the facts and in the validity of the theories he formulates. In this novel, the narrator is presented as "a professed and recognised writer on philosophical themes," a learned man and curious observer of the extraterrestrial invasion who, however, often reacts hysterically and very emotionally to the events occurring in front of him (150).29 Indeed, as he admits, when the first cylinder opens "ungovernable terror gripped me. I stood petrified and staring," (19) and he is subsequently "overcome with disgust and dread" (20) at the sight of the aliens. Later in the narrative, he is often struck with "a panic terror," (24) "blank astonishment," (44) "a sense of dethronement" (138) and "indescribable horror" (140). The adjectives used by the narrator to describe his own feelings and perceptions (such as "blank" and "indescribable") point to the inability to define, comprehend, accept and rationalize the facts that he witnesses. This is apparently confirmed by the fact that, in the last chapter of the novel, he says: "I cannot but regret ... how little I am able to contribute to the discussion of the many debatable questions which are still unsettled" (169). With this statement, the narrator explains his actual lack of knowledge and inability to offer any definitive answer and to contribute to the acquisition of new information through his own testimony.³⁰ This is particularly emphasised by the subsequent affirmation: "I must confess the stress and danger of the time have left an abiding sense of doubt and insecurity in my mind" (171). Doubt and insecurity thus come to form the basis of the narrator's thoughts, almost invalidating his own narrative at large.

Furthermore, the various hypotheses formulated about the nature of the Martians and their technological advances are repeatedly revealed as wrong. The main difference, however, with the theories elaborated by the Time Traveller consists in the fact that, in this case, the formulation of hypotheses is made by the whole population of England. An example is the idea that the gravitational difficulty would have forced the Martians into their pit, a theory which is immediately denied by the following assault and invasion of the aliens (30). In the same respect, the information diffused by the various periodicals continually referred to during the tale and constituting the most

^{29.} All parenthesized references are to this edition: H. G. Wells, *The War of the Worlds* (London: Everyman, 1993 [1898]).

^{30.} According to Parrinder, this could be due to the fact that he is "a traumatized survivor . . . demoralized and disoriented by his experiences" (Patrick Parrinder, "'God's Ministers'? Reinterpreting the Martian Invasion in *The War of the Worlds*," in *Flashes of the Fantastic*, 9–24, p. 11).

important source of knowledge for the whole population of England is depicted as approximate, late, imprecise and conjectural. The narrator reports that "the morning papers on Saturday contained, in addition to lengthy special articles on the planet Mars, on life in the planets, and so forth, a brief and vaguely worded telegram" (67). This news misreads the murder of the first humans and deludes the readers of the fact that the Martians would not have left their pit. The telegram which should inform the English people about facts close to them is given secondary importance and is not properly commented upon or elaborated. Primacy is instead given to the fanciful paper commenting on life on Mars as if it was proven knowledge and more useful information. Furthermore, by specifying that "the majority of people in London do not read Sunday papers" and are, for this reason, ignorant about the Martians until too late could mean that the tragic end of the metropolis is partly due to the lack of interest in knowledge of its population (68). The information held by the British people who are later forced to run through the countryside and desperately fly from London is based on such fragmented knowledge. All the knowledge they have about the Martians assumes the form of rumours, of conjectural reports that are subjectively interpreted.

Not only is the narrators' knowledge of external reality partial and the reliability of their accounts compromised, but the representation of science itself given by Wells in these two works is negative. Since the Time Traveller has spent so many years trying to build a machine capable of travelling into a future he is then not able to understand or prove, since the Martians can cripple the nineteenth-century confidence in science and technology as sources of human power and safety (as we shall see later in detail), science is shown as almost useless for the individual and as not granting him/her the real power derived from certain and definitive knowledge. Such a position is initially expressed explicitly in the 1891 journalistic essay "The Rediscovery of the Unique," where Wells compares science to

a match that man has just got alight. He thought he was in a room . . . and that his light would be reflected from and display walls inscribed with wonderful secrets and pillars carved with philosophical systems wrought into harmony. It is a curious sensation, now that the preliminary splutter is over and the flame burns up clear, to see his hands lit and just a glimpse of himself and the patch he stands on visible, and around him, in place of all that human comfort and beauty he anticipated – darkness still.³¹

Science is pictured as offering very little help for the human comprehension and control over the external world. The understanding of external reality is presented as very limited and actually only circumscribed to the human being. Darkness is what

^{31.} Wells, "The Rediscovery of the Unique," pp. 30–31.

really surrounds humanity at present. An exemplary instance of this in Wells's literary fiction could be the insistence, throughout The Time Machine, on the Eloi's verballyunexpressed terror of darkness and particularly on the importance of matches for the main character (47). Matches help the protagonist to win the admiration of the Eloi and fight off the Morlocks as much as, on the other hand, they cause him to burn an entire forest and lose his only companion, Weena, in the fire. We could also specifically refer to the passage in which the Time Traveller descends into one of the wells in order to explore the underground domain of the Morlocks. The matches that he uses in order to illuminate his way through the dark corridors could be seen as the light of science helping him to discover such a place as well as helping him to defeat his adversaries. However, as Parrinder has suggested, "it is the extent of darkness that terrifies."32 Indeed, the Time Traveller is not able to understand the complex machineries present in the underground – which he once calls "the big unmeaning shapes" (59) - and their function or to have a clear vision of the vast arched cavern "stretch[ing] into utter darkness beyond the range of [his] light" (58). Nor can he understand or communicate with the inhabitants of such a place: it is darkness itself which makes him realize the extent of his ignorance. In fact, he admits: "the sudden realisation of my ignorance of their ways of thinking and doing came home to me very vividly in the darkness" (59-60). We could even read the fact that the Morlocks fly "incontinently, vanishing into dark gutters and tunnels" at the sight of the lit match as their will not to be known (58). It is significant, in this respect, to note that Wells refers to a match as very partially illuminating the world around it, not around the human being, but merely the space around the match. In a certain way, we could then affirm that science - in this specific case, the matches as the only technology available to the Time Traveller – does not help Wells's character to understand the technological advances represented by the ventilation shafts and the constantly cleaned and oiled machines present in the underground chamber or the evolutionary progress embodied in the Morlocks themselves.

Humans are thus clearly depicted by Wells as ignorant about the surrounding phenomena. In *The War of the Worlds*, the narrator admits his own cognitive limits when affirming "I did not consider these points at the time, and so my reasoning was dead against the chances of the invaders" (30). Human intellectual faculties are presented as prejudiced and useless. This is the case of the soldiers going to the front, for example, who "didn't know anything" and are sent to the battlefield with no idea about the incoming enemy (37). Similarly, the character of the curate is much preoccupied with the questions "What does it mean? . . . What do these things mean?" (64) and thinks of the Martians as "God's ministers" (66). He interprets their arrival as "the

^{32.} Parrinder, Shadow, p. 34.

great and terrible day of the Lord" - certainly, the most mistaken hypothesis of all those formulated in the tale (64). The curate is a man of faith who completely loses his belief in the salvation of the soul as much as he loses "all vestiges of reason and forethought" (128). This renders the picture of humanity even darker in that, since all individuals could be slaughtered by the aliens and none can create any means to stop them, not even the refuge of faith is granted for humans who are therefore left to strive in ignorance. This is epitomized by the fact that human beings have no part at all in the defeat of the Martians, who are "slain by the putrefactive and disease bacteria against which their systems were unprepared; ... slain, after all man's devices had failed, by the humblest things that God, in his wisdom, had put on this earth" (161). Certainly, it is not thanks to the deployment of the artillery that humans are victorious in the end. Indeed, the technology employed by the soldiers defending London is shown as utterly useless against the fire power of the inimical intruders. The advances made by industry thanks to the development of science, the mutual exchange of products advocated and wished by Huxley are depicted as leading to no practical results: only one tripod out of at least six is destroyed by the human army. The second tripod which is brought down is immediately rescued by its companions and quickly repaired. The earthly defences lined up in Richmond are not even able to reply to the fire of the Martians and are slaughtered by the Black Smoke or even completely ignored by the advancing enemy.

Knowledge is presented as unattainable in the present but also as unachievable in the future. This is particularly true if we consider that both tales by Wells are told some years after the fictional occurrences narrated. In *The Time Machine*, the protagonist's friends depicted in the framing section remain ignorant about both of the Traveller's journeys. On the one hand, they do not believe in his visit to the Eloi's world and even laugh about it, thinking that it could be an entertaining fictional story (98). The narrator of the frame section admits: "For my own part I was unable to come to a conclusion. The story was so fantastic and incredible, the telling so credible and sober" (100). He thinks of the story as a fictional tale, a work of literature rather than a scientific statement or report. On the other hand, both the narrator and the circle of listeners have no knowledge about the Traveller's end. The only knowledge they possess is that "he has never returned" (101). The very epilogue is structured through a series of questions as to the destination of the Traveller's last journey. However, this is done with a negative note on humankind's progress. The narrator does not accept that his contemporary "days of weak experiment, fragmentary theory, and mutual discord are indeed man's culminating time" and refuses to admit that the apex of evolution and technological advancement has already been reached (102). He is not willing to admit that ahead lies only the decline and degeneration of human beings. The narrator of The Time Machine also states: "to me the future is still black and blank - is a vast ignorance," precisely as Huxley argues in his theories (102–3).33 The thought of the scientific naturalist is almost explicitly restated in the epilogue of this novel by Wells. The blankness of the future invoked by the narrator seems to represent the impossibility for the individual to know reality because of his/her cognitive limits, as stated by Huxley. Of course, we could think again of the light of science as illuminating such a black future, although nothing certain can be affirmed at present by the narrator, as was the case of the scientific naturalists and agnostics.

Ignorance is a repetitive theme of *The War of the Worlds* too. This is stated at the very beginning of the tale, when the narrator affirms:

No one would have believed in the last years of the nineteenth century that ... as men busied themselves about their various concerns they were scrutinised and studied, perhaps almost as narrowly as a man with a microscope might scrutinise the transient creatures that swarm and multiply in a drop of water. With infinite complacency men went to and fro over this globe about their little affairs, serene in their assurance of their empire over matter. (5)

From the first sentence of the novel, human beings are presented as overconfident in their incomplete knowledge and partial control over external reality, and as literally ignorant or mindless about major concerns. They are compared to the lowest creatures present on the planet and, in a curious reversal of roles, are positioned at the level of an object of study and examination. Science is thus not presented as contributing to the acquisition of a definitive and useful knowledge, as granting the humans a comforting security from the achievements hitherto obtained. This is confirmed by the fact that the narrator defines the present preoccupations of human beings as "petty concerns" (9). Subsequently, he specifies that "few of the common people in England had anything but the vaguest astronomical ideas in those days" and "Extraterrestrial' had no meaning for most of the onlookers," thus completing the picture of human beings as interested only in their private and actually unimportant affairs (5).

Later in the narrative, all the speculations made by humans during the invasion are finally unproven and remain mere hypotheses. The narrator affirms that "it is still a matter of wonder how the Martians are able to slay men so swiftly and so silently" and that "no one has absolutely proved" the details of the Heat Ray (9). In the same respect, he also specifies that "we are still entirely ignorant of the nature" of the deadly Black Smoke (81). In this way, the invasion carried out by the biologically superior alien creatures, though finally guaranteeing the discovery of the "Secret of Flying,"

^{33.} Pamboukian argues that the "future remains unclear and mysterious because of the limited power of humanity to comprehend evolutionary change" (Pamboukian "What the Traveller Saw," p. 20).

brings about no knowledge or certainty about the real nature of the hostile intruders or of their technological advances (166). This could be confirmed by the fact that the story's narrator explicitly compares human reasoning to Martian intelligence by wondering: "Did they grasp that we in our millions were organised, disciplined, working together?" (79) He considers human beings as powerless as ants when compared to the aliens. Specifically, Martians are described as "huge round bodies-or, rather, heads-about four feet in diameter" that are supported by sixteen slender tentacles (118).34 The narrator suggests that their bodies are principally constituted by the brain and, therefore, can utilize reasoning better than human beings can. This theory is further elaborated later, when he states: "Without the body the brain would, of course, become a mere selfish intelligence, without any of the emotional substratum of the human being" (121). The technological and organizational advantage of the aliens could therefore be seen as due to their superior intellectual faculties and their not being limited by human feelings and emotions. The supremacy of human intellectual faculties is thus severely questioned also on a biological level, because emotions are considered as hampering the evolution of the individual. We could even argue that this is indirectly epitomized by the very unscientific and emotional reactions experienced by both the narrator of this novel and the Time Traveller, as we saw before.

In this respect, in the accounts of both Huxley and Wells, human beings are finally considered as ignorant in matters of ultimate knowledge of external reality. If we refer to Shearer West's argument that the "fin de siècle" meant "a belief on the part of the literate and voluble bourgeois that the end of the century would bring with it decay, decline and ultimate disaster" it is interesting to note, indeed, that Wells represents human beings as epistemologically decadent creatures.³⁵ This is exemplified by the depiction of the two races of the future representing the descendants of contemporary human beings. The beautiful but frail Eloi are "exquisite creatures" (25). However, the Traveller soon realizes their childlike intellectual level, their indolent natures and lack "of interest" (30) and "of intelligence" (35). He is particularly disappointed by the delusion of his own assumption that the people of the distant future "would be incredibly in front of us in knowledge, art, everything" (26). He then attempts to explain such a devolution as the result of a condition of perfect comfort and security which was possibly due to the scientific advances and subsequent subjugation of nature achieved by the previous generations of humans. After achieving what is revealed to be a useless knowledge of the natural world, humanity is destined to a condition in which obtaining knowledge is no longer considered as an important accomplishment

^{34.} Liz Hedgecock interprets the Martians as representing "hyper-evolved parodies" of human beings. Quoted in Williams, "Alien Gaze," p. 60.

^{35.} Shearer West, Fin de Siècle (London: Bloomsbury, 1993), p. 93.

or stimulus. The "humanity upon the wane" (33) represented by the Eloi could then be read as characterized by epistemological decay. The Traveller admits this when saying that "the dream of the human intellect . . . has committed suicide" (86).

Similarly, the Morlocks are pictured as "obscene, nocturnal Thing[s]," (50–51) "filthily cold at the touch" (55) and "nauseatingly inhuman" (60). They instinctively provoke loathing and shrinking in the protagonist and are finally revealed to be voracious cannibal beings intent on preying upon the naïve and disorganized Eloi. They make several attempts on the protagonist's life, physically fight against him and finally manage to kidnap (and, allegedly, murder) Weena in spite of the Traveller's several attempts to prevent it. They have therefore lost any vestige of morality or interest in the welfare of the entire community and, similarly to the human beings pictured at the beginning of *The War of the Worlds*, they care only about the satisfaction of their appetites and needs, about the execution of their daily "little affairs" (5).

Lack of knowledge on the part of human beings could be also exemplified by the very fact that, when visiting the palace of green porcelain, the decaying museum of technology and science, the Time Traveller finds no record of his own invention (70–75). This definitely implies that his creation was never constructed again and that the knowledge that could have been obtained through it has not been available to the future generations. The invention of the Time Machine in the nineteenth century has offered no help or benefit to the Traveller's contemporaries: he has created a machine which could not be appreciated or utilized by his people. In a very unscientific way, his own knowledge of such an invention has therefore not been distributed to the public.

The metaphorical darkness of human ignorance is finally expressed by the Traveller, when he journeys more than thirty million years ahead in the future until the earth becomes a cold, silent and almost dead planet.³⁶ As he observes the landscape around himself, the protagonist witnesses the beginning of a solar eclipse:

the darkness grew apace. . . . In another moment the pale stars alone were visible. All else was rayless obscurity. . . . A horror of this great darkness came on me. . . . I shivered, and a deadly nausea seized me. (94-5)

^{36.} This chapter has been repeatedly interpreted as referring to the Second Law of Thermodynamics and the physicists' theories of the dissipation of energy, which allegedly revealed that the energy of the sun was finite and thus accentuated contemporary fears of decline and entropy. According to Crossley, for example, Wells here "does not simply gloss the Second Law of Thermodynamics, [but] orchestrates it." See Robert Crossley, "Taking It as a Story: The Beautiful Lie of *The Time Machine*," in *H. G. Wells's Perennial Time Machine*, 12–26, p. 24. See also Gillian Beer, ed., "The Death of the Sun: Victorian Solar Physics and Solar Myth," in *Open Fields: Science in Cultural Encounter* (Oxford: Clarendon Press, 1996), 219–41.

As in the case of the descent into the Morlocks' underground realm, darkness terrifies the Traveller: he experiences the reactions typical of the characters of a Gothic tale, being horrified by the unknown hidden in (and represented by) the darkness. Most importantly, the Traveller does not advance any clear explanations for the earth's fate: he contemplates the annihilation of human civilization and life, but merely lingers on a description of his physical sense of oppression and feelings of revulsion and fear. The only comment uttered by the Traveller on such a future is: "I cannot convey the sense of abominable desolation that hung over the world" (93). Solitude, silence and death: these are the defining characteristics of the protagonist's last journey into "the mystery of the earth's fate" (93). As in *The War of the Worlds*, human testimony of the facts is reduced to a simple description of the events and is focused upon the human and subjective impression of them, with no actual scientific analysis or verified explanation clarifying them with certainty.

In this way, we could say that, in the interpretation of Huxley and Wells, it is the human lack of ultimate knowledge itself which is seen as the possible cause of disasters. In The Time Machine, the acquisition of knowledge is even disregarded or ignored by the representatives of the future evolutionary stages of humankind. The possible attainment of knowledge in the near future does not bring about any lasting benefits for the human species. Similarly, the catastrophic invasion carried out by the aliens in The War of the Worlds seems to be partly favoured by the fact that human beings are not able to acquire any precious and useful knowledge about the Martians. This is explicitly stated by the narrator at the very beginning of the tale when affirming that "the world went in ignorance of one of the gravest dangers that ever threatened the human race" (7). These texts highlight how scientific discovery forces us to confront the limits of human knowledge. Indeed, human beings are shown by Wells as ignorant about the real nature of the events they witness, with no effective help from the scientific theories and instruments in their possession. In both the theoretical analysis offered by Huxley and the literary representation given by Wells, latenineteenth-century science and its method of analysis bring no certain help to the evolution of humankind and the progress of society; nor, most importantly, they do not offer any advancement to human epistemological abilities, to a definite knowledge of the world. Neither Wells nor Huxley are completely "negative" about science, but they both acknowledge its role in our realisation of the limits of human knowledge.