

## Footnotes

- 1 Huxley's letters, edited by Grover Smith, Chatto & Windus, 1969.
- 2 See for example, Sybille Bedford biography of Huxley, volume 1, Chatto & Collins, 1973.
- 3 The name 'Rigamey', which rhymes with 'bigamy', may hint at something. Wells was a bigamist in all but name, needing two women to be available at any one time. Huxley's private life was also unorthodox, as he relied on his lesbian wife, Maria, to provide him with women for one-night stands. It may well be that Wells, who was always well-informed, wanted to suggest that Huxley shared his own tastes.
- 4 Although *The Doors of Perception* is a much more engaging book than *The Soul of a Bishop*, it must bear some responsibility for the Californian drug culture of the 1960s, with its evil results. Dame Helen Gardner once told me that she thought *The Doors of Perception* 'the most dangerous book ever written'.
- 5 Noyes is an improbable hero and his technique of doubtful value. Huxley does not tell us – he may not have known it – that Noyes, after the collapse of his colony, fathered eight children after the age of fifty-eight. See Philip Thody, Aldous Huxley, Studio Vista 1973.
- 6 Some years earlier, Huxley had prepared for this setback in the sense that he had written a magazine article about what books he would set about acquiring if his library were ever destroyed by fire. Wells's science fiction is on the list.
- 7 Huxley evidently had little faith in the UN as there is no suggestion that a coalition sponsored by the UN might come to the assistance of Pala, as happened in the comparable case of Kuwait.
- 8 The influence of *Men Like Gods* on Huxley is considerable. At one point, Mr Barnstaple finds himself whistling the Barcarolle from the 'Tales of Hoffman', a song which is also sung in fragmented German by Mercaptan, immediately after the restaurant scene in Huxley's *Antic Hay* – a novel which was written just after *Men Like Gods*. Mercaptan may be a self-portrait but he is certainly no Wellsian. A few pages before this incident he had remarked: 'And as for Homo a la H.G. Wells – ça ne pue pas assez ...'. He also considers Gumbriel's pneumatic trousers 'Too Wellsian ... Too horribly Utopian'.
- 9 In his film, *Things to Come*, Wells has the altruistic airmen from Basra destroy a petty dictatorship in Everytown – an almost exact inversion of events in 1991, and in the film, as in the Gulf War, there was talk of the deployment of gas and the taking of hostages.

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## The Time Machine: A Chronological and Scientific Revision

### Introduction

For work having time as a major theme, it is rather odd that the chronology of H.G. Wells's *The Time Machine* has not been fully analysed. Its chronological structure is complex, comprising an outer framework of events set in the late Victorian atmosphere of the Time Traveller's Richmond home, and a more extensive inner core of events ostensibly set in the distant future.

The chronology of the outer framework will be explored in detail here. It will be shown that the accepted chronology of *The Time Machine* is erroneous and that the true chronology reveals a hidden series of events. The discussion below will establish the following points:

- 1 The chronology of the outer framework forms a puzzle, the solution of which reveals the Time Traveller to have hoaxed his guests, especially the narrator, Hillyer. The Time Traveller has not travelled in time but has dreamed his vision of the future after returning to his workshop from a cycling excursion.
- 2 The disappearance of the model time machine and the Time Traveller's final departure are optical illusions which, along with his theory of time and his dream, accord with contemporary theories of psychology and visual perception.
- 3 The relationship between the Time Traveller's hoax and the book's theme of evolutionary retrogression is best understood by viewing *The Time Machine* as an indictment of late nineteenth century complacency. The Time Traveller's deception of Hillyer is Wells's way of ridiculing the naïve optimism and complacency Hillyer displays in the Epilogue.

One result of this analysis of *The Time Machine* is a greater appreciation of its scientific basis, especially in the area of psychology. Autobiography is also important and indicates the whereabouts of the Time Traveller following his final "disappearance" on the "Time Machine".

The outer framework is here considered to include the passages describing the Time Traveller's departure and return. Unless stated otherwise, all references to *The Time Machine* are to the Heinemann edition of 1895.

### I The Chronological Puzzle of *The Time Machine*

There are eleven references to puzzles in *The Time Machine*, three on one page (111). If one takes this as a hint and reads carefully, contradictions can be found in the chronology of the Time Traveller's account which yield the solution to a puzzle and a new reading.

#### *The chronology of the outer framework*

Literary critics and the Time Traveller's guests alike assume that the Time Traveller returns to his laboratory from the future at eight o'clock in the evening on the day of his departure. Geoffrey H. Wells (226) and Harry M. Geduld (11) both affirm this chronology which, to the best of my knowledge, has not been disputed. However, a close reading of the second paragraphs of Chapters 4 and 15 show this assumption to be wrong. Here is the Time Traveller's account of his departure on his machine on the second Thursday afternoon:

Then I noted the clock. A moment before, as it seemed, it had stood at a minute or so past ten; now it was nearly half-past three!

. . . The laboratory got hazy and went dark. Mrs Watchett came in, and walked, apparently without seeing me, towards the garden door. I suppose it took her a minute or so to traverse the place, but to me she seemed to shoot across the room like a rocket. I pressed the lever over to its extreme position. The night came like the turning out of a lamp, and in another moment came tomorrow. (28)

Note that Mrs Watchett traversed the laboratory after half-past three but before the night came.

In Chapter 15, where the Time Traveller describes his return from the future, he again encounters Mrs Watchett: "As I returned, I passed again across that minute when she traversed the laboratory. But now her every motion appeared to be the exact inversion of her previous ones" (142-43). According to his own account, the Time Traveller returns almost to his starting time, in the late afternoon, before night-fall. Yet at eight o'clock he belatedly greets his guests creating the impression that he had only just returned. He later upholds this false impression when telling how he stopped the machine and sat down on the bench:

For a time my brain went stagnant. Presently I got up and came through the passage here, limping, because my heel was still painful, and feeling sorely begrimed. I saw

the Pall Mall Gazette on the table by the door. I found the date was indeed today, and looking at the timepiece, saw the hour was almost eight o'clock. (144)

The words "For a time" and "Presently" imply a short duration between his return and his entry into the dining room. But the Time Traveller has spent several hours in his laboratory with a "stagnant" brain while his guests, unaware of this, have begun dinner in his absence. The Time Traveller's mind has been elsewhere for this period: "Around me was my old workshop again, exactly as it had been. I might have slept there, and the whole thing have been a dream" (143). The Time Traveller has dreamed the entire future adventure with the Eloi and Morlocks while sitting on the bench in his laboratory. Wherever he has travelled, he has not travelled in time. His claim to have done so is part of an elaborate hoax.<sup>1</sup> This interpretation is confirmed by another missing piece of time. In the second last paragraph of Chapter 3 the Time Traveller prefaces his story by remarking: "I was in my laboratory at four o'clock, and since then . . . I've lived eight days . . . such days as no human being ever lived before!" (25). This statement does not square with the implication that he began his journey at half-past three and returned at eight o'clock.

The contradiction can be resolved by accepting the Time Traveller's claim to have been in his laboratory at four o'clock and by taking the statement "such days as no human being ever lived before" literally. His remarks are then clearly a hint that his vision of the future occurred in the laboratory after four o'clock as "no human being" – which includes the Time Traveller himself – has lived those eight days before four o'clock. It can thus be concluded that the Time Traveller's vision of the future was in the form of a dream which occurred between four o'clock and eight o'clock on the second Thursday evening after he returned to his laboratory and before he greeted his dinner guests. The chronological inconsistencies are a clue to understanding this.

The chronology of the rest of the evening supports this view. Allowing about three-quarters of an hour for the Time Traveller to wash, dress and dine, we can assume he begins his narrative at about a quarter to nine. He concludes four hours later, given by the Journalist's remark, "I'm hanged if it isn't a quarter to one" (146). The duration of the story concurs with that of the dream.

The Time Traveller openly admits his story is a dream when he says:

No. I cannot expect you to believe it. Take it as a lie – or a prophecy. Say I have dreamed it in the workshop. Consider that I have been speculating upon the destinies of our race, until I have hatched this fiction. (145)

The ingenuity of his hoax is shown by his claim to have seen not only Mrs Watchett as he returned from the future, but also Hillyer, who “passed like a flash” (143). He also implies that he saw the whole party of guests as he returned, for to them he remarks, of the Time Machine, “It had come to rest again in the north-west, against the wall where you saw it” (143). At this stage, only three of his guests have seen the machine, and then only after dinner on the previous Thursday when it was in the south-east corner of the laboratory.

The Time Traveller’s claims are prophecies: first, that Hillyer will return, which he does the next day; and second that the whole party will go to view the machine against the north-west wall, which they do after the Time Traveller concludes his story. Although seeming to confirm his story, both prophecies are realised by the Time Traveller. He perceives that Hillyer credits his story more than the other guests and shrewdly guesses that he will return to discuss time-travelling – indeed, prompts him to do so by naming him. The Time Traveller also arranges for the whole group to view the machine by rushing to the laboratory with the lamp to reassure himself of the machine’s reality.

Did I ever make a Time Machine, or a model of a Time Machine? Or is it only a dream? . . . I must look at that machine . . .

The Time Traveller put the lamp down on the bench and ran his head along the damaged rail. “It’s all right now,” he said. “The story I told you was true. *I’m sorry to have brought you out here in the cold.*” [my italics] (147-48)

The Time Traveller is a clever man indeed.

There is strong evidence that the chronological “faults” of the outer framework are deliberate and not the result of errors in writing or in publication. This evidence will now be reviewed.

### The puzzle: accident or design?

In June 1894, Wells reviewed Dr O.W. Owen’s Sir Francis Bacon’s Cipher Story. In “More Bacon”, Wells describes Owen’s efforts to uncover a cipher story hidden in some literary works attributed to Bacon, and notes the literary euphemisms that typified the age.

Then language and thought alike were permeated by the spirit of Euphuus, so that whereas we aim nowadays at subtlety of meaning and simplicity of expression, the ambition of the educated man of the early seventeenth century was invariably to conceal a simply idiotic meaning beneath an imposing, brilliant, and even enigmatical form. (4)

Two other unsigned essays published in April and May 1894 which discuss cryptograms and hidden symbols could also belong to Wells.<sup>2</sup>

The text of *The Time Machine* was revised by Wells before, during and after its serial publication in the *New Review* (Bergonzi “Publication of *The Time Machine*” 43-45). Apart from the two well-known major revisions to Chapters 1 and 14 of the Heinemann edition, I count forty-five minor revisions of the *New Review* version prior to its publication by Heinemann. None of these revisions changes the chronology of the outer framework. In 1924, Wells revised the text again for inclusion in *The Works of H.G. Wells*, Atlantic Edition (Preface vol 1 Atlantic Edition xxii). Despite re-reading and revising, Wells still made no changes to the chronology of the story. Given his writing on literary puzzles and his detailed revisions of *The Time Machine* (all of which left the chronology intact) it is clear that the chronological irregularities of the book are part of Wells’s design. The work has been carefully and cleverly written.

The circumstances of the Time Traveller’s return to his laboratory, however, indicate that he has *somehow* travelled *somewhere*. We will now examine the “how” and the “where” of the Time Traveller’s journey.

### The Machine

The Time Traveller’s dishevelled state when he enters the dining room at eight o’clock is described by Hillyer.

His coat was dusty and dirty, and smeared with green down the sleeves; his hair disordered, and as it seemed to me greyer – either with dust or dirt or because its colour had actually faded. His face was ghastly pale; his chin had a brown cut on it – a cut half-healed; his expression was haggard and drawn, as by intense suffering. (20)

He is also lame, having on his feet only a pair of tattered, bloodstained socks (21) as well as having scarred knuckles (146). His condition resembles that of another of Wells’s characters, Mr Hoopdriver of *The Wheels of Chance*, whose bruised ankles and legs were merely the visible sign of more extensive injuries.

Fired by these discoveries, an investigatory might perhaps have pursued his inquiries further – to bruises on the shoulders, elbows, and even the finger joints, of the central figure of our story. He had indeed been bumped and battered at an extraordinary number of points. (8-9)

Hoopdriver’s injuries were based on injuries Wells himself sustained while learning to

ride the bicycle, as he makes clear in his autobiography: "The diamond frame had appeared but there was no free-wheel. You could only stop and jump off when the treadle was at its lowest point, and the brake was an uncertain plunger upon the front wheel" (543). The importance of cycling in Wells's life in the 1890s is described by David C. Smith, who states that Wells used his safety bicycle to explore the Thames valley (Smith "Little Wars for Little People" 127-28). In the text and notes of his biography of Wells, Smith also discusses cycling and its relationship to Wells's early journalism (*H.G. Wells* 136, 523).

In an early essay, "Specimen Day", Wells recounts a journey to Crawley on a tricycle. This essay has many points in common with the Time Traveller's account, some of which are best illustrated by a direct comparison:

### Specimen Day

The road to Midhurst . . . goes up and down like a switch back (17).

We have a pleasant but all too short run together, and upset in a heap on as soft a parch of turf as I have ever fallen on (19).

. . . certain little misadventures on the road had made me, to say the least, dusty (18).

### The Time Machine

There is a feeling exactly like that one has upon a switchback – of helpless headlong motion! (29)

. . . I was sitting on soft turf in front of the overset machine. (32)

His coat was dusty and dirty, and smeared with green down the sleeves . . . . (20)

These autobiographical parallels indicate that in the interval between his two dinner engagements, the Time Traveller has been learning to ride a bicycle. He may have embarked on one or more cycling excursions, or a holiday. The Time Traveller's dream of the future occurs on his return, just as Hoopdriver was wont to "ride through Dreamland on wonderful dream bicycles that change and grow after a day's cycling" (*Wheels of Chance* 81). The Time Traveller's machine is no ordinary bicycle,

being one of his own design made of nickel, ivory and quartz (15-16). Nevertheless, the most audacious part of his hoax is his act of passing off this bicycle to his guests as a machine capable of travelling in time.

Many references in the text of *The Time Machine* support the bicycle hypothesis. On stopping his machine suddenly, the Time Traveller falls off it: "Like an impatient fool, I lugged over the lever, and incontinently the thing went reeling over, and I was flung headlong through the air" (32). What is more, a brazen hint equating the Time Machine with a bicycle is given by Wells in his Preface to a later edition of *The Time Machine*: "So The Time Machine has lasted as long as the diamond-framed safety bicycle, which came in at about the date of its first publication".<sup>3</sup> The similarities between the Time Machine have been noted by other commentators but none identify the Time Traveller's absence, activities or physical condition with cycling.<sup>4</sup>

It is true that the claim that the Time Machine is a bicycle and the Time Traveller's vision is a dream demands a revision of the cardinal incidents in the book.

### A revision of the Time Traveller's activities

The Time Traveller invites his guests to dinner one Thursday evening, planning a hoax based on the construction of his own bicycle. After discussing space and time (1-7) and causing a model to disappear by means of an optical illusion (to be discussed below), he shows his guests the full-size machine in the laboratory, declaring his intention to explore time (16).

He completes his machine and takes a cycling holiday around the Thames valley, during which he has an accident, injures himself and damages the machine (148). The Time Traveller finds two flowers which are "sports" (146), that is, variations of a species type.<sup>5</sup> Given his lameness, it is probable that he loses his machine and has to walk a long way to recover it. He sends a note to his home stating that his return may be delayed (19).<sup>6</sup>

Reaching his laboratory at four o'clock in the afternoon on the second Thursday, he dismounts shakily and sits down on his bench. Exhausted, he falls asleep and has a dream in which his cycling experiences and his thoughts about the future of the human race are mixed together. Awakening just before eight o'clock, the Time Traveller approaches the dining room and, upon hearing this guests discussing the "ingenious paradox and trick" (19) of the previous week, decides to continue the hoax. He then washes, dresses, dines and imparts his vision (27-144). Most guests

are sceptical, but the gullible Hillyer returns the following afternoon (148). Expecting his visit, the Time Traveller has set up a second optical illusion (see below). After asking Hillyer to wait for half an hour, the Time Traveller goes out of his laboratory, primes his illusion and departs on his machine in advance of Hillyer's (and the manservant's) entry (150-51). The hoax is completed by the Time Traveller's failure to return.

This solution to Wells's puzzle may, however, be only partial. Readers of his time could not have used the biographical details used here. We must, therefore, assume that the true series of events in *The Time Machine* can be discovered purely on internal evidence. The following passage, spoken by the Time Traveller, points to a cryptogram hidden in the work.

"I felt I lacked a clue. I felt – how shall I put it? Suppose you found an inscription, with sentences here and there in excellent plain English, and, interpolated therewith, others made up of words, of letters even, absolutely unknown to you? Well, on the third day of my visit, that was how the world of Eight Hundred and Two Thousand Seven Hundred and One presented itself to me!" (71)

Note that the initial capitals of the date, when rearranged, spell "THE HOST". This probably refers to the Time Traveller and could form part of a longer message. As the cryptogram belongs to the inner core of the narrative, it is not my intention to deal with it here, but in a subsequent paper.

If, as I have argued, the Time Traveller has not physically travelled in time, how are we to understand his theory of time, his vision of the future, his demonstration of the model and his disappearance? These questions will now be addressed.

## 2 Principles of Psychology: Theory, Model and Dream

Book reviews and articles by Wells published between 1893 and 1895 indicate that he was abreast of developments in psychology and visual perception. These theories underpin the outer framework of *The Time Machine*.

### *The Time Traveller's theory*

By the early 1890s, physiologically-based theories of the perception of time were well-established in psychology. Herbert Spencer, who was a seminal influence on Wells, broaches the subject of temporal perception thus: "The doctrine that Time is knowable only by the succession of our mental states calls for little exposition: it is so well established a doctrine" (2: 209). In "The Position of Psychology", a review of

George Trumbull Ladd's *Psychology, Descriptive and Explanatory*, and C. Lloyd Morgan's *Psychology for Teachers*, Wells boldly criticises psychological research, showing a familiarity with the main trends in this science and the work of researchers such as William James and James Sully (715)

In *The Time Machine*, the Time Traveller provides a "proto-(William) Jamesian demonstration that time is a dimension of consciousness."<sup>7</sup> The nature of his discourse can best be understood by examining the emphasis placed on nervous physiology in contemporary theories of perception in such works as James's *Principles of Psychology* (1890) and Spencer's *Principles of Psychology* (1881).

When time is discussed in absolute or objective terms spatial analogies are used, with the similarities and differences between our perception of time and our perception of space being stressed (James 1: 610-11). For example, events are located in time in a certain succession or order, separated by intervals, just as objects are in space (1: 631 text and note; Spencer 21: 210-11, 217). However, James notes, a major difference is that our perception of time is limited to a few seconds (the present) while our perception of space is more extensive (1:611). Spencer also articulates this by applying the term "co-existence" to our feelings of space, and "sequence" to our feelings of time (1:210-11 et seq., 2:208-9).

Subjectively, our perception of time is said to depend on principles of nervous action. The slow decline of nervous activity after a presentation (such as the after-images we see after looking at a bright light) gives rise to our sensation of the present which then fades into a sensation of immediate past as the nervous action passes into memory and is succeeded by a new presentation. Our perception of time is thus produced by a continual succession of nervous sensations, or feelings (James 1: 632-45; Spencer 1: 268; Sully Human Mind 1; 269-72).<sup>8</sup>

In Chapter 1 of *The Time Machine*, the Time Traveller relates space, time and consciousness by stressing extrinsic similarities between space and time, but noting the difference in our perception of them:

... any real body must have extension in four directions: it must have Length, Breadth, Thickness and – Duration. But through a natural infirmity of the flesh which I will explain to you in a moment, we incline to overlook this fact. There are really four dimensions, three which we call the three planes of Space, and a fourth, Time. There is, however, a tendency to draw an unreal distinction between the former three dimensions and the latter because it happens that our consciousness

moves intermittently in one direction along the latter from the beginning to the end of our lives. (2-3)

The Time Traveller proposes that time and space have common objective properties, such as extension, but a difference arises in our (subjective) perception of them. He calls the difference an “unreal distinction” due to a “natural infirmity of the flesh” because the distinction is a mental one produced by our nervous sensations. Successive nervous sensations cause us to perceive time as a sequence, or as the Time Traveller puts it, as an intermittent movement of consciousness. This discussion of space, time and consciousness is quite in accordance with psychological theory espoused by James and Spencer. Wells, however, uses a language suited to a popular readership.

The joining of the absolute standpoint – seen most clearly in the version which depicts a rigid physical universe extended in four dimensions – with the standpoint of human consciousness is not contradictory but complementary (Philmus & Hughes 51). However, it appears that Wells has leaned closer to the latter standpoint than commonly realised, for the Time Traveller’s journey through time is in the form of a series of mental states, a dream. Contemporary scientific literature shows much common ground between psychology and visual perception.<sup>9</sup> James emphasises the role of visual sensations in temporal perception by describing how the world would appear to a being whose nervous system operates 1000 times more slowly than ours, creating the impression of a rapid movement through time.

Winters and summers will be to him like quarters of an hour. Mushrooms and the swifter growing plants will shoot into being so rapidly as to appear instantaneous creations; annual shrubs will rise and fall from the earth like restlessly boiling-water springs; the motions of animals will be as invisible as are to us the movements of bullets and cannon-balls; the sun will scour through the sky like a meteor, leaving a fiery trail behind him. . . . (James 1:639)

Similarly, the Time Traveller’s successive sensations of the external world cover increasingly larger intervals as he moves forward in time.

The slowest snail that ever crawled dashed by too fast for me. . . . the jerking sun became a streak of fire, a brilliant arch, in space; . . . I saw trees growing and changing like puffs of vapour, now brown, now green: they grew, spread, shivered, and passed away. I saw huge buildings rise up faint and fair, and pass like dreams. The whole surface of the earth seemed changed – melting and flowing under my eyes. (29-30)

The similarity of these two passages, together with the Time Traveller’s Jamesian discussion of time, indicate the strong influence of theories of psychology and visual perception in the outer framework of *The Time Machine*. This intermediate field where psychology and physiology meet has also influenced Wells in his design of the Time Traveller’s experiment with the model.

### **Experimental verification**

The two phenomena most relevant to the model’s disappearance are: (i) the concept of presentation below the threshold; and (ii) the illusory nature of visual perception.

(i) The use by Wells of the phenomenon of “presentation below the threshold” (14-15) again indicates an acquaintance with psychology. Well’s knowledge of this could have come from a number of sources. Sully, for example, writes: “Every stimulus must reach a certain intensity before any appreciable sensation results. This point is known as the threshold or liminal intensity of sensation” (*The Human Mind* 1:87). James Ward states that if the intensity of a presentation is less than a certain assignable value it is said to lie “below the threshold of consciousness” (19: 49).

(ii) Wells would have undoubtedly been struck by the importance of optical illusions for research in psychology. Optical illusions are discussed in detail by James (2:86-103, 243-68), while Sully devotes an entire work to the psychology of illusions. Ladd deals with illusions in the context of suggestion, feeling and association:

*Our ideas, feelings, and volitions take part in determining how we shall see the spatial qualities and relations of any object. . . . Or – to say the same truth in more popular phrase – within given limits, we see what we think or imagine ought to be seen; what we are expecting to see; and what we by an act of will determine to see. (362-63)*

The Time Traveller is portrayed as an expert in physical optics (114). Relevant to this field, as to psychology, were theories of colour vision. Researchers in both psychology and optics often employed “colour tops” because visual illusions resulted when the tops, with patterns on their flat upper surface, were spun.<sup>10</sup> In “The Visibility of Colour” (1895), Wells indicates a knowledge of colour vision and refers to the new Spectrum Top, a device mentioned some months earlier in *Nature*.<sup>11</sup> These concepts all bear on the demonstration of the model.

The Time Traveller places his model on a table before his guests. It is a “glittering metallic framework” about the size of a small clock, containing ivory, “some transparent crystalline substance,” and brass (10). The Time Traveller then gets the

Psychologist to push a little white lever to start the model. As Hillyer observes:

One of the candles on the mantel was blown out, and the little machine suddenly swung round, became indistinct, was seen as a ghost for a second perhaps, as an eddy of faintly glittering brass and ivory; and it was gone – vanished! Save for the lamp the table was bare. (12-13)

The Time Traveller has made the model less visible by causing it to spin rapidly, like a top, so that the presentation of the framework approaches the threshold of perception. The framework-like construction of the model would allow things behind it to be visible through it, so enhancing the illusion. Moreover, the model is made of materials that are white, highly reflective or transparent, rather than opaque. The model is then no more appreciable than “the spoke of a wheel spinning” (15). The psychological phenomenon of suggestion also plays a part in this demonstration. Ladd emphasises the importance of suggestion in optical illusions:

In the wider meaning of that much-abused word, all visual perception, true or false, our daily sights of the most practical and ordinary kind as well as the wildest hallucinations of the hypnotic dreamer or of the inmate of the madhouse – involve “suggestion”. (364)

Before causing the model to disappear, the Time Traveller provides his guests with the appropriate suggestion. “Presently”, he tells them, “I am going to press the lever, and off the machine will go. It will vanish, pass into future time, and disappear” (12). After his guests see what they expect to see, the Time Traveller stands and turns to the mantel to fill his pipe, removing the model as he does so. His guests are not observing his actions here, for, as Hillyer faithfully records, “We stared at each other” (13). The illusion of the model’s disappearance may thus be explained in terms of psychology and colour vision. The disappearance of the full-sized Time Machine can be similarly explained.

### **The Time Traveller’s disappearance**

Hillyer’s account of the Time Traveller’s disappearance is vague, being qualified by the words “seemed”, “indistinct” and “apparently”. Here is his testimony:

As I took hold of the handle of the door I heard an exclamation, oddly truncated at the end, and a click and a thud. A gust of air whirled round me as I opened the door, and from within came the sound of broken glass falling on the floor. The Time Traveller was not there. I seemed to see a ghostly, indistinct figure sitting in a whirling mass of black and brass for a moment – a figure so transparent that the bench behind with its sheets of drawings was absolutely distinct; but this phantasm vanished as I rubbed my eyes. The Time Machine had gone. Save for a subsiding stir

of dust, the further end of the laboratory was empty. A pane of the skylight had, apparently, just been blown in. (150)

The Time Traveller has a reputation as a practical joker, having once shown his guests a ghost (16). The creation of such illusions was a common Victorian parlour trick involving a “magic lantern”: a three-dimensional image was created seemingly in mid-air by reflecting a brightly-lit object onto a sheet of glass, and this probably explains the Time Traveller’s ghost and his “disappearance”.<sup>12</sup>

Expecting Hillyer to turn up, the Time Traveller has earlier removed a sheet of glass from the skylight to provide a reflective surface for his illusion, which is triggered by Hillyer touching the door handle. The sounds Hillyer hears are easily explained by a phonographic recording, and the gust of air arises as the door is opened between the “long, draughty corridor” (15) and the laboratory which has a hole in the skylight. Hillyer’s perception of events accords with the suggestions arising from the Time Traveller’s story.

If it is accepted that the Time Traveller has not travelled in time, we might expect that his dream vision of the future may be understood in terms of psychology. Again, we find evidence of this in Wells’s early journalism.

### **Alternative reality: the Time Traveller’s dream**

In his 1893 essay, “The Dream Bureau”, Wells recounts a psychological explanation for dreams in which they are simply “the imperfect and exaggerated interpretation by the somnolent mind of the sensations that affect it, together with the flow of suggestions that naturally follow such impressions” (3). Wells discusses the work of the French scientist, Alfred Maury, on the origin of dream images, as does Sully who gives a very thorough account of Maury’s researches into how the external and internal sensations that affect us while sleeping influence dream imagery (*Illusions* 10).

James considered dreams to be a perfectly valid alternative world where our perceptions arise from *re*-presentations from our memory rather than presentations from the external world.

The world of dreams is our real world whilst we are sleeping, because our attention then lapses from the sensible world. Conversely, when we wake the attention usually lapses from the dream-world and that becomes unreal . . . . The dream holds true, namely, in one half of that universe; the waking perceptions in the other half. (2:294n)

These presentations to the mind from the memory were considered to constitute a form of perception, Sully acknowledging that “recent psychology draws no sharp distinction between perception and recollection” (*Illusions* 10). Thus even the Time Traveller’s dream can be brought within the science of psycho-physiology, presenting to the Time Traveller’s mind a vivid alternative reality derived from his cycling memories, his thoughts on the human future and the associations arising therefrom.

The important role of psychology in the outer framework greatly strengthens the scientific foundation of *The Time Machine*. Commentators have erred in describing the Time Traveller’s theory and demonstration as “pseudo-scientific”, “bogus” or “verbal flimflam”.<sup>13</sup> On the contrary, the related areas of nervous action, visual perception, memory, suggestion and illusion, which underpin almost the entire outer framework, are informed by some of the major scientific works of Wells’s day.

The question arises as to how the outer framework relates to the inner core, with its theme of human evolutionary degeneration. A comparison of the views of the Time Traveller and Hillyer will help clarify this.

### 3 Evolution and Ethics: Hillyer vs the Time Traveller

As Mark R. Hillegas argues, the theme of evolutionary retrogression in *The Time Machine* attempts to jolt the reading public out of its complacency by an imaginative presentation of the “cosmic pessimism” of the naturalist T.H. Huxley.<sup>14</sup> In his essays of the late 1880s and early 1890s, Huxley attacks the “optimistic dogma” that the evolutionary state of nature is “the best of all possible worlds”. Hillegas’s view accords with a comment made by Wells that *The Time Machine* depicted a future “that ran counter to the placid assumption of that time that Evolution was a pro-human force making things better and better for mankind” (Wells, Preface to *Scientific Romances* ix).

It is not my purpose here to discuss the inner core of *The Time Machine* further. Bearing in mind that the book can be viewed as an attack on the complacency inherent in optimistic evolutionism, the Time Traveller’s motive for what I have argued is his deception of Hillyer can be more easily understood.

#### **The fooling of Hillyer**

The Epilogue of *The Time Machine* contrasts with the apparent pessimism of the Time Traveller with the dogged hopefulness of Hillyer, who writes:

I, for my part, cannot think that these latter days of the weak experiment, fragmen-

tary theory, and mutual discord are indeed man’s culminating time! I say, for my own part. He, I know – for the question had been discussed among us long before the Time Machine was made – thought but cheerlessly of the Advancement of Mankind, and saw in the growing pile of civilization only a foolish heaping that must inevitably fall back upon and destroy its makers in the end. If this is so, it remains for us to live as though it were not so. But to me the future is still black and blank – is a vast ignorance, lit at a few casual places by the memory of his story. (152)

Some commentators cite this apparent ambiguity as revealing a deep conflict in Wells’s own outlook, the Time Traveller’s pessimistic view representing that of “a scientist who had gone to the end of science” and Hillyer’s hopeful view constituting an “almost existential courage against the void” (Hynes & McConnell 353, 355). Or Wells could be *enforcing* ambiguity, showing us how to accept both sides of a contradiction by balancing the unresolved pessimism and optimism of the Epilogue (Huntington 52-53). The dichotomy is also said to reflect the problem of determinism and free will – the determinate evolutionary laws of the inner core being balanced by an affirmation of the importance of human responsibility where, at the level of individual action man must behave *as though* he were free” (Haynes 129).

However, the ambiguity of the Epilogue vanishes once we accept that the events of the outer framework constitute a hoax. Let us re-examine the views of the Time Traveller and Hillyer, and their relationship, in this light. Hillyer is an optimist. Despite the “fragmentary theory and mutual discord” of his time, he anticipates continued progress. Despite the Time Traveller’s vision of evolutionary degeneration, Hillyer cannot think that it may occur, or that it may have already begun. The phrase “these latter days of weak experiment” implies an existing ebbing of intelligence about which Hillyer is unconcerned. With the words “for my own part” Hillyer opposes his view to that of the Time Traveller.

In fact, Hillyer is in reaction to the Time Traveller’s vision. If that bleak future is true, “it remains for us to live as though it were not so” says Hillyer. This is not an existential courage against the void, but a romantic evasion by Hillyer of the Time Traveller’s future. Hillyer is contented that the future remain “a vast ignorance.”

The final sentence of *The Time Machine* reveals Hillyer’s romantic view of the human story: “And I have by me, for my comfort, two strange white flowers – shrivelled now, and brown and flat and brittle – to witness that even when mind and strength had gone, gratitude and a mutual tenderness still lived on in the heart of man” (152).



Hillyer sees the Time Traveller's flowers only as a source of comfort in the face of the harsh future he depicts. Hillyer's concern, like that of the ancestors of the Eloi and the Morlocks, is for comfort and security.

The Time Traveller's poor regard for Hillyer is shown by his "disappearance" when the latter arrives on the Friday afternoon, and the blatant lie the Time Traveller tells just before departing. Hillyer naïvely recalls his challenge to his friend:

"But is it not some hoax?" I said. "Do you really travel through time?" "Really and truly I do." And he looked frankly into my eyes. (149)

The character of Hillyer, along with the complacent and optimistic views he represents, is the subject of devastating ridicule by Wells. The hoax of the outer framework supports the evolutionary arguments of the inner core by implying that those of Hillyer's views, therefore, are not Wells's views.

### Conclusion

The outer framework of *The Time Machine* has been examined in detail. It has been shown that the book is constructed as a puzzle which, when solved, shows the Time Traveller's story to be a hoax. His vision of the future is a dream experienced after returning from a cycling excursion. However, the Time Traveller's activities could also be the subject of a cryptogram.

The Time Traveller's theory of time, his optical illusion and his dream are informed by an intermediate area of scientific research involving psychology and the physiology of visual perception. The hoax of the outer framework supports the theme of the work as a whole by ridiculing the optimistic and complacent outlook of the narrator, Hillyer. The Epilogue is not ambiguous, as the fooling of Hillyer shows that Wells favours the Time Traveller's view.

It is not my aim here to pursue the implications (if any) of this reading, except to propose that the dominant role of psychology and consciousness, culminating in the Time Traveller's dream, destroys the sense of the cosmic determinism superficially present in the work. At the deeper level the human mind predominates. If it could once be said that the role of consciousness "reaffirms the possibilities for human will in a Rigid Universe" (Philmus & Hughes 55) we must further ask whether Wells placed any credence in a rigid determinism at all.

An important feature to emerge here is the strong scientific foundation of *The Time*

*Machine*, built from Wells's education in biology, his reading in psychology and colour vision, and his own science writing. The design of the book as an intellectual puzzle and the extensive revisions made to the text, indicate a brilliant conception and meticulous execution, where Wells has displayed a creativity almost rivalling that of his scientific coevals on whose work *The Time Machine* is based.

It remains only to suggest that the Time Traveller's final departure is simply the start of a second, more extensive, cycling holiday. His three-year absence (151) may be explained in terms of Robert P. Weeks's analysis of many of Wells's characters as being driven by a profound desire to escape social, evolutionary or scientific restrictions (Weeks 26-30). The escape of the Time Traveller may even reflect a desire by Wells to escape from some of all of the restrictions described by Weeks; a desire which surfaced in 1901 when Wells vanished for two months on his bicycle without informing his wife of his whereabouts (West 258-59).

In any case, soon after the publication of *The Time Machine*, Wells had a tandem bicycle made to his own plans by Humber, after which he and his wife began exploring the south of England on this machine (*Autobiography* 543). Perhaps the Time Traveller was not far behind.

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## Footnotes

- 1 A hint as to the role of the later chapter in uncovering this puzzle is given in the second to last paragraph of Chapter 7 where the Time Traveller, puzzling over the loss of his machines, says 'In the end you will find clues to it all' (65).
- 2 Philmus and Hughes attribute 'More Bacon' to Wells, and suggest that 'Mysteries of the Modern Press: Secret Marks in Printing', *Pall Mall Gazette* 58 (April 23 1894):3; and 'A Remarkable Literary Discovery: Francis Bacon the Author of "Box and Cox"!' *Pall Mall Gazette* 58 (May 3 1894):3, could also be by Wells.

- 3 H.G. Wells, Preface to a revised edition of *The Time Machine*, 1931 x.
- 4 See Williamson 52, Batchelor 10, Geduld 96, 192.
- 5 In 'Discoveries in Variation', Wells notes that lilies may sometimes have their floral organs in five instead of threes, just as the Time Traveller's flowers have an unusual gynaeceum (312).
- 6 The presence of the note is another inconsistency discrediting the Time Traveller's tale. He would have no excuse for being late if he could really travel in time. Also, how could the note have been sent?
- 7 Philmus and Hughes, *Early Writings* 48. This comment refers to the first instalment of the 1894 *National Observer* series of articles by Wells on time travelling, but it is equally applicable to the Heinemann edition.
- 8 James, *Principles*, 1:632-45; Spencer, *Principles*, 1:268. For discussion of time perception see also James Sully, *The Human Mind: a Textbook of Psychology*, 2 vols. London: Longman, Green, 1892 1:269-72, 318-29; 2:343-45.
- 9 The German physiologist, Hermann von Helmholtz, discusses psychology extensively (see H Helmholtz, *Helmholtz's Treatise on Physiological Optics* vol.3. Ed. James P.C. Southall. Menshaha Wisonconisn: Optical Society of America, 1925. 1-35; H. Helmholtz, *Popular Lectures on Scientific Subjects*. Trans. E. Atkinson. London: Longmans, Green, 1873. 197-99, 306-16. Conversely, Helmholtz's work is freely cited by psychological researchers).
- 10 See James, 2:23-24; Ladd, 106, 109; Sully, *Illusions* 56; Helmholtz, *Treatise* 215-24; Capt. W. de Abney, *Colour Vision, Being the Tyndall Lectures* delivered in 1894 at the Royal Institution. London: Sampson Low, Marston, 1895 (32-34).
- 11 H.G. Wells. 'The Visibility of Colour' *Pall Mall Gazette* 60 (March 7 1895):4. This is a review of Abney's Tyndall lecture (see above). Abney does not mention the Spectrum Top, but Wells was also reviewing books for *Nature* in late 1894 and may have read of the Spectrum Top there.
- 12 Frank D. McConnell, ed. *H.G. Wells: The Time Machine, The War of the Worlds: A Critical Introduction*. New York: Oxford UP, 1977 (22n). See also Geduld, who, in *The Definitive Time Machine* (98, 119) links the ghost trick to the Time Traveller's disappearance.
- 13 These comments are made by, respectively: Bernard Bergonzi, *The Early H.G. Wells: A Study of the Scientific Romance*, Manchester: Manchester UP, 1961 (33); Darko Suvin, *Metamorphoses of Science Fiction*, New Haven: Yale UP, 1979 (212); Robert Crossley, *H.G. Wells, Mercer Island*, Washington: Stamont House, 1986 (21).
- 14 Mark R Hillegas, 'Cosmic Pessimism in H.G. Wells's Scientific Romances' *Papers of the Michigan Academy of Science, Arts and Letters* 46 (1961): 656-57.