

illuminating works are not those where his fascination with apocalyptic change and his idealism result in an attempt to envisage perfection, but those where the idea of a new, perfect world is applied figuratively or in parody — books like *The History of Mr Polly* and *The Time Machine*.

Here Wells is writing in the spirit he himself praised in an uncollected essay on J.F. Nisbet:

to me, at least, it has a touch of the heroic, that feeling, as he certainly did, a strong attraction towards certain aspects of devotion, he would defile himself with no helpful self-deceptions to anticipate his call, but remained, as he was meant to remain, outside, amid his riddles. (22)

NOTES

1. George Orwell 'Wells, Hitler and the World State' (1941) *The Collected Essays, Journalism and Letters* ed. Sonia Orwell & Ian Angus (Secker & Warburg) 1968, Vol. 2, pp. 139-145.
2. The turning point in the study of Wells was Anthony West 'H.G. Wells' (1957) in Bernard Bergonzi ed. *H.G. Wells, A Collection of Critical Essays* Englewood Cliffs, New Jersey (Prentice-Hall) 1976 pp. 8-24. West over-compensates, however, in suggesting a complete change of attitude between the early and the late Wells.
3. *Experiment in Autobiography* Ch. 3:6.
4. *Experiment in Autobiography* Ch. 4:4.
5. David Rubenstein ed. *People for the People* (Ithaca Press) 1973 p. 226.
6. K.R. Popper *The Open Society and Its Enemies* (Routledge & Kegan Paul) 1966 edition, Vol. 1, pp. 173-174.
7. See 'Scepticism of the Instrument' appended to *A Modern Utopia*.
8. *An Englishman Looks at the World* Ch. 14.
9. 'Socrates' *Science Schools Journal* (December 1886) pp. 18-21.
10. Bertrand Russell *Portraits from Memory* (Allen & Unwin) 1956 p. 80.
11. *The Short Stories* (Benn) 1927 p. 191.
12. Cf. Patrick Farrinder *H.G. Wells* Edinburgh (Cliver & Boyd) 1970 pp. 22-23.
13. Frank Kermode *The Sense of an Ending* New York (Oxford University Press) 1967 pp. 96-98; Malcolm Bradbury *The Social Context of Modern English Literature* Oxford (Blackwell) 1972 pp. 42-43, 60-62, 85-90.
14. *The First Men in the Moon* Ch. 11.
15. T.H. Huxley *Evolution and Ethics* (Macmillan) 1894 pp. 22-29.
16. The name may have been suggested by W.H. Mallock's book *The New Republic* (1877), a discussion-fiction which Wells later took as a model for *Boon* and, to a lesser extent, for *A Modern Utopia*. His intended reference is clearly to Plato, however.
17. *A Modern Utopia* Ch. 1:2.
18. *A Modern Utopia* Ch. 4:3.
19. *First and Last Things* (1908 version) Bk. III, Ch. 11.
20. See W. Warren Wagar *H.G. Wells and the World State* New Haven (Yale University Press) 1961 pp. 106-107.
21. *A Modern Utopia* Ch. 11:5.
22. 'J.F.N.' *The Academy* (May 6th. 1899) pp. 502-504.

The Time Machine: H.G. Wells's Journey Through Death

Patrick Parrinder

I

The title of this essay may seem a little sensational. Wells himself, however, once wrote an article with the still more sensational title 'How I Died'. This article appeared incongruously among the pieces of humorous journalism collected in *Certain Personal Matters* (1897), and it began like this:

It is now ten years ago since I received my death warrant. All these ten years I have been, and I am, and shall be, I hope, for years yet, a Doomed Man. It only occurred to me yesterday that I had been dodging — missing rather than dodging — the common enemy for such a space of time.

I think those last words, "for such a space of time", are worth noticing. Perhaps Wells dashed them down hurriedly with no thought but for the weekly pay cheque, but they are highly-charged words in his vocabulary, as every reader knows. *Tales of Space and Time* was the title of a collection of stories he published only two years later, and it is the vast space opened up by the new conception of time — the idea of time, that is, as a Fourth Dimension — which is the guiding idea of *The Time Machine* itself.

In 'How I Died', Wells gave his first public account of the series of haemorrhages he had suffered as a result of his footballing accident in 1887. He told of the sensations of "blood in the sputum" and of his reactions to the doctor's pronouncement that he had become, as he put it, a Doomed Man. The medical profession continued to renew his "death warrant", but after four months of brooding he found that dying had "lost its freshness" and no longer occupied his thoughts. Yet despite the insouciance displayed in this article, we know that Wells had already experienced suicidal moods in the draper's shop at the age of sixteen, and that these moods would haunt him right up to the end of his life. (1) We might add that very soon after receiving his "death warrant" in 1887 he was at work on 'The Chronic Argonauts', the first of the many drafts of *The Time Machine* (2) One might fancy that he had turned to the idea of time-travelling in an effort to increase the very short "space of time" to which the doctors had condemned him.

The Time Machine is based on the premise of the theoretical possibility of time travel, deftly expounded by Wells's narrator. Many critics have discussed this possibility, but the fundamental objection to it, I believe, is the one put forward by Israel Zangwill in his column in the *Pall Mall Magazine* for September 1895: to travel forward more than a few years in time is to travel through one's own death. (3) (It is also, one might add, to travel through the death of the machine: metal fatigue and corrosion are often swifter processes than the decay of the human body). To journey beyond his own death is what, in writing the book, Wells was learning to do in imaginative terms. He was not yet able to carry it through at the time of writing 'The Chronic Argonauts', a story set in the present time. This first version of *The Time Machine* shows the Reverend Elijah Cook returning from

an unwilling voyage into the future, but we never get to hear his tale of what happened there. Wells's friends complained about the abrupt ending, and he wrote to one of them (Elizabeth Healey) assuring her that "*The Chronic Argonauts* was no joke. There is a sequel — it is the latest Delphic voice but the tripod is not yet broken". (4)

The shape of this sequel was not to appear until *The Time Machine* saw publication, in three different forms, in 1894-5. At the time of its eventual appearance in book form, the story had been rewritten at least six times. (5) It is remarkable how hesitant Wells was in projecting his imagination forward to tell the tale of the future that the concept of a time machine so obviously demanded. Why were so many rewritings necessary to knock *The Time Machine* into shape? The natural answer might be that he was learning his trade as novelist and journalist, so that the gap between '*The Chronic Argonauts*', with its brilliant idea very clumsily handled, and the final *Time Machine* would represent the normal process of literary apprenticeship. I want to suggest that the apprenticeship involved was more personal and more special. *The Time Machine* is a visionary novel and a work of genius, not merely a good bit of craftsmanship. When Wells spoke of his "Delphic voice" he spoke, as he so often did as a young man, with self-deprecating mockery, but we might make the experiment of taking him at his word. He did become a prophet, a lifelong and world-famous one. Launching himself on a career as a prophet is not a thing that a man can do lightly. Perhaps I can quote some words of I.A. Richards, one of this century's great literary critics, on this:

Traditionally, and rightly, the prophet trembles. On him lies a double duty: that of actually swaying the future by his words; and that of being a true prophet — not a false one. The penalty for being a false prophet, we may recall, is to be stoned to death. (6)

Wells as an apprentice visionary had foreseen the death of the world and the end of man. As he had written to Miss Healey, it was no joke.

In '*The Chronic Argonauts*' there are two narratives, which Wells calls the "exoteric" and the "esoteric". The exoteric or external story is told by "the author" (i.e., Wells himself), while the esoteric or internal one is told, in an incomplete and fragmentary form, by the Reverend Elijah Cook. The figure who never tells the story is Nebogipfel, the inventor of the time machine or "Chronic Argo" himself. He only expounds the principles of time-travelling, in conversation with Elijah Cook. In the *National Observer* version of *The Time Machine* (1894) Nebogipfel, now re-christened (or better, re-labelled) the Time Traveller, is constantly interrupted by his hearers. His mixture of philosophical argument and narrative is punctuated by commentaries and outbursts of scepticism; the sheer imaginative power of his story is never given full rein, as if some inhibition still prevented Wells from letting his imagination go. As storytelling, this version is again bungled. But in the final version Wells does let himself go, and once we are with the Time Traveller on his voyage into the future the smoking-room setting of his tale is forgotten for very long stretches. The Delphic voice has been poured forth at last. The Time Traveller can still be coy and almost apologetic about what he has to reveal: "Take it as a lie — or a prophecy. Say I dreamed it in the workshop", he says. Yet with *The Time Machine* Wells had attained to the imaginative and

prophetic vantage-point that he was to occupy so frequently in the course of his life's work; and he had also ensured his literary survival, so that, whatever the doctors said, he could no longer pose as a Doomed Man. The Time Traveller, then, is partly a mere narrative device, and partly the visionary personality that Wells was discovering, with growing confidence, in himself. (7)

What I have said so far may be summed up in a biographical supposition: the hypothesis is that Wells made himself into a creative writer by looking into his own imminent death and projecting his imagination beyond that death. If so, we may see *The Time Machine*, not only as one of the most remarkable, but as in a sense the most heroic of his books. However, biographical hypotheses, whether true or false, have only a limited value in criticism. What is important is not that Wells looked beyond his own death, but that what he saw has remained vivid and relevant for three or four generations of readers. *The Time Machine* survives first and foremost as an unrivalled extrapolation of the Darwinian vision of man, and to carry the argument further we must look into the Darwinian vision itself, and especially at the place of death within it.

II

Darwin's *Origin of Species*, the Bible of the evolutionary idea, ends on a note of resounding optimism. Darwin speaks of the "grandeur" of the evolutionary view of nature, in which "not one living species will transmit its unaltered likeness to a distant futurity", and "very few will transmit progeny of any kind to a far distant futurity". He admits no suggestion that man — the noblest of animals, made after all in God's image — may not be among those very few. On the contrary, "we may look with some confidence to a secure future of great length", he assured his readers; and, "as natural selection works solely by and for the good of each being, all corporeal and mental endowments will tend to progress towards perfection". (8)

But if evolution was a progress towards perfection, the basis of Darwin's theory was the Malthusian view of life as a remorselessly competitive struggle for existence. Malthus, Darwin wrote, had demonstrated that "many more individuals of each species are born than can possibly survive" (i.e. presumably, to produce offspring). (9) Progress towards perfection, in other words, is based on the premature dying-out of the majority. With this in mind, it must surely be said that Darwin's view of the beneficent effects of evolution was the result of optimism transferred from his earlier Christian beliefs, rather than being implicit in the biological facts themselves. The account that he gives in his *Autobiography* of a gradual loss of faith in the years after 1859 would tend to support this (10).

This no doubt is why T.H. Huxley — Darwin's friend, who did not share his reticence in matters of faith — turned to what is in many respects a classical, Stoic philosophy in reaction against what he saw as the amorality and the indifference toward all human ends of the "cosmic process". Huxley was a good deal bolder in drawing philosophical conclusions from the study of nature than Darwin had been. The breadth of Huxley's outlook is exemplified by the first-year course on Comparative Anatomy that he taught at the Normal School of Science — the course which Wells took, and as a result of which he says he "had man definitely placed in the great scheme of

space and time". (11) At the same time, 'Evolution and Ethics' and his work on Hume show Huxley's readiness to search through the philosophical traditions of East and West for the ancestry of the doctrines which seemed to him to arise necessarily from the study of evolutionary biology. In 'Evolution and Ethics' (1893) Huxley argues that it is only the hope of the technological subjugation of nature which stands between modern man and the quietist, world-renouncing attitudes of the ancient Stoics and Hindu philosophers. Formerly "ethical man" was obliged to admit that the cosmos was too strong for him; now he has discovered his own, scientific sources of strength. (12).

Huxley and Wells were teacher and pupil. The contrast between Huxley's late essays and Wells's early writing (now available in the excellent anthology of Professors Philmus and Hughes) shows that if Huxley was the classical philosopher of evolution, his pupil was its romantic poet. Huxley's figurative descriptions of the state of nature and the cosmic process are part of a metaphysical argument, while Wells's visionary metaphors often seem to be ends in themselves. Human life, Wells writes, is deceptively tranquil, like an eddy in the stream of the universe; science is a match which man has just struck in the dark, to reveal — more darkness. (13) And what Wells romanticizes, in his early essays, in *The Time Machine* and in *The Island of Doctor Moreau*, is above all the theme of death and extinction.

Death and extinction are indeed at the centre of the evolutionary vision. This may be seen by glancing for a moment at its expression, not in literature, but in those great cultural monuments of the late Victorian age, the natural history museums. These museums were designed to exhibit the full range of organic life, connected together by the logic of the evolutionary process. The most influential examples were the University Museum at Oxford, built in the late 1850s and in its time one of the most controversial public buildings in England, and the vast British Museum (Natural History) in South Kensington, built in 1873-81 just opposite what became the Huxley Building of Wells's own college. Architecturally what distinguished these two museums was the use of neo-Gothic and Romanesque styles, diverging sharply from the colonnaded classical buildings of virtually every purpose-built museum in Europe before the 1850s. Beside these exuberant classical facades the Gothic museums have an extra solemnity that is reflected in the careful reproduction of period details, the systematic use of decorative motifs embodying botanical principles, and in the carefully scientific gradation of the exhibits at South Kensington. (14) Thus the new style reflects a new ideology, which is broadly that of science as opposed to "culture".

But if they may be seen as the cathedrals of science, the new museums were also mausoleums of dead animals. The great halls are filled with stuffed carcasses, skeletons, and in some cases plaster reproductions. These collections were at once the instruments of scientific advance and splendid exhibitions for adults and children alike. The crowd-pulling capacity of extinct animals in particular was recognized by the promoters of the Crystal Palace, who erected the plaster dinosaurs which can still be seen today. Wells was taken to see them as a child, and showed his hero and Ann Pornick courting under the shadow of the Labyrinthodon in *Kipps*. But if such exhibitions show the richness and diversity of the natural world, they also serve in a more covert way as a *memento mori*, a constant reminder

of death. Nor is it only dead animals which are on show. From the beginning the new museums included human bones and skeletons among their most prominent exhibits. Placed for scientific comparison together with the other species of apes and primates, these exhibits were meant to drive home the proofs of the evolutionary descent of man with maximum impact. Yet today they can still occasion a sense of shock, which reminds us that the natural history museums had a wider function than that of making propaganda for the latest developments in biological science. They were the one public institution to which anyone could go to contemplate the real facts of life and death; and death here was a stark physical reality, not a judicial spectacle (public hangings had recently been abolished) or a subject for Christian idealization.

Wells, as a South Kensington biology student in the decade when the museum on Cromwell Road was first opened to the public, was well placed to register its ethos. He studied "life" by dissection and under the microscope, and when he said that he "had man definitely placed in the great scheme of space and time", he was implying an organization of dead forms like that of a museum — a "Universe Rigid" spread out for inspection. (15) A selection from the titles of his early science journalism will speak for itself: 'The Rate of Change in Species', 'The Duration of Life', 'Death', 'Concerning Skeletons', 'Zoological Retrogression', 'On Extinction', 'Bio-Optimism'. And in case the last title suggests a more sanguine view, let me quote from the article in question: "As a matter of fact Natural Selection grips us more grimly than it ever did . . . In our hearts we all wish that the case was not so, we all hate Death and his handiwork; but the business of science is not to keep up the courage of men, but to tell the truth . . . The names of the sculptor who carves out the new forms of life are, and so far as human science goes at present they must ever be, Pain and Death". (16) Such is the account that Wells gave his early readers of the evolutionary vision. His message of bio-pessimism is implicit in *The Time Machine* and painfully explicit in his next scientific romance, the lurid and misanthropic *Island of Doctor Moreau*.

III

The Island of Doctor Moreau was denounced by its early reviewers as a "perverse", a "loathsome", a "ghastly" book. Wells's own experiences of pain and the threat of death evidently affected this story, and one must conclude that they also affected *The Time Machine*, where the panorama of extinction and species-replacement posited by evolutionary theory is projected forward towards a vision of universal death. Wells's purpose in writing *The Time Machine* reflects his statement in 'Bio-Optimism' that it is the business of science not to keep up the courage of men but to tell the truth. In part the story is a debunking parody of a kind of imaginative thinking and writing which has the deliberate purpose of heartening mankind by ignoring contemporary "truth"; *The Time Machine* is an attack on utopia. In many ways it may be read as a response to a particular utopia, William Morris's *News from Nowhere* (1890), since *News from Nowhere* is the classic example of the kind of book in which the narrator travels forward into the world of his remote descendants to find consolation for the political defeats of his own lifetime.

Wells had seen Morris at socialist meetings during his South Kensington student days, and the older writer's romantic Communism stood out in sharp contrast to the attitudes he was imbibing from his biological studies. I have set out the reasons for considering *The Time Machine* as a response to *News from Nowhere* at greater length elsewhere, and will confine myself to briefly summarizing them here. (17) The main similarity lies in the setting: Morris's pastoral, idyllic society is centred on Hammersmith, while the society of the Eloi is centred on Richmond; both are placed in a verdant parkland by the River Thames. Morris's narrator learns the history of his society by visiting the British Museum, while the Time Traveller journeys to the Palace of Green Porcelain, an abandoned science museum near Banstead (evidently modelled on the Crystal Palace). On the evening of his first day with the Eloi the Time Traveller climbs to a hilltop, surveys the view and exclaims "Communism!" to himself: the Communism referred to must be the pastoral utopia of Morris and More, rather than the revolutionary industrial society of Marx and Engels. Later on the Time Traveller makes fun of the artificiality of utopian narratives in order to stress the authenticity of his own story. He has no access to the quantities of social detail which utopian writers invent, and has "no convenient cicerone in the pattern of the Utopian books". (18) He has to work everything out for himself, and his conclusion is that 802,701 AD is as far from utopia as it is possible to be. Travelling on to the further vision, he discovers that man is indeed doomed to the eventual extinction that the Darwinian theory (considered without religious *parti pris*) and the Second Law of Thermodynamics seem to ordain.

Wells, then, has sent his Time Traveller on his journey through death only in order to witness the final, collective death of the whole solar system. Sometimes this has been seen as a vision of ultimate despair, but I am not convinced that it is. The utopian dream is debunked in *The Time Machine*, and yet it survives — so much so that ten years later Wells would go in the footsteps of Morris and present his own vision of *A Modern Utopia*. To see this as an act of apostasy, or a total change of heart, would be to underrate the resilience implicit in *The Time Machine*, and especially in its central character. The Time Traveller is not only a hero in the usual literary sense, but a symbolic individual who has embarked on the central quest of the scientific romance, since in the context of evolutionary thought the discovery of the future becomes the greatest cognitive challenge known to man.

In literary terms, the Time Traveller is a descendant of the Romantic hero, and especially of Mary Shelley's tormented scientist Frankenstein. In addition, he shows some traits which point to Frankenstein's legendary ancestor, Prometheus. Prometheus, one of the Titans, stole the gift of fire from heaven and brought it down to earth concealed in a stalk of fennel, thus demonstrating his allegiance to suffering humanity against the tyrant Zeus. The Time Traveller goes to the Palace of Green Porcelain and steals a box of matches; the Palace of Green Porcelain itself is one of the huge buildings left over from former ages which give the impression that the earth has been inhabited by a race of gods or giants. But the Time Traveller can no longer find a fit recipient for the gift of fire; future humanity has degenerated so that his matches are used only for the purpose of self-defence and cause reckless destruction. At the end of the story he fails to return, condemned, perhaps, to perpetual time-travelling as

Prometheus was condemned to perpetual torture.

So much for his legendary antecedents: but the Time Traveller is also a representative of the scientists, inventors and explorers of the nineteenth century. He comes, as he proudly tells us, "out of this age of ours, this ripe prime of the human race, when Fear does not paralyse and mystery has lost its terrors" (p. 90). (It is worth considering how few of the heroes created by the major Victorian novelists — Dickens, George Eliot, Thackeray and so on — are able to speak for this self-confident, outgoing, inventive side of Victorian life, to which we owe the foundations of the prosperity that the Western world has enjoyed in the twentieth century). *The Time Machine*, as a story of the "discovery of the future", has an epic theme and an epic hero. Why, then, is it such a relatively small-scale work, a brief adventure-story, or novella rather than an ambitious and monumental narrative like the traditional epic? The answer lies in the ironic quality of the story and the fact that Wells still trembles in his role as prophet. That he does so will emerge from an examination of the most striking images in the story, the image of the White Sphinx that the Time Traveller encounters at the moment of his arrival in the future.

The Sphinx with its sightless eyes and death-like face ("It was greatly weather-worn, and that imparted an unpleasant suggestion of disease") represents knowledge of the riddle of life, and the Time Traveller is struck with fear as he contemplates it:

"I looked up again at the crouching white shape, and the full temerity of my voyage came suddenly upon me. What might appear when that hazy curtain was altogether withdrawn? What might not have happened to men? What if cruelty had grown into a common passion? What if in this interval the race had lost its manliness, and had developed into something inhuman, unsympathetic, and overwhelmingly powerful? I might seem some old-world savage animal, only the more dreadful and disgusting for our common likeness — a foul creature to be incontinently slain". (pp. 31-2).

The temerity of the prophet is underlined by the Time Traveller's sense of impotence. At one level this will account for his ruthlessness later on, his readiness to turn on the Morlocks armed with a crowbar and a box of matches. At the same time, we can see that Wells's courage as a prophet does not fail him in the story, but that what he sees in the face of the Sphinx is, simply, the coming universal death. He can report this, but he cannot bring himself to do so with the amplitude that an epic survey of the future, such as we get in the later *Shape of Things to Come*, would have demanded.

Let us return to the ending of *The Time Machine*, when the bleak outlook for man has been confirmed and the Time Traveller has gone off on his second journey, never to return. What if the growing pile of civilization is "only a foolish heaping that must inevitably fall back upon and destroy its makers in the end" (pp. 143-4)? We are left with the comment of the narrator (whose personal vision, unlike the Time Traveller's, is of a future that cannot be prophesied) that "If that is so, it remains for us to live as though it were not so". In other words, the coming death of humanity cannot affect our actions in the here and now. With this declaration Wells's narrator is endorsing Huxley's revision of Stoicism. (19) Once he had accepted, with Huxley, that man must live by the "ethical process" which opposes itself to the larger cosmic process, Wells was able to emerge from the gloom of an intellectual valley of death, or what he called in his essay 'Bio-Optimism' as

the "Calvinism of science". And we may hypothesize that at about the same time he came to realize that he was not going to die of his supposedly incurable tuberculosis.

IV

In *The Origin of Species*, Darwin went beyond Malthus with his principle of natural selection, introduced in these words: "As many more individuals of each species are born than can possibly survive; and as, consequently, there is a frequent recurrent struggle for existence, it follows that any being, if it vary however slightly in any manner profitable to itself, under the complex and sometimes varying conditions of life, will have a better chance of surviving, and thus be naturally selected" (20). In those months during which he toiled through successive drafts of *The Time Machine* Wells did bring about a variation or "mutation" in himself, and one which improved his chances of literary and intellectual — if not of physical — survival. In the *persona* of the Time Traveller, he became a visionary and a prophet. That achievement never left him, though his pessimism became less sweeping and much more intermittent. After about 1897 Wells gave up writing on "pure" science, and there is a distinct poverty of scientific ideas in *The First Men in the Moon* (1901) as compared to *The Time Machine*, *Moreau* and *The War of the Worlds*. When the biological vision of death receded, the utopian vision that he had done so much to excoriate came back. He wrote *Anticipations* (a tough and sometimes Fascistic book), *A Modern Utopia* (an over-regimented, Webbian paradise) and then, in later works, some far more attractive and desirable utopias, coming back in *Men Like Gods* to precisely the sort of hedonistic dream-romance that he had once attacked Morris for writing in *News from Nowhere* (of course, Wells couldn't resist showing Catskill/Churchill and his bunch of bullies in utopia, attempting to break it up). The view that sees human desire as the main determinant of history reaches its apotheosis in *Mr Polly*, where the narrator tells us of Polly's discovery that "If the world does not please you, you can change it." (The problem is that desires may be evil; for every Mr Polly there is an Uncle Jim.) Wells tended to alternate between the free indulgence of desire and an acceptance of necessity in his later prophetic work, and he argued, in any case, that determinism and free-will were not in fact incompatible. But if mankind was to overcome the obstacles to its survival what it needed, he constantly implied, was a favourable variation or mutation. His visions of future wars and his projects for open conspiracies, world education and rational government were all directed to this end. He believed it could happen because it had happened to him personally, when from an unhealthy young science teacher liable to brood on his own imminent death he became a prophet who saw beyond his own death. And only if such a mutation was conceivable for mankind — whether we choose to interpret this in ethical, educational, sociological or political terms — could the truths of science become instruments of human perfectibility, rather than tests of the Stoical endurance of mankind. He continued to hope that *homo sapiens* would evade the logic of doom and demonstrate that he was not (as Wells sometimes feared) at the end of his tether.

NOTES

1. See especially C. P. Snow's essay on Wells in *Variety of Men*, London 1967, p. 61.
2. Wells came across the idea of time-travelling as a result of a Debating Society meeting at the Normal School of Science in January 1887. 'The Chronic Argonauts' was certainly written at Uppark (1887-8) and may have been begun at Wrexham, where his footballing accident took place in September 1887. It was published in the *Science Schools Journal*, April-June 1888. See especially Geoffrey West, *H.G. Wells*, London 1930, pp. 67, 289. For the later version of *The Time Machine* the work of Bernard Bergonzi and the anthology of *Early Writings in Science and Science Fiction* by Philmus and Hughes should be consulted.
3. Zangwill's article is reprinted in my *H.G. Wells: the Critical Heritage*, London 1972, pp. 40-42.
4. G. West, op. cit., p. 77.
5. *Ibid*, pp. 288-294.
6. I. A. Richards, 'The Future of Poetry' in *The Screens and Other Poems*, London 1960, p. 105.
7. This last point is echoed in the title of Norman and Jeanne Mackenzie's biography *The Time Traveller: The Life of H.G. Wells*, London 1973. The Mackenzies give a much more bread-and-butter account of Wells's literary apprenticeship than that sketched here, however.
8. Charles Darwin, *The Origin of Species*, 6th edn., London 1910, pp. 402, 403.
9. *Ibid*, Introduction, p. 3.
10. Darwin, *Autobiography*, London 1929, p. 149. Darwin describes himself as a "Theist", though no longer an orthodox Christian, at the time of the *Origin of Species*.
11. 'Scepticism of the Instrument', Appendix to *A Modern Utopia*,
12. T. H. Huxley, *Evolution and Ethics and Other Essays*, London 1895, pp. 77, 83.
13. *H.G. Wells: Early Writings in Science and Science Fiction*, ed. Robert M. Philmus and David Y. Hughes, Berkeley and Los Angeles 1975, pp. 113, 31. Both metaphors come in the final paragraphs of the essays in which they belong.
14. At Oxford the various orders of the vegetable kingdom are represented in ornamental ironwork, while the stone columns are specimens of as many kinds of granite and marble as the museum had room for. At South Kensington the exhibits were classified not only on biological but on modern pedagogical lines which were expounded in the Museum's *General Guide* (1st edition, 1886).
15. 'The Universe Rigid' is the title of a lost article by Wells which was rejected by Frank Harris, editor of the *Fortnightly Review*, in 1891.
16. *Early Writings in Science*, pp. 208-9.
17. See my article *News from Nowhere, The Time Machine and the Break-Up of Classical Realism*, in *Science-Fiction Studies*, vol. 3 part 2 (November 1976), pp. 265-7.
18. *The Time Machine*, London (Heinemann) 1949, pp. 62, 77. Page references in the text are to this edition.
19. "We should apprehend, too, the nature of death; and that if only it be steadily contemplated, and the fancies we associate with it be mentally dissected, it will soon come to be thought of as no more than a process of nature (and only children are scared by a natural process) — or rather, something more than a mere process, a positive contribution to nature's well-being". (Marcus Aurelius, *Meditations*, Penguin Classics edn., p. 49). Huxley dissents from the Stoic "apathy", pointing out that men must oppose the cosmic process insofar as they can. But Wells's narrator's prime concern is that we should not be perturbed by the universal destiny of man, which it is not in our power to alter. A more active, Huxleyan faith was advanced in his twin essays 'Human Evolution, an Artificial Process' and 'Morals and Civilisation' (1896-7, reprinted by Philmus and Hughes).
20. Darwin, op. cit., p. 3.