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Essay on H.G Wells

## SCIENCE JOURNALS

## The worlds of H. G. Wells

Simon J. James looks back at the richly varied contribution of the science-fiction writer and science populariser.

Herbert George Wells (1866-1946) occupies a singular place in science and culture. Practically reinventing science fiction in landmark books such as *The War of the Worlds*, he also wrote prolifically on science, education, history and politics over a career spanning six decades and more than 150 books and pamphlets, as well as numerous articles in, and letters to, the press. Living through the late nineteenthcentury burgeoning of the sciences, the societal and technological upheavals of the twentieth century, and two world wars, Wells both absorbed revelations and delivered some himself — foreseeing powered flight, space travel, the tank and the atomic bomb, as well as being an enthusiastic and committed popularizer of science. Behind all of Wells's enormous output was a desire to use writing as a means of making the world better (rather than, as in his lengthy disagreements with Henry James, primarily as a way to produce something inherently beautiful) whether through projecting a utopian vision of a perfected future world, or dystopias that warned of the consequences if the lessons of his work are not heeded.

Among his extraordinary achievements, Wells has a reasonable claim to be the first major writer in the English canon to be a trained scientist. The word 'scientist' had been coined by historian William Whewell just 22 years before Wells's birth. Wells — whose parents were servants turned shopkeepers — escaped apprenticeships in drapers' shops to become a pupil-teacher at Midhurst Grammar School in the south of England. A scholarship propelled him to what is now Imperial College, where he studied biology under T.H. Huxley, graduating in 1890. He never practised as a scientist, nor did he view himself as an 'artist', preferring the term 'journalist', particularly later in his career when politics became even more important in his writing.

Wells's brilliance as a communicator of science drew him to many friendships with scientists — not least Richard Gregory. The astronomer was the second editor of *Nature*, and Wells was to publish 25 pieces all told in the journal over 50 years, inspiring and provoking in turn scores of contemporary thinkers into contributing a

rolling tide of correspondence, book reviews, notices and other commentary on Wells's output.

Wells was meanwhile publishing a range of inspired books at a furious pace. The year 1895 alone saw the emergence not only of his first full-length work of fiction, *The Time Machine: An Invention*, but a collection of short stories *The Stolen Bacillus and Other Incidents*), a fantastic romance in which an angel falls to Earth (*The Wonderful Visit*), and a volume of essays.

Wells's 1890s 'scientific romances' The Time Machine, The Island of Doctor Moreau, The War of the Worlds and The Invisible Man, would, with set the bar for the genre of science fiction that would follow. They have remained hugely popular to this day, and Wells's writing continued to have impact on science itself. The War of the Worlds, for instance, inspired Robert H. Goddard – inventor of the liquid-fueled rocket, whose research led to NASA's Apollo mission – to devote his life to space travel, while the novel's "Heat-Ray" imagines military lasers. The World Set Free predicted the atomic bomb, both drawing on and subsequently influencing Frederick Soddy's work on radioactivity and inspiring physicist Leo Szilard to create the neutron chain reaction pre-Manhattan Project. The hero of The Island of Doctor Moreau 'had spent some years at the Royal College of Science, and had done some researches in biology under Huxley'; the book's hybrids of human and animal in are rough precursors to today's embryonic chimeras. The Shape of Things to Come predicts the Second World War, and its cinematic adaptation, a collaboration with producer Alexander Korda, *Things to Come* ends with humanity launching its first spacecraft. Jules Verne and Wells were irritated by comparisons to each other, Verne complaining that Wells's gravity-resistant Cavorite in The First Men in the Moon was pure invention compared to the gunpower-fuelled rocket of his own A Voyage to the Moon. Wells, however, was never primarily interested in technology. After inventing the perfected insectoid bodies of the Selenites in The First Men in the Moon, the giant, wise children of The Food of the Gods or the The Camford Visitation's mindreading aliens of, he goes on to imagine the significance of these fantastic elements for the human psychology and culture, setting a template that the most literary of science fiction has followed since.

Wells's first published volumes, however, were the scientific textbooks *Honours Physiography* and *Text-book of Biology* (both 1893), which went into many editions. Education was also the subject of Wells's first essay in *Nature*, 'Popularising Science' (27 September 1894), which asks for standards to be set in popular scientific writing as they are for literary writing, to promote accessibility. He would go on to publish articles in *Nature* on a range of subjects (see John S. Partington's admirable and comprehensive *H. G. Wells in Nature* 1893-1946 (Frankfurt: Peter Lang, 2008), but

education, more than fiction, science or indeed science fiction, was to be the keynote of Wells's writing career.

Due, in part, to his own escape from apprenticeship into an intellectual life, Wells was driven by the conviction that education was paramount to clear thinking and efficient, happy lives. Even Wells's most fantastic, futuristic writings contained lessons for the present intended to lead his readership to a more utopian ordering of the world. Wells's Royal Institution lecture, first published in *Nature* on 6 February 1902 as 'The Discovery of the Future', is a window on the development of these ideas, arguing for the importance of thinking in consciously forward-looking ways:

We travel on roads so narrow that they suffocate our traffic; we live in uncomfortable, inconvenient, life-wasting houses out of a love of familiar shapes and familiar customs and a dread of strangeness; all our public affairs are cramped by local boundaries impossibly restricted and small. Our clothing, our habits of speech, our spelling, our weights and measures, our coinage, our religious and political theories, all witness to the binding power of the past upon our minds.

For Wells, the scientific method conferred on its user the authority to rethink and challenge these stale ideas, and should underpin every area of human endeavour, especially politics. (This positivistic notion of 'science' was actually fairly short-lived, lasting only from Charles Darwin's dethroning of humankind from the summit of creation to the early-twentieth-century advent of quantum mechanics, which undermined claims of absolute scientific 'certainty'.) Global woes, he felt, emanated from an educational system that failed to enshrine science properly and gave privileged status to classics: "to defective education was due the general neglect of science and 'muddling through'", he claimed. His hope was that, if the intellectual enquirer were armed with the right kinds of knowledge, history might be predicted in the same way as the movements of planets and tides. Then, informed by the knowledge of all humans' shared evolutionary origins, the history of the future would see nation states dissolving themselves in favour of a system of co-operative world government.

While he is best remembered for the late-Victorian scientific romances, Wells's significance over most of his writing career rested on his status as a public intellectual, and he relished the international audience reached by his publications. A vital element of Wells's popularity lay in his prescience. Along with his predictions of new technologies, he imagined something like a World-State-sponsored Wikipedia. In an address to the Royal Institution in 1936 on the "World Encyclopaedia" or "World Brain", he noted it would become

the mental background of every intelligent man in the world. It should be alive and growing and changing continually under revision, extension and replacement from the original thinkers in the world everywhere. Every university and research institution should be feeding it. Every fresh mind should be brought into contact with its standing editorial organization. On the other hand its contents would be the standard source of material for the instructional side of school and college work, for the verification of facts and the testing of statements – everywhere in the world.

The World Brain and *The Outline of History*, which told the story of humanity from its evolutionary origins to Wells's hoped-for utopian civilization (and which, at 2 million copies, was Wells's best-selling book during his lifetime), were his responses to the catastrophe of the First World War. He lived to see the catastrophe of the Second. Having witnessed such a failure to act collectively, Wells's final contribution to *Nature* in 1944 was an attempt to understand the actions and motivations of the individual. 'The Illusion of Personality' suggests that the notion of a stable personality is an illusion, since consciousness is constantly flitting from one moment to the next. Reading this piece now, it is fascinating to see a writer so long concerned with thinking on a global scale, over timespans of hundreds to thousands of years, preoccupied at the end of his career with the micro-impressions of a single, impermanent sensibility.

Wells knew, and argued with, most of the significant writers and political leaders of the late nineteenth- and early twentieth-centuries. Two friendships remained constant: one with fellow novelist Arnold Bennett, the other with fellow undergraduate Gregory. Before his editorship of *Nature*, Gregory had co-authored *Text-Book of Biology*, and was an editorial assistant at the journal when Wells, a then-unknown teacher and jobbing science writer, published 'Popularising Science'. Gregory advised Wells on lunar gravity when he was writing *The First Men in the Moon*; and when Wells died in 1946, Gregory wrote the *Nature* obituary of the genius with whom he had first collaborated 50 years before. Gregory's review of *The War of the Worlds* ('Science in Fiction', 10 February 1898), had ventured that "scientific romances are not without a value in furthering scientific interests; they attract attention to work that is being done in the realm of natural knowledge, and so create sympathy with the aims and observations of men of science". To attract attention and create such sympathy was Wells's steadfast aim.

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