ORGANISM AND SUPERORGANISM: ENTOMOLOGY AND COLLECTIVE CONSCIOUSNESS IN H. G. WELLS

Matthew Wraith

Abstract. H. G. Wells saw the First World War as a way to realise his long-cherished dream of a single unified World State. I propose that one can detect within, behind and beyond this already fairly ambitious project, an even more ambitious one. It was not enough that the population of the world should cohere together into a single state, but that it should cohere together into a single *organism*. At this time, there were ideas afoot in the biological sciences suggesting a zoological model for this unity. Figures like Wilfred Trotter, Maurice Maeterlinck and William Morton Wheeler were looking at the gregarious behaviour of many animals, insects especially, and suggesting that insect colonies could be seen as a single '*super-organism*', with a single collective intelligence. The single consciousness that the entomologists were hypothesising was an explicitly *decentralised* intelligence, it was not locatable in any single individual within the collective, but was instead an all-pervasive, emergent entity.

Wells was obsessed, throughout his life, with ideas about the group mind and the collective act of thinking generally. The First World War provoked him to a series of sharp polemics and sustained mediations on the need for a unification of human thought. However, Wells, in his wartime writings, was still committed to the notion that this unification required centralisation. He could never quite conceive of a purely distributed intelligence. A better example of a superorganismic consciousness might be looked for in his earlier scientific romances, including *The First Men in the Moon* and *The War of the Worlds*.

> Is Liberal thought in this world-crisis going to present the spectacle of a swarm of little wrangling men swept before the mindless besom of brute accident, or shall we be able in this vast collapse or re-birth of the world, to produce and express ideas that will rule?[1]
>
> H. G. Wells, *The War That Will End War*

[1] H. G. Wells, *The War That Will End War* (London: Frank & Cecil Palmer, 1914), 61.

> A close study of England gives the impression of some agency comparable with a 'spirit of the hive' being at work within it... It appears, then, that England has something to retort upon the conscious direction to which Germany owes so much of her strength.[2]
>
> Wilfred Trotter, *Instincts of the Herd in Peace and War*

At the outbreak of the First World War, H. G. Wells surprised many by becoming one of its most zealous propagandists. The articles that he immediately began to fire off to London newspapers – later to be published as a pamphlet entitled *The War That Will End War* (1914) – were not simply propaganda, but a call for others to propagandise – propaganda for propaganda. 'The ultimate purpose of this war is [...] the destruction of certain beliefs and the creation of other ones. It is to this propaganda that reasonable men must address themselves.' This was less the means and more the *end* of the war effort: the war that England had to wage was above all a 'war of the mind' intended to 'kill ideas' – more specifically the 'nest of evil ideas' that the Germans had built for themselves.[3] New ideas, 'ideas that will rule', could redeem Germany from its vice and folly, but also, importantly, could redeem liberal England from the unhappy state to which liberalism would always perennially succumb: that of 'a swarm of little wrangling men'.

Two years later, Wilfred Trotter, a British neurosurgeon, zoologist and social psychologist at University College, London, published a book that he had already begun writing before 1914 but which eventually took the war as one of its overriding themes. It was entitled *Instincts of the Herd in Peace and War* (1916) and it took very literally Wells's image of England swarming. It put this image to decidedly different rhetorical purposes but did so in a language and a framework that Wells would intuitively recognise, and which corresponded to some of his most enduring preoccupations.

The war made real and urgent questions upon which Wells had already been speculating for decades. As Warren Wagar's canonical study of Wells's visionary political ideas states, 'From the first, Wells treated the war as a

[2] Wilfred Trotter, *Instincts of the Herd in Peace and War* (London: T. Fisher Unwin, 1916), 204-5.
[3] Wells, *The War That Will End War*, 89, 90.

supreme opportunity to realize the World State.'[4] The coalescence of the population of the world into two giant geopolitical blocs was an intermediary step on the way to its coalescence into one. However, Wells was a zoologist before and above all else and in his political writings, even and especially at their most utopian, he was continually seeking zoological validation. Peter Kemp has recorded 'Wells's eagerness to see not merely human beings but also human institutions in biological terms'.[5] Behind the already fairly ambitious project for a single world state lay an even more ambitious project: unification into a single organism with a single collective intelligence.

In the first decades of the twentieth century, zoologists such as Trotter began examining animal collectives like the insects' swarm as single entities, or as others put it, 'superorganisms'. In doing so, they offered a biological model for Wells's political project, one grounded in science but shading off into realms of speculation regarding an emergent and all pervasive 'common mind' that coordinated the collective's activities. As we will see, Wells shared in similar speculations. He subjected these ideas to intensive meditation and debate in his wartime writings, and revisited these ideas throughout his career up until the very end. Yet the very speculative nature of these hypotheses meant that it is in his speculative fiction, the early scientific romances, that we see these ideas given their fullest imaginative focus. It is these early works, rather than the later, more didactic writing, that provide the best testing ground for ideas that were later to become matters of scientific import. *The First Men in the Moon* (1901), the most explicit of Wells's engagements with entomology, seems, on the surface, to depict the superorganismic collective at its fullest. Yet the Selenite society differs fundamentally from the superorganism in how knowledge is distributed through the collective. A better example is provided in the blighted, decentred, swarming population of London in *The War of the Worlds* (1898), a less acknowledged but powerful representation of England's collective intelligence at work.

Apian England – Wells and the zoologists

Trotter's aim was to develop a theory that could simultaneously explain both sides of the supposed animal-civilised divide in zoological terms. He spoke

[4] W. Warren Wagar, *H. G. Wells and the World State* (New Haven: Yale University Press, 1961), 34.

[5] Peter Kemp, *H. G. Wells and the Culminating Ape: Biological Imperatives and Imaginative Obsessions* (London: Macmillan, 1982), 176.

of society, politics and the formation of the state not as a movement away from the status of animality, but as the product of what was for him an under-recognised but indispensable animal instinct in its own right: namely the *gregarious* instinct. Civilisation, politics, society were all manifestations of the drive possessed by many species, including *homo sapiens*, to flock, herd and swarm together. He also saw war and the *esprit de corps* that it provoked as the herd mentality at its most apparent and intense:

> The characteristic of a really dangerous national struggle for existence is the intensity of the stimulus it applies to the social instinct. It is not that it arouses 'dormant' or decayed instincts, but simply that it applies maximal stimulation to instinctive mechanisms which are more or less constantly in action in normal times.[6]

The word 'herd' suggests in English cattle or deer or other mammals. But Trotter reserved his most detailed observations for insect societies. Insect colonies, precisely because their constitutive individuals were smaller and simpler than in mammalian or avian groups, could embody a more perfect integration. The relative lack of behavioural variety in the insect colony led to a greater ease of coordination; so much so that such a colony could be spoken of as one single organism. 'The hive', he states, 'may, in fact, without any very undue stretch of the imagination be described as an animal whose individual cells have retained the capacity for locomotion.'[7]

Trotter applied this zoological framework to the war and constructed for himself a subtly differentiated interpretation of its different actors. The gregarious instincts he identified applied to all human societies, but different societies embodied different types of animal collective. The resurgent German nation, he believed, embodied the pack mentality of the wolf: aggressive, purposive, and hierarchical. The English people displayed, in their deepest national essence, the characteristics of the beehive: defensive, industrious, egalitarian.

These were the totem animals that Trotter ascribed to the war's two principal military forces, and he did so with full scientific seriousness. His book, unlike *The War That Will End War*, claimed the status of science, not propaganda. He confesses his support for the war simply in order to make open and explicit a prejudice which he is determined not to let cloud his objectivity. But his vision was not without its rhetorical consolations.

[6] Trotter, 142.
[7] Ibid., 106.

Whereas many Englishmen might remain decidedly uninspired by the thought of going to war, holding aloft the insignia of the bumble-bee; Trotter comforts his fellow citizens with the idea that any insect community, precisely *because* of the bumbling – a simple and unconscious manner in which its members go about their business, has a perfect cohesion and integrity that the lupine Germans could never hope to emulate. They were not a pack but an organism.

The idea of a group of small organic sub-units aggregating and structuring themselves into a single organism was not in any way new to Wells. He had himself, some two decades earlier, posited something like the same idea. In 1892, while still a jobbing hack, he wrote an article entitled 'Ancient Experiments in Co-operation' in which he approaches the process from the opposite direction: 'The higher animals and higher plants', he states, 'are, in fact, *colonies* of imperfectly separated amoeboid cells.'[8]

However, the process by which they gathered themselves into reciprocal relation was undertaken through the slow movement of evolutionary time. The 'experiments' he invokes in the title are the blind, haphazard experiments of random mutation and natural selection. Trotter sees a peculiarly English virtue in this slow accumulation of chance and local variation. In this, he follows in a tradition of English historical self-conception, best exemplified in the observation (originally made by the historian John Robert Seeley), that the British Empire was acquired 'in a fit of absence of mind'.[9] For Trotter, this was the English way. Darwinism always fitted nicely into this national self-conception, as does Trotter's apian parallel. The course taken by any individual organism within the hive is individually driven and wildly unpredictable, but the overall effect is one of unity.

All this reminds us that the parallel between animal societies and our own, whatever Trotter may say, is always as much rhetorical as it is scientific.[10] The image of insects *en masse* and on the move perhaps gains its rhetorical force precisely from its ambiguity. It has a way of standing

[8] H. G. Wells, 'Ancient Experiments in Co-operation' [1892], in *H. G. Wells: Early Writings in Science and Science Fiction*, ed. Robert Philmus and David Hughes (Berkley: University of California Press, 1975), 191.

[9] Trotter, 229; John Robert Seeley, *The Expansion of England: Two Courses of Lectures* [1883] (Cambridge: Cambridge University Press, 2010), 8.

[10] For an ambitious, if sometimes slightly obtuse, study of the rhetorical value of the insect collective see Cristopher Hollingsworth, *Poetics of the Hive: The Insect Metaphor in Literature* (Iowa City: University of Iowa Press, 2001).

simultaneously for chaos and conformity, accident and necessity, liberation and regulation, wilderness and domesticity. The language we use to invoke them is always charged somewhat along these poles: 'swarm' deriving from a Sanskrit for 'tumult' will usually tend slightly to the former in each of these; a 'hive', on the other hand, suggests the latter.[11] In the years immediately preceding the war, Wells used such words and images liberally to describe the historical forces he sees at work around him. In another collection of journalism, *An Englishman Looks at the World* (1914), he speaks of 'the swarming liberation of our kind from ancient imperatives'. A few pages later he describes the grand apian coalition of mankind: 'We separate persons, with all our difference and individuality, are but fragments, set apart for a little while in order that we may return to the general life again with fresh experiences and fresh acquirements, as bees return with pollen and nourishment to the fellowship of the hive.'[12] This passage is testament to the swarm image's ability to serve on both sides of the equation: a figure both for Wells's anticipated human unity, and the prior and opposing state of diffusion. But it is also testament to the difference that two years and the outbreak of war made on Wells's thought: from 'swarming liberation of our kind' to a 'swarm of little wrangling men'.

By 1914, Wells could be forgiven for not wishing to trust that the war could be won by the undirected sum of fortuitous accidents, an aggregate of wayward individual trajectories. For Wells the task of unification needed a single unifying and guiding intelligence. In his pamphlets, Wells, the lifelong republican, lambasts the King for his lack of leadership. 'If he saw fit to say simply and clearly what it is we fight for and what we seek, his voice would be heard universally. [...] He is, he has told us, watching the war with interest, but that is not enough!'[13] Trotter's entomological vision, on the other hand, makes no use of any notion of guiding sovereign power. A generation with the figure of Victoria fresh in their memory might find something reassuringly matriarchal about the beehive. But Trotter explicitly rejects the

[11] The word 'colony', used for many insect groups, also has obvious political implications, particularly for the era before the First World War refocused the imperial imagination from its frontier to its neighbouring imperial rivals. Wells's 1905 short story 'The Empire of the Ants' plays on this parallel. It has been very capably dealt with by Charlotte Sleigh, 'Empire of the Ants: H. G. Wells and Tropical Entomology', *Science as Culture* 10 (2001): 33-71.

[12] H. G. Wells, *An Englishman Looks at the World, Being a Series of Unrestrained Remarks on Contemporary Matters* (London: Cassell and Company, 1914), 355-7.

[13] Wells, *The War That Will End War*, 94.

notion, long since abandoned by entomology, that the Queen Bee exercises any executive control over her progeny. The insect colony had to gain its tight-knit cohesion from elsewhere.

But where? And what?

At this point, Trotter's scientific confidence begins to falter and he starts to cloud his statements in a dense fog of qualifying sub-clauses:

> Speculators upon the physiology and psychology of bees have been forced – very tentatively of course – to imagine that creatures living in such intensely close communion are able to [...] produce, so to say, a communal mind which comes to have, at any rate in times of crisis, a quasi-independence. The conception is difficult to express in concrete terms, and even to grasp in more than an occasional intuitive flash. Whether we are to entertain such a conception or to reject it, the fact remains that societies of a very close communal habit are apt to give the appearance of a kind of common mind – a veritable spirit of the hive – although no trace of any directive apparatus can be detected.[14]

Here, Trotter seems to be slipping – and to be uncomfortably aware that he is slipping – into the realm of metaphysics. But as a cursory survey of entomological knowledge in the preceding decades shows, metaphysics was something with which biology in 1914 was still awkwardly entangled.[15]

The phrase 'Spirit of the Hive', which Trotter uses, originates from the Belgian playwright, poet, essayist and amateur entomologist Maurice Maeterlinck who wrote several books about insects, among them *The Life of the Bee*.[16] It is less a work of entomology than a piece of pastoral prose-poetry with the apiarist uncomplicatedly substituted for the humble and bucolic shepherd; he is less concerned to describe and explain the natural world than to prove its pleasures. Yet a fragile but persistent question can be traced within it concerning how the hive co-ordinates its activities. He writes pages of panegyric to the queen-bee – 'she is the unique organ of love; she is the mother of the city' – whilst carefully denying her any organising control. In place of this governing authority, he posits an unknowable force,

[14] Trotter, 204.

[15] For a fuller survey of the development of entomological ideas see Charlotte Sleigh, *Six Legs Better: A Cultural History of Myrmecology* (Baltimore: Johns Hopkins University Press, 2007) and John F. Clark, *Bugs and the Victorians* (New Haven: Yale University Press, 2009).

[16] Maurice Maeterlinck, *The Life of the Bee*, trans. Alfred Sutro (London: George Allen, 1901).

or geist: 'it is not the queen, but the spirit of the hive, that decides on the swarm.'[17] On reading this florid prose-style, one emerges from the work with the slightly sickly feeling of having eaten an entire jar of honey and altogether none the wiser as to what exactly the 'spirit of the hive' is. However, Maeterlinck does not fail to provide an abundant rhapsody of negative definitions: 'It is not like the special instinct that teaches the bird to construct its well-planned nest. [...] Nor is it a kind of mechanical habit of the race, or blind craving for life, that will fling the bees upon any wild hazard [...].' Quoting succinctly is difficult because Maeterlinck never seems entirely to reach a conclusion but rather circles endlessly around the same essential mystery, a mystery with which he is clearly very much in love.

Later in the decade, more sober minds were trying to get to grips with the same problem. The American myrmecologist William Morton Wheeler had himself noticed the incredible differentiation and the power for self-regulation and self-protection possessed by the ant-colony. He paid attention to the way in which the colony reproduced exactly the amount of dead soldiers, when a portion of its population were killed or taken away, to keep the population in a perfectly balanced, stable condition, just as the human replaces injured tissue.[18] Wheeler also noticed the boundedness and individuality of a colony, the way one ant-colony keeps itself permanently separate from the workings of another, no matter how spatially integrated they are forced to become. Wheeler, who coined the term 'superorganism', spends a good deal of time struggling over the question of where this capacity for self-regulation and integrity comes from; how do they know? Or rather, who or what type of entity did the knowing? He pauses to entertain beliefs like that of Maeterlinck or the German philosopher of biology Hans Driesch's revival of Aristotelian concepts such as *entelechy*, only to dismiss them gently, if condescendingly, out of hand, stating that although the notion clearly has 'distinguished antecedents',

> we ought not to let it play about in our laboratories, not because it would occupy any space or interfere with our apparatus, but because it might distract us from the serious work at hand. I am quite willing to have it spanked and sent back to the metaphysical house-hold.

Yet for all that, Wheeler concedes in the end:

[17] Maeterlinck, 43.

[18] William Wheeler, 'The Ant-Colony as Organism', *Journal of Morphology* 22 (1911): 301-25.

> It seems to me that if the organism be inexplicable on purely biological grounds, we should do better to resort to psychological agencies like consciousness and the will. These have at least the value which attaches to the most immediate experience.[19]

This was the beginnings of what had already become known as 'emergence' or 'emergentism': the belief that a higher stratum of phenomena, with wholly novel properties and a wholly new sequence of cause and effect could emerge spontaneously out of the workings of lower, more simple strata.[20] It is often seen as either a way of letting in a kind of mysticism through the back door, or alternatively explaining away the appearance of metaphysical intervention.

We might intuitively place Wells in the latter, more materialistic camp. But one thing that the war did to Wells was to precipitate one of his periodic bouts of religiosity. It appears that the two sides of this debate split Wells down the middle.

'They tell me the Germans are thinking' – *Boon*

In 1914, Wells was, like Wilfred Trotter, also already in the middle of a book and, like Trotter, he wrote the war into its subject matter. *Boon: The Mind of the Race, The Wild Asses of the Devil and the Last Trump* is a sprawling, chaotic scrap-book of a novel which is now rarely discussed, even by Wellsians. It is the story of a writer Reginald Bliss who is given the role of assembling the literary remains of his deceased friend, George Boon, and the book he assembles is the book we read together with extensive recollections of philosophical discussions between Boon, Bliss and other friends. The French would call the form a *roman à thèse,* or a novel of ideas, and it is the

[19] Wheeler, 324.

[20] For a good exposition of the history of this concept see Robert Keith Sawyer, *Social Emergence: Societies as Complex Systems* (Cambridge: Cambridge University Press, 2005). At the beginning of the century, the notion of a superorganism had become the founding principle of the newly independent discipline of Sociology in Emile Durkheim's *Rules of Sociological Method*: 'Whenever elements of any kind combine, by virtue of this combination they give rise to new phenomena. One is therefore forced to conceive of these phenomena as residing, not in the elements, but in the entity formed by the union of these elements.' (Emile Durkheim, *The Rules of Sociological Method* [1901], trans. W. D. Halls (New York: Free Press, 1982), 39.)

thesis running through that form that pulls it all together. This thesis forms a point of discussion which, though not dealing directly with zoology, chimes in concord with Trotter's nervous speculations regarding the 'Common Mind'. In *Boon*, 'The Mind of the Race' – the idea that all individual consciousnesses partake of one unified global consciousness is an idea that obsessed the deceased novelist George Boon, as it obsessed Wells. The nature, constitution and even the existence of such a thing are all held up to rigorous debate by a multitude of different characters in quiet suburban settings. In one discussion in Boon's greenhouse, a Mr Edwin Dodd, the belligerent sceptic who every night 'looked under his bed for the Deity, and slept with a large revolver under his pillow for fear of a revelation' takes Boon to task for his unprovable speculations. Boon remonstrates:

> 'You perceive something more extensive than individual wills and individual processes of reasoning in mankind, a body of thought, a trend of ideas and purposes, a thing made up of the synthesis of all the individual instances, something more than their algebraic sum [...] —'
> 'Oh – figuratively, perhaps!' said Dodd.

Here, the narrator, Reginald Bliss, steps in:

> For my own part I could not see where Dodd's 'figuratively' comes in. The mind of the race is as real to me as the mind of Dodd or my own. Because Dodd is completely made up of Dodd's right leg plus Dodd's left leg, plus Dodd's right arm plus Dodd's left arm plus Dodd's head and Dodd's trunk, it doesn't follow that Dodd is a mere figurative expression. . . .[21]

Despite the common sense to which Bliss is appealing here, large claims were made for this collective entity. Later in the war, Wells made something of a confession of religious faith in which participation in the super-personal intellectual project of the species, joining something larger and more enduring than the individual mind, becomes a substitute for the individual immortality promised by religion. In fact, at the time, he insisted that this was not a substitute for religious ideas but a modern form of religious conviction. The super-personal intelligence became a kind of 'synthetic god'[22]

---

[21] H. G. Wells, *Boon, The Mind of the Race, The Wild Asses of the Devil, and, The Last Trump* [1915] (London: Faber and Faber, 2008), 42-3.
[22] H. G. Wells, *God the Invisible King* (London: Cassell, 1917). Wells later recanted somewhat on these views. See Wagar, 35.

However, in *Boon*, the Mind of the Race is not an object of faith in the sense of a kind of Providence to which one can entrust one's fate. The task of synthesising this synthetic God is very much up to the will of human beings. This is in marked contrast to Trotter, Maeterlinck and Wheeler's 'Spirit of the Hive' which acts upon its constituent members regardless of their individual wills. Wells himself, in an earlier formulation of his thoughts, seemed to agree; in *Anticipations* (1901), he states: 'The final attainment of this great synthesis [...] has an air of being a process independent of any collective or conscious will in man.'[23] At some point in the course of *Boon* – quite early but hard to pin-point exactly – the Mind of the Race changes from an object of speculative description to a goal to be achieved; not something recognised, but something willed into being through evangelising convocation. One of Boon's prospective literary creations, Hallery, a young man who shares his crusading zeal for collective thinking takes to accosting 'nice bright clean Englishmen at tennis saying: '"Look here, you know… this is all very well. But have you *thought* to-day? They tell me the Germans are thinking…"'[24]

Boon decides that his fictional creation Hallery must convene a conference of writers, real and imaginary, to discuss the Mind of the Race but also in some way to instantiate and realise it – a group assembled to *become* the mind of the race. He sets out the idea in a presidential address to the assembly. Here, though, the ironist in Wells steps in and his thesis becomes subject, not to refutation but, much worse, to bathos. The grandeur of the scheme comes aground amongst a host of trivial personal incidents.

> At this point Hallery became so acutely aware of his audience that for some seconds he could not go on reading. A number of people in various parts of the hall had suddenly given way to their coughs, a bald-headed gentleman

[23] H. G. Wells, *Anticipations of the Reaction of Mechanical and Scientific Progress Human Life and Thought* (London: Chapman and Hall, 1901), 246.

[24] This interjection is very revealing of the atmosphere in which thinking was taking place in the pre-war years. The arms race that had slowly been gathering speed throughout the Edwardian era, reaching a decisive moment in 1906 with the unveiling of the HMS *Dreadnought*, was a race of collective intellect as well as military and industrial power. Germany's growing success was built on the increasing numbers of *Technikerschulen*, and Wells's own alma mater in South Kensington was assembled in slightly panicky imitation of these. Imperial College was born out of imperial anxiety as much as imperial pride.

> about the middle of the assembly had discovered a draught, and was silently but conspicuously negotiating for the closing of a window [...].[25]

This ironic distancing movement is repeated throughout the novel: invocations and convocations of the world mind repeatedly fall broken into a plurality of local personal affairs. And these are all small, incidental rehearsals of the grand tragic irony of the book: that of the First World War. Worse than a frustration or even confounding of his hopes for global unity, Boon comes, as Wells himself eventually did, to see the martial enlistment of society under one central command and the jingoistic rallying cries of patriotism as a grotesque parody of their dreams of social solidarity:

> Read the daily papers; go and listen to the talk of the people! [...] The mind you will meet is not in the least like a mind doing something slowly but steadfastly; far more it is like a mind being smashed about and worried… It is like a dying man strangling a robber in his death-grip.[26]

However, even if military central command and control did not live up to Wells's dream, centralisation was still the *sine qua non* of his project. Wells, in his wartime writing, could never quite believe in any purely distributed intelligence. His global consciousness could only be conscious to the extent that it was channelled through a single mind, or at least a defined and recognisable group of minds, within the collective. But this vision had its own form of biological validation. In other works, the hazy metaphysical concept of a collective *mind* is replaced by the more tangible and scientifically verifiable image of the collective *brain.*[27]

---

[25] Wells, *Boon*, 152.

[26] Ibid., 265.

[27] This core assumption was born out of debates within the English Victorian Scientific establishment in which Wells was disciplined as a thinker. The contemporary historian of science James Elwick has written extensively about the biologically informed political debates between Herbert Spencer and Thomas Henry Huxley around the relative centralisation of the 'social organism'. Spencer was very interested in emerging evidence of invertebrate creatures like the sea squirt that were at the border between being one thing and being many different things acting together in harmonious independence. Spencer jumped at these examples, not simply out of scientific interest but out of a nakedly political, liberal distaste for *dirigiste* authority. Spencer's friend Thomas Henry Huxley rejected what he called the 'administrative nihilism' of Spencer's politics and rejected their supposed biological foundation, insisting on the centralised coherence of Spencer's squirts and polyps.

Wells believed in brains. He famously called, at the end of his life, for an encyclopaedic 'World Brain' – 'a new social organ, a new institution [...] a means whereby we can [...] bring all the scattered and ineffectual mental wealth together into something like a common understanding.'[28] He wanted society to grow a brain and he saw its failure to do so all around him. He accused his *alma mater*, the Normal School of Science in South Kensington, now Imperial College, of being brainless. It was, he said, 'a huge fungoid assemblage of buildings and schools without visible centre, guiding purpose or directive brain [... now] a constituent of that still vaster, still more conspicuously acephalic monster, the University of London.'[29] Wells here does not necessarily mean that any single individual within the College is brainless. What it lacks is a collective brain, a synthesis of individual intelligences. However, something of his contempt for the institution filters down to the student body. He goes on: 'The ideal output of the Imperial College remains a swarm of mechanical, electrical and chemical business smarties, guaranteed to have no capacity for social leadership, constructive combination or original thought.'[30] Here again, as in his wartime pamphlets, Wells uses the word 'swarm' to mean a purely chaotic aggregation with nothing vital holding it together. For this swarm to come together in any type of complex unity – for the social organism of the college to be more than a fungoid assemblage – leadership was needed. The cerebral authority Wells imagined is not quite a Hobbesian sovereign, still less a totalitarian government. The large-scale societal brain that he imagined was never – or never only – simply the centre *from which* power and law emanated. It was also an information hub, the centre *to which* information flowed, the point at which all society's various lines of communication converged.

Huxley's role as a scientific arch-pedagogue blended into a New Liberal vision where a cerebral quasi-clergy of scientific naturalists transmitted knowledge and scientific values down through the collective nervous system of institutions, journals, exchanges. Without ever joining this debate in person, Wells very clearly stood behind Huxley, his teacher and mentor. See James Elwick, 'Herbert Spencer and the Disunity of the Social Organism', *History of Science* 41.1 (2003): 35-72; Herbert Spencer, 'The Social Organism', *Westminster Review* 73 (1860): 90-121; and Thomas Henry Huxley, 'Administrative Nihilism', *Fortnightly Review* (1871): 525-43.

[28] H. G. Wells, *World Brain: Essays and Addresses* (London: Methuen, 1938), 11.

[29] H. G. Wells, *Experiment in Autobiography* [1934] (Philadelphia: Lippincott, 1967), 167.

[30] Ibid., 168.

The swarming gutter – *The First Men in the Moon*

This conception of a *cephalic* society recurs throughout Wells's work, even and especially in his own entomologically inspired speculation. In *The First Men in the Moon*, Wells published one of his first fictional and fanciful meditations on the idea of a collective intelligence.

The insect society that Cavor and Bedford find amongst the Selenites in the caverns of the moon corresponds superficially to the entomological notion of the super-organism. Labour is divided among them according to the different functions of a single human body, with some individuals acting as hands, others as noses, and so on. Their society has reached the apogee of what entomologists would later call *eusociality*, a state of perfect social integration wherein each individual's role is perfectly coordinated with the other, and each individual has become nothing other than his social role.

However, this society is definitely not the communistic anarchy that both Maeterlinck and Wheeler saw in their hives, and its order does not need to be explained by any emergent entity or principle. The fallacy that entomologists had long since dismissed as the 'myth of the queen ant' was, for Wells, at least an imaginative imperative. The Selenites are governed by a pompously regal and autocratic brain-like being known as the Grand Lunar. We meet him towards the end, in a flush of regalia, with attendants at hand to spray cooling liquid over him, while he listens to the scientist Cavor describing earthly society and democratic government. '"You said all men rule?' he asks. "But who thinks? Who governs?" [...] He reached out to a salient fact. "Do you mean [...] that there is no Grand Earthly?"'[31]

Critics are still undecided as to whether to see the novel as a comically exaggerated utopia or as a satire on such utopianism.[32] There is certainly something ridiculous about the Grand Lunar, modelled, as he clearly is, not simply on a conception of human anatomy, but on the stereotypical image of a despotic oriental potentate. If this is satire, then the joke may well be on the brain, or on Wells himself, with his plans for cerebral authority. William Wheeler, in dismissing the notion of the insect queen as an organising

[31] H. G. Wells, *The First Men in the Moon* [1901] (London: Everyman, 1993), 181.

[32] Simon James sees the work as a transition between Wells's scientific romances and his utopian writing. The element of satire would appear to add the later Edwardian works like *The War in the Air* and *Tono-Bungay* to this mix. Simon J. James, *Maps of Utopia: H. G. Wells, Modernity, and the End of Culture* (Oxford: Oxford University Press, 2012).

intelligence pauses to reflect that, in reality, human queens rarely ever quite fit that role either: 'as queens in human states do not necessarily govern and are often rather anabolic, sedentary and prolific persons and the subjects of much flattering attention, the term is not altogether inapt.'[33] For all the Grand Lunar's regal-rational control, there is something in the pomp and ceremony of his presentation that at least allows the reader some room for suspicion. Is this society really a utopia of intellectual governance or the flattering illusion of one?

Beneath this tightly controlled structure, the reader glimpses the possibility of another order at work. There is one fleeting and seemingly insignificant moment in the text in which the rigid cognitive hierarchy seems to subside a little. The Grand Lunar loses his monopoly of understanding, and the task of looking and interpreting the world is dispersed amongst the population as a whole. It is when Cavor, the alien visitor to their world, arrives and disturbs their perfect order: 'These moon people behaved exactly as a human crowd might have done in similar circumstances: they jostled and thrust one another, they shoved one another aside, they even clambered upon one another to get a glimpse of me.' [34] It is the only point in the novel where the colony becomes truly a swarm. As such, it momentarily provides an alternative model of collective thinking.

More importantly, in the novel, as in Wells's thinking as a whole, possession of a brain is not quite the guarantor of integrity and singularity that one might think. At an earlier point in the novel, we gain another glimpse into chaotic plurality behind surface unity. But this one happens at the level of the individual human protagonists. There is a curious passage that stands out from the narrative, where Bedford finally escapes from the moon in his spaceship and, finding himself drifting in space, experiences something of an existential crisis, if not a schizophrenic breakdown. He senses his own vacancy: the reality of his own dissociated selfhood. He experiences

> a pervading doubt of my own identity. I became, if I may so express it, dissociate from Bedford. [...] For a time I struggled against this really very grotesque delusion. I tried to summon the memory of vivid moments, of tender or intense emotions to my assistance [...]. But I could not do it. I saw Bedford rushing down Chancery Lane, hat on the back of his head, coat tails flying out, *en route* for his public examination. I saw him dodging and

[33] Wheeler, 320.
[34] Wells, *First Men*, 162.

> bumping against, and even saluting, other similar little creatures in that swarming gutter of people. Me?[35]

What Bedford has found himself suddenly lacking in the solitude of space is what he would later, under the influence of Carl Jung, call a *persona*, a mask constructed for the purpose of relating to others, the 'wabbling working self we imagine for ourselves'.[36] This false front is designed to help orient us in relation to society and thus to coordinate in the maintenance and structuring of it. But, more than protecting the integrity of society as a whole, the *persona* protected the boundedness and integrity of the individual. The mask was what held the self together. Without it, Bedford not only fails to identify himself in the 'swarming gutter of people', but also takes on something of its swarming multiplicity; he becomes the swarm itself. Losing this mask is described in the novel as a breakdown, but for Wells such a breakdown was also a revelation: this is what selves always were.

At a very ripe old age, Wells decided that he wanted to get a PhD. His thesis was entitled 'A thesis on the quality of illusion in the continuity of the individual life in the higher metazoa, with particular reference to the species Homo sapiens'. Here, he details succinctly his theory of the plurality of the self. He does so using the image of a city population, each individual lost in their own preoccupations:

> [T]he integrality of the individual in the higher metazoan up to and including man, is a biologically convenient delusion. [...] Things are going on in your body when, in the vulgar language of everyday life, you are sound asleep – a multitude of natural, irrational things. They go on, a series of living sequences like people going about their business in a great city, just as Mr. Smith and Mr. Brown go about their suburban affairs, sufficiently and completely, without getting into the papers or going on record in anyway. Some of these sequences, under stress of accumulating secretions, pressures, muscular movements, or external sounds, may stir the body to activity as a conscious whole. To pursue the suburban metaphor further, the social body, the public, the Press, the magistracy, or the police have to take notice. In normal speech, you wake up.[37]

---

[35] Ibid., 135-6.

[36] H. G. Wells, 'A Thesis on the Quality of Illusion in the Continuity of the Individual Life in the Higher Metazoa, with Particular Reference to the Species Homo Sapiens' (London: [Privately printed], 1942), 5.

[37] Ibid., 1-2.

The individual's consciousness is dispersed into a set of disparate local affairs, reassembling and disassembling in phases, without firm and secure continuity. With this in mind, we might revisit Reginald Bliss's comment in *Boon* with a sense of irony: 'The mind of the race is as real to me as the mind of Dodd or my own.' Wells, towards the end of his life, calls into question even this latter grounding certainty.

Thus, in Wells's work taken as a whole, we can see a curiously circular relationship between tenor and vehicle. Wells wishes to give society the integrity and centrality of the individual person, but at the same time, he is giving the individual person something of the multiplicity of the collective. The two swap qualities. The individual mind and the collective mind parallel each other, the latter *is* as real as the former – that is, barely, fleetingly, mysteriously.

Swarming and multiplying – *The War of the Worlds*

The city image that Wells uses to enlarge and project the elusive and inconstant processes of consciousness is reminiscent of the famous panoramic opening shot of *The War of the Worlds*. 'Mr. Smith and Mr. Brown' going about 'their suburban affairs' chimes readily with the 'infinite complacency' with which 'men went to and fro over this globe about their little affairs' in the earlier novel. Here, the city image is compared, not to the human body with its central nervous system, but a seemingly much more chaotic aggregate: to 'creatures that swarm and multiply in a drop of water'.[38] The reader is invited to share in the Martians' viewpoint: it is not a human perspective on aliens, but an alien perspective on humanity. Once again, the image of a human swarm is invoked to suggest a state of collective unconsciousness, a failure to cohere as one thinking entity. Even as the individual humans busy themselves in full wakefulness, the global mind that they might together constitute, the elusive entity that Wells sought throughout his work, is fast asleep.

Asleep, but not dead. *The War of the Worlds*, in contrast to *The First Men in the Moon*, suggests the possibility of a swarm intelligence, a single collective intellect without the universally mediating presence of a global brain. Human society exhibits something like the superorganismic consciousness that Trotter and Wheeler were to describe in the decade to come. *The War of the Worlds* presents a picture of how the swarm get to

[38] H. G. Wells, *The War of the Worlds* [1898], ed. Patrick Parrinder (London: Penguin, 2005), 7.

know the figure that gazes at them, how the all-encompassing gaze is returned. The novel stages a battle between two biological entities, a cephalic and an acephalic monster, the brain-like Martians, against the brainless collective humanity. This time, of course, the latter wins the day. It does so precisely without the intervention of any central intelligence, without anything like the Martians' totalising perspective. This is what the Martians destroy very effectively from the beginning (a curious forecast of the US military doctrine of 'Shock and Awe', which aimed to 'paralyze the enemy's perception of the battlefield'[39]). There are certain moments when the reader is again invited to see the action from the same Olympian perch with which the novel opened. During the exodus from London, we are imaginatively elevated: 'If one could have hung that June morning in a balloon [...] every [...] road running out of the tangled maze of streets would have seemed stippled black with the streaming fugitives [...].'[40] However, the subjunctive mood of this description, the 'if' with which it is introduced, only serves to highlight the fact that it is exactly this macroscopic perspective that the London population lacks. Any semblance of such a viewpoint that human society may have constructed for itself has been usurped by the malign omniscience of the enemy.

The first casualty of *The War of the Worlds* is centralised intelligence; in particular centralised *scientific* intelligence. The astronomers are discredited in their dismissal of the chances of alien visitation and eventually Ogilvy and Stent, the real world Grand Lunars of their society, are both killed. Throughout his fiction, Wells shows a decided predilection for destroying scientific establishments; from one of his earliest short stories, 'The Argonauts of the Air' (1895), in which a plane crashes climactically into the Royal College of Science, to his 1919 novel *The Undying Fire* (1919), which portrays an explosion in a chemistry lab.[41] He wrote a letter to Elizabeth Healey whilst writing *The War of the Worlds*, recounting with rather gruesome glee the horrors and destruction he was visiting upon

[39] Harlan K. Ullman and James P. Wade, *Shock and Awe: Achieving Rapid Dominance* (Washington: National Defense University, 1996), xxiv.
[40] Wells, *The War of the Worlds*, 104.
[41] H. G. Wells, 'The Argonauts of the Air' [1895] in *Selected Short Stories* (London: Penguin, 1971), 212-23; H. G. Wells, *The Undying Fire* (London: Cassell, 1919). I owe this observation to Patrick Parrinder.

Woking and London, noting that South Kensington had been singled out 'for feats of peculiar atrocity'.[42]

However, in a certain sense, the breakdown of institutionalised public knowledge, the decapitation of English society, brings about, not the collapse of scientific process, but a widening dispersal of it. English society as a whole *becomes* a kind of exploded laboratory: not 'exploded' in the sense of obliterated, but in the sense of having lost its boundedness and discretion, losing the sanctifying limits that keep it separate from the rest of the population. As in the one fleeting moment from *The First Men in the Moon*, where the Selenites elbow and jostle with each other for a view, the task of empirical investigation becomes distributed through the population at large. All the participants in the story are involved in a chaotic process of gathering, exchanging, collating and interpreting information about a set of novel biological specimens.

This is, of course, not to say that Wells's populace always acts and thinks rationally and methodically. But even the apocalyptic fantasies of the curate, for example, can be seen as a frenzied attempt at hypothesis and interpretation, a way of answering his own question: 'What do these things mean?'[43] The presence of the Martians unites the population, not into consensus, but into dialogue. However, this is done without there being any single point at which all these lines of communication finally converge. Social knowledge and public deliberation are no longer structured like a central nervous system with a brain that receives and transmits the needed information. It is an endlessly plastic and fluctuating network with multiple, changing points of collection and collation.

The print media, which could be considered a plausible candidate for the role of centralising information-hub, singularly fails to fulfil this role. Its main representative in the story, Henderson the journalist, is killed along

---

[42] See Norman and Jeanne Mackenzie, *H. G. Wells: A Biography* (New York: Simon and Schuster 1973), 113. All this might remind us of another novel, one dedicated to Wells, written eleven years later by his friend Joseph Conrad. *The Secret Agent* features as its central episode an aborted attack by an *agent provocateur*, posing as an anarchist, upon the Royal Observatory at Greenwich. This is done under the guiding assumption that, in the twentieth century, science has become the 'sacrosanct fetish' of the age; it has an authority amongst the general population that the traditional centres of authority like the government and the church lack. Only by attacking the institutions of science could the needed anarchy and outrage erupt. Joseph Conrad, *The Secret Agent* [1907] (London: Penguin, 1984).

[43] Wells, *The War of the Worlds*, 69.

with the astronomers. A great amount of attention is given to press reports in the novel, but the picture created is one of a chaos of contradictory reports and misinformation.[44]

Buried below this official information network in the novel is an unofficial network of communal word-of-mouth and personal reportage. The Martian invasion provides a kind of dye-test for this network, bringing it to the surface. For a relatively long period at the beginning of the novel, the Martian landing remains an object of excited village gossip. News of the military encirclement of the cylinder is brought by the milkman.[45] And because of this communal reportage, the interpretation of phenomena becomes curiously localised. Arriving in Shepperton, the narrator meets an excited and noisy crowd: 'the idea people seemed to have here was that the Martians were simply formidable human beings.'[46] Shepperton, evidently, has its own ideas about Martians – the Shepperton School of extra-terrestrial biology. Yet these topographical variations can only be momentary interpretative constellations amongst the chaotic mingling of people and reports.

Top-down epistemological authority is regained at the end of the novel. The alien corpses are given post-mortems and scientific reports are written and published. Much of what we learn about the aliens is given in the light of this subsequent understanding. But these investigations are made after the fact, in the wake of victory. The war is won without any such unified knowledge, in fact, without any human effort. It is won by creatures with even less consciousness than individual humans – a kind of bacterial guerrilla warfare. And this might serve to put to rest any claims that the microbial victory at the novel's conclusion constitutes a *deus ex machina*.[47] The swarm of bacteria are the epitome of the unconscious and uncoordinated collectivity that the novel opened with in its portrayal of humanity.

Conclusion

[44] To cite one example among many: the news report stating that 'All London was electrified by the news from Woking', which the narrator dismisses: 'As a matter of fact there was nothing to justify that extravagant claim.' (Wells, *The War of the Worlds*, 74.)

[45] Wells, *The War of the Worlds*, 38.

[46] Ibid., 61.

[47] See, for example, 'Deus ex Machina', *The Greenwood Encyclopaedia of Science Fiction and Fantasy. Volume 1*, ed. Gary Westfahl (Westport: Greenwood, 2005), 194.

In confronting their alien intruder, the Selenites 'jostled and thrust one another, they shoved one another aside, they even clambered upon one another to get a glimpse of me'. The Martians in *The War of the Worlds* similarly gather an 'elbowing and jostling' crowd around themselves. Soon this chaotic multitude will encompass everyone; all of London will be arranged in a frenzied act of mass observation around them. The Martians provide a singular focal point for a society that, until they arrived, was entirely lacking one. And this, in a way, answers questions that Trotter, Maeterlinck, Wheeler, and indeed Wells were asking about the nature of collective consciousness. The phenomenologists tell us that the single defining feature of consciousness is *intentionality*, directedness at something outside itself.[48] Consciousness has to be conscious *of* something. Society gains a common consciousness when it gains a common *object*. Wells's wartime pamphlets called for an 'idea' to rally the English citizenry. However, his earlier scientific romance shows society being marshalled, not by an idea, but by a *Thing*. The Martians seek to devastate the human swarm, but in doing so, they give it unity.

[48] For the original formulation of this position, see Franz Brentano, *Psychology from an Empirical Standpoint* [1874], trans. Antos Rancurello, D. B. Terrell and Lina McAlister (London: Routledge, 2009).