

THE SINGULARITY AND H. G. WELLS'S CONCEPTION OF THE WORLD BRAIN

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Abstract

Prescience allowed H. G. Wells to predict the outbreak of WWII and anticipate modern technologies, such as the aeroplane, the tank, the atomic bomb, the laser beam, and biological engineering. This article explores Wells's prefiguration of the singularity in the shape of the world brain. In both his fiction and journalism, Wells invests in vast political and social transformations, which precede the emergence of a knowledge infrastructure whose universal availability purports to transcend national, racial, gender, and socioeconomic boundaries. Contextualized alongside present-day concerns about exclusion, the world brain offers a critical model for circumventing the singularity as a dystopian prospect.

Key words

H. G. Wells; world brain; Ray Kurzweil; singularity; technology; exclusion

1. Introduction

The idea of singularity owes its popularization to Ray Kurzweil's voluminous bestseller *The Singularity is Near: When Humans Transcend Biology* (2005). Inventor of text and sound recognition technologies, Kurzweil has defined the singularity as a world-transforming event, "an acute and abrupt break in the continuity of progress" (Kurzweil 2006: 24). This break has been prepared by accelerating technological development, which has propelled humanity towards a new stage in its existence. Kurzweil places that stage at the convergence of biological and technological evolution, both of which will result in the amplification of the human body. Once the neurones connect responsively to nanotechnological extensions, humans will take full control of their lives by re-arranging the brain, redesigning digestion, re-programming blood, and generating organ replacements (Kurzweil 2006: 245). In consequence, creativity will trump "our destructive inclinations", and most medical causes of death will be eliminated, allowing humanity to "encounter transcendence" (Kurzweil 2006: 21, 387). Kurzweil construes transcendence as the outcome of a knowledge, skills, and personality back-up, which will predate a spiritual existence (Kurzweil 2006: 323). On his evolutionary scale, such an existence will initiate an intelligent saturation of the universe and enable the beginning of the singularity, whereby "the 'dumb' matter and mechanisms of the universe will be transformed into exquisite sublime forms of intelligence" (Kurzweil 2006: 21). In general outline, Kurzweil premises the singularity on the conviction that both the world economy and technological progress follow the

course of biological evolution and continue to accelerate (Kurzweil 2006: 99). For him, the purely economic imperative of exponential growth has the capacity to resolve all socioeconomic problems, as though the incremental “price-performance” of proliferating technologies would indiscriminately lead humanity out of the injustices to a much more fulfilling condition (Kurzweil 2006: 469).

Markedly, Kurzweil’s volume contains no reference to H. G. Wells, much as the latter had prefigured the singularity some eighty years earlier. Indeed, in *Men Like Gods* (1923), Wells envisages a considerably more evolved society working towards space conquest. Dubbed Utopians, the new humans have engineered the environment they inhabit, changing it into a pastoral site with tame leopards and double roses; they have also improved on their physical constitution and, as a result, exhibit accomplished bodies (Wells 2011a: 220, 295). Most changes have affected, though, the Utopians’ cerebral activity. Their individual brains have become wired to a collective superintelligence, known as the world brain. Telepathy has nearly supplanted language: “We use sounds in this world now only for poetry and pleasure and in moments of emotion or to shout at a distance, or with animals, not for the transmission of ideas from human mind to kindred human mind any more” (Wells 2011a: 242). Having achieved such heights in biological and technological development, the Utopians set sights on saturating the universe with their intelligence:

With Man came Logos, the Word and the Will into our universe, to watch [Nature] and fear it, to learn it and cease to fear it, to know it and comprehend it and master it. So that we of Utopia are no longer the beaten and starved children of Nature, but her free and adolescent sons. We have taken over the Old Lady’s Estate. Every day we learn a little better how to master this little planet. Every day our thoughts go out more surely to our inheritance, the stars. And the deeps beyond and beneath the stars. (Wells 2011a: 270)

This passage predicates the singularity on biological evolution, assisted by technological progress. However, unlike Kurzweil’s, Wells’s evolutionary optimism does not fly vertiginously high, nor does it take its assurances from the accelerating growth of the world economy. His earlier scientific romances, particularly *The Time Machine* (1895) and *The Island of Doctor Moreau* (1896), alert the reader to possible reversals and relapses to a pre-cultural, animal state. For Wells, transcendence of any biological existence requires more than a fluke of economic development and technological progress. Contrary to Kurzweil, Wells does not leave the singularity to the mercy of proliferating technologies. In *Men Like Gods*, vast political and social transformations precede, inflect, and direct the emergence of the world brain and, subsequently, the new human society.

This article explores Wells’s prefiguration of the singularity in the shape of the world brain. Devised to transcend national, racial, gender, and socioeconomic boundaries, the world brain constitutes an indelible part of the World State, which is, in turn, a political and social formation that makes human flourishing its sole prerogative. My examination opens with an overview of critical opinion

on Wells's anticipations, the World State and its knowledge infrastructure, followed by discussion of the world brain in terms of its organization and properties, as well as relevance to present-day concerns about exclusion. Throughout my analysis, I glean Wells's conception of the world brain from both his fiction and journalism, which permits me to situate it in the history of the singularity, on the one hand, while at the same time upholding its current pertinence, on the other.

2. Wells's anticipations, the World State and its knowledge infrastructure

Prescience allowed Wells to anticipate technological innovations, predict historic events, caution against destructive trends in modern society, and hitch creative potentialities to new forms of human association and knowledge. In *Shadows of the Future: H. G. Wells, Science Fiction and Prophecy* (1995), Patrick Parrinder has famously bestowed on Wells the dual symbolic role of Moses and Cassandra, because his futuropection was not only comforting, but also ominous and disturbing (Parrinder 1995: 9–10). Long before the Bleriot flight across the English Channel in 1909, the first use of the tank in the battlefields of WWI, the explosion of the atomic bomb in 1945, the testing of the laser in 1960, and the dawn of biological engineering in the 1970s, Wells had foreseen the “navigables”, the “land ironclads”, explosive atomic energy, the “heat ray”, and human-animal chimeras. He also prognosticated the outbreak of WWII resulting from the escalated tensions between the Third Reich and the Second Polish Republic over the Danzig/Gdańsk corridor. Wells's *The Shape of Things to Come* (1933) contains the following prophecy:

War came at last in 1940. The particular incident that led to actual warfare in Europe was due to a Polish commercial traveller, a Pole of Jewish origin, who was so ill advised as to have trouble with an ill-fitting dental plate during the halt of his train in Danzig. He seems to have got this plate jammed in such a fashion that he had to open his mouth wide and use both hands to struggle with it, and out of deference to his fellow passengers he turned his face to the window during these efforts at readjustment. He was a black-bearded man with a long and prominent nose, and no doubt the effect of his contortions was displeasing. Little did he realize that his clumsy hands were to release the dogs of war from the Pyrenees to Siberia. [...]

Unhappily, a young Nazi was standing on the platform outside and construed the unfortunate man's facial disarrangement into a hostile comment upon his uniform. (Wells 2011b: 193–194)

Regardless of its clearly ironic overtone, the predictive accuracy of this excerpt raises no doubts about the place and nature of a future conflict. In 1941, two years after the start of WWII, Wells wrote a preface to his earlier scientific romance *The War in the Air* (1908). Aggrieved by the fulfilment of the warnings he had made about warfare earlier, he concluded: “Is there anything to add to that preface now? Nothing except my epitaph. That, when the time comes, will

manifestly have to be: ‘I told you so. You *darned* fools.’” (Wells 2011c: 840; emphasis in the original). Towards the end of his life, Wells had grown to accept Cassandra’s profile more than that of Moses.

However, throughout most of his writing career, Wells remained a staunch advocate of a united human enterprise. Wells’s proposal for the World State has been the subject of several comprehensive studies, including particularly W. Warren Wagar’s *H. G. Wells and the World State* (1961), John S. Partington’s *Building Cosmopolis: The Political Thought of H. G. Wells* (2003), and Duncan Bell’s “Founding the World State: H. G. Wells on Empire and the English-Speaking Peoples” (2018). Whereas Wagar and Partington find international thought and internationalist politics at the heart of Wells’s World State (Wagar 1961: 210; Partington 2003: 234), Bell traces its origins to the British Empire, which Wells used as a model for global interrelations (Bell 2018: 877). Further to these contentions, I have argued elsewhere that Wells founded the World State on English national discourse, whose selective redeployment would engender a post-national world order (see Shadurski 2020: 56).

As early as *The War of the Worlds* (1898), Wells foregrounds “the commonweal of mankind” (Wells 2010: 362), proposing it to ensure the survival of the human species in the face of natural and other adverse cosmic factors. Beginning with *Anticipations of the Reaction of Mechanical and Scientific Progress Upon Human Life and Thought* (1901), Wells elaborates on the notion and function of the World State, which will harness the forces of modernity: transport, communications, and science will thus be made to expedite humanity’s well-being. In *A Modern Utopia* (1905), he problematizes the World State as a merely technological node, when one of the novel’s narrators, the Owner of the Voice, remarks:

I have compared the system of indexing humanity we have come upon to an eye, an eye so sensitive and alert that two strangers cannot appear anywhere upon the planet without discovery. Now an eye does not see without a brain, an eye does not turn round and look without a will and purpose. A Utopia that deals only with appliances and arrangements is a dream of superficialities; the essential problem here, the body within these garments, is a moral and an intellectual problem. Behind all this material order, these perfected communications, perfected public services and economic organisations, there must be men and women willing these things. (Wells 1967: 172–173)

Here, the World State does not equal the proliferation of technologies, such as include indexing, documentation, and surveillance. Rather, Wells propagates a more complex nexus between the operations of the World State, on the one hand, and the human cerebral activity that coordinates them, on the other. The World State conducts a purposeful transformation of society, willed and envisaged collectively for the citizens’ own benefit.

In Wells’s later writing, the World State acquires a less demotic and more institutionalized dimension. Wells projects it as “one interlocking system” and “a world business organization” (Wells 1926: 635), as well as stipulating that large

companies “make for a single economic world organization, for Cosmopolis that is and not for Empire” (Wells 1929: 6). In *The Shape of Things to Come*, he maps out the World State onto a system of functional units:

[The World State] was never divided up into regional bodies. Its Fellows were acceptable at any local centre they happened to visit. Naturally it began mainly as localized nuclei, but those localizations were merely for convenience of propaganda, teaching, and local purposes. The effective subdivision of the Fellowship was into *faculties*, and these again were subdivided into sections and departments. There was to begin with a faculty of scientific research, a faculty of interpretation and education, a health faculty, a faculty of social order, a supply and trading faculty, a number of productive faculties, agricultural, mineral and so on. There were splits and coalescences among these faculties. (Wells 2011b: 350; emphasis in the original)

Wells gives the World State the form of an interconnected network of regions, not nations or nation-states. Each region will be specialized yet flexible in its economic purview, and very closely linked to all other regions by means of highly developed associations, similar to brain structure.

Wells’s World State both synthesizes and facilitates concerted human effort, ensuring that the work of individual cerebra culminates in a collective, world brain. In *Experiment in Autobiography* (1934), Wells illustrates the latter desideratum by referencing his own and wider humanity’s cerebral activity. Initially, he observes that “My brain I believe is consistent. Such as it is, it holds together. It is like a centralized country with all its government in one capital, even though that government is sometimes negligent, feeble or inert” (Wells 1934: 36). In conclusion, though, he despairs about his fellow humans’ “multitudinous brain-life”, which has yet to produce a common intelligence (Wells 1934: 643). Such observations foreshadow Wells’s conception of the world brain, a special knowledge infrastructure that will enhance the unity of the World State and serve as a vehicle towards the singularity.

3. The goals, governance, and properties of the world brain

As a knowledge infrastructure serving the united humanity, the world brain has garnered guarded critical opinion. Critics express concern about the centralization of knowledge, which the world brain presupposes, and ensuing manipulation of that knowledge for the sake of either authoritarian control or commercial profit. In “H. G. Wells’s Idea of a World Brain: A Critical Re-Assessment” (1999), W. Boyd Rayward applies an Orwellian lens, seeing in Wells’s conception the rise of Big Brother. For him, the world brain will herald “doctrinal conformity”, much in regress to the medieval practices of knowledge enclosure and inquisition (Rayward 1999: 570). Rayward rules that dissent and diversity will suffer the most in the conditions of knowledge synthesis, entrusted to the technocrats who

run the World State. He further remarks that “As individuals are subsumed by or absorbed into [the world brain], their independence and instrumentality in their own lives are inevitably curtailed in the expectation of general social betterment rather than an enhancement of individual potential. It is neither tool nor prosthesis but may be interpreted as an expression of totalitarian values and authoritarian control” (Rayward 1999: 571). This criticism brings to mind the anti-communist (and, by extension, anti-utopian) rhetoric of Karl Popper and Hannah Arendt, who equally feared the loss of the individual to the big state.

More recently, in “Cerebra: ‘All-Human’, ‘All-Too-Human’, ‘All-Too-Transhuman’” (2018), Joff P. N. Bradley has contextualized the world brain alongside digital capitalism. Under its circumstances, big corporations achieve knowledge synthesis with the help of search engines and digital content providers (Bradley 2018: 407). According to Bradley, such tendencies exteriorize knowledge, leading to its commodification and reification, as well as causing the loss of the authentic relation to the world and its social being. Unlike Rayward, Bradley raises no alarm about Wells’s conception as such and distinguishes in the world brain a democratic phenomenon, as long as the knowledge available through it becomes a matter of internal reflection and critique (Bradley 2018: 403). He warns about the perversions of the world brain by the market forces, whereby “purveyors of occupied attention” socially engineer and control knowledge recipients. Here, the “end to be served would not be for human betterment – a human cerebrum (world peace) but the maximization of profit – an all-too-human cerebrum satisfying the drives” (Bradley 2018: 413). Bradley’s criticism targets corporatism, a recent socioeconomic development that threatens to enslave the individual more thoroughly than the big state.

In what follows, I examine the conception of the world brain, as originally outlined by Wells in a series of his writings ranging chronologically between *A Modern Utopia* (1905) and *World Brain* (1938), and place them in response to the critical opinion recorded above. This examination allows me to isolate the political and social objectives of Wells’s conception, which make human flourishing their task. The idea of the world brain began to take shape in Wells’s major evolutionary study *The Science of Life* (1930), co-written by his son G. P. Wells and Julian Huxley. In scientific terms, Wells and his co-authors direct humanity’s progress towards “one collective human mind and will”, which equals “the promise of Man, consciously controlling his own destinies and the destinies of all life upon this planet” (Wells et al. 1931: 878). This promise gained special urgency when Europe found itself on the brink of WWII, and Wells reasserted his hope in the human capacity to evolve beyond disparate cerebral activity. In the collection of essays *World Brain*, Wells deplores the mental confusion sweeping the continent because of misconstrued faiths and creeds, on the right and on the left of the political spectrum. He conceives of the world brain as “a clearing house of misunderstanding”, which “would not be a miscellany, but a concentration, a clarification and a synthesis” (Wells 1938: 14–15). The world brain is to become “an undogmatic Bible to a new culture”, a culture defined by the proliferation of technologies and fast communications (Wells 1938: 14). Wells identifies the continuance of a world peace with the world brain and, through it, with a globally

emerging community of “competent receivers” (Wells 1938: xiv). This community will adopt an anti-sectarian outlook and denounce nationalism as a major cause of international conflict. In Wells’s words, the world brain “will necessarily press strongly against national delusions of grandeur, and against all sectarian assumptions” (Wells 1938: 55).

Further to ideological goals, the world brain will restructure society, its economy, and knowledge systems. Earlier, in *A Modern Utopia*, Wells laid the foundation of an arrangement that would rid the World State of the hierarchies associated with race, gender, and class. Instead, he proposed a non-hereditary caste of administrators, both men and women of any colour, calling them the *samurai*. Ability to pass an intellectual test would qualify them for the job:

Typically, the *samurai* are engaged in administrative work. Practically the whole of the responsible rule of the world is in their hands; all our head teachers and disciplinary heads of colleges, our judges, barristers, employers of labour beyond a certain limit, practising medical men, legislators, must be *samurai*, and all the executive committees, and so forth, that play so large a part in our affairs are drawn by lot exclusively from them. The order is not hereditary – we know just enough of biology and the uncertainties of inheritance to know how silly that would be – and it does not require an early consecration or novitiate or ceremonies and initiations of that sort. The *samurai* are, in fact, volunteers. Any intelligent adult in a reasonably healthy and efficient state may, at any age after five-and-twenty, become one of the *samurai*, and take a hand in the universal control. (Wells 1967: 278; emphasis in the original)

Later, Wells has redefined the *samurai* into “open conspirators”, a specially trained technocracy of engineers, aviators, and scientists. In *The Open Conspiracy: Blue Prints for a World Revolution* (1928), he endows them with the highly responsible task of critical discussion, whose “range and amplitude” become crucial to the dynamic development of the World State (Wells 1928: 86). In promoting the technocrats to the administration of the world brain, Wells heavily invests in their intellect, high moral radar, and lack of self-interest. He deems that, without these qualities, the prospect of the world brain will only reinstate the inequities of race, gender, and class, as well as concentrating knowledge in privileged enclosures.

Wells imagines a wholesale economic restructuring of the world, caused by the need to expand the world brain into a comprehensive knowledge system. In *The Shape of Things to Come*, the narrator Gustave de Windt casts an estranged glance at the economic practices of the twentieth century, to relegate their anachronism to the “Age of Frustration”:

To the people of the Age of Frustration our interlocking research, digest, discussion, verification, notification and informative organizations, or Fundamental Knowledge System, that is, with its special stations everywhere, its regional bureaus, its central city at Barcelona, its seventeen million active workers and its five million correspondents and reserve enquirers,

would have seemed incredibly vast. It would have seemed incredibly vast to them in spite of the fact that the entirely unproductive armies and military establishments they sustained in those days of universal poverty were practically as huge. (Wells 2011b: 132)

By this logic, the world brain will be, in the first instance, an organization that employs an enormous workforce. In re-channelling military expenditures and alleviating unemployment, Wells believes that the world brain will have global political consequences as a deterrent to war and social instability.

Undertaking to universalize the availability of knowledge, the world brain will challenge extant educational enclosures. Wells targets, particularly, the English university system as a medieval bastion of unused and unusable knowledge. In *The World of William Clissold: A Novel at a New Angle* (1926), he denigrates the incapacity of Oxford and Cambridge to contribute to the prerogatives of the World State. As a result, these universities become decommissioned as sites of architectural and tourist interest: “A time must come when Oxford and Cambridge will signify no more in the current intellectual life of the world than the monastery of Mount Athos or the lamaseries of Tibet do now, when their colleges will stand empty and clean for the amateur of architecture and the sight-seeing tourist” (Wells 1926: 735-736). For Wells, Oxford and Cambridge belong to a quaint past, alongside a whole system of the monastic entrenchment of knowledge. He returns to the inadequacies of such institutions in the novella *The Camford Visitation* (1937), where Camford unequivocally stands for Oxbridge. Wells enacts a fantastic intrusion of a visitant, who reveals himself as a voice, into the thoughts of several dons and fellows. Speaking on behalf of the world brain, the voice holds his academic interlocutors to account for failing to warrant humanity’s common cause: if anything, Camford reproduces itself, yet produces “no sort of brain” (Wells 1937: 41). The novella portrays the university as “feeble in innovation but invincible in resistance” (Wells 1937: 66). This description contrasts with the urgent dictates of the times, such as demand “an ordering of knowledge, so valiant a beating out of opinions, such a refreshment of teaching and such an organization of brains as will constitute a real and living world university, head, eyes and purpose for Man” (Wells 1937: 67). In Wells’s World State, the privilege and entitlement associated with Oxbridge will fall into desuetude, being outgrown by the pragmatism of the world brain.

Contrary to Rayward’s criticism, Wells shies away from the fixed parameters of the world brain (Rayward 1999: 571); rather, he upholds its organicism. According to Matthew Wraith, the world brain constitutes “a single collective intelligence” of a superorganic World State (Wraith 2016: 8). Indeed, the narrator of *The Shape of Things to Come* testifies to the processes of adaptation, mutation, bifurcation, and growth, which define cerebral activity and engender the world brain:

There is not only this sharpening and refinement of the brain going on, but there has been what our great grandparents would have considered an immense increase in the amount, the quality, and the accessibility of

knowledge. As the individual brain quickens and becomes more skilful, there also appears a collective Brain, the Encyclopaedia, the Fundamental Knowledge System which accumulates, sorts, keeps in order and renders available everything that is known. The Encyclopaedic organization [...] is the Memory of Mankind. Its tentacles spread out in one direction to millions of investigators, checkers and correspondents, and in another to keep the educational process in living touch with mental advance. It is growing rapidly as the continual advance in productive efficiency liberates fresh multitudes of workers for its services. [...] It is because the mind of man is growing up that for the first time it realizes that it is young. (Wells 2011b: 413–414)

The organicism of the world brain renders its content and structure provisional. Wells adumbrates no finite version of the world brain, because that version may threaten to choke development. In *World Brain*, he maintains:

Such premature crystallization of a thing needed by the world can produce, we now realize, a rigid obstructive *reality*, just *like enough* to our actual requirements to cripple every effort to replace it later by a more efficient organization. Explicit constitutions for social and political institutions are always dangerous things if these institutions are to live for any length of time. (Wells 1938: 52; emphasis in the original)

In couching the world brain in organic idiom, Wells privileges process and circumstance above the rigidity of theoretical formulation. On this score, the world brain declares itself “the enemy of all final doctrines and convictions” and “the spirit of the provisional” (Wells 1937: 60). Wells rejects doctrinal conformity on principle and favours organic growth instead: “If a thing is really to live it should grow rather than be made. It should never be something cut and dried” (Wells 1938: 52).

As regards functional properties, Wells transcribes the world brain as a storehouse of human memory, comprised of books and artefacts. In his sociological study *The Work, Wealth and Happiness of Mankind* (1931), he refers to this memory as “the central ganglion [...] of the collective human brain” and proposes to anatomize it into encyclopaedic sections that deal with philosophies, languages and cultures, mathematics, chemistry, biography, health, biology, political systems, education, religion, economic life, and aesthetics (Wells 1932: 776). Wells thinks of the world brain in terms of the most advanced technology of the time: knowledge will be “filmed on an ultra-microscopic scale, stored away, indexed [...] and [...] reproduced upon a suitable screen whenever required” (Wells 1937: 47). In Wells’s design, microfilm will ensure the widest possible availability of knowledge, expedited by fast global communications.

Wells treats the global outreach of the world brain inseparably from the status of English as lingua franca of the British Empire. In his BBC broadcast “As I See It” (1937), he interprets the history of English as an amalgamation of differences, a coming-together of various cultures, which “is a new thing in human experience” (Wells 2019). Wells expands on his apology in *World Brain*, recommending that

English because it has a wider range than German, a greater abundance and greater subtlety of expression than French and more precision than Russian, is the language in which the original text of a World Encyclopaedia ought to stand. And moreover it is in the English-speaking communities that such an enterprise as this is likely to find the broadest basis for operations, the frankest criticism and the greatest freedom from official interference and government propaganda. But that must not hinder us from drawing help and contributions from, and contemplating a use in every community in the world. (Wells 1938: 22)

Undoubtedly, this indiscriminate apology for English puts other languages at a disadvantage. However, Wells remains loyal to his organic rationale: having served large quarters of the planet's population, English has demonstrated its admirable ability to adapt and be adapted. Additionally, in *The Shape of Things to Come*, Wells notes that the world brain will use English as only a "provisional language" (Wells 2011b: 413). Eventually, this temporary phase will evolve into much more effective means of communication, telepathic or otherwise.

Born of the historic turmoil of 1930s Europe, Wells's conception of the world brain undertook to resolve the pressing issues of its time: how to keep a world peace and prevent war, how to unite human effort, and how to overcome socio-economic inequities. Wells absolutized the role of education, institutionalizing the world brain as a knowledge infrastructure that would transcend the divisions between nation-states, as well as the boundaries between people. Some of Wells's solutions bear the hallmarks of his faith in the ruling elites' charitable impulses, while others lack sufficient elaboration on demotic involvement in the production of the world brain. In this sense, his conception has its roots in the Victorian culture of public moralism, particularly Thomas Carlyle's appeals to the "captains of industry" and Matthew Arnold's valorisation of "touchstones". Grounded in historic circumstance and national discourse, the world brain subsumes technological development under the primacy of political and social objectives. Wells's refiguration of the singularity involves a willed transcendence of extant concerns, before allowing technologies to overtake them.

4. Coda: exclusion and the legacies of the world brain

Despite Kurzweil's optimism about the "ongoing exponential growth of price-performance" (Kurzweil 2006: 469), technologies facilitate exclusion. One need not be a conspiracy theorist to notice that the traces left online undergo constant commodification and reification. Search engines and other non-creative digital content providers respond to an Internet user's acts with targeted advertisements, which should raise questions about the use of personal data. Exclusion from the control of information flows becomes the functional mode of digital capitalism, which reinforces extant inequities. In *Against the Double Blackmail: Refugees, Terror and Other Troubles with the Neighbours* (2016), Slavoj Žižek has proposed to consider this issue as a decisive present-day antagonism:

The only *true* question today is this: do we endorse the predominant acceptance of capitalism as a fact of (human) nature, or does today's global capitalism contain strong enough antagonisms to prevent its indefinite reproduction? There are in fact four such antagonisms: the looming threat of ecological catastrophe; the more and more palpable failure of *private property* to integrate into its functioning so-called "intellectual property"; the socio-scientific developments (especially in biogenetics); and, last but not least, [...] new forms of apartheid, new walls and slums. [...]

[I]n the series of four antagonisms outlined above, the one between the Included and the Excluded is the crucial one: without it, all others lose their subversive edge. Ecology turns into a problem of sustainable development; intellectual property into a complex legal challenge; biogenetics into an ethical issue. (Žižek 2016: 103–104, 105; emphasis in the original)

Žižek uses the example of WikiLeaks to contend that technologies may also fracture exclusion. When corporate and governmental secrets occasionally escape containment, their publicity serves as a moving reminder of the unresolved problems of power and privilege. Under the circumstances of global capitalism, do Wells's legacies of the world brain gain a renewed significance?

Critics have discerned in Wells's conception a precursor of Wikipedia. In *Good Faith Collaboration: The Culture of Wikipedia* (2010), Joseph Michael Reagle points out that, even though the world brain had "never materialized beyond the ardent vision of an author", Wells foresaw the parameters that define Wikipedia. These include "corrective criticism" and the neutral point of view (Reagle 2010: 26). In "The Worlds of H. G. Wells" (2016), Simon J. James compares the world brain to a "World State-sponsored Wikipedia", an ever emerging global-scale organization (James 2016: 8). Indeed, Wikipedia resembles the world brain in that it produces a universally available reference facility whose writers seek no self-interest. Yet, contrary to Wells's open conspirators, they operate in the absence of a World State, and this peculiarity posits the question about political and social commitments, on the one hand, and the universalization of knowledge and use of technologies, on the other.

Wikipedia styles itself as "a free online encyclopaedia, created and edited by volunteers around the world and hosted by the Wikimedia Foundation" (Outline 2019). Put otherwise, the Foundation accommodates, rather than controlling, a platform whose premises enable anyone with an Internet connection to use and contribute to its growing content. Unlike Wells's world brain, Wikipedia allows a dual interface between recipient and creator, which in itself suggests a higher democratization of knowledge. Notably, in *A Social History of Knowledge II: From the Encyclopédie to Wikipedia* (2012), Peter Burke records no critical excess of error in Wikipedia entries, especially in comparison with other online reference resources, including the *Encyclopaedia Britannica*. He describes Wikipedia as an example of "citizen science" (Burke 2012: 273). Nathaniel Tkacz, in turn, addresses Wikipedia's foundational principles, which constitute its politics of openness. In *Wikipedia and the Politics of Openness* (2015), he admits that Wikipedia content, which is always necessarily the product of a spontaneous collaboration and

participation between peers, passes the test of merit, charisma, and ad-hocracy, as well as editing out extreme opinion (Tkacz 2015: 6-7). Existing outside the regulative mechanisms of a World State, Wikipedia regulates itself from within, and the exercise of self-verification guides the process. However, such internal politics of openness run up against the composition of Wikipedia's contributing community in terms of race, gender, and class, as well as language. Analyses reveal that, despite the fact that most Wikipedia writers stay anonymous, they typify white male North American academic enthusiasts and speakers of English (Burke 2012: 274; Tkacz 2015: 10). In view of these tendencies, Wikipedia reflects the patterns of power and privilege co-opted by global capitalism. It does challenge exclusion from the universal availability and emergence of knowledge, which marks a significant advance. Yet the lack of a definable political stance and social agenda leaves Wikipedia in alignment with an extant socioeconomic order.

The legacies of Wells's world brain remind the reader that human flourishing does not come of its own accord; it must be willed and envisaged in political and social categories. Unless the tasks of emancipation and world peace inflect the direction of technological progress towards the singularity, existing inequities will only escalate, serving the interests of the well-to-do one percent of the human population. If exclusion is set to keep humanity misguided and sectarian, yet monitored and commodified, the arrival of the singularity may bring with it a new slavery under an ever co-opted, dehumanizing system of digital manipulation. Politically motivated and socially committed, Wells's conception offers a critical model for circumventing the singularity as a dystopian prospect.

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