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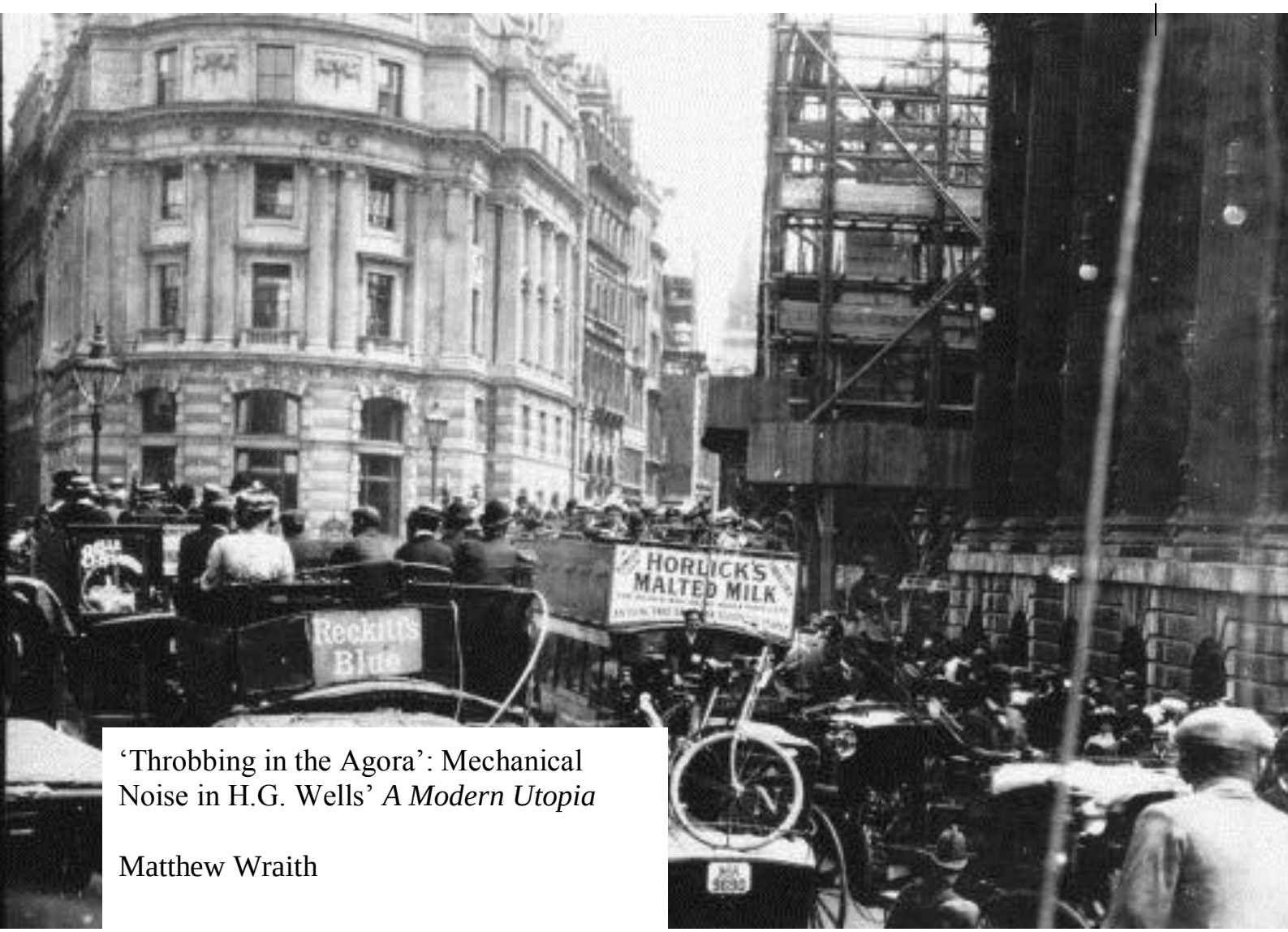

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‘THROBBING IN THE AGORA’: MECHANICAL NOISE IN H.G. WELLS’ *A MODERN UTOPIA*

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Abstract

Noise was a major by-product of the Industrial Revolution. The cacophony that started to fill the industrial cities of Europe in the nineteenth century was bewailed and campaigned against by a large and uneasy coalition of intellectuals and reformers. Noise was blamed for the corruption and decline of civilisation; for the genetic degeneration of the human stock; for the constant state of nervous anxiety in which the modern citizen lived and laboured. But despite the often Luddite, anti-industrial, stance of many of these polemics, the ‘crusade for quiet’ shared a common interest with the industrialists and engineers. Because a machine’s noise is the most immediately perceivable evidence of its inefficiency, the need to silence machinery became an over-riding industrial imperative.

At the beginning of the twentieth century, this synthesis of social-political and engineering concerns became of great importance in the technocratic utopian visions of scientifically-minded writers like H.G. Wells. Wells imagined throughout his fiction and non-fiction, that an elite group of scientists could engineer society for the good. But if society as a whole, in this way of thinking, was viewed as a kind of single mega-machine, engineered by its rulers, then mechanical *noise* comes to stand for the stubborn, recalcitrant social reality that will not conform to its design. In the political speculations of Wells’ *A Modern Utopia* and in a range of fictional works, he confronts this noisy reality.

Noisy inefficiency was at work not just in the labour process but in the very dialogue and deliberation through which the scientific principles that were to govern society were established. Noise is just as much, if not more, an antagonist to communication as it is for movement and production. The Information Age (of which Wells is sometimes hailed as a prophet) has to do battle with noise. Ultimately, Wells saw language itself as inherently prone to distorting miscommunication. He believed that language interfered with the truth which it was meant to transfer.

Key Words: Wells, H.G., utopia, modern, machine, noise, technology, dynamo, automobile, agora

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Introduction

> There appears no limit to the invasion of life by the machine. Now it is only in the last three hundred years that any human being seems to have anticipated this […] Plato clearly had no ideas about machines at all as a force affecting social organisation […] We are educated by our circumstances to think no revolution in appliances and economic organisation incredible, our minds play freely about possibilities that would have struck the men of the Academy as outrageous extravagance, and it is in regard to politico-social expedients that our imaginations fail. Sparta, for all the evidence of history, is scarcely more credible to us than a motor-car throbbing in the agora would have been to Socrates.[1]

H.G. Wells, growing up in the suburbs of Victorian London, had witnessed ‘the invasion of life by machines’. The factories, offices and town squares of his city had become host to a vast throbbing multitude of appliances; this invasion had happened at a pace that made the

English citizenry, despite nonchalance that Wells attributes to them, scarcely less incredulous than the Athenians. Yet in *A Modern Utopia,* Wells' 1905 reworking of the utopian tradition stretching from Plato, to Thomas More, to William Morris and in a wide range of other fictional, semi-fictional and polemic writings, he embraces these intrusions. If Utopian writers of the generations before Wells had secluded their utopias in Arcadian idylls, Wells sought to delineate a society at the apex of the process of industrialisation, rather than in retreat from it.

Crucially, the idea of the machine was not simply a feature of the modern Utopia, nor simply the means by which it achieved its ends; It was also its *model*. 'Compared with our world' Wells says of his *Utopia*, 'it is like a well-oiled engine beside a scrap-heap.'[2] His Utopia could be realised, he declares, 'were our political and social and moral devices only as well contrived to their ends as a linotype machine, an antiseptic operating plant, or an electric tram-car'. This was, for Wells, 'the plain message physical science has for the world at large'.[3]

It is passages like this one that have earned Wells the reputation of a technocratic social engineer, impatient with the messy deliberative processes and traditional freedoms of liberal democracy.[4] A cursory acquaintance with Wells' work is enough to dispel the notion that he was in any way dismissive of the imperatives of freedom and collective rational discussion. One might rightly point out that in both my opening quotation and the last, Wells is in fact making a *distinction* between technological considerations and ethical-political ones. Yet it is clearly by the standards of the former that he judges the latter. Throughout Wells' Utopian speculations, he is concerned to translate moral issues and concerns into the language of the engineer, holding social and political institutions up to the engineer's standards: integration, co-ordination and above all *efficiency*.

In this way, we can see the motorcar that Wells drops into the Athenian town square as providing the prototype for the Good society that Plato looked for in a transcendental heaven of Ideas. The Republic, said Plato 'is laid up as a pattern in heaven, which he who desires may behold, and beholding may set his own house in order'.[5] In contrast, Wells sought the principle by which to adjudicate society in the messy realities of the empirical world. As Simon James states, 'the scientific occupies a place in Wells' thought equivalent to the good in Plato's'.[6] Wells' *Utopia* was an empirical utopia. Like Plato, he imagined a society run by an elite sect of guardians, the *Samurai*. As in Plato they achieved their status through an ascetic regime of self-discipline. Unlike Plato's guardians however, they were in the business of executing the processes of a vast state bureaucracy, governing the world state in accordance with the rules of scientific management. A weird combination of heroic warrior-monk and civil servant, the *Samurai* were not those who had peered into the sun of transcendental truth, but rather those who had peered under the bonnet, as it were, at a decidedly immanent and empirical one.

Yet Wells knew as well as Plato that nothing under heaven is perfect. It is of the very essence of the empirical, as anciently understood, that its items deviate slightly from their ideal conception. The machine is itself a secondary replication from an original blueprint and it will inevitably differ slightly from that blueprint; flaws and failures will appear upon realisation. And in a way, the motorcar that Wells conjures, 'throbbing in the Agora' before the Athenians, is displaying its own imperfection. For what is a motorcar's *throb* but the most immediately apparent evidence of its inefficiency? The noise that an engine emits betrays the fact that alongside its purposeful intended motion there exists a chaotic wayward motion, the all but supressed insistence of its component parts on their independence. Thus, the very model on which Wells seeks to base his ideal society contains within it the traces of its contrary. I wish to argue that for a certain type of early-twentieth-century techno-utopian thinking, of which Wells might be considered the exemplar, machine-noise comes to stand for

the recalcitrant social reality that will not conform to its design. Noise is the antagonist that Utopia must overcome; that which it must eliminate or accommodate.

Throbbing…

Machines in Utopia, Wells states, 'will all be beautiful things'. This is one of the first and most commonly recurring observations made by the narrator in his journeys around the parallel utopian world in which he finds himself, alongside his pedantic and tediously self-absorbed companion, named only as 'the botanist'.

> There is nothing in machines […] to oblige them to be ugly. Ugliness is the measure of imperfection; a thing of human making is for the most part ugly in proportion to the poverty of its constructive thought, to the failure of its producer fully to grasp the purpose of its being.[7]

Wells, like a great many artists and writers in the decade in which he was writing, was shaking off the orthodoxy of Victorian aesthetics that gasped in sustained horror at the invasions of machinery.[8] Four years after his book was published, the Italian Futurists were proclaiming in their first manifesto: 'A racing car whose hood is adorned with great pipes like serpents of explosive breath […] is more beautiful than the *Victory at Samothrace*.'[9] But the beauty that the latter found in the machine was based precisely on its excesses, its 'explosive breath' and its 'famished roar'.[10] One of the Futurist's main intellectual forbears, Friedrich Nietzsche said that 'excess strength alone is the proof of strength'.[11] In the motorcar's uproarious surplus motion the Futurists found a vitality far in excess of anything so vulgarly utilitarian as getting from A to B.

Wells was committed to the perhaps slightly more mundane idea of bringing machines into line with aesthetic principles rather than bringing aesthetic principles in line with the machine. Or rather, he posited an identity of the aesthetic and the utilitarian. He sought a beauty that was perfectly aligned with purpose. And if we look at all the various instances of this beauty as they are observed throughout the story, we can see that it is as much an auditory, *euphonic* conception of beauty as it is a visual one. We are shown 'a nocturnal tram-car gliding, lit and gay but almost *noiselessly*, past'.[12] In the room in the inn where the travellers stay, 'a *noiseless* rapid fan pumps air out of the room'.[13] The narrator notes the experiments in aviation that are taking place in utopia: 'To-morrow, perhaps, or in a day or so, some *silent*, distant thing will come gliding into view'.[14] And in the utopian train carriages, furnished with all the conveniences of a contemporary gentleman's club, 'will be a news-room, with a *noiseless* but busy tape at one corner, printing off messages'.[15]

Wells' almost obsessive insistence on silence can be elucidated with reference to a convergence of technological and social imperatives in the late nineteenth and early twentieth centuries. The noise that machines made had become, over the course of Wells' lifetime, a topic of heightened civic indignation. The cacophonous crescendo that industrialisation brought with it was met by a crescendo of complaint amongst campaigning members of the public. In the 1860s there had arisen an anti-noise movement in Britain which counted amongst its supporters some of the most illustrious names in Victorian England, and continued on into the 1930s.[16] In Germany, the *Deutsche Lärmschutzverband*, the German society for noise suppression was founded by the Philosopher Theodor Lessing who accompanied his complaints with a fashionably angst-ridden and pessimistic historical vision of the role that noise played in the decline of western civilisation.[17] And in North America in 1906, the Society for the Suppression of Unnecessary Noise was founded in the United States by New York society *belle*, Julia Barnett-Rice, enlisting the support of the medical authorities who championed her cause on behalf of their convalescent charges.[18] All saw the noise that

had invaded the space of western culture as both effecting and in some way symptomatic of a more general societal malaise; a disharmony in the social body.

Jon Agar, one of the many recent social historians who have looked at the rise of noise abatement movements in the period, notes the stalwart backing that it received from scientific authorities and detects within the movement the emergence of what he calls a 'conservative science'; 'scientific research […] brought to bear against the products of science'.[19] However, despite the often Luddite stance of many of the anti-noise polemics, there was nothing *inherently* reactionary or anti-industrial about such a movement. Emily Thompson comments that the North American movement gained relative success beyond that of its European counterparts precisely through the cooperation it ensured with businesses, gaining their support through the tactical but also accurate identification of industrial noise, not as a mechanical war-cry of progress and advance, but as a waste product and inefficiency in the industrial process.[20] There is an ambiguity in the word 'conservative' that Agar uses, hinging on the issue of what exactly was being conserved. For the keenly felt need to silence the machines was not simply about conserving a traditional way of life or archaic economic system; it was conserving *energy* and the mechanical negentropic order that ensured its utility in the onward march of progress. In this way, the interests of industry and that of their supposed antagonists in the anti-noise movement can be seen to coincide. Silence became itself an over-riding industrial imperative. And it is this synthesis of social-political and engineering concerns that Wells evokes in his technocratic utopian speculations. Wells' silence is not the silence of the old bucolic pre-industrial Europe; it is a silence on the other side of industrial progress.

This was a vision of machine progress that had been set in motion by engineering theorists at the end of the nineteenth century. Franz Reuleaux was a lecturer at the Berlin Royal Technical Academy, one of the German industrial colleges on which Wells' *alma mater* in South Kensington was modelled in panicked imitation.[21] He was an engineer and man of letters; as comfortable quoting Schiller and Homer as he was describing 'chamber-crank trains from a turning cross-block'.[22] Reuleaux was one of the first to attempt to understand the machine *as such:* not a definition of this or that device, but of what a machine is in its essence. A machine is, he said, 'a combination of resistant bodies so arranged that by their means the mechanical forces of nature can be compelled to do work accompanied by certain determinate motions […] The kosmical freedom of natural forces is brought in the machine under order and law, which no ordinary external force can shake.'[23] Lewis Mumford has pointed out that, once the idea of a machine had been abstracted to this point, it could begin to include the human collective. The first ever machine, according to Mumford, was nothing other than the co-ordinated labour force of the first Neolithic settlements and it is only the lack of any remains of this entity in the archaeological record that has stopped us recognising it as such. In these assemblages of human parts, he states, lay the seeds for the utopian impulse.[24] Reuleaux had already hinted at something like this idea himself:

> If we look for a parallel to [the mechanical restriction of forces] elsewhere we may find it in the great problem of human civilization […] Just as the poet contrasts the gentle and lovable Odyssean wanderers with the untameable Cyclops, the 'lawless-thoughted monsters,' so appears to us the unrestrained power of natural forces, acting and reacting in limitless freedom, bringing forth from the struggle of all against all their inevitable but unknown results, compared with the action of forces in the machine, carefully constrained and guided so as to produce the single result aimed at. Wise restriction creates the State, by it alone can its capacities receive their full development.[25]

The construction of a machine was akin to the foundation of civilisation; both are constituted by the taming of wild energies.[26] Moreover, this conception of human history implied a projection into the future. Reuleaux envisioned the progress of machine technology as an ever increasing elimination of *play* – play in the engineering sense of variability of interaction among components, the independent waggle-room allowed to a moving part. This does not imply any particular innovation in design so much as the increasing *correspondence* of a machine product *to* its design; the exclusion of chance variation. Wells lends support to something like Reuleaux's notion of mechanical progress in his 1902 book of social prophecy, *Anticipations,* in which he predicts the rapid elimination of the 'convulsiveness and clumsiness' of current automotive experiments.[27] But more importantly, the governing assumption behind *Anticipations*, built into its very structure, was that social and political change was driven by and in parallel to technological change. A less convulsive means of transport entails a less convulsive society as a whole. Something of this view of progress lies behind Wells' utopian visions and it offers some explanatory context for those disappointed readers expecting to find in *A Modern Utopia* a science-fiction showcase of technological exotica: Wells, in his utopian writings, was not as interested in the increasing *scope* of technological possibilities as much as in the increasing perfection of existing ones. His ideal society is based on an ideal of noiseless machinery.

It is an ideal that many will find, and have found, deeply unattractive. From this side of the twentieth century it seems to uncomfortably evoke the Nazi concept of *Gleichschaltung,* a term borrowed from mechanical and electrical engineering to invoke the absolute co-ordination of society around the central motivating engine of the Party and its Führer. There are ominous and notorious premonitions of this poisonous association elsewhere in Wells' political writings where the industrial imperative to eliminate inefficiency, once applied to the population as a whole, becomes a plan to eliminate inefficient persons. As John Partington has shown, after the initial debut of these proposals in *Anticipations,* Wells began a slow and cautious climb-down.[28] Publications like *Mankind in the Making* re-focussed his plans for human improvement onto nurture and education.[29] Certainly, Wells lived just long enough to comfortably dissociate himself from the 'screaming little defective in Berlin'.[30] Moreover, steadfast liberal principles sing continually from the pages of his utopian writing. In *A Modern Utopia*, Wells goes as far as pre-empting liberal thinkers like Isiah Berlin in saying that even to name the freedoms that should be accorded to the citizen in one's ideal state is already illegitimately to curtail them. Freedom should be taken as default and assumed; only prohibitions should be positively declared.

I am not concerned here to show how Wells went about reconciling his love of liberty with his demand for mechanical efficiency, or even to say that he ever really did. He liked to wear the contradiction on his sleeve as an intriguing paradox in the titles of his books and lectures: 'An Open Conspiracy', or, more troublingly, 'Liberal Fascism'. In any case, Wells' novelistic impulses, nurtured in the ironic prose tradition of Austen and Dickens, would continually get the better of his idealism. Wells' novels and short stories continually provide an ironic counterpoint to the technological ideals espoused in his utopian writings, a parody of his own enthusiasms. His 1907 novel *The War in the Air,* written less than two years after *A Modern Utopia*, opens with a description of the machine craze that grips Edwardian English society and makes the agora throb with mechanical excitement:

> The motor cars that went by northwards and southwards grew more and more powerful and efficient, whizzed faster and smelt worse, there appeared great clangourous petrol trolleys delivering coal and parcels in the place of vanishing horse-vans, even the Kentish strawberries going Londonward in the night took to

> machinery and clattered instead of creaking, and became affected in flavour by progress and petrol.[31]

Before we reach the end of the sentence, the claims of increasing efficiency are confounded in the stalled, if not backward, progress from 'creak' to 'clatter'. The noiseless perfection of the tramcars and aeroplanes in utopia find their travestied counterparts in these machines. And the heroic engineers who administer utopia find theirs in the later novel's hero, Bert Smallways, the enthusiastically progressive but gormless bicycle mechanic 'of the let's-have-a-look-at-it, enamel chipping variety'[32] and the clown-car pratfalls of his merchandise.

An even more credulous cult of machinery can be found in a rather gruesome short-story from 1894, 'The Lord of the Dynamos'. It is the story of Azuma-zi, a negro who has found himself working in the perpetual din of the dynamo sheds at Kings Cross station, but who has never entirely adapted himself to the modern mindset: 'the veneer of civilisation lay no deeper than his slop suit'.[33] It is one of many occurrences in Wells' work, like the imagined motorcar in the agora, in which he exposes the machine to a naïve uncomprehending perspective:

> The place made the visitor's head reel with the throb, throb, throb of the engines, the rotation of the big wheels, the spinning ball-valves, the occasional spittings of the steam, and over all the deep, unceasing, surging note of the big dynamo. This last noise was from an engineering point of view a defect, but Azuma-zi accounted it unto the monster for mightiness and pride.[34]

Azuma-zi bonds himself in a private animistic cult of worship to this machine. But it is a discipline quite distinct from that meted out by his boss Holroyd, a grotesque sadist who 'liked a nigger help because he would stand kicking'[35]. As the story comes to a climax we discover that Azuma-zi's machine-god must be served not simply with the routines of industrial labour but with human sacrifice. The negro stands before the violently throbbing altar and awaits his command:

> As Azuma-zi presently stood behind the engine and glared at the back of the hated Holroyd, the noises of the machinery took a new rhythm, and sounded like four words in his native tongue.[36]

The Kings Cross dynamo, in its uproarious babel din, provides Azuma-zi fleetingly with a language that he understands. The machine's defective engineering and irregularity parallels the atavistic thought-processes of its attendant. The still untamed, chaotic forces at work within it lend a kind of scope to the irrational. Azuma-zi breaks free of the cruel dictates of his labour just as the machine's energy exceeds and escapes its own purposive motion. The uprising does not lead to any benign state of liberty. The story does not end at all happily for Azuma-zi. The freedom that he finds is rather a savage's state of subjection to chaotic contingencies; akin to the 'kosmical freedom' that Reuleaux describes as the natural state of energy.

…in the Agora

Returning to *A Modern Utopia*, we can in fact see the comic deflation of Wells' techno-political ideals that we have found elsewhere in his fiction already at work within the text. The literary convention that Wells adopts to convey his ideal world, the tale of two travellers in a utopian world exploring and observing it in constant communication with each other, turns out to be more than a dispensable framing device. The drama and the comedy of the story, such as they are, all derive from the antagonistic relationship between the narrator and

'the botanist'. The latter's wilful egotism in argument, and his obsessive harking back to the subject of a girl he has left behind on earth mean that the narrator's observations on life in Utopia, and the inspiration that he receives from his surroundings, are continually and bathetically coming to ground on a foreign and unreceptive consciousness. '*Are we but mocking at Utopias?*' Wells imagines the reader asking, '*using all these noble and generalised hopes as the backcloth against which two bickering personalities jar and squabble?*' [Italics in the original].[37]

This confounded dialogue turns out to have important implications for the prospects of any reproduction and realisation of the Utopian idea. For Utopia depends on the effective communication of its grounding precepts throughout society as a whole. The global integration and co-ordination that Wells sought for his society is not simply a co-ordination of bodies, but a co-ordination of minds. The latter idea became increasingly relevant to his political thinking over the course of his own life, passing through the notion of an 'Open Conspiracy' in the 1920s and culminating at the end of his life with his grand project for a 'World Brain', a constantly extended and updated encyclopaedia that could sit at the centre of world civilisation and set it on scientific foundations. Sylvia Hardy has noticed the attention that Wells paid to the future development of language as a tool for the co-ordination and harmonisation of the world state. His ideas ranged from detailed prescriptions of the proper linguistic education for infants in *Mankind in the Making,* to support for C. K. Ogden's 'Basic English', a simplified and streamlined version of the language that could act as a global lingua-franca, to fantasies of a centralised 'Dictionary Bureau', controlling the world's utterances from on high in *The State of Things to Come*.[38] This increasing emphasis in Wells' thought partakes of what some have seen as *the* great shift in attention during the twentieth century – a shift that occurred in culture, in technology and in physics – the shift from *energy* to *information*.[39] Wells was concerned to regulate, enhance and make efficient the flow of information through society. He wished to *engineer* a large scale public conversation.

This is where the notion of the *agora* that Wells introduces fancifully and fleetingly in our opening quotation takes on a vital importance. For the agora, the market place, or town square is historically the original and in some ways the prototypical site of open and unconstrained social communication. It is the place where the public sphere was born. It is a place where people come for free public exchange – the exchange of goods, to be sure, but alongside those goods, the exchange of information, gossip, rumor and opinion. All the teeming and multiplying sites of informational exchange in our own day are modelled on this original. If, with Lewis Mumford, we see the combined and co-ordinated labour of the first human settlements as a kind of engine, then the first market-places were a type of vast, if relatively inefficient, data-processor.

It is also a space about which the prophets and proclaimers of the scientific method have always been suspicious. Francis Bacon, in listing his 'Idols of the Mind', the traps that habitually beset Reason, identifies a particular subspecies of idol which he names 'Idols of the market-place'. The market place was, for Bacon a place in which words become untethered from the objects and qualities they are meant to communicate, and take on a life of their own. 'Words plainly force and overrule the understanding, and throw all into confusion, and lead men away into numberless empty controversies and idle fancies'.[40] The medium of language betrays its referents. Wells, whose interest in science was always indissolubly linked to its social applications and effects, could not so easily dismiss or retreat from the public sphere. But he was attentive to the distorting potentials inherent within it.

The science of communication, burgeoning in Wells' own day and flowering dramatically in his immediate posterity, offered its own version of this corrupting influence. It called it *noise*. Through the new technologies of transmission and communication, the concept of noise was being subtly redefined. Noise came to mean the distortion of a signal in its line of

passage; the corrupting influence that was added to a message on its way from sender to addressee. Noise is as much, if not more, an antagonist to mechanisms of communication as it is to mechanisms of work and motion. Here it does not mean corrupted energy but corrupted information. The prosthetically enhanced public sphere of the twentieth century found a brand new way to sow confusion: a technological twist on the Idols of the Marketplace idea. The distorting influence was no longer precisely in the medium, i.e. words, language, etc. but in the *channel*, the physical space through which those words travelled. The effect, however, was much the same. There will always be noise in the communicative system, a throbbing in the agora.

Wells of course knew nothing of the vastly improved technical methods by which we now construct and process our global conversation. So much of Wells' Utopia now resembles a kind of 'Flintstones' world in which the ends that we have achieved in his posterity are being performed by an almost comically clunky and inefficient technology. *A Modern Utopia* makes surprisingly little reference to communication technologies, save for a fleeting reference to 'magnetic tubes' through which the *Samurai* officials pass their orders and the noiseless news tape in the train compartment.[41] Of the radio, not a word. But the dialogue between the two characters acts as a kind of microcosm of the grand confabulation he seeks elsewhere: a way of observing its failures in close-up. For most of the narrative, these failures are the decidedly psychological failures of one of the dialogue's participants. But the end of the book offers a more technical way of describing the same thing.

In the last chapter of the book, entitled 'The Bubble Bursts' the travellers find themselves, in an instant, back in the real world, in Trafalgar Square, and the reality of everyday announces itself in a rising din of traffic: 'The sullen roar of London fills our ears.'[42] They find the London agora filled with throbbing machines. 'We can't go on talking of your Utopia,' says the botanist 'in a noise and crowd like this.'[43] The narrator tacitly agrees, finally deserts his companion for good and boards one of the roaring vehicles.

> But I am back in the world for all that, and my Utopia is done […] From the front seat on the top of an omnibus […] the great uproar of vehicles, streaming in all directions, is apt to look a world altogether too formidable. It has a glare, it has a tumult and vigour that shouts one down. It shouts one down, if shouting is to carry it. What good was it to trot along the pavement through this noise and tumult of life, pleading Utopia to that botanist? What good would it be to recommend Utopia in this driver's preoccupied ear?[44]

Noise is the most salient quality of the world as the narrator gloomily rediscovers it. Before the narrator can even attempt to build his utopia, the din prevents him from even articulating it effectively. His utopia becomes a purely private thing; an immaterial scrap contained in his own memory and imagination. The noise of the vehicles announces not only a dysfunction of their own mechanisms, but a dysfunction of the dialogue that frames the texts and by implication, the public dialogue and deliberation that utopia would be based upon.

The world confronting the narrator has become almost indescribable, a single inchoate 'thing' known only by the noises that it gives out. Noise here comes to stand for the real, empirical, fallen world as such: 'the Thing in Being that roars so tremendously about Charing Cross corner.'[45] The vehicles are noisy in three related but distinct senses. They are noisy in the simple and obvious sense of making noise; and noisy in the sense of disrupting the flow of communication; but they are also noisy in the sense of being themselves *bad copies*. The motorcar is itself a reproduction, a mass-produced artefact, aspiring to as great a fidelity as the industrial process will allow. If noise is the agent of mis-replication, the element of chance that intervenes in the process of reproduction, then the motorcar in the agora embodies, in its

disrupted, throbbing mechanism, just this chaotic interference. It has failed to live up to its blue-print.

The Waggle of Definitions

Seeking a form of social communication impervious to noisy distortion, Wells took refuge in fantasy. In a later utopian novel, *Men Like Gods*, Wells imagines a Utopia whose citizens have long since abandoned verbal language and transmit their thoughts through something like telepathy, by-passing the mess of language in favour of a complete empathic immediacy, gained in silence.[46] But this is not quite the fantasy of the disillusioned narrator in *A Modern Utopia*. He instead fleetingly tries to envisage a single central declarative act of communication powerful enough to rally the collective mind from its confusion. For this, his only imagined recourse lies in divine intervention:

> Could one but realise an apocalyptic image and suppose an angel, such as was given to each of the seven churches of Asia, given for a space to the service of the Greater Rule […] and when he sounds, all the *samurai* will know themselves and one another. […] For a moment I have a vision of this resurrection of the living, of a vague, magnificent answer, of countless myriads at attention.
>
> Then that philosophy of individual uniqueness resumes its sway over my thoughts, and my dream of a world's awakening fades.[47]

The last reference to a 'philosophy of individual uniqueness' is not immediately transparent. The key to understanding it lies in an appendix that Wells added to the book entitled 'Scepticism of the Instrument' which he had originally given as a paper to the Oxford Philosophical Society in 1903 and which restated and elaborated views that he had been working on since his early days as an undergraduate.[48] In this paper he argues for a deep-going 'doubt of *the objective reality of classification.*'[49] The categories into which we group the items of our world are external interpolations that the mind imposes upon a state of endless and seamless variation, a boundless conjunction of tokens without type. The objects presented to the senses can be only imperfectly equated. Nothing is exactly like anything else. One item will always be a mis-replication – a *noisy* replication – of the other, each an equally faulty transmission of the absolute. The sorting process that understanding requires always involves a wilful disregard of apparent difference.

In this, Wells was arguing against the metaphysical grounding upon which the earliest utopian philosophers had based their ideal state.[50] Plato invited the philosopher to look past the messy affairs of the sensible world and look into the eternal *type* or *form* that held them all together. Only once you had done this could you judicially build a proper society from first principles. Looking for such principles in the physical things around you was doomed to failure because all perceivable items are only the corrupt, imperfect copies of an immaterial original. All perceptible items were, like the throbbing motorcar, failed reproductions.[51] As the contemporary philosopher Michel Serres has suggested, the sum of divergent empirical objects can be thought of as a kind of *noisy* transmission of their platonic form. They represent their type, but they fail to do so properly. The scribbly lines of the triangle drawn in the sand thwart its aspirations to triangularity itself.[52]

Yet it was the noise that Wells was interested in. Wells reverses Plato's priorities, inviting us to look past the false imposition of type and attend to the swarm of differing specifics behind it. In this vision, however, he finds little grounding for a state. That is why the angelic call-to-gather to the nascent *Samurai* of the world is doomed to failure. The very category that holds them together as such is an objectively specious one. A disordering dispersal exists not simply in their communications but in their very identities. Most troubling of all, it is the

empirical method, the very foundation of Wells' utopia that has brought about this disillusionment. Patrick Parrinder has suggested that Wells' concept of a scientific utopia was always 'a paradox, if not an actual contradiction in terms.'

> Science is an inherently dynamic force, relying (as Wells puts it) on 'the perpetual criticism, increase and diffusion of more knowledge and more.' The effect must be to subvert any social order.[53]

He might have added that empirical investigation subverts any absolute rigorously delineated order of *knowledge*. Systematic categories always turn out on inspection to be composed of nothing but anomalies and exceptions. Wells believed this was true of all classifications, including those of atoms and molecules. But it was most apparent in the classifications of the natural world that he had worked on as a zoologist. Darwin had raised the fourth wall on the animal kingdom, revealing behind systematic order of Linnaean classification, an indivisible continuity of minutely differing individuals. Wells again uses the engineering metaphor of *play* to describe this loosening of systematic boundaries: 'Every species waggles about in its definition', he states, 'every tool is a little loose in its handle.'[54]

Yet, there is, lying somewhere in this chaotic waggling play of type against population, perhaps an alternative model of progress and social design – one to which Wells would have been receptive. Wells was, to the last, a faithful Darwinian and it was Darwinian science most of all, that he sought to make the basis of his politics. This, in its original formulation took the form of a brutal state-administered replication of the process of natural selection. Even as this position was being drastically deemphasised, Wells still maintained that the grounding conception of his politics was the Darwinian inspired view of society as 'a tissue and succession of births'.[55] Yet natural selection was only one half of the theory of evolution as it came to be understood. A fuller title would be 'natural selection *of random mutation'.* And it is this neglected second half of the theory to which the concept of noise as we have seen it corresponds. Darwinian evolution progresses precisely *because* of the faulty transmission of hereditary information. The vanguard of evolutionary progress lies precisely in the defectives of the race, the bad copies who have strayed furthest from their type. The noise in the system is the precondition of its creative power. Only because of the waggle room in the joints can the machine move at all.

The theoretical biologist, François Jacob describes the evolutionary process of design as one of *bricolage,* or tinkering.[56] Darwin's God, if one can speak of such a thing, is not a Brunel or von Haussman figure, erecting his grand designs from scratch, but a Saturday-afternoon suburban garage tinkerer, botching things together from whatever happens to be lying around; a process of fiddling, experiment, accident and opportunism. And this is how most societies – perhaps in reality *all* societies – are put together. Perhaps the proper model for the social engineer was less *Samurai* and more Bert Smallways, the 'enamel-chipping, lets-have-a-look-at-it' bicycle repair man. 'Let's have a look at it' suggests a process of construction in which the object *pre-exists* its design and must be improved by degrees, through reform and repair, a process blind to its ultimate ends. It is to this fumbling process of political trial-and-error that *A Modern Utopia*'s narrator, and his creator, ultimately resign themselves.

Notes

[1] H.G. Wells, *A Modern Utopia* (London: Penguin, 2005), pp. 71-2.
[2] Wells, *Utopia*, p. 117.
[3] Wells, *Utopia*, p. 73.
[4] For two decidedly hostile condemnations of Wells on such a charge see Jonah Goldberg, *Liberal Fascism: The Secret History of the Left from Mussolini to the Politics of Meaning* (London: Penguin, 2007), pp. 134-6 and John Carey, *The Intellectuals and the Masses: Pride and Prejudice among the Literary Intelligencia* (London: Faber and Faber, 1991), p. 51. There was a group in the 1930s calling itself the Technocracy Movement to which Wells, in *The Shape of Things to Come*, gave a qualified assent: 'a soundly scientific effort to restate economics on a purely physical basis' H.G. Wells, *The Shape of Things to Come* (London: Penguin, 2005), p. 262.
[5] *The Dialogues of Plato*, trans. Benjamin Jowett, ed. R. M. Hare and D. A. Russell (London: Sphere, 1970), IV, p. 387.
[6] Simon James, *Maps of Utopia: H. G. Wells, Modernity and the End of Culture* (Oxford: Oxford University Press, 2012), p. 130.
[7] Wells, *Utopia*, p. 78.
[8] The figure who perhaps best encapsulates this attitude is John Ruskin; see John Ruskin, *Unto This Last: Four Essays on the First Principles of Political Economy* (New York: John Wiley & Son, 1872)
[9] F. T. Marinetti, 'The Founding and Manifesto of Futurism', in *Futurist Manifestos*, ed. Umbro Apollonio (London: Tate Publishing, 2009), p. 21.
[10] Marinetti, 'Manifesto', p. 19.
[11] Friedrich Nietzsche, *Twilight of the Idols and The Anti-Christ*, trans. R.J. Hollingdale (London and New York: Penguin, 2003), p.31.
[12] Wells, *Utopia*, p. 40.
[13] Wells, *Utopia*, p. 74.
[14] Wells, *Utopia*, p. 47.
[15] Wells, *Utopia*, p. 162.
[16] See John Picker, *Victorian Soundscapes* (Oxford: Oxford University Press, 2003)
[17] See Lawrence Baron, 'Noise and Degeneration', in *Journal of Contemporary History*, Vol. 17 (1982), pp. 165-78
[18] See Emily Thompson, *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America 1900-33* (Cambridge, Mass. and London: MIT Press, 2002)
[19] Jon Agar, 'Bodies, Machines and Noise', in *Bodies/Machines*, ed. Iwan Rhys Morus (Oxford and New York: Berg, 2002), p. 199.
[20] Thompson, *Soundscape*, p. 122.
[21] See H.G. Wells, *An Experiment in Autobiography: Discoveries and Conclusions of a Very Ordinary Brain (since 1866)* (London: Gollancz, 1938), p. 208.
[22] Franz Reuleaux, *Kinematics of Machinery: Outlines of a Theory of Machines*, trans. Alex B. W. Kennedy (London: Macmillan, 1874) p. 375.
[23] Reuleaux, *Kinematics*, pp. 34-5.
[24] Lewis Mumford, 'The Myth of the Machine', extract in *Interpretations and Forecasts: 1922 – 1972* (San Diego: Harcourt Brace Jonavich, 1973), pp. 279-91.
[25] Reuleaux, *Kinematics*, p. 241-2.
[26] The parallels between Reauleux's conception of mechanical progress and what Nobert Elias describes as 'the civilising process' have been brilliantly articulated in Wolfgang Schivelbusch, *The Railway Journey: The Industrialisation of Time and Space* (Lemington Spa: Berg, 1977), p. 169.
[27] H.G. Wells, *Anticipations: of the Reaction of Mechanical and Scientific Progress on Human Life and Thought* (London: Chapman & Hall, 1902), p. 13.
[28] John S. Partington, *Building Cosmopolis: The Political Thought of H.G. Wells* (Aldershot: Ashgate, 2003), pp. 53-61.
[29] H.G. Wells, *Mankind in the Making* (London : Chapman & Hall, 1906)
[30] H.G. Wells, *Guide to the New World: A Handbook of Constructive World Revolution* (London: V. Gollancz, 1941), p. 31.
[31] H.G. Wells, *War in the Air* (Cirencester: Echo Library, 2005), p. 6.
[32] Wells, *War in the Air*, p. 8.
[33] H.G. Wells, 'The Lord of the Dynamos', in *Selected Short Stories* (London: Penguin, 1972), pp. 184-92, p. 187.
[34] Wells, 'Dynamos', p. 185.
[35] Wells, 'Dynamos', p. 184.

[36] Wells, 'Dynamos', p. 188.
[37] H.G. Wells, *Utopia*, p. 246.
[38] Sylvia Hardy, 'A story of the days to come: H.G. Wells and the language of science fiction', in *Language and Literature*, 12:3 (2003), pp. 199-212.
[39] For an account of this transition see Bruce Clarke and Linda Dalrymple Henderson eds., *From Energy to Information: Representation in Science, Technology, Art and Literature* (Stanford: Stanford University Press, 2002)
[40] Francis Bacon, *The New Organon* (Cambridge: Cambridge University Press, 2000), p. 48.
[41] Wells, *Utopia*, p. 153.
[42] Wells, *Utopia*, p. 237.
[43] Wells, *Utopia*, p. 240.
[44] Wells, *Utopia*, p. 243.
[45] Wells, *Utopia*, p. 243.
[46] H.G. Wells, *Men Like Gods* (Los Angeles: Indo-European Publishing, 2011), p. 31.
[47] Wells, 2005, p. 245.
[48] See H.G. Wells, 'The Possible Individuality of Atoms' and 'The Rediscovery of the Unique', in *H.G. Wells: Early Writings in Science and Science Fiction* (Berkley and Los Angles: University of California Press, 1975) pp. 22-31 and 119-122.
[49] Wells, *Utopia*, p. 254.
[50] For a full account of Wells' relationship to Plato, see Michael Sherborne, 'Wells, Plato and the Ideal State' in John S. Partington, *The Wellsian: Selected Essays on H.G. Wells* (Oss, Netherlands: Equilibris, 2003), pp. 189-198.
[51] In fact, Plato's account of the origin of the material world describes both the process of construction and its inevitable corruption in decidedly mechanical terms. Unlike the Old Testament God who declares the world into being by fiat, the demiurge of Plato's *Timeaus* is in the business of 'fastening' and 'riveting' the world together. In the midst of this process, however, a chaotic energy intervenes. As the orbits of the immaterial soul are fastened to a body, it becomes subject to the violent tumult of the terrestrial realm. 'Plunged into this strong stream, the orbits were unable to control it, nor were they controlled by it, and because of the consequent violent conflict the motions of the whole creature were irregular, fortuitous and irrational.' The throbbing irregularity of motion that Reuleaux sought to eliminate from all machines, Plato saw at work in the human body.
Plato, *Timeaus*, trans. H.D.P. Lee (Harmondsworth: Penguin, 1965), p. 59.
[52] Michel Serres, 'Platonic Dialogue', in *Hermes: Literature, Science, Philosophy*, trans. Joshua Hariri (London, Baltimore: Johns Hopkins University Press, 1982), p. 69.
[53] Patrick Parrinder, *Shadows of the Future: H.G. Wells, Science Fiction and Prophecy* (Syracuse: Syracuse University Press, 1995), p. 97.
[54] Wells, *Utopia*, p. 257.
[55] Wells, *Mankind*, p. 5.
[56] François Jacob, *The Logic of Life: a History of Heredity* and *The Possible and the Actual*, trans. Betty E. Spillman (London: Peregrine, 1982), pp. 380-420.

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Biography

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