Phonographic Books and the Late Nineteenth-Century Reader

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Inspired by his own invention of the phonograph in 1877 Thomas Edison published two essays that entertained the possibility of phonographic libraries and the demise of the book. Outlining his invention's democratising potential Edison asserted:

> A book of 40,000 words upon a single metal plate ten inches square thus becomes a strong probability. The advantages of such books over those printed are too readily seen to need mention. Such books would be listened to where now none are read. They would preserve more than the mental emanations of the brain for the author; and, as a bequest to future generations, they would be unequaled. ('Phonograph and Its Future' 534)

Edison had always conceived of the phonograph as a writing machine continuous with other forms of textual inscription and production, including shorthand, telegraphy, and typescript (Gitelman 1–2). Positioning the potential applications of the phonograph as a catalyst for thinking about how people read and communicated, he imagined a paperless future that has become a twenty-first century reality.

Echoing contemporary theories of reading that described the distracted efforts of modern readers, scanning page after page of cumbersome print media, Edison offered listening as the solution. In the next two decades writers from across the globe expanded and reflected upon Edison's vision for the phonograph as a reading machine. The transnational nature of these responses is itself indicative of an unprecedented proliferation of new media technologies that created the illusion of democratised networks of communication and information that traversed national boundaries. United by an interest in the idea of connection and immediacy that the phonograph promised, the responses to the idea of a phonographic book that form the focus of the following essay – penned by writers from France, England, Australia and America – suggest something akin to the technological

overreach Marshall McLuhan historically associated with the advent of the telegraph, in which 'the entire world of the arts began to reach again for the iconic qualities of touch and sense interplay' (220). What all these writers share is an investment in the intimacy of this new form of reading through the ear, in which the whispering voice of the author speaks directly to the reader/listener as if they were present in a common space that transcended the materiality of print or geography.

John Picker and, more recently, Matthew Rubery have discussed the misplaced optimism of early responses to Edison's assertion in 'The Phonograph and Its Future' (1878) that his new and improved machine would be able to provide a recording of the entire text of *Nicholas Nickleby* in phonograph form on 'four cylinders eight inches long, with a diameter of five' (648). Both cite the notable example of Mark Twain's ill-fated attempt to record his novel *The American Claimant* on a rented phonograph in 1891. Chagrined and disillusioned, after filling four dozen cylinders, Twain wrote to his friend William Dean Howells in April 1891: 'You can't write literature with it because it hasn't any ideas & it hasn't any gift for elaboration, or smartness of talk, or vigor of action, or felicity of expression, but is just matter-of-fact, compressive, unornamental, & as grave & unsmiling as the devil' (2: 641). Twain's ambitions were 'way ahead of the technology' as Rubery observes (*Audiobooks* 216). The tinfoil cylinders available in 1878 were only capable of producing recordings of a few minutes' duration and were virtually impossible to reproduce. Even the first recordings of Tennyson's and Browning's verse were not made until the late 1880s and recordings of entire books remained unavailable until the 1930s.

While assimilating the writing on phonographic books produced in the immediate wake of Edison's essays into the history of 'audiobooks' is an important project, one currently being undertaken by Matthew Rubery, this essay is more concerned with tracing continuities between these various responses and mid- to late-nineteenth-century theories of reading that attended to its physiological and technological dimensions. As these responses indicate, the phonograph represented an extension of the socially inscriptive force of reading, to adapt Nicholas Dames, in which the solitary reader was 'not a sign of the atomization of preindustrial sociability, but the very location of contemporary sociability' (44). The novel, more than any other literary form in this period, was associated with an immersive reading experience that fostered distinctively modern 'automatic, or preconscious, styles of consumption' (Dames 44). Vanessa Ryan has dubbed this understanding of the process of reading 'thinking without thinking', a suggestive phrase that captures the mid- to late-nineteenth-century interest in 'system-oriented' theories of reading in which the mind of the reader is understood as both embodied and dynamically interactive with its material and

social environment (7). An interest in the physiology of reading, for example, how the eye scans back and forth across the page or how the mind drifts between periods of attention and reverie, characterised the neurological and cognitive approaches that emerged in the middle decades of the nineteenth century in the psychological work of George Henry Lewes, Alexander Bain and Herbert Spencer. As Lewes claimed in *Principles of Success in Literature*: 'Our inquiry is scientific, not empirical; it therefore seeks the psychological basis of every [literary] law, endeavouring to ascertain what condition of a reader's receptivity determines the law' (128). Implicit in Lewes's concept of receptivity is the need both to measure and ideally to regulate periods of attention, rates of comprehension and degrees of absorption.

What is striking in the novels, essays and newspaper columns that will form the focus of this essay is how quickly this new science of reading was assimilated into a set of assumptions about the labour of modern reading. Distractible, exhausted and suffering from information overload, the modern reader is presented as sorely in need of the easy consumption that listening to a talking book, rather than scanning page after page, will provide. Some of these writers, such as H.G. Wells in *The Sleeper Awakes* (1899) and Edward Bellamy in *Looking Backward: 2000–1887* (1888), project their readers into a future where the printed book is already obsolete while others, such as the French bibliophile Octave Uzanne, envisage a more immediate uptake of the phonographic book. The impact of Edison and Uzanne's polemical assertions of the inevitable end of books extended far beyond Europe and America to Australia, where newspaper columnists were less convinced of the phonograph's potential to supplant the efficiency of the printed book. These Australian responses to a bookless future not only exemplify the robust nature of these debates about the material processes of reading and their transnational reach, but also the global fascination with Edison's vision for the potential adaptations of his marvellous new invention.

In an essay on 'Whispering Machines' published in the *Nineteenth Century* in 1885, Bibliothèque Nationale librarian R. Balmer speculated:

> It is a perfectly safe statement that, as things now are, one half of the power of literature is lost. No book is ever read as its author intended it should be read. Printing was a great invention; but it is manifestly unequal to the task of conserving the treasures genius entrusts to it ... The full realization of what the printed book was intended to do will be the glorious mission of the phonographic reading machine. The written word has been made immortal; the genius of man will soon give immortal life to the spoken word. For the first time authors may be said to truly live in their works, and soon generations will mingle in closer communion; and the dead will speak to the living. (496)

Penned eight years after Edison's invention of the phonograph (1877) made the recording of authors' voices a possibility, this description is typical of

the utopian visions and wishful thinking that the phonograph inspired. Balmer embraces the possibility of an accurate transcription of authorial intention that this new reading system will provide. Yet it is worth noting in this context that this perceived novel efficiency had a much longer history that can be traced back to earlier experiments with mechanical intelligence, typified by Charles Babbage's 'Difference Engine'. Babbage's invention of a system of mechanical intelligence, as Henry Thomas Colebrooke, the President of the Astronomical Society proclaimed in 1824, promised to substitute 'mechanical performance for an intellectual process' (509–10). Like Babbage's computational system of mathematical notation, Edison's theory of phonographic notation involved the sequential encoding of data, albeit in Edison's case acoustic rather than numeric, that promised to reduce the margin of error in both reading and writing. As Edison claimed in 'The Perfected Phonograph': 'The phonograph, in one sense, knows more than we do ourselves. For it will retain a perfect mechanical memory of many things which we may forget, even though we have said them' (649). The prospect of supplanting a human with a mechanical process was as enticing for Edison as it was for Babbage. According to Balmer's Edison-inspired vision the unreliable communication of the author's voice by printed media to the potentially inattentive reader is replaced by the systematic mechanical reproduction of the 'live' voice of the author in the form of an automatically inscribed 'little metal book'. Ruling out wastage, forgetting and inefficiency, this inherently docile model of literary communication assumes both that the ear is necessarily more passive and receptive than the eye, and that it might be possible to produce a pure mediation of the author's voice with no unwanted static or mechanical distortions.

Balmer's account of the wasted energy involved in the reading eye scanning back and forth across lineated pages of typescript also has much in common with Babbage's vision of the productive incorporation of working bodies into a technically ordered factory system to which Marx objected in the wake of the London Chartist debates in 1856, 'all our invention and progress seem to result in endowing material forces with intellectual life, and in stultifying human life into a material force' (692). Revelling in precisely these material efficiencies Balmer effuses:

> Through dense jostling crowds, in jammed omnibuses, in dimly-lighted underground railway-carriages, you may see men of all conditions, with book in hand, trying to read, risking their eyesight to snatch something from the treasures of knowledge and inspiration. This widespread hunger would be satisfied, abundantly. Fully satisfied by this wonderful little whispering-machine, this metal automatic book of the future. It would accompany men to the office, to the factory, to the bench, to the field, to the ditch, down into the mines, whispering into their ears greater thoughts and imaginations,

strengthening, ennobling, and refining the mind. This good genius of humanity (for such we would have to call it) would be companion also to the housewife and the maid; and so the laboring man would be the better fitted for his duties, so the wife and the maid would be better fitted to theirs, and the problem of the higher education of women would be triumphantly solved in the solving of the higher education of mankind. (497–98)

Balmer's positive vision of the material applications of 'this metal automatic book of the future' embraces the systematic transformation of modern minds into efficient thinking machines. Summoning images of minds standardised and civilised by invisible mechanical voices, images that would have made Marx recoil, Balmer aligns himself with Babbage's 'construction of sociotechnical systems' predicated on the 'perception that the world of work was ordered systematically', to quote Simon Schaffer (204). For Babbage, technical systems were a political and economic necessity, as he notes with some frustration regarding the delays in the successful realisation of the difference machine: 'one great advantage which we derive from machinery is the check which it affords against the inattention, idleness or dishonesty of human agents' (Schaffer 209).

While disciplining the working body was not his priority, Balmer was nevertheless inspired by the prospect of attentive minds and productive bodies. He envisaged an information delivery system that would increase the productivity of its consumers who could consequently multi-task, compliantly listening to the instructive lessons of an invisible, yet audible, cultural elite as they performed their everyday work in the factory, mine or home. Balmer's interest in the civilising potential of inducing states of absorption also resonates with one of the standard reference works on psychology in the latter half of the nineteenth century, Alexander Bain's *The Emotions and the Will* (1865). Describing the psychological process of being engrossed in a novel Bain wrote:

> ...we are 'all eye, all ear,' all observation; the attitude being one of stillness, and of suitability to the process of seeing, hearing, touching or sensibility engaged ... there is a strong and concentrated activity; the stray currents of energy are recalled for a special effort; recipiency of impressions is reduced to a point; the system is open at a single avenue and closed at others. (42).

Bain envisages a mind engrossed, unselfconscious and attentive, but unlike Balmer, he also argues for the need for periods of unproductivity when the mind relaxes enough to feel and comprehend the information that it has received.

Variations to Balmer's model of efficient phonographic reception that echoed Bain's suggestion that the reader might need to pause to process or think were raised by an anonymous contributor to the *Tasmanian Mercury* in 1885 (republished in the *Adelaide Register*):

> We know now what future books are to be. By a development of the phonograph or by the construction of a musical alphabet based on sounds, and not on arbitrary spelling, the book of the future is to be printed on a metal cylinder, and placed in a small automaton which can be wound up at pleasure, and which will read from the place at which it is set right on to the end, unless it is stopped … Anything so hypothetical and problematical as this project opens a field of unlimited speculation. One wants to know if the automaton would read with expression, and if the musical alphabet would be as pleasant as an ordinary human voice. One also hopes that it will be possible to accelerate or slacken the time, so that the light literature in which youth delights may be read with rapidity, while the break [sic] is put on for the slower intellect of the old … Could the automaton be made to skip the descriptions of scenery and the moral reflections which most novel-readers consider an interruption to the story? Will it be equal to reading the sonorous blank verse of Milton and Tennyson, and the irregular odes of our great masters if lyric poetry? (4)

In contrast to Edison, Balmer and others, this Australian columnist registers the encroachment of the human by the mechanical, whilst seeming to concede the inevitability of the integration of the human dimension of reading into this imagined technological future. Yet these observations also pose a significant unanswered question: how can this new reading machine reproduce the uneven rhythms, the pauses, breaks and drifts in attention that characterise both light and heavy reading, or the intrinsic irregularities and discontinuities of literary form? This registration of the potential loss of the idiosyncratic rhythms of reading and the sensual pleasures of thumbing through page after page of a favourite novel, returning to select passages at one's leisure, or running a finger across a collection of bindings on a shelf pondering what to read next, aligns with Friedrich Kittler's more recent evocative, if selective account of a similar demise of print media in *Discourse Networks*: 'As long as the book had to take care of all the serial data flows … words trembled with sensuality and memory. All the passion of reading consisted of hallucinating a meaning between letters and lines: the visible or audible world of romantic poetry' (40). This unassailable sovereignty of the letter is precisely what the phonograph, cinema, typewriters and other new media systems would alienate and disperse, according to Kittler.

A decade later, testifying to the persistent appeal of the idea of phonographic reading in an Australian context, a letter to the editor dated 9 October 1895 entitled 'Phonograph Newspaper' was published in the *Sydney Morning Herald*. More optimistic than the columnist from the *Tasmanian Mercury*, the letter responded positively to a report published a few days earlier describing the successful invention and implementation of the world's first telephonic newspaper in Budapest:

An important improvement introduced …within the last few days … made me determined to pay a visit to the Hungarian capital and to study the whole subject on the spot. While I was dressing in the morning the hotel servant knocked at my door and asked if I wanted the telephone paper. He then handed me two receivers about the size of a pocket watch attached to long cords [sic], which can be fastened to the bed or armchair to suit one's convenience. 'The newspaper will begin to speak directly,' remarked the servant, 'and will go on speaking until late in the evening. We don't charge visitors anything for it, as it only costs a penny a day.' ('A Telephone Newspaper' 1)

When listeners wearied of this steady stream of information, 'this telephonic organ', the report continues, a program of music and literature replaced the steady diet of fact, transmitting live concerts and the voices of popular authors, the latter diversion 'heartily appreciated by the feminine public' (2). Making little distinction between speculative fictions and journalistic description, or telephones and phonographs for that matter, the author of 'The Phonograph Newspaper' compared the above account of instantaneous telephonic communication to both Edward Bellamy's vision of a future American society harmonically unified by the democratising effects of a telephonic information system in *Looking Backward* (1888) and Henry Crocker Watson's equally utopian visions of phonographic communication in *Erchomenon; or The Republic of Materialism* (1879). The main purpose of the letter seems to be to assert Watson over Bellamy as the true visionary, and *Erchomenon*, as a proleptic account of an improved phonographic system that would put more control in the hands of the reader/listener to modulate and vary the otherwise constant flow of information: 'One of the details shows a great advance on the reality. The reader was able to hear any particular item of news by turning the indicator to the item required' (4).

In contrast to Bellamy's imagining of his own country's future, Watson, an Anglican priest who lived in New Zealand and then Victoria, locates his phonographic library in the imperial centre of London, rather than Auckland or Melbourne. Waking after 600 years the narrator finds himself 'standing in the crowded streets of London; but unlike the London of the nineteenth century' (43). Marvelling at the predictably transformed streetscape, novel modes of urban transport and the sartorial improvements of its inhabitants, he navigates his way through this future London, finding himself at one point in a bookshop where an obliging androgynous assistant asks him if he wishes 'to hear Mr. Miller's new story':

'You will be in time, citizen, and the price is only fifty cents,'

I excused myself, and said that I would look at some of the new books. Several were lying about.

'This,' said the young lady, 'has been "heard", and is now on sale.' (47)

Printed mediation is secondary to auditory reception – the eye replaced by the ear – a sensory eclipse echoed by the content of the book itself in which a 'Professor Spangler, Philosopher' urges his readers to look back to the 'discoveries and advances' of the nineteenth century even though they 'pale before the wonders which have been achieved by the science of subsequent ages' (47).

One of these wonders, the phonograph newspaper, is the title and subject of the following chapter, in which the narrator is guided into a phonograph library complete with automata-like reading machines:

> He led me into a large room, containing books on the shelves, ranged round the wall, and several metal figures in human form, in different parts of the room. 'Which would you like to hear?' he asked, turning to me, and pointing to the row of metal figures. I saw that each had a name engraven [sic] on the brow of the figure: *The Times, The Telephone, The Despatch, Bell's Life,* &c. .... 'This,' he said, turning to me, and pointing to a metal hand, 'is the indicator, and that the table of contents.' This latter was a printed dial plate. Left to myself, I examined this strange machine, and read on the dial plate, – 'Table of contents in this day's *Times*: – Leading Articles: The War; British Interests; Protection and Free Trade; The African Confederation ...' (73–74)

In contrast to Balmer and, as we shall see, Octave Uzanne, Watson echoed his fellow Australians' concerns about the technological limitations of the phonographic reading machine, particularly its capacity to allow for the reader to stop, start, rewind or accelerate the flow of information. Yet Watson shared Balmer, Uzanne and Wells's fascination with Edison's vision of the phonographic library as an archive of voices instantaneously accessible to future readers. At one point Watson's narrator describes an ideal communal reading scene in which he is joined by other listeners who select their own phonographic reading machines alongside his own: 'It was amusing to hear, now a deep-toned voice, now a shrill treble, evidently a woman's, again a quavering, hesitating tone, anon a quick vigorous style' (79). This version of the phonographic library exemplifies McLuhan's theory of 'technological over-reach' in which the library becomes a universal model of idealised communication and sensory inter-play. It also parallels Uzanne's more programmatic vision of how the phonographic cylinder would supplant the mass-produced codex in response to the rapacious demands of a modern reading public.

In a short story entitled 'The End of Books' published in *Scribner's Magazine* in 1894, Octave Uzanne's narrator, a futuristic bibliophile, announces to a select gathering of artists and men of science:

> What is my view of the destiny of books, my dear friends? ... If by books you are to be understood as referring to our innumerable collections of paper, printed, sewed, and bound in a cover announcing the title of the work,

I own to you frankly that I do not believe (and the progress of electricity and modern mechanism forbids me to believe) that Gutenberg's invention can do otherwise than sooner or later fall into desuetude as a means of current interpretation of our mental products. (223–24)

The ensuing discussion, illustrated by Albert Robida's often remarkably prescient illustrations, presents a typically idiosyncratic perspective on the potential luxuries and efficiencies of phonographic books. Minds enslaved to the despotism of print since 1436, Uzanne's bibliophile proclaims, will be free to submit to a new mastery 'by the various devices for registering sound which have lately been invented' (224). The 'book must go,' he insists, 'before it takes the world over' (230). According to his calculation between eighty and one hundred thousand books appeared every year in the 1890s, which, at an average of one thousand copies, makes more than a hundred million books, 'the majority of which contain only the wildest extravagances or the most chimerical follies, and propagate only prejudice and error' (231). What a relief, he concludes, will it be to 'close our eyes upon the annihilation of printed things!' (231).

Uzanne imagines an elaborately tiered phonographic delivery system that reflected his own conservative investment in maintaining distinctions between modes of book production and consumption. As Willa Silverman notes, Uzanne valued the increasing sophistication of printing processes and other such technological innovations 'only insofar as they helped advance an elitist aesthetic of the book based on originality, novelty, and fantasy' (240). Accordingly, the most privileged discerning consumers of phonographic books will find they have even more time to indulge in indolent and selfish pleasures. Eyes 'made to see and reflect the beauties of nature' will be free, while shifting the burden to the ear will 'establish an equitable compensation in our general physical economy' (224).

Efficient design, Uzanne's bibliophile informs his enchanted audience, will maximise auditory pleasure, the portable 'registering cylinders' will be as light as 'celluloid penholders' containing five hundred or six hundred words and occupying not more than five square inches: 'Each will work his pocket apparatus by a fluent current ingeniously set in action; the whole system may be kept in a simple opera-glass case, and suspended by a strap from the shoulder' (225). Novels will be replaced by 'storygraphs' narrated by the voice of the author who will deposit them at a Patent Office, ensuring that both the highest and lowest notes of his voice are registered and thus protected from pirated copies (225). Libraries, in turn, will be transformed into 'phonographotecks, or rather, phonostereoteks', containing all 'the works of human genius on properly labeled cylinders, methodically arranged in little cases' (225). The most favoured editions, he continues, will be 'the autophonographs of artists most in vogue', Shakespeare charismatically

voiced by Henry Irving for example, or Sarah Bernhardt's Hugo, or Goethe, Milton, Byron, Dickens, Emerson, Tennyson or Musset, 'vibrated upon cylinders by favorite Tellers' (226). They will also be luxuriously bound to satisfy the tastes of bibliophiles turned phonographiles who will send out their cylinders to be bound 'in morocco cases, adorned with fine gildings and symbolic figures, as in former days' (226).

Such luxurious possessions, he assures those in his audience who object to the 'aristocratic' nature of this image of lounging phonographiles, will also be extended to the masses in a modified, less Epicurean, form:

> At every open place on the city little buildings will be erected with hearing tubes corresponding to certain works easily worked by the mere pressure of a button. On the other side, a sort of automatic book-dealer, set in motion by a nickel in the slot, will for this trifling sum give the works of Dickens, Dumas, or Longfellow, on long rolls all prepared for home consumption. (227)

People with small means will be able to access auditory information wherever they find themselves, every restaurant table, public carriage, waiting room, steamer state-room will be provided with a phonographic collection, and trains will be fitted out with 'a sort of Pullman Circulating library' (228).

While Uzanne's vision of the 'end of books' is more explicitly concerned with the materiality of the book than the physiology of the reader, he does assume a hierarchy of receptivity with the bibliophile at its apex. Echoing a long history of anxious reflections on the mass reading public from Coleridge to Henry James, Uzanne sees the phonographic book as a way of maintaining distinctions between media. Listening is associated with passive consumption, in contrast to the active discriminatory powers of the eye. While anyone can read or comprehend a mass-produced popular fiction or newspaper, only an elite few can appreciate the true beauty of an ornately bound rare book. In Uzanne's view the phonographic book only intensified the habitual patterns of unthinking consumption which those interested in the science of reading had long associated with the novel, to quote George Henry Lewes's famous provocation in *Physical Basis of Mind*: 'We learn to read with conscious effort, the process passes so rapidly and smoothly, that unless there be some defect in a letter, or the word be misspelled, we are not "conscious" of the perceptions. Are we therefore reading automata?' (397). Uzanne certainly believed the mass reading public were automata whose needs could be efficiently answered by the phonographic media of the future. In contrast to Wells, whose embrace of new media was driven by a revolutionary internationalising impulse, Uzanne was more reactionary, conservative and Parisian focused. As Wells would later argue in his celebration of microfilm as the basis for his vision of a 'world brain' or 'complete planetary memory' that would replace 'the multiplicity of books' currently smothering the world, progress and technological innovation are synonymous (*World Brain* 86).

In *The Sleeper Awakes* (1899) Wells's protagonist Graham awakens after 203 years to find himself in a strange new world. While attempting to make sense of this new environment he wanders into a room that vaguely resembles a library where he discovers rows of 'peculiar double cylinders' inscribed with phonetically spelt titles, such as Conrad's *The Heart of Darkness*, which was first serialised in 1899 (56). Turning to the 'square apparatus' designed to display the contents of these cylinders, Graham presses a button that sets off 'the kinetoscope drama' it has been set up to play. Absorbed by the 'intense realism' of this 'latter-day substitute for a novel', Graham looks back nostalgically to the late-nineteenth-century technologies that had spawned this new 'kineto-tele-photographic' reality (57).

While clearly inspired by Edison's new invention, Wells's kineto-phonographic library of great works of the past functions more ambivalently in *The Sleeper Awakes*, principally as a form of mechanical memory with potentially sinister coercive uses – an archival apparatus that reanimates the voices of a long dead culture with the press of a button. In contrast to hearing the intimate whispers of a favourite actor or writer performing the words of a classic work of fiction, Graham encounters the kineto-phonograph in the first alienating phase of his coming to consciousness in a brutal corporate new world order.

Awaiting his first audience with the masters of this new universe, the 'Council', Graham decides to wander through a series of adjoining 'silent rooms':

> He observed one entire side of the outer room was set with rows of peculiar double cylinders inscribed with green lettering on white that harmonized with the decorative scheme of the room, and in the centre of this side projected a little apparatus about a yard square and having a white smooth face to the room. A chair faced this. He had a transitory idea that these cylinders might be books, or a modern substitute for books, but at first it didn't seem so. (56)

The cylinder bindings initially appear to be some form of Cyrillic notation, but looking closer these mysterious markings begin to resemble 'mutilated English' as the familiarity of the title, 'The Man Who Would Be King', emerges from a confusion of phonetic inscriptions:

> He remembered reading a story with that title, then he recalled the story vividly, one of the best stories in the world. But this thing before him was not a book as he understood it. He puzzled out the titles of the two adjacent cylinders. 'The Heart of Darkness' he had never heard of before nor 'The Madonna of the Future' – no doubt if they were indeed stories, they were post-Victorian authors. (56)

Curious, he ponders each cylinder, returns them to their respective places on the shelf and then turns to the 'square apparatus', which after some

examination is revealed to be some kind of visual recording device (57). Pressing a mysterious button he sets off a rapid clicking, which begins then ceases. He then quickly becomes aware of voices and music as images of a 'strange world' flicker across the screen, images 'unscrupulous, pleasure-seeking, energetic, subtle, a world too of dire economic struggle' suggesting radically altered moral ideals with tragic consequences (57).

While puzzling over how to replace the cylinders, he concludes that it must be 'these little appliances' which 'had fixed the language so that it was still clear and understandable after two hundred years' (58). Unfortunately, the next phonographic narrative dispels this positive curiosity. A lurid contemporary adaptation of Wagner's Tannhäuser, in which Tannhäuser goes to an updated Venusberg called a 'Pleasure City', repels him with its explicitly erotic realism:

> He rose, angry and half ashamed at himself for witnessing this thing even in solitude. He pulled forward the apparatus, and with some violence sought for a means of stopping its action. Something snapped. A violet spark stung and convulsed his arm and the thing was still. (58)

The only interpretation he can derive from this perplexing data is the key part played by the final decades of the late nineteenth century in 'making the future' (59).

Exemplifying this seminal influence, according to Graham, is the uncanny accuracy of nineteenth-century fictions of the future, such as Edward Bellamy's extraordinarily popular *Looking Backward: 2000–1887*. Wells's allusion to Bellamy at this point in the narrative has a dual function. While recognising the parallels between the two novels, it also attempts to distinguish the dystopic 'realism' of *The Sleeper Awakes* from late nineteenth-century utopian novels, such as Bellamy's: 'He thought of Bellamy, the hero of whose Socialist Utopia had so oddly anticipated this actual experience. But here was no Utopia, no Socialist State' (59). Graham's reality is one in which the abject poverty, suffering and exploitation of the many supported the luxury, waste and sensuality of the few. In contrast, Bellamy's Julian West, a well-heeled Bostonian who lapses into a hypnotic sleep in 1887, awakens in 2000 to a world no longer enslaved by capitalism and connected by a harmonious telephonic system that disinterestedly shapes the consciousness of its citizens.

Both Wells and Bellamy were interested in what Nicholas Dames calls the 'affective mechanics' of reception (57). They simply displaced their present concerns about the state of mass culture into a future where the psychological and social implications of a world driven by information and capital could be thought through from a comfortable distance. As Wells's description of Graham's intensely physiological response to the images

and sounds of the kineto-phonograph suggests, there is clearly a sense that the steady stream of sensational data must be interrupted or paused by the listener. The alternative is to be completely subsumed by the machine and its violent and decadent communication of world events. Yet as Wells was always keen to stress, he was a creature of the media – of journalism not art – and in that guise, a proponent rather than a critic of technological progress. The novel, for Wells, was the ultimate mechanical form, an invention of the same industrial age that was responsible for the railway, the telegraph and the phonograph. Wells believed that reading, in whatever form, should be a standardised, universal process with the power to bring the world closer rather than reinforce national and cultural differences. As the influential literary reviewer for the *Times*, E.S. Dallas, argued, a point with which Wells would have agreed:

> At the same time the railway and the steamship, the telegraph and the penny postage, by daily and hourly bringing near to us a vast world beyond our own limited circles, and giving us a present interest in the transactions of the most distant regions, have enormously increased the numbers of readers, have of themselves created a literature, and through that literature have had a mighty influence upon the movement of the time. (ii.312)

Where Wells aligns with Bellamy and other fin-de-siècle technological romantics, such as Uzanne, Balmer, Watson and Robida, is in his enlisting of imaginative writing to reflect on and experiment with the process of reading, listening and thinking in a radically altered media landscape. Edison's phonograph proved so inspirational to these writers not only because it promised to be a new transmission and storage system, but also because of its inscriptive potential. In contrast to the telegraph, for example, the phonograph cylinder resembled a written text – a physical object, 'not just a fleeting electrical or ethereal pattern', as Richard Menke describes the telegraph's 'fugitive impulses of current from afar, on-off rhythms distinct from any particular way of writing them down' (11). In this sense these writers, to invoke Katherine Hayles, used the new medium of the phonograph to highlight the specificity of the book and of reading at precisely the moment when print culture's defining characteristics were being 'flaunted, suppressed, subverted, or re-imagined' (33).

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