CHAPTER 10

Profit and prophecy: electricity in the late-Victorian periodical

Gráinne Gooday

What the revival of learning was to the Renaissance, what the discovery of the new world was to the Elizabethans, what the steam-engine was to the century of the Revolution, the application of electricity is to the New Generation. We are standing at the day-dawn of the Electric Age... There is an electric thrill in the air which is affecting the nerves of civilization, and galvanizing into new and serviceable activity the sluggish imaginations of our people. Hence I have selected for presentation in a condensed form in this REVIEW the work of an American author, republished in the last days of 1889...


This chapter examines the adoption of a popular 'futurist' mode of writing on electricity in general periodicals of the 1890s. I show that this was inspired in part by the enormous popularity of Looking Backward, 2000–1887 (1888), in which American author Edward Bellamy used a technological-egalitarian utopia set in the year 2000 to illustrate the injustices of late nineteenth-century life. Periodical and monograph writing about the possible or probable future social effects of technology predated Bellamy's novel, of course. Antecedents can readily be found in optimistic forecasts about the impact of the steam railway in the 1830s and 40s, and the electric telegraph from the 1840s to the 1860s — as well as sharp satirical responses, notably from Punch, founded in 1841. In 1883 the Scottish-American polymath John Macnab published an electrical utopia of the ninety-sixth century entitled The Dithras: Or, A Far Look Ahead under the pseudonym 'Ismar Thiesen' — but soon afterwards its main premise was undermined by the financial collapse of Edison and Swan electric lighting schemes. Six years later, with sales of Looking Backward booming and the prospects of electrical technology invigorated by new political and technical developments, Macnab republished his novel, now retitled Looking Forward, and with a preface claiming priority for the Dithras over a 'somewhat similar but much more

widely known work'. A new British sixpenny monthly, Review of Reviews, soon offered its readers this work in a form that, although shortened, took up a full quarter of the forty pages in the March 1890 issue. As we shall see, this presentation by editor-proprietor William Stead signalled the great significance of 'Looking Forward: A Romance of the Electrical Age' for the species of 'new journalism' that he promoted in sympathy with the socialist utopianism of Bellamy's Looking Backward.

Thanks to the work of Peter Broks we know that by 1896 (and up to 1907) electricity was presented as the principal generator of future societal progress in such diverse periodicals as Pearson's Magazine, Pearson's Weekly, Cassell's Magazine, Cassell's Saturday Journal, The Clarion, and The Contag and Artisan. Broks's suggestion that this univocal utopianism developed in response to H. G. Wells's popular scientific romances, specifically the Time Machine of 1895, is compelling, since Wells's futurist writings in this period neither refer to electricity nor promote optimistic views of human progress. I argue instead that electrical futurist writing can be traced back to Stead's promotion of this genre from the very first issue of Review of Reviews in January 1890. In this and subsequent issues Stead and his staff presented readers with a transatlantic array of imaginative journalism on electricity as the destined force of life — a major component of the scientific responses to Bellamy's Looking Backward.

As Gowan Dawson points out in chapter 7, Stead's implementation of the 'new journalism' enabled readers of this sixpenny monthly to gain access to British, American, and European periodical literature on politics, religion, science, otherwise well beyond their means. Such was the circulation and impact of Stead's radical new kind of periodical that, I suggest, fiction writers, journalists, scientists, and entrepreneurs appropriated this new genre of 'prophetic romance' to articulate the future cultural significance of electrical light, power, and communication to readers of a broad range of publications. Moreover, the ascendancy of electrical futurism in contemporary journalism can be registered in the way that the Review of Reviews commented upon instances of it — sometimes in a highly critical vein. One particular target for criticism was William Crookes's 'Some Possibilities of Electricity' in the Fortnightly Review of February 1892. Importantly, Crookes had recently been criticized for significantly different reasons by the Tory Spectator and the premier journal of professional engineering, The Electrician. Since their criticisms can be seen as appealing to a more traditional 'authoritative' mode of writing, the first part of this chapter will document the principal pre-futurist mode genre of electrical journalism: the technical-didactic exegesis.
While giving centre-stage to Stead it is important not to overstate his role in moulding the genre of electrical futurism. Stead could hardly have nurtured this literary genre unless industrial experts such as Park Benjamin, William Crookes, Thomas Edison, Alice Gordon, William Gordon, and Frank Sprague had agreed to adopt this new mode of writing for periodicals. Even those few writers on electricity who did not rely on its application for their primary income, such as William Coutts Keppel (Viscount Bury, later Earl of Albermarle) and Edith Faithfull, evidently wrote on the subject with some personal stake in the future success of applications of electricity. Moreover, writers and editors alike recognized the importance of treating their readers as socio-economic agents whose actions were crucial in deciding which of the possible electrical futures presented in periodicals would come into existence and which would not.

DIDACTIC WRITING IN THE QUARTERLY REVIEW AND NINETEENTH CENTURY

Our old men remember when it took many months to get a letter to India; but the rising generation would think themselves ill-treated if they did not read in the 'Times' each morning the report of any important event which had occurred in India the day before. Electricity rings our bells, lights our shores, runs our errands, and, as we hope, will blow up our enemies if they approach our coasts. It has become indispensable in peace and doubly indispensable in war. Last, not least, it has [a] young and vigorous literature, and a special language of its own.

'The Science of Electricity as Applied in Peace and War', Quarterly Review (July 1877)

In contrast to the excited coverage of futurism in the 1890s, writing on electricity featured only occasionally in established British general periodicals in the preceding decades, generally less frequently than for the cognate issues of physical science (meteorology and cosmology) or technology (railways and shipping). Upmarket monthlies, such as Macmillan's Magazine launched in 1859 and the Fortnightly Review in 1865, had recently come to dominate the scene, but quarterly periodicals were neither totally eclipsed nor forced to alter the journalistic practices they adopted during their heyday earlier in the century. The Quarterly Review long maintained the Tory commitments with which it was founded in 1809, and the pricing of six shillings per quarterly issue (a year's subscription was still less expensive than monthlies typically costing two shillings and sixpence per issue). And whereas the new monthlies published named contributions from the ambitious secular community of middle-class academic scientists, for example T. H. Huxley, John Tyndall, and Norman Lockyer, the Quarterly continued its tradition of anonymity well into the twentieth century — albeit occasionally subverted by authors' subsequent self-identification. Using the Wellesley Index to identify Quarterly authors between 1873 and 1889, we can see that while Herbert Spencer, Richard Owen, St George Mivart, and Alfred Wallace wrote very occasional contributions, most articles on natural science were penned by 'men of letters' or marginal scientific figures. For the period from January 1876 to July 1880, William Coutts Keppel (Viscount Bury), contributed six articles on the physical and navigational sciences and a seventh on international politics. With the exception of a single piece on electric lighting published in October 1881, however, the Quarterly's coverage of science in the 1880s focused predominantly on the life sciences and colonial exploration.

Science writers for the Quarterly wrote within the long-established repertoire of house styles astutely characterized by Walter Bagehot in the 1850s as 'review-like essays' and 'essay-like reviews'. While some reviews clearly set out to engage with the books whose titles graced their headings, many essays only had the semblance of being reviews, insofar as they used one or more books as rhetorical 'pegs' on which to hang independent accounts. As Walter Houghton and Joanne Shattock have noted, the partisan character and broad scope of such pieces went far beyond an analysis of the books cited: their wider themes were indeed clearly signalled in ensuing page headers. Some Quarterly essays encompassed a broad temporal scope, and discussions were by no means tied to new or even recent publications. The three-monthly cycle of publication importantly enabled more reflective writing for the longue durée, constituting publications more likely to be kept, bound, and consulted by posterity than ephemeral weeklies or shilling monthlies. Befitting a publication that spoke to its presumptive readership of landed, military, and political interests, Quarterly writing narrated the past and present accomplishments of the establishment more often than it addressed prospects for social improvement. While playing to the conservative mores of readers, Quarterly writers nevertheless used various devices — some distinctly didactic — to acclimatize readers to unfamiliar concepts in the sciences.

The July 1877 issue of the Quarterly Review carried a forty-page 'Article V' nominally devoted to reviewing six diverse publications on electricity dating from 1870 to 1876. Only four of these were explicitly addressed in this 'review-like essay' on 'The Science of Electricity as Applied in Peace and War'. Two theoretical treatises of five years' vintage, Sir William Thomson's Papers on Electrostatics and Magnetism (1872) and Sir William Snow Harris's
Magnetism (1872), were explored to illustrate decades of argument about the cause of variations in terrestrial magnetism that had so vexed navigators. Rather than ‘further weary our readers’ with unresolved arguments, the piece followed both Thomson and Snow Harris in conceding that the subject remained a mystery.\(^8\) By contrast, the first five volumes of the *Journal of the Society of Telegraph Engineers* (1871–6) furnished definitive diagnoses on the hazards of lightning strikes and heralded the successes of thirty years of submarine and land telegraphy, especially in the colonies.\(^9\) In this context the official Report from the Select Committee of the House of Commons on the Post Office Telegraph Department (1876) served to highlight how German military forces had made great tactical use of telegraph technology.

The didactic-historicist genre of writing instantiated in this *Quarterly* article is most clearly epitomized, however, in its excursions into sources not listed in its header. Note, for example, the concluding passage on the devastating use of the (static) electric torpedo in the American Civil War drawn from the 1865 Report of the Secretary of the United States Navy. Reinforcing the interpretation of the 1876 Select Committee Report, *Quarterly* readers were offered yet more evidence that electrical techniques had become decisive in modern warfare. Between such historical anecdotes, the narrative explicitly positioned readers as students more or less expert in the important but arcane wisdom of electricity. After the conventional admission that not even experts knew what electricity actually was, one quarter of the article was devoted to a standard textbook exegesis of how electricians had created instead a working language of electricity, including such terms as voltage, resistance, current, and induction.\(^20\) Acknowledging the heterogeneous nature of the *Quarterly* audience, both the ‘well-informed’ and the ‘very idle’ reader were ‘solemnly warned to skip’ this lengthy discussion of technicalities. A third (majority) category of reader was thereby implied: the attentive learner who sought to attain the knowledge presupposed in texts addressed to a ‘professional’ audience. By gaining some such knowledge, readers would then find the *Journal of the Society of Telegraph Engineers* a ‘mine of interesting information’, and thereby come to comprehend the pronouncements of electrical experts contained within its pages.\(^31\)

The significance of this didactic mode both for the writer and for the standing of the *Quarterly* as an anonymized reference volume is clear when we consider the opening sentences of William Coutts Keppel's article ‘Electric Light and Force’ published by the Nineteenth Century in July 1882:

In July 1877 the *Quarterly Review* had an article of mine on ‘Electricity as applied in Peace and War’, to which I refer here because it forms a convenient landmark.

Though it was written by me five years ago, and was intended to give in a popular form an account of electrical science as it then existed, it is quite curious to remark how completely recent inventions have left its statements in arrear... The very nomenclature of the science, which I took some pains to expound, is as archaic as Chaucer's English.\(^22\)

Keppel conceded that electrical science had greatly altered since he had introduced *Quarterly* readers to the professional language of electricity in 1877; indeed in October 1881 *Quarterly* readers encountered a piece on electric lighting using a very different discourse (see below, p. 536). Keppel admitted that so ‘rapid and violent’ had been the change in language – at a speed indeed to ‘rival that of the imponderable agent itself’ – that such familiar household words as ‘phonograph’ and ‘telephone’ had only come into existence since his earlier article. And whereas Bury wrote in 1877 of ‘voltaic electricity’ measured in webers, the retitled ‘direct current’ was now customarily registered in amperes. Given the resilient status of the *Quarterly* as a repository of considered periodical wisdom, it is plausible to suggest that Keppel retrospectively revealed his authorship of the 1877 article because it was important to inform periodical readers that the earlier piece was no longer definitive. This was especially significant since the introduction of electric light a few years earlier had engendered a fast-growing demand for knowledge of electricity: ‘The newspaper and the popular lecturer have taken it up, and instilled it into us, so to speak, with our tea and toast at breakfast.’\(^33\)

Writing in the Nineteenth Century in 1882 was indeed an effective way of reaching an important audience interested in the implications of new developments in science and technology. Daniel Rutenber has suggested that this ‘serious’ campaigning monthly, founded in 1877 by the former editor of the *Contemporary Review*, James Knowles, exercised a ‘very striking influence’ on both periodical literature and on ‘liberal thought’ in general. No more so than in 1882 when Knowles secured enormous support for his personally grounded opposition to plans for a Channel Tunnel.\(^24\) Moreover, individual articles on science were a customary feature of its monthly schedule, as were the regular abstracts of recent research provided first by Thomas H. Huxley and later by Prince Kropotkin.

Bury's piece is discernibly attuned to the house-style, readers of his article being presumed to be well-informed about such features of modern life as the telephone.\(^25\) Presuming 'everyone nowadays knows' how to maintain an electric current using a battery and electrical conductor, readers of 'Electric Light and Force' were invited to extend such knowledge to new forms of artificial lighting and power supply. Hopefully without 'wearying' readers,
Bury offered to guide them through the bewildering novelty of vocabulary needed to understand the Edison and Brush forms of 'dynamo', especially as textbooks treated such topics in exasperatingly different ways. Tellingly, when the same author published again on the 'Electrical Transmission of Power' in the *Nineteenth Century* ten years later, he recyled much of the same material, but updated his vocabulary yet again to include 'energy' rather than the now antiquated terminology of 'electrical force'. He also now candidly revealed that his own financial interests in the electrical industry had been thwarted in the collapse following the brief boom of 1882. Evidently his didacticism was not that of a disinterested man of letters, but a mode of writing designed to give readers an understanding of contemporary entrepreneurial projects of 1892 that were now, he implied, on a much sounder footing. As the recently elevated Duke of Albermarle put it: 'the bona fide investor may fairly consider that in matters electrical his turn has come at last.' Readers of the *Nineteenth Century*, like earlier readers of the *Quarterly*, were thus configured in two correlated modes: both as leisurely scholars of electricity and as prospective stakeholders in electrical ventures.

This pattern of didactic writing on electricity inflected with entrepreneurial undertones was not unique to Bury's journalism, but characteristic of most periodical writing on this subject up to about 1890. Consider, for example, 'Article IV' in the October 1881 issue of the *Quarterly Review*. This was an overtly partisan interpretation of the *Catalogue Général Officiel* of the Paris Exposition Internationale d'Électricité of August 1881 that attacked the conclusion of the Parliamentary Blue Book *Lighting by Electricity* of August 1879 that house-to-house electricity supply was economically unviable. Alluding to the scepticism with which contrary claims had been treated, the article claimed that the 'dream of the visionary and enthusiast has been realized': what had been deemed impossible two years earlier could be seen 'in daily action' at the exhibition in Paris. Citing evidence on machines listed in the catalogue, and the writer's own visits and interviews at the Paris Exposition, technical arguments were offered to show that the ideal dynamo must be robustly designed to run at high speeds. By showing readers exactly how electrical machinery could be so efficiently constructed as to render the enterprise profitable, the wealthiest of *Quarterly* readers were thus offered inducements to be treated as potential shareholders in the electrical industry. When the engineer James Gordon claimed authorship of this piece at the Society of Arts in 1883 (and subsequently in its journal), he effectively claimed priority for what was by then his characteristic technique of designing dynamos for his employer, the Telegraph Construction and Maintenance Company.

Nevertheless, when Gordon published on 'The Latest Electrical Discovery' in the *Nineteenth Century* two months after Albermarle's piece for the same periodical in January 1893, his approach to writing about the subject had changed markedly. Gone were the detailed technical specifications and performance data that were meant to impress readers of the *Quarterly* with the combined rhetorical resources of the advanced science textbook and engineering company prospectus. Also vanished was the presumption that dreamers and visionaries stood, of necessity, at odds with conventional mainstream wisdom. Gordon presented Nikola Tesla's recent lecture on fluorescent lighting at the Royal Institution (on 3 February) as a dazzling extension of William Crookes's theatrical use of cathode ray tubes to produce 'radiant matter'. In exploring the use of very high frequency currents, this experimenter entered a region of mystery and hope: the generation of artificial light without the need for wire connections presented an astonishing new array of possibilities. If application of Tesla's results were ever to fulfill the 'bold dreams of scientific imagination', Gordon speculated that readers of the *Nineteenth Century* would see social and political change on a scale at least as significant as that already associated with the railway and telegraph systems:

Most manual labour will become unnecessary, as unlimited power will be available at every man's hand. Engineering works will be carried out on a far greater scale than has yet been even contemplated, and doubtless a corresponding era of material prosperity will set in.

Why had Gordon adopted this rather different mode of writing on electricity as the fulfilment of progressivist 'dreams'? Explanations of this utopian strain of writing cannot be found in simple biographical accounts, but rather in understanding the widespread adoption of futurist writing during the preceding two years.

**Looking Backward and Electrical Futurism in the Review of Reviews**

A somewhat provoking paper by Mr Pack [sic] Benjamin, in the *Forum*, discusses the possibilities of electricity with more scientific imagination than literary skill.

Following the broadly positive American response to the publication of Bellamy’s *Looking Backward* in 1888, the first sustained production of futurist writing on electricity developed in the USA. These writers aimed at attracting a readership for their work by extrapolating a plausible Bellamyian utopian future from contemporary novelties in electrical science and technology. As William Stead was founding an American version of the *Review of Reviews* at the same time as the British edition in late 1889, he had unique access to transatlantic journalism. Stead in turn reproduced in summary form some of these writings in early issues of the *Review of Reviews*, thus bringing into one periodical otherwise disparate and dispersed electricity-centred responses to *Looking Backward*. To understand why he did this we should note both Stead’s political sympathy for Bellamy’s representation of the year 2000 as a Christian world of social justice facilitated by nationalized technologies of communication and transport, and his shrewd recognition of the great popularity of *Looking Backward* in the United Kingdom. Stead’s anthologizing of futurist writing thus showed the tens of thousands who were to read the *Review of Reviews* how present-day developments in electrical technology could plausibly realize Bellamy’s egalitarian vision of life a little more than a century in the future. At the same time, Stead was by no means an uncritical cut-and-paste purveyor of futurist writings. His editorial interventions not infrequently passed harsh judgement on self-indulgent or ill-considered journalism, especially gadget-based fantasies that failed to conform to his sober Congregationalist ethic.

In its very first issue of January 1890 the British *Review of Reviews* abstracted Park Benjamin’s ‘The Miracles of Electricity’ from the American engineering journal *Forum*. Stead’s criticism of its implausibility and literary demerits is evident from the epigraph above. Benjamin blithely forecast the arrival of electric light without heat; instant photography across continents; electric trains travelling at three hundred miles an hour; the telegraphing of tastes and smells for remote medical diagnosis; telegraphic and telephonic transmissions without wires; and the use of electrical heating for welding, cookery, and institutional warmth. Noting the sybaritic possibility of ‘music on tap’ in every dwelling, the sceptical *Review of Reviews* noted with astonishment Benjamin’s intimation that wallpaper might soon be electrically illuminated. As if to counter these excesses, this article on electrical miracles was immediately followed by an abstract of ‘Electricity in the Household’ published by A. E. Kennelly, Thomas Edison’s senior electrician, in *Scribner’s Magazine*. This ‘interesting’ and generally denatured paper offered the more immediate utilitarian prospect of using electricity in a burglar-alarm service; to regulate domestic temperature; keep clocks on time; power carpet-sweepers; operate a table train to serve meals; and heat large quantities of coffee.33

Although neither Benjamin nor Kennelly explicitly mentioned Bellamy, we can understand Stead’s abstracting and republication of their writings in the context of his quasi-Bellamyian agenda as owner-proprietor. A few pages later in the same issue we find an abstract of an ‘admirable’ piece from the *Contemporary Review* on ‘Two New Utopias’. This offered readers a history of philosophical utopianism from Plato to Bellamy, comments on Peruvian state socialism, and a review of ‘Mon Utopie’ by an eminent French professor of philosophy. Significantly, Stead placed immediately after this article some highlights from an interview with the author of *Looking Backward* drawn from the American *Our Day*. Stead’s editing reveals a striking commonality between his wholesome interests and Edward Bellamy’s. Much is made of how Bellamy’s novel promoted maritai equity, state ownership of principal technologies, especially those of transportation and telegraphic communication, and the religious praxis of working collectively towards a peacefully built utopia. Of the widespread organization of activist clubs formed to enact his goals Bellamy is reported as saying: ‘Christians form the best class in society, but they have lacked a practical working plan, and our movement supplies that lack.’34 By his detailed and sympathetic reporting of Bellamy’s plan, Stead effectively endorsed an active form of devout technological egalitarianism that enabled readers of the *Review of Reviews* to see how an utopia could be created in their lifetime.

Wherever possible, Stead’s editing of electrical futurist writing highlighted the distinctly theological concommitants of electrical innovation. An adulatory piece from *Harper’s Magazine*, ‘The Genius of this Electric Age’, in the February 1890 issue of *Review of Reviews* closed with Thomas Edison’s reply to questions about an Intelligent Creator: ‘The existence of such a God, can to my mind, almost be proved from chemistry.’35 Nevertheless, Stead’s ecumenical editorial policy could also accommodate less reverent visions of an electrical world to come. That same issue re-published from the *North American Review* an article on ‘The Future and What Hides in It – A Scientific Prophecy by Professor Thurston’. This broad-ranging narrative examined the wider possibilities of human development and technologically induced harmony, focusing on the probable impact of electrical agency in global transmission of power, voices, and pictures:

Nothing is more probable than that in the next few years the triumphs of electricity will be extended from the earth to the air, and a flying machine will be as common in the twentieth century as an electric tramcar is to-day. It is only a question of the number of years that must pass before we are able to emulate the angels, if not in their virtues, at least in the manner of their locomotion.’36
Indeed with an eye to maintaining the circulation figures needed for profitability, Stead was tactical in choosing to republish the racier and more imaginative sources—especially given the prosaically unliterary qualities of "Looking Backward." As Stead noted in an editorial piece from March 1890:

The great success which has attended Mr. Edward Bellamy's "Looking Backward," a prophetic-realist romance of an American idealist is a welcome sign of the times. "Looking Backward" as a story is as dull as ditch water. It is only because it is a kind of apocalyptic vision, if not of the new heaven, then of the new earth, for which the hearts of men and women are longing all over the world, that 200,000 copies have been sold in the America, and the sale in this country in the last few months has mounted up to 100,000. The success of "Looking Backward" has naturally stimulated the tendency of a certain class of theorists to resort to the historically-prophetic form of romance as a popular vehicle for infusing these ideas into the public mind.

Not only did Stead seek out livelier writing than Bellamy's to capture popular literary taste, he also pinpointed narratives that placed at centre-stage the most plausible means for bringing its utopia into existence. Electricity, he contended, was the "most puissant of all the servants of man," no less than the "destined agent" that would banish war from the world by making next-door neighbours of nations in all continents. Such was the editorial flourish with which he introduced his condensed version of "Looking Forward" as a "romance of the electrical age." Stead explained that this was among the best of such contemporary romances, since it offered an ingenious speculation upon the probable political and social results to be expected from harnessing the "universal force" of electricity. Stead noted approvingly the author's claim that this forecast was drawn from present conditions and tendencies framed within the bounds of "sober reason"—in contrast to the wild fancifulness of some futurist writing surveyed in previous months. Tellingly though, Stead took no notice of the anti-socialist preface that "Ismar Thiessen" included in the 1889 edition of his work.

Politics aside, the commonality of themes between "Looking Forward" and "Looking Backward" explains why Stead found the former a useful vehicle for re-articulating Bellamy's programme. A mesmerically induced sleep takes the narrator to an egalitarian and co-operative 96th-century world characterized by a three-hour working day for all men and women. The ubiquitous electric light and the phonograph sustain a high quality of domestic life and an automated food service obviates the need for servants— but not the obligation for a prayer of thanks before each meal. The modernity of global life is further characterized by the abolition of the papacy and the free availability of intercontinental electric transportation and telecommunication. Stead spares his readers the central love-story (advising readers to purchase the complete novel), but not the tragedy in which the narrator's nineenth-century unfamiliarity in handling a battery-powered boat leads to the death of his 96th-century fiancée—while he miraculously returns to his year of origin.

This genre of cautious technological extrapolation, framed in an egalitarian utopia and narrated as populist romance, was calculated, as Stead noted, to reinvigorate the imaginations of readers in order to see how electricity could "re-energize" the world to egalitarian reform. Accordingly he and his staff of writers on the Review of Reviews were critical of any subsequent popular writing on electrical futurism that failed to meet these demanding moral standards. In the final section I consider their critical response to electrical writing in a liberal highbrow monthly, entire issues of which were regularly abstracted in a section entitled "The Reviews Reviewed."

FUTURISM IN THE FORTNIGHTLY REVIEW—AND ITS CRITICS

The scientific authorities of today have fallen into a rather provoking and tantalising habit of taking the public into their confidence, making known to it discoveries that are as yet only half known to themselves, and building upon them the basis of those discoveries a bewildering fabric of conjectural possibilities.

'Science and Conjecture,' The Spectator (21 November 1891)44

Symptomatic of the literary response to Bellamy's millennial bestseller epitomized in the Review of Reviews, a range of periodicals soon discussed the future possibilities and possible futures engendered by science, often aided and abetted by scientific experts, who generally welcomed such congenial debates. Between spring 1890 and 1892 the 'future' featured as a central motif in the titles of eight Fortnightly Review pieces on warfare, religion, marriage, American literature, geography, cosmology and art.45 Two of the three articles on electricity published by the Fortnightly in this period borrowed from the futurist genre popularized by Stead in the widely read Review of Reviews. A third, 'Human Electricity' by Professor John McKendrick of Glasgow University, showed, however, the resilience of the didactic mode of writing among the academic fraternity—elements of which were also apparent in William Crookes's 'Some Possibilities of Electricity', published in February 1892. Nevertheless, substantial portions of the latter epitomize the tendency of expert electrical writers to borrow from the imaginative literature of the future that we saw illustrated earlier in J. E. H. Gordon's
Expanding upon several of the themes in his recent after-dinner speech at the Piccadilly, for the Fortnightly Crookes cast expert electrical researchers as heroes of the coming generation. Undeterred by the resiliently mysterious nature of electricity, their task was to imagine and instantiate practical possibilities for the future utilitarian application of electricity. Alluding perhaps to one of the 'miracles' of electricity forecast by Park Benjamin two years earlier, Crookes articulated in considerable detail the possible operation of a system of telegraphy that dispensed with the expensive encumbrance of wires. Establishing his authority for Fortnightly readers by using the didactic mode of exegesis for several paragraphs, he then distanced this account from the more fantastical electrical journalism of the non-expert by emphasizing the informed modesty of his extrapolation:

This is no dream of a visionary philosopher. All the requisites needed to bring it within the grasp of daily life are well within the possibilities of discovery, and are so reasonable and so clearly in the path of research which are now being actively prosecuted in every capital of Europe that we may any day expect to hear that they have emerged from the realms of speculation into those of sober fact.

Such communication, he emphasized, was indeed already possible within a distance of a few hundred yards, and he himself could claim credibility for having participated in similar experiments several years earlier. And it was not just long-distance communication that could take place through the ether in an electrified future. Like Gordon writing for the Nineteenth Century, Crookes quoted intensively from Tesla’s recent dazzling theatrical display illustrating how vacuum tubes could be made incandescent without recourse to ungainly connecting wires. This, Crookes noted, would be the 'ideal way' of lighting a room; such was the intrinsic beauty of the coloured light that even Mrs Gordon’s elaborate aesthetic of lampshades might prove otiose.

Drawing inspiration from the imminent prospects of success in these two familiar technological enterprises, Crookes then undertook a considerable departure from his own areas of expertise. In the latter part of the article he adopted the imaginative rather than didactic mode, speculating on the future application of electricity to public services. The enhancement of agricultural productivity, the treatment of sewage, the destruction of disease, the elimination of London fogs and the control of rainfall might yet be attempted, he suggested, by exploiting the electrical mechanism responsible for their particular operations. Recognizing that such optimistic speculations might arouse derision, Crookes reflected that he would 'perhaps, be styled a dreamer, or something worse, if I remotely hint at still
further amending the ways of Nature’. To curtail such thoughts, he reminded readers of their non-expert status by suggesting that such matters could safely be left to the devices and ‘inspirations’ of electrical engineers. ‘Sufficient for this generation are the wonders thereof’ exclaimed Crookes in closing.14

In the ‘Reviews Reviewed’ section of the Review of Reviews in February 1892 Stead disparaged Crookes’s piece, which he somewhat archly characterized as the ‘most interesting’ in that month’s issue of the Fortnightly. It was ‘sufficient to take away one’s breath’ for its indulgence in futurism beyond what might have been warranted by contemporary accomplishments:

The writer maintains that there is no reason to doubt that, in a short time, we shall be able to telegraph without wires in any direction. As we have the telegraph without wires, so we shall have electric light without connecting the lamp to any current. Professor Crookes gives a clear run to his fancy, and thinks that we may, by electrical action, rout the parasitical insects and fungi which in some seasons rob us of no less than the tenth of our crops. At present there is 796,800 horse-power of the sun’s rays wasted on our land. If it could be yoked by electricity, what could not be done? Electricians, he thinks, should aim at nothing less than the control of the weather, and always make it wet at night and sunny all the day; and when it was to rain, rain a downpour never a drizzle. Incidentally he would abolish London fogs and sterilize all germs in the water supply.15

This response to Crookes shows us clearly that, despite being a convenient part of the rhetorical weaponry employed by the youthful electrical industry to win the confidence of future consumers and investors, the legitimacy of electrical futurism could be contested in a variety of ways.16 For Stead, Crookes’s undisciplined conjectures were symptomatic of the unenlightened worldly hubris of electricians. Stead’s critique in such a high-circulation monthly as the Review of Reviews served to undermine Crookes’s broad status as an electrical expert of the highest rank. The problematic position of futurist writing by experts was recognized elsewhere in the periodical world by an electrical journal that had eulogized Crookes as President of the Institution of Electrical Engineers in the previous year. In commenting on Crookes’s piece, the Electrician of 5 February 1892 referred its readers back to its discussion of the Spectator’s comments in the previous November on the humbug of scientific conjecture.

If the science, so far as it goes, is correct, and the conjectures which go beyond are fairly logical, such dissertations have a JULES VERNE-like romance, and harmlessly amuse the public with ideas of these “half-baked” notions with which some thinkers are busying themselves.

The Electrician judged Crookes’s ‘Some Possibilities of Electricity’ to be a contribution to this kind of literature, noting knowingly that the ‘initiated’ would observe a number of ‘slips’ that it then documented in some detail. Even while sharing Crookes’s interest in promoting an electricity-dominated future, the Electrician criticized his account so as to pre-empt further scepticism concerning the trustworthiness of expert writers engaging in futurist speculation.14

RE-ASSESSING THE ORIGINS OF FUTURIST WRITING ON SCIENCE

William Stead’s journalism for the Review of Reviews was crucial in forging electrical futurism as an identifiable genre of writing out of the responses of electrical scientists and engineers to Bellamy’s Looking Backward. Having seen the flourishing of electrical futurism due to Stead’s efforts from 1890, we can appreciate – pace Broks – that H. G. Wells’s Time Machine of 1895 was arguably more a reaction against utopian futurism about electricity than a stimulus to it. Although Wells deployed a technology of time-travel rather than conventional mesmeric devices to transport his protagonist into the future, its mechanism was not electrical. More tellingly still, the two futurist narratives in the Time Machine present discomfiting extrapolations from other areas of contemporary science: a Darwinian dystopia of human degeneration and an entropic eschatology of universal heat death.15 Although Stead remained silent about the uncongenially anti-progressivist ramifications of the former, the Review of Reviews did publish writings on the theological implications of the latter. After all, from Stead’s perspective there was no incongruity in juxtaposing the journalism of electrical liberation with that of thermodynamic catastrophe eons later: an imminent future of socialist electrical utopias was quite compatible with the eventual passing of the material world to herald the resurrection of Christian souls.16 Importantly, however, neither readers of the Review of Reviews nor those whose writings it published need have subscribed to Stead’s religious-political assumptions in order to appreciate the narratives of electrical futures that he edited and commented upon during the 1890s. For less affluent consumers, the Review of Reviews provided an affordable panoply of imaginative views of what the wonder-working agent of electricity might soon do for them – sparing them both the expense of reading several periodicals and the tedium of dry didactic treatments that hitherto abounded. For industrial propagandists of electricity, the Review of Reviews furnished useful examples of how to treat the subject so as to capture the interest of
the reading public – and some salient warnings about the reasonable limits of journalistic hyperbole.

Imaginative technological futurism never became the sole mode of writing on electrical topics; it supplemented and eclipsed traditional didacticism as the most popular mode of writing about technical subjects, if not necessarily the most credible. But even since Stead’s endeavours in the 1890s, experts in science and technology have enjoyed the benefits of the precedents he created, enabling them to speculate about the future implications of their work without fear that they would necessarily be seen as breaching the boundaries of professional decorum.

Notes


5. Secord, Victorian Sensation, p. 351.


