Science in mid-Victorian Punch

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This article examines the scientific content of the most famous comic journal of the Victorian period: Punch. Concentrating on the first three decades of the periodical (1841–1871), I show that Punch usually engaged with science that was highly topical, of consequence to the lives of its bourgeois readers, and suitable for comic interpretation. But Punch’s satire of scientific topics was highly complex. It often contained allusions to non-scientific topics, and its engagement with science ranged from the utterly comic to the sharply critical. Punch prompted readers to think as well as laugh about science, and probably shaped their scientific education more than we think.

Punch; Or, the London Charivari: the very name seems to evoke Victorian Britain, warts and all4 (Figure 1). Although it lasted long into the 20th century – it collapsed in 1992 and was revived four years later – we tend to associate Punch with the period in which it was born and reached its zenith. First published in 1841, it became one of the most successful and respected comic journals in 19th-century Britain. By the early 1860s it was far outselling rivals with a steady 40 000 copies each week, a circulation comparing well with the 55 000 of its more famous contemporary, the London Times5.

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Concerning biological evolution, the principle of the correlation of physical forces, the massive extension of railway networks, the laying of trans-Atlantic telegraphs and the rise of government medical inspectors and women doctors. It also saw the development of plenty of ‘alternative’ scientific practices, including mesmerism, homoeopathy and spiritualism. A sharp tracker of anything topical, Punch bore witness to these often news-breaking developments, and much more. Trawling through its first 60-odd volumes, we find cartoons mocking mesmerists and darwinian evolution, poems on public health and the Great Exhibition, parodies of scientific papers and advertisements for new pills, and awful puns on technical terms. But Punch did more than just reflect scientific news. Concentrating on its first 30 years, I show that it actively engaged with science, whether this meant championing useful as a record of scientific native’ scientific practices, including mesmerism, homoeopathy and spiritualism. A sharp tracker of anything topical, Punch bore witness to these often news-breaking developments, and much more. Trawling through its first 60-odd volumes, we find cartoons mocking mesmerists and darwinian evolution, poems on public health and the Great Exhibition, parodies of scientific papers and advertisements for new pills, and awful puns on technical terms. But Punch did more than just reflect scientific news. Concentrating on its first 30 years, I show that it actively engaged with science, whether this meant championing

Punch’s ancestors and founders

Punch was founded by a group of journalists, dramatists, artists, engravers and publishers who, as Richard Altick has suggested, simply wanted to make a living from comic journalism6. By the time Punch was founded, this publishing genre had changed dramatically since the early decades of the 19th century. The radical, licentious and often lewd satirical print that flourished in these political times had gone out of fashion. The passage of the Reform Bill and the Regency era removed some of the political issues and colourful personalities on which such literature depended. British society was ‘turning respectable’ and the increasingly economically powerful section of society – the middle class – sought more dignified comic reading matter7. By the time Victoria ascended the throne, steam presses and wood-engraving techniques were already making it possible to cater to this new market, because they enabled the mass production of cheap newspapers that blended texts and illustrations. These developments not only made Punch possible, but also a plethora of serious and comic illustrated papers that appeared in the early 1840s, of which the Illustrated London News was the most popular8. What did Punch readers get for their 3d? Its 12 double-columned pages bristled with texts and illustrations on politics, religion, theatre, fashion, literature and science. These were discussed in a variety of literary and graphic
genres, including news commentaries, full- or half-page cartoons, droll poems, spoof letters, advertisements, examination papers, literary pastiches and parodies, illuminated letters and column-filling puns and jokes. With the notable exception of the illustrations, most material was anonymous, and readers were implicitly invited to assume that it was masterminded or penned by the famous no-nonsense fictional editor from the fairground, Mr Punch. Although many of these literary strategies were stock aspects of earlier forms of illustrated and comic journalism, what was different about Punch, and what eventually secured its popularity, was the quality and tone of its material. It secured the services of such admired writers as William Makepeace Thackeray, Douglas Jerrold and Mark Lemon, and such fine illustrators as John Leech, John Tenniel and George Du Maurier. And although its satires on the Irish, Roman Catholics and Americans were considered extremely harsh in some quarters, this did not significantly change middle-class opinion that, as one early reviewer put it, *Punch* was generally ‘mirthful without malice, witty without grossness, and pointed without partisanship’ 12. For most readers, its cartoons were still a far cry from the lewd and licentious material of the early 19th century.

**Mechanisms and places of Punch's scientific comedy**

As with most material in comic journals, *Punch* articles typically worked by allusion, ironic contrast and distortion. Articles were peppered with references to items in daily newspapers, classical literature and art, recent exhibitions and plays, and society gossip. *Punch*’s eccentric editorializing on the week’s news usually involved making such references in unexpected places or distorting them for comic effect. Writers and artists sought to entertain and provoke readers by juxtaposing or directly linking events, people and things – many of which concerned science – that were not believed to be connected. A good example is John Tenniel’s 1866 cartoon in which notorious aspects of the pharmaceutical trade are incongruously, but nonetheless effectively, linked with the heated debate over parliamentary reform (Figure 2). Here, the Liberal Prime Minister W.E. Gladstone is seen as a druggist in his shop, and whose shady wares include bottles labelled ‘Extension of Franchise’ and ‘Redistribution of Seats’. He offers a bottle marked ‘Reform’ to his sceptical customer, the Tory leader Benjamin Disraeli, and as the caption explains, advises Disraeli to ‘take it at once; the more you look at it, the worse you’ll like it’13.

Elsewhere, *Punch* contributors reckoned that distortion was a more effective way of making a point about serious social, religious or political issues. This was certainly one of the *Punch* contributors’ favourite approaches to Irish nationalists for whom, like most Victorian Britons, they developed bitter hostility. An 1861 issue of *Punch*, for example, featured a spoof report of an alleged meeting of Irish nationalists to celebrate Britain’s anticipated heavy losses sustained in its threatened involvement in the American Civil War. Building on the notorious British tradition of representing the Irish as mad beasts, *Punch* grossly caricatured participants as the savage human ‘Yahoos’ from Jonathan Swift’s *Gulliver’s Travels* (1726) and as apes (by giving them such names as ‘Mr. O’rangoutang’ and ‘Mr. G. O’rilla’). Participants allegedly hurled ‘inarticulate abuse at the Saxon’ and howling, after the manner of the canine species, to which the Yahoo is nearly allied, between the mongrel and the baboon’14. The whole article, in fact, contained an astonishing array of topical allusions, many scientific: the savage nature of gorillas was being widely discussed following the observations on African simians made by the French–American explorer, Paul Du Chaillu; and the possibility that men were linked to lower species was now a hotly debated topic in the wake of the publication of Charles Darwin’s *Origin of Species* (1859).

The foregoing example neatly illustrates that by far the most common occasion for science appearing in *Punch* was when it was topical. Like many newspapers, *Punch* ‘set its watch by the clock of *The Times*’ and if a scientific subject was widely reported in newspapers and magazines, the focus of a sensational book, lecture or exhibition, the prominent topic of Parliamentary debate, conversation, rumour, or something provoked by widespread natural
phenomena, then Punch usually had something to say about it. Scientific events prompted a range of responses in Punch, from the fiercely sober critique to the dreadful pun. News of details of the 1858 Medical Reform Bill prompted an angry Punch to urge the insertion of a ‘clause empowering a Magistrate to order any Advertising Quack to be flogged’ which would extirpate this ‘murderous system of heartless traders’. By contrast, Punch responded gleefully to news of the invention of the ‘Debuscope’, by simply insisting that ‘unscientific persons’ had assumed the instrument was an opera glass ‘often used in witnessing débuts’. Although science cropped up most frequently in Punch’s news commentaries, this wasn’t the only literary genre in which science appeared. It featured strongly in spoof letters (usually written from the perspective of someone of limited intelligence and literary abilities, and who expressed bewilderment or contempt for a new scientific development), mock advertisements (which typically puffed a deliberately bogus elixir or ridiculously far-fetched engineering scheme), and half-page cartoons (which often explored the hilarious implications of particular scientific claims or scientific habits on everyday life). Wherever they appeared, and whether presented with a serious commentary or linked in comic association with another topic, Punch’s scientific references usually gave readers material to think about science from a new, provocative and often ridiculous perspective.

What kinds of science featured in Punch?
In general, the sciences that appeared in Punch were those that would have mattered most to the daily lives of the predominantly metropolitan middle-class reader of the periodical. Thus, there is a high proportion of articles on medical topics, notably the alleged benefits of new medical treatments, the unsanitary state of London’s streets, buildings and rivers, the practices and malpractices of doctors, the prosecution of quacks and food adulterators (which Punch vehemently supported), the heroic accomplishments of Florence Nightingale and Edward Jenner, and the training of women doctors. Punch contributors were equally sensitive to the ways in which technological developments could improve or threaten the bodily and mental health of its readers. Like most early to mid-Victorian general periodicals, Punch devoted a large amount of space to railways, the electric telegraph, giant steamships and a host of other novel contraptions. This coverage invited readers to share in the enthusiasm for the sheer ingenuity of invention. Punch’s admiration for the astonishing strides made in railway engineering is best seen in its deliberately ridiculous schemes for new lines, including one to the North Pole and another floating on the English Channel. But Punch articles on railways also invited readers to consider the costs of technological progress. Many bitterly lamented the alarming number of fatal railway accidents, the environmental damage caused by trains and the perilous world of railway financing. Two of these fears were succinctly combined in a John Leech cartoon of 1855, which proposes that one solution to the problem of railway accidents is to tie avaricious railway company directors to the front of their own steam locomotives.

There’s a similar ambivalence in Punch’s representation of the electric telegraph. It was bowled over by the sheer spectacle of the Anglo–French and Anglo–Atlantic cables and was often sanguine about the possibilities of telegraphy, anticipating that it would create harmony between hostile nations and even facilitate dinner table conversation between a husband and wife who were not on ‘speaking terms’. But Punch also emphasized the downside of telegraphy that typically led to conflict, from the uncooperative manner of telegraphic clerks to the worry that although telegraphy furnished the electrical forces for bringing nations together, it couldn’t supply the ‘motive forces’ needed for ‘people to change their courses’.

The ‘pure’ sciences that featured in Punch also tended to be those that were likely to be of familiarity, interest or direct concern to readers, whether from reading newspapers and books, visits to exhibitions and zoological gardens, or from routines at home and work. Thus, there are many articles on astronomy (notably during the appearance of spectacular solar eclipse and comets), on natural history (which was an increasingly important bourgeois leisure activity), zoology and animal behaviour (especially in relation to new species at zoological gardens, animal cruelty and animal husbandry), and chemistry (notably in

Figure 2. John Tenniel uses the shadier side of Victorian medicine to comment on Gladstone and Disraeli’s political battles. Reproduced from Ref. 13.
connection with British artillery, pharmaceuticals and industrial pollution).

Although *Punch* acts as a reliable barometer of the ways in which medical and technological developments were fitting in (or not) into Victorian culture, it does not always give one a sense of the dramatic changes in the ‘purer’ sciences. More esoteric developments were clearly not believed to be good for circulation: there are some references to the new principle of the correlation of physical forces, but nothing on the new energy physics being forged in the 1850s and 1860s. Electricity and magnetism did matter in *Punch*, but only insofar as such forces were used to entertain, improve communication or otherwise improve daily existence. The foremost electrical scientist of the day, Michael Faraday, was important to *Punch* less for his electrical discoveries as for his ability to curb the problems of water pollution and spiritualism.

*Punch* was better at tracking startling new claims in the biological sciences, undoubtedly because these often concerned the origin and development of humans and were thus of immediate interest to readers. Thus, *Punch* published a stream of articles exploring the accounts of human origins enunciated in Robert Chambers’ anonymous bestseller, *Vestiges of the Natural History of Creation* (1844), and in Charles Darwin’s *Origin of Species* (1859) and *Descent of Man* (1871). In much of *Punch’s* coverage of these works, the comic relationship between these biological theories and the customs of contemporary society were explored. Just under a year after *Origin* first appeared, *Punch* insisted that married couples were influenced by ‘the new Theory of Unnatural Selection’ because so many of them appeared to be physically and mentally ill-matched. Indeed, it suggested that ‘Natural Selection’ did not necessarily lead to an ‘Improvement of Species’ because then ‘the world would get so wise and good that there would really be little pleasure left in it’ and leave it bereft of topics for *Punch* joke. Twenty-one years later Du Maurier explored a different social meaning of darwinism, by showing how man might fly by wearing a tail coat, waving his arms about for ‘a few generations’, and expect ‘by an extension of Charles Darwin’s theory’ to develop wings, a beak, tail and clawed feet (Figure 4).

In many ways *Punch*’s idiosyncratic engagement with science is what we might expect given that it was produced by a group of fairly liberal-minded bohemians. What made them work so well as a team was their shared hatred of humbug, obscurantism and injustice, their celebration of bravery and ingenuity, and their fascination with convention.
and ceremony. *Punch* contributors’ bohemian preoccupations help explain why it had such decided views on key issues of the mid-Victorian period. Good examples include its attack on astrologers and spiritualistic mediums whom it believed to be utter fraudsters; its lampoon of the incomprehensible evidence of engineers at official enquiries; its attacks on the Admiralty for shamefully neglecting the turret-ship of inventor Cowper Coles; and its boundless praise for the Crimean War exploits of Florence Nightingale. *Punch*’s bohemian preoccupations with convention and ceremony were best displayed in its coverage of the annual meetings of the British Association for the Advancement of Science. Drawing on 18th-century models of scientific satire, *Punch* mocked the obscure linguistic conventions and apparently bogus schemes of conference delegates. At its most satirical, *Punch*’s ‘coverage’ comprised parodies of scientific papers on ridiculously chimerical projects, such as the 1843 ‘report of the comprized parodies of scientific papers on ridiculously chimerical projects, such as the 1843 ‘report of the

References and notes

1 This paper is based on my contributions to the ‘Science in the Nineteenth-Century Periodical (SciPer)’ Project at the Universities of Leeds and Sheffield, UK. This project will produce an online index of the science, technology and medicine in several non-specialist periodicals published between 1800 and 1900.


3 Athenaeum, 17 July 1875, p. 29


9 Altick, R.D., *Punch*, p. xvii

10 Altick, R.D., *Punch*, p. 4


12 Altick, R.D., *Punch*, p. 10


14 Anon. (1861) *The Irish yahoos*. *Punch* 41, p. 245


16 Anon. (1858) *Punch*’s essence of Parliament. *Punch* 34, p. 233

17 Anon. (1862) *Scientific*. *Punch* 43, p. 73

18 Anon. (1846) *Telegraph for families. Punch* 11, p. 253

19 Anon. (1857) *The two giants of the time, Punch* 33, p. 132

20 Anon. (1860) *Unnatural selection and improvement of species. Punch* 39, p. 182

21 Du Maurier, G. (1871) *Suggestions for aerial navigation*. *Punch*’s Almanack for 1871, p. 8

22 Anon. (1843) *Fourth Meeting of the Brightish Association for the Advancement of Everything. Punch* 5, p. 167

23 Anon. (1860) *The spiritual ’hue’-bug. Punch* 39, p. 53

24 Anon. (1860) *Effects of the recent eclipse. Punch* 39, p. 39