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Richard Yeo, *Encyclopaedic Visions: Scientific Dictionaries and Enlightenment Culture*. Cambridge: Cambridge University Press, 2001. xxi+358pp. £40.

“My hand is absolutely shaking with fatigue, and my head almost turned with ... temporary delirium of over exertion.” —David Brewster, editor of the *Edinburgh Encyclopaedia*.

In the preface to this impressive book, Richard Yeo quotes David Brewster's words to the co-editor of his eighteen-volume *Edinburgh Encyclopaedia* as a warning to himself to make his task manageable. In so doing, he restricts his primary purpose to revealing and analysing “the assumptions behind the encyclopaedic project” and to considering “how these influenced coverage and format”. What he explicitly eschews—with eyes no doubt to Robert Darnton's publishing history of the *Encyclopédie*¹—is the task of giving a “publishing history or a study of readership”. Yeo nevertheless expresses a hope that his study will be a useful contribution to the “significant intersection between history of science and the history of the book” (p. xvi). That hope is well founded, and he makes the case repeatedly for the importance of taking seriously the practices of authorship, readership, and publishing. Yet there are significant respects in which his primary purpose would have been more fully accomplished had he paid more attention to these issues.

In the first part of the book, Yeo relates the eighteenth-century encyclopaedic project to the imagined community constituting the Republic of Letters. As he quickly demonstrates, however, this Republic of Letters was materially grounded in the production and circulation of printed matter. It is generally acknowledged that the key Enlightenment ideal of the open communication of ideas was given decisive physical embodiment in the periodical journals and magazines of the eighteenth century. Yeo argues that it was, in addition, embodied in dictionaries of the arts and sciences like Ephraim Chambers' *Cyclopaedia* (1728) and John Harris' *Lexicon Technicum* (1704 and 1710), and that, if anything, these dictionaries applied the ideal to a yet wider, ‘universal’ audience.

In introducing us to the principal focus of his study—Chambers' *Cyclopaedia*—Yeo reveals that its compiler was the employee of a London globe maker and bookseller whose work earned him the respect of leading members of the Republic of Letters, and a fellowship of the Royal Society. Such events could not have occurred, he claims, “without both the ideals associated with the Republic of Letters, and the commercial market of eighteenth-century publishing” (p. 40). Placing the early eighteenth-century scientific dictionaries within the context of the commercialisation of knowledge, Yeo argues that the mechanics of publication were important in shaping their meaning. The practicalities of publishing in parts, and by subscription, he argues, made readers “akin to corporate authors”, since they were involved in the financing of the project, and in providing feedback to the compiler (p. 53). Yet Yeo's readers remain distinctly shady. While he gives details of print runs, numbers of subscribers, and price, the comparative data is slight, and his conclusions are rather general. He does not, for instance, follow Darnton in giving a detailed analysis of subscription lists. Moreover, the wider literary marketplace remains obscure. This makes it difficult (at least for one not expert in eighteenth-century studies) to assess

his rather imprecise claim that the dictionaries of the arts and sciences “reached a wide range of readers” (p. 58).

Readers are also invoked in Yeo’s account of how the early scientific dictionaries responded to the “problem posed by the progress of science” (p. 60). Reflecting on the expansion of scientific literature, he refers to Rolf Engelsing’s notion of a *Leserevolution* dating from about 1750, in which educated readers in one section of the German bourgeoisie are supposed to have shifted away from intensive to extensive reading practices, with individuals reading a greater number of publications more quickly, but only once. Yeo points out—drawing on the rhetoric of dictionary compilers and pedagogues—that scientific dictionaries were intended to be studied closely and methodically, and suggests (as some other commentators have) that the increase in extensive reading by no means ended such close reading practices. Again, however, it is difficult to assess his claims without a more developed sense of the place of scientific dictionaries in the wider literary marketplace, and without more analysis of the reading practices of divergent audiences.

In the second section, Yeo analyses how the genre of the scientific dictionary was shaped in eighteenth-century Britain. He does this initially by relating the eighteenth-century scientific dictionary to the Renaissance tradition of the commonplace book, in order to recover how Ephraim Chambers conceived of his *Cyclopaedia*. Yeo is both subtle and concretely historical in drawing the two genres together, and the analysis is convincing. Succeeding chapters further explore Chambers’ response to the thorny issue of how structurally to combine the accessibility of alphabetical arrangement with the possibility of systematic reading, and also his debt to Locke’s strictures on the use of language, particularly in regard to scientific terminology. Yeo then contrasts the alphabetical scientific dictionaries of the early eighteenth century with the later treatise-based *Encyclopaedia Britannica* (1771), which he skilfully paints as a product of the distinctive analysis of intellectual progress of the Scottish Enlightenment.

What is missing, however, is a sense of how the genres he describes were shaped by the changing demands of the literary marketplace. It is not that Yeo fails to be persuasive in the analysis he provides: scientific dictionaries and encyclopaedias were clearly moulded in the light of the philosophical and literary traditions he so meticulously depicts. However, the appropriation of such traditions cannot properly be separated from the status of scientific dictionaries as expensive commodities. As Lee Erickson has demonstrated for nineteenth-century literary works, analysis of the rise and fall of genres in relation to the technologies, practices and exigencies of the book trade raises important and often unanticipated issues. Erickson’s account has justly been criticised for the crudeness of its economic and technological determinism, but as James Secord has recently shown, a similar approach, shorn of determinist excesses, can fruitfully be applied to the many genres of scientific publication.²

In the final section of *Encyclopaedic Visions* Yeo reflects on the relation between encyclopaedias and notions of the ownership of knowledge. Following the lapse of licensing in 1695, and the passing of the ‘Act for the Encouragement of Learning’ in 1710, eighteenth-century Britain was riven by debates about literary property. By

giving authors legal standing, the 1710 act raised the issue of their rights for public debate. This was particularly pertinent to scientific dictionaries, which represented exceptionally valuable property (at mid-century the copyright of Chambers' *Cyclopaedia* was worth some £6,400), and consequently had to be carefully defended from piracy. At the same time, however, scientific dictionaries possessed a peculiar status, since they were compilations of material extracted and abridged from other printed sources, which made them vulnerable to charges of plagiarism. Yeo nicely teases out from the rhetoric of compilers, from case law, and from reviews, the strategies which were deemed adequate to constitute a compilation and abridgement as a distinct item of literary property. He shows that, while 'originality' was a key feature of the Romantic conception of authorship which emerged late in the century, compilers of scientific dictionaries evinced their authorship through the "labour, learning, and judgement in their selection and abridgement of other works" (p. 208). What is left unexplored, however, is how the authorial practices and status of these dictionary compilers related to a wider picture of scientific authorship in the same period.

Yeo takes up the theme of scientific authorship at greater length in his excellent account of the radical changes which took place in the encyclopaedic tradition during the late eighteenth and early nineteenth centuries. In the context of the specialisation of the sciences in the years after the French Revolution, he recounts how the *Supplement to the Fourth, Fifth and Sixth Editions of the Encyclopaedia Britannica* (1815–24) marked a shift "towards a work collectively written by experts rather than assembled by a compiler" (p. 250). He shows that this intellectual division of labour had a theoretical justification in the philosophy of the Scottish Enlightenment, but also that it was inscribed in the practices of the early nineteenth-century book trade. The ambiguities of the new kind of scientific authorship are well evoked by Yeo in his description of the negotiations between the editor and contributors to the *Supplement*, although the emerging economy of scientific authorship is regrettably not placed in a larger historical perspective. Yet while we are given a valuable and detailed account of the preparation of the *Supplement*, the wider changes in the book-trade which underpinned the changes in authorship and genre are once again underplayed.

It is worth considering this point in further detail. Yeo relates that the *Supplement* was produced at the instigation of the Edinburgh publisher Archibald Constable, who with two partners purchased the stock and copyright of the *Britannica* in 1812 for a sum between £11,000 and £14,000. Yet he does not reflect on the radical shift this represented from the days when the copyright of Chambers' *Cyclopaedia* was divided into sixty-four shares. Whereas for most of the eighteenth century booksellers generally worked together in large groups of shareholders to finance and protect editions of expensive works, the new entrepreneurial publishers of the early nineteenth century were both more highly capitalised, and more inclined to keep their valuable properties to themselves for competitive advantage. This substantial reorganisation of the trade followed in the wake of the 1774 House of Lords ruling against the booksellers' claims to perpetual common-law copyright. The standard works which had hitherto been the mainstay of the London trade were consequently laid open to cheap competition, and booksellers were obliged to create and market valuable new literary property which would only enjoy copyright protection for a limited period. In these circumstances, and with the rapidly growing market for print,

the new ‘publishers’ (the word only now coming into common usage in this sense) began to build the large establishments that we associate with Victorian publishing. In these circumstances, too, the enormously capital-intensive ‘expert’ encyclopaedia was both possible and commercially desirable.

The cornerstone of Constable’s house was, as Yeo points out, the *Edinburgh Review*. Itself a radical departure in publishing, the review provided him with capital, and with a honey pot that would draw the ‘senior literati’ of Edinburgh. These new business conditions enabled Constable to establish new kinds of relationships with the authors of his *Supplement*. He was able to enlist expert contributors by offering them staggering amounts of money—in Dugald Stewart’s case £1,500 for fifty sheets. Moreover, as Yeo shows, it was Constable—the publisher—who attracted Stewart to the project, and who pumped him and others for their advice before he eventually appointed one of Stewart’s students, MacVey Napier, as editor. Yet Yeo does not give detailed consideration to the question of how this new form of encyclopaedia—with its specialist treatises written by highly paid expert contributors—resulted from these radically changed trade conditions, as well as from philosophical changes.

Yeo’s great success in meticulously uncovering the ‘encyclopaedic visions’ behind the voluminous works he handles in this book is a major achievement. The fact that he has also broached so many important issues in the conversation between the history of the book and the history of science is an added benefit. That these references are sometimes rather tantalizing reflects not only the size of the task Yeo tackles in this important book, but also the wide open field of the history of scientific authorship, readership, and publishing in eighteenth-century Britain.

¹ Robert Darnton, *The Business of Enlightenment: A Publishing History of the “Encyclopédie” 1775–1800* (Cambridge, MA: Belknap Press, 1979).

² Lee Erickson, *The Economy of Literary Form: English Literature and the Industrialisation of Publishing, 1800–1850* (Baltimore and London: Johns Hopkins University Press, 1995); and James A. Secord, *Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of “Vestiges of the Natural History of Creation”* (Chicago and London: University of Chicago Press, 2000).