Scientific publishing and the reading of science in nineteenth-century Britain: a historiographical survey and guide to sources


Abstract

It is now generally accepted that both the conception and practices of natural enquiry in the Western tradition underwent a series of profound developments in the late eighteenth and early nineteenth century—developments which have been variously characterized as a 'second scientific revolution' and, much more tellingly, as the 'invention of science'. As several authors have argued, moreover, a crucial aspect of this change consisted in the distinctive audience relations of the new sciences. While eighteenth-century natural philosophy was distinguished by an audience relation in which, as William Whewell put it, 'a large and popular circle of spectators and amateurs [felt] themselves nearly upon a level, in the value of their trials and speculations, with more profound thinkers', the science which was invented in the late eighteenth and early nineteenth century was, as Simon Schaffer has argued, marked by the 'emergence of disciplined, trained cadres of research scientists' clearly distinguished from a wider, exoteric public. Similarly, Jan Golinski argues that the 'emergence of new instrumentation and a more consolidated social structure for the specialist community' for early nineteenth-century chemistry was intimately connected with the transformation in the role of its public audience to a condition of relative passivity. These moves were underpinned by crucial epistemological and rhetorical shifts—from a logic of discovery, theoretically open to all, to a more restrictive notion of discovery as the preserve of scientific 'genius', and from an open-ended philosophy of 'experience' to a far more restrictive notion of disciplined 'expertise'. Both of these moves were intended to do boundary work, restricting the community active in creating and validating scientific knowledge, and producing a passive public.

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