

## Literature and Science in Eighteenth-Century Studies: Mountain Gloom or Mountain Glory?

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The eighteenth-century scholar seems an incorrigible adventurer in period studies, who roams far beyond the strict limits of their home century proper. Under the paradoxical banner of the "long century," they traverse the 1650s to the 1840s: a nearly two-century century that holds the very crucible of modernity and spans many distinguished "Ages"—of Reason, of Enlightenment, of Sensibility, and of Revolution. Found among these weighty eras of thought are great literature and science bounties: the Scientific Revolution and the Restoration, the Royal Society and the Republic of Letters, mechanical philosophy and sentimental literature, the rise of empiricism and the rise of the novel, Newtonianism and Romanticism, salons filled with philosophes and Literary and Philosophical Societies, curiosity cabinets and natural history museums, to name but a few. Such well-known encounters pepper the long eighteenth century, and have proven to be fine whetstones for early literature and science scholars to hone the tools of their trade. Perusing the eight volumes of *Literature and Science, 1660–1834* gives a sense of the diverse topics, genres and contexts in play. No doubt, the breadth of that history—which covers the emergence of many modern scientific disciplines and formal institutions—is tempting enough to forego the arbitrary periodization of the Christian calendar. Such loose adherence to the temporal confines of their designated period can be doubly forgiven because, thanks to their disregard for boundaries, eighteenth-century scholars have been particularly encouraging of research on literature and science. This somewhat *laissez-faire* attitude towards fields of enquiry may be partly responsible for how foundational and germane eighteenth-century studies has been for the study of literature and science, and why such interdisciplinary research continues to thrive among that field's societies. Yet, it is not all happy border crossings, as disciplinary protectionism and interdisciplinary shortcomings continue to foster disinclination to the free exchange of materials, ideas and approaches.

### Fertile Slopes

It was in the eighteenth century that the esteemed literary scholar Marjorie Hope Nicolson fixed such ground-breaking works as *Newton Demands the Muse* (1946), *The Breaking of the Circle* (1950), *Science and Imagination* (1956), *Pepys' Diary and the New Science* (1965), and, with George Rousseau, *This Long Disease, My Life: Alexander Pope and the Sciences* (1968). Nicolson's oeuvre successfully established "the impact of science upon literary imagination" as a productive site of inquiry in the history of ideas, and one which continues to thrive today (*Newton Demands* vii). Take, for example, her *Mountain Gloom and Mountain Glory: The Development of the Aesthetics of the Infinite* (1959), which casts the geological work of the natural historian Thomas Burnet (1635–1715) as critically influential in moving the literary perception of topography towards the Romantic sublime. Since then, many have explored different aspects of the scientific in the eighteenth-century world, including an especially rich literature and science scholarship in Romantic studies (Fulford, et al; Mitchell; Tresch; Wilson; Ruston, *Creating Romanticism*).

Historical examinations on the permeability of the public and private spheres in the eighteenth century have given us a fuller picture of the circulation of scientific knowledge. Numerous branches of science expanded via print culture and public lectures (see Golinski; Shteir; Stewart), and their popularization helped bring experiment into parlour rooms, as well as domestic laboratories. Hybrid texts such as Erasmus Darwin's botanical poems *The Loves of the Plants* (1789) and *The Economy of Vegetation* (1791) attest to the value of private and associational exchanges in the scientific imagination. Recent scholarship also emphasises the complex and variable gendering of public and private spaces and pursuits (see Guest; Landes; Klein). In this vein, the scientifically oriented writings of influential women such as Anna Seward (1742–1809), Maria Edgeworth (1768–1848) and Anna Letitia Barbauld (1743–1835) are now better known. Still underrepresented are examples from outside the bourgeois domestic setting of the British Enlightenment. New and important work now “engages and resists traditional concepts of Western modernity that assume scientific and technological progress developed exclusively in Enlightenment Europe” (Sudan, 6).

The historicist bent common among eighteenth-century literary scholars has been amenable and encouraging to scholarship about science. Affiliated societies for eighteenth-century studies routinely feature scientific themes. The 2017 annual meeting for the Western Society for Eighteenth-Century Studies, for example, was on “Eighteenth-Century Science(s).” Indeed, search for “science” in the programme of any such meeting and your scroll bar will light up with hits in a plethora of panels, with offerings on writers from Samuel Richardson to Eliza Haywood, Tobias Smollett to Hannah More. Core publications reflect this open reception to interdisciplinarity; as the *Journal for Eighteenth-Century Studies* candidly advertises, “While British and non-British history, literature, science, art and music may have been the disciplinary boundaries that have characterised the majority of academic research in this period, essays which explore these subject areas from perspectives of gender, sexuality, canonicity and liminality are as welcome as more mainstream articles.” However, and as *JECS* suggests, work that breaches disciplinary conventions still requires encouragement, and especially on global literatures and marginal social classes.

### Contested Turf

No one wants to be seen as an interdisciplinary hater. Yet there are those who still doggedly patrol disciplinary boundaries. They are the sort that inspired Raymond Stephanson's tongue-in-cheek mock-plea in a 2015 issue of *Eighteenth-Century Fiction*:

A few kind words, please, for the literary historian who tackles the history of science or the history of medicine. Sometimes viewed as energetic poseurs, cross-over fakes making quickie raids on history, or well-meaning cultural-studies riff-raff trying to bulk up their readings of the canon by soft appeal to Isaac Newton, Richard Bradley, Thomas Willis, or Erasmus Darwin. (470)

This kind of patrolling has its place. Literary scholars can still persist in casting anachronistic comments about scientific disciplines that did not yet exist or referencing outmoded positivist accounts of scientific progression. No doubt, some historians of science giddily elevate the lives of experimenters well beyond their lowly place in the shadows of literary celebrity, and shirk from the uncomfortable

possibility that historical actors operated in a world that highly esteemed literary genius. There is a failure on either side to recognise that the hermetic separation of science from cultural production in the eighteenth century is itself anachronistic. And even when cousin disciplines are embraced, moving between them can pose problems: confused methodologies, mixed registers, impenetrable jargons, and unfamiliar historiographies. Essentially, engaging with two disciplines requires meeting two sets of standards. This continuing challenge for interdisciplinary research has been met with creativity and innovation in methodology, such as Dror Wahrman proposed for cultural studies ("Change and the Corporeal").

To some extent, academics all enjoy keeping to our own niche topics. Some historians of science, just like some literary historians, are patently uninterested in what role the intersection of the literary and the scientific played in their home topic. The case for the significance of that intersection will not need to be made for most readers here, but from the eighteenth-century scholar's perspective, there are specific gains to be made in the exchange of ideas between literature studies and history of science. In British history, for example, literature and science helps to open up the Revolutionary debate beyond Jacobin/anti-Jacobin and radical/conservative binaries by showing how scientists and writers across political and religious spectra developed and applied scientific ideas. It is essential to recognise the wide appeal of these ideas in that earlier Age of Revolutions, their transformative power in the cultural imagination, and their political uses—whether in propagandist tracts or utopian schemes.

If, as Barbauld envisioned in 1773, the "Hill of Science" can be a difficult ascent, the problem today might be the disciplinary footings that so many of us rely upon. With a nascent transcendentalism that mirrors the culmination of our period in Romanticism, literary scholars are perhaps too easily carried away by "excentric flights" in theory; or, more likely, obsess over minutiae—from remarking on poetic rhythm in obscure doggerel to deciphering the most nugatory marginalia that the little-known author may have scribbled. But the enthusiasm for archives and collections that unites the historian of science and the literary historian has brought exciting new fields of inquiry into view. Take, for example, the transmission of ideas and objects in scientific communities and global networks (Roberts; Mee and Wilkes; Easterby-Smith), and the permutation of electricity and gas into cultural phenomena (Ruston, "From the Life"; Fairclough). Disciplinary borderlands remain great cause for collaboration and shared spaces and events have certainly facilitated the exchanges that we, the authors, have enjoyed: having both undertaken PhDs at the University of York's Centre for Eighteenth Century Studies, but with different home departments (History and English respectively), we similarly research literature and science, regularly attend the same conferences, and both belong to various societies for eighteenth-century studies. However, bridging disciplines requires sensitivity to theoretical, methodological and rhetorical differences, as well as reflection on our own implicit biases.

### **In the Vale**

Differences and divisions aside, there are many who continue to cross-pollinate, busily perusing the budding interests of cognate disciplines. This kind of intermingling is essential to all manner of research topics in eighteenth-century literature and science and their manifold overlaps: from race, gender, class, sexuality, and disability to collections, correspondence, art, ephemera, and experiment.

Literature proves time and again to be an important record in these histories because it reveals otherwise elusive or unknowable expressions, beliefs, responses and interventions. Literary approaches also enable us to perceive anew the reciprocity of the exchange between literature and science in the eighteenth century—it is evident that literature does not merely absorb ideas from science, but that language, metaphor and narrative crucially shape theory and method in scientific communities. Yet, even with these known benefits, literature and science has not nearly achieved the same prominence as literature and medicine in eighteenth-century studies.

It is an imperfect comparison, but literature and medicine scholars have formalized collaborations with allied humanities disciplines and contributed directly to academic and practical medicine in ways that literature and science scholars could emulate in their own disciplinary context. The current disparity can be partly explained in terms of medical humanities—a flourishing discipline with wide appreciation among medical professionals. For the eighteenth century, the historian of medicine Roy Porter, who garnered wide public and professional recognition, generously looked to literary scholars and records to build and legitimise his claims. The history of eighteenth-century science has yet to achieve such a weighty appeal for the professional scientist. Is it that the art of medicine has greater affinity for the humanities? That may be a true or at least self-fulfilling perception. But medical humanities scholars also pitch their wares and services to health professionals with the sly maneuvers of Don Draper. One of the results has been centres for studying medicine that house various combinations of historians, anthropologists, sociologists, bioethicists, legal scholars and literary scholars. Creating equivalent academic settings for the study of science—with scholars of literature and science alongside allied humanities and social science disciplines—opens new possibilities for collaboration not only within those interdisciplinary centres but with the scientific community too. It behooves scholars of literature and science, then, to better illustrate the continued significance of past understandings of experiment and empiricism as inseparably bound to human experience and expression—a phenomenon that extends well beyond the limits of any long century, and resonates strongly in our own age of scientific revolution.

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