

deal about this group and Brown introduces little new information. He also describes the contributions of the Swiss naturalist Louis Agassiz, who became involved in this debate after his arrival in the United States. Yet there is little discussion of the significant contingent of polygenist anthropologists in Britain who composed the majority of members of the Anthropological Society of London, and there is no mention at all of the French polygenists who belonged to the Société d'anthropologie de Paris. Brown's argument would have been much stronger had he examined the broader range of polygenist beliefs and the range of monogenist reaction to it. We would also have gained a much fuller picture of the polygenism–monogenism debate and its relationship to advances in philology, the geological evidence for the antiquity of humans, and the biological question of species and variation.

The broader goal of Brown's book is not simply to trace the history of anthropological and biological thought about human variation and the problem of race, but to locate these questions within the social and political context of nineteenth-century racism and the institution of slavery. Again, there is a substantial scholarly literature on these latter issues and therefore the challenge for Brown is to link the scientific components of this topic to these social and political elements in a way that gives us a novel understanding of these subjects. He does offer interesting analyses of American anthropologists' contributions to the debate over slavery and the ways in which Darwin's theory of human evolution and its reassertion of monogenism affected nineteenth-century society's conception of race and human diversity. There is a lengthy discussion of Darwin's private views about slavery as well as Darwin's own experience of the institution in South America during the HMS *Beagle* voyage, which has also been the subject of extensive recent scholarship. Brown devotes considerable time, in this context, to discussing Darwin's studies of 'slavery' among ants in an effort to further illuminate Darwin's thinking about the biological nature of slavery. Brown asserts that the adoption of Darwin's theory of evolution created a modified form of monogenism and a novel explanation for the origin of racial variation in humans. While this is certainly true, there is little evidence from late nineteenth- or early twentieth-century anthropology to illustrate this claim. Historians of anthropology and palaeoanthropology have noted that the acceptance of the idea of human evolution and common descent did not spell the demise of polygenism but instead replaced the original polygenist idea of separate origins with polytypic theories for the evolution of the different human races that continued to emphasize their separateness and distinctness.

Brown has tackled a complex subject with tools that could lead to valuable new insights. Social historians may gain some insights into the ways scientific theories and problems helped to inform ideas about race in the nineteenth century, but the result will probably be disappointing for historians of science. Nevertheless, Brown has identified a set of problems and relationships connecting natural history, anthropology, race theory and slavery that may prompt future researchers to pursue avenues not yet fully explored.

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DAVID N. LIVINGSTONE and CHARLES W.J. WITHERS (eds.), *Geographies of Nineteenth-Century Science*. London and Chicago: The University of Chicago Press, 2011. Pp. x + 526. ISBN 978-0-226-48726-7. £35.50 (hardback)  
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This homogeneous and well-structured collection of essays explores geographies of nineteenth-century science in Britain with the occasional offshoot to British colonies and beyond. As a whole the volume represents an important contribution to a flourishing field in the history of science that the two editors of this collection over the last two decades have done much to develop and influence. In line with the bulk of this scholarship, the articles in the volume are primarily informed

by cultural approaches to historical geography, devoting less attention to questions and methodologies relating to economic and physical geography.

The essays analyse a broad range of sciences but, as is emphasized in the clearly argued editorial introduction, as well as in an engaging afterword by Nicolaas Rupke, share the basic assumption that scientific knowledge is influenced profoundly by its spatial, local contexts, and a geographically sensitive historical account of the sciences is therefore as indispensable as one that traces developments in historical time; far from being a universal, context-independent endeavour, the production, use and communication of science are a product of the local environments in which individuals, institutions and practices are situated. These claims are not new, but the essays concentrate on bringing empirical weight to them.

The collection is divided sensibly into three subsections, each containing five essays. A wide range of locations are analysed and include sites devoted to the production, the dissemination and leisurely consumption of scientific knowledge. Several essays however, deliberately blur such boundaries in order to grasp the activities that took place in these locations and the often conflicting agendas of the people who influenced them. The status of scientific spaces were constantly reconfigured and contested and the inadequacy of clear-cut distinctions between lay and professional, highbrow and lowbrow, instruction and entertainment, production and diffusion are readily exposed as the authors unravel the spatial dynamics. Unsurprisingly, learned societies and museums feature prominently in the collection and the essays confirm the key role that the latter, in particular, played as research institutions in nineteenth-century science in Britain. The essays also, however, broaden the geographical scope beyond the traditional 'truth spots' of Victorian science to include, amongst others, bookshops in Soho, country house laboratories, regional geological societies and scenic regions on the British coast visited by scientifically interested Victorian tourists with budgets for guidebooks.

This broadening of scope is much welcomed. As Graeme Gooday notes in conclusion to an insightful analysis of the contested status of electrical light as a 'safe' technology on theatre stages and in domestic quarters, it is possible by focusing on spatial topographies to develop a more demographically and geographically inclusive appreciation of knowledge in transit. Thus the reader learns from these essays much about well-known men of Victorian science, but a whole range of other agents engaging with the world of science are also brought into focus: the 'armchair geographers' whom posterity has often belittled, the frustrated curators bemoaning the gradual demise of the museum as a privileged venue of knowledge production, and the botanical collectors (outside the confines of the elites) whose observational practices have left physical marks in botanical pocketbooks. Several articles, moreover, explore in imaginative ways how spatial factors shaped audience responses and experiences, as in the case of the hot, overcrowded venues housing the touring British Association for the Advancement of Science.

The collection amply demonstrates that historical geography and history of science share a common set of historical and epistemological issues. As Bernard Lightman notes in his analysis of elite spaces of science in London, it is now well proven *that* space mattered and attention can be directed at studying *how*. This is a sensible and to some extent uncontroversial point. After all, only a highly essentialist understanding of science would maintain that location was irrelevant to the development and status of the sciences in the nineteenth century. Yet the uncontroversial status of the argument for the importance of place does point to a real concern that historical geography and history of science at times appear to be too much in agreement and that the dialogue between the fields therefore becomes too frictionless to unleash its full critical potential. Indeed, it is often difficult to tell the difference between studies of science that are informed by the 'spatial turn' and contextualized, historically sensitive approaches to the history of science more generally. With respect to avoiding this pitfall, the essays in this collection that work best are those that use spatial categories most actively in structuring the analyses of the locations they examine. To highlight one

example, Sujit Sivasundaram, in an essay that ranks among the best in this fine collection, takes the island of Ceylon as the spatial boundary of his analysis and explicitly pushes the wider imperial geography aside. This spatial demarcation enables him to present a compelling history of competing highland and lowland epistemologies on the island itself, as it gradually fell under imperial sway. When such bold, structuring, spatial choices are made, it becomes particularly evident how historical geography can push history of science in new and compelling directions. Readers will find that such choices are made in some, but not all, contributions.

Despite its broader title the collection is largely devoted to geographies of science in the British Isles and rather little is done by way of placing the British case in a wider historiographical and geographical context. On the positive side this leaves ample scope for future comparative studies and for scholars with the knowledge and linguistic skills required for analysing developments in the sciences in other local settings. The many historians who are currently engaged in this endeavour will find this highly recommended volume of original essays a virtual goldmine of inspiration when framing future research questions and agendas.

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IAN HESKETH, *The Science of History in Victorian Britain: Making the Past Speak*. London: Pickering & Chatto, 2011. Pp. xii + 229. ISBN 978-1-84893-126-8. £60.00 (hardback). doi:10.1017/S000708741200026X

Hesketh's book focuses on a group of British historians who promoted a new definition of history between 1860 and 1890. The debate over history was triggered by the huge and short-lived success of Henry Thomas Buckle. In his *History of Civilization in England* (1857–1861) and in his public lectures, Buckle relied on Auguste Comte's positive philosophy and claimed that history was a science similar to the physical sciences. Human actions as well as natural phenomena were governed by general laws, which the new tool of statistics would reveal. Leaving aside Buckle's more subtle approach to the past, including the use of imagination and intuition, contemporaries were shocked by the moral and metaphysical implications of his theory. If human actions were governed by laws, no room was left for free will or for Providence. Critical reactions to Buckle were numerous, and his reputation soon faded.

Some historians argued against Buckle that history could never be a science. The past was subject to individual motivations and therefore unpredictable. It called for another kind of knowledge, more similar to art. Such knowledge could be best formulated in biographies and in historical narratives based on facts but written like novels. This was the opinion of Charles Kingsley, Regius Professor of Modern History at Cambridge from 1860, and of James Anthony Froude, who claimed to follow Carlyle's model in his *History of England from the Death of Cardinal Wolsey to the Defeat of the Spanish Armada* (12 vols., 1856–1870).

Another group of scholars, led by William Stubbs, John Robert Seeley, Edward Augustus Freeman and Lord Acton (John Emerich Edward Dalberg), opposed a different definition of science to Buckle's conception. History should indeed become a science, but rather than Comte's faulty positivism, its model was Leopold von Ranke's inductive science of facts. Ian Hesketh has chosen to study the work and career of these historians in terms of 'boundary work' (p. 86). Focusing on their methodological statements, mostly expressed in public lectures, correspondences, book reviews and periodical articles, he analyses how the promotion of a new definition of history was also an attempt at monopolizing professional authority and excluding rivals from within by defining them as 'amateurs', or 'pseudo-historians'.

Stubbs, Seeley, Freeman and Acton shared a common definition of objectivity. The historian's task was to discover facts, and let these facts from the past speak by themselves. This definition implied some specific professional skills in order to deal with archives and primary sources. It also