

included. Professor Wiesner-Hanks seems to have chosen to stay away from the medical and evolutionary aspects of her subjects, however: no reference is made to the nineteenth-century discussion of congenital hypertrichosis, or the contributions of Rudolf Virchow and other leading scientists of that time. The index, for example, does not include 'Darwin, C.' This considerably devalues the book for the historian of medicine.

The Marvelous Hairy Girls is a solid academic tome, of considerable value to specialist Renaissance historians. Its arcane subject and turgid writing makes it unlikely any person would read it for pleasure, however, and its discussion of the medical aspects of its subject is wholly lacking in depth.

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Mike Jay, *The Atmosphere of Heaven: The Unnatural Experiments of Dr Beddoes and His Sons of Genius* (New Haven: Yale University Press, 2009), pp. vii + 296, \$30.00/£20.00, ISBN: 978-0-300-12439-2.

How does one experience the 'Atmosphere of Heaven'? Robert Southey, as the first of an élite circle who inhaled nitrous oxide after its potent effects from inhalation were trialled by Humphrey Davy and Thomas Beddoes, offered that 'the atmosphere of the highest of all possible heavens must be composed of this gas' (p. 176). It is a descriptive enough statement, but one that evokes images that can deceptively omit the experiences and endeavours leading to its discovery. This is particularly a truth in the case of physician Thomas Beddoes and his revolutionary vision of a pneumatic institute for the treatment of the sick, particularly those who could not afford many of the existing treatments.

The scene is set in late eighteenth-century Britain: an era on the verge of medical and scientific discoveries that paved the way to our

proudest and most important historical advances. But this too was a period in our history when scientific and medical discovery, though posing real and exciting opportunities, also had an element of haphazard, and often an unethical or even dangerous approach of trial and error to those brave enough not to shun or shy away from the prospects.

From the opening paragraph in the Bastille Day prologue, the reader is engaged and drawn into the social, political and idealistic ambitions and realities of Beddoes and his circle of friends and colleagues. Our not-so-gentle introduction to the story starts with descriptions of a 'great mob' and their destructive rampage through Fair Hill, on the outskirts of Birmingham, with their very next target being Joseph Priestley – experimental chemist, philosopher and dissenting clergyman.

Beddoes, at this point, was a Reader in chemistry at Oxford University, whose political views and opinions on the French Revolution sat rather uncomfortably alongside his role as an academic and lecturer, and after the account of the Bastille Day riots, an air of dread surrounds Jay's description of the tribulations Beddoes faced as a result of his own political views.

Jay leads us descriptively and methodically through Beddoes' conflicts and aspirations, his visions and their limitations. As an introduction to the life of Thomas Beddoes, a very sympathetic and detailed picture is assembled, of a philanthropist and idealist, but one that the reader will, through subtly suggestive story telling, be willing throughout to succeed.

It doesn't take long into this read, or even a furtive glance at the bibliography, to begin to appreciate and understand the scope of research and careful assembling of all that could be gathered and transferred, from biographies, papers, books, notes, letters and other sources; and Jay's ability to compile all of this into an engrossing yet informative, emotive and yet pragmatic account of one person, who before this is little mentioned next to his more renowned circle of friends, is both

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provocatively but considerably executed in equal measure.

That said, it has to be noted that *The Atmosphere of Heaven* is overall more a biography of Beddoes' working life, and contains only one, albeit explicitly descriptive chapter (Chapter 6, 'Wild Gas'), focusing predominantly on the very experiments that the book pertains to be at its core. This is a wonderfully engaging and fast-paced chapter, where, behind the scenes at Dowry Square (Beddoes Pneumatic Institute, Hotwells), Humphrey Davy was regularly self-experimenting with nitrous oxide, to the point where he and Beddoes decided to extend the effects of the gas from treatment of the sick, to encompass recreational use among friends. Full of accounts and quotes from those who experienced the social aspect of these 'human experiments', this chapter is the gold nugget within this work, and cleverly brings together feelings of friendship, unity and success that, as a reader, one hopes the previous chapters had been building up to.

In all, a very readable and well compiled book, which acts as both a great introduction to the characters and events that capture the essence of late eighteenth-century medicine, and a detailed insight into the work of Thomas Beddoes, and his endeavours to throw off the constraints of convention so that medicine and issues in health were accessible and understandable to all. Whether his achievements can be measured directly or through his encouragement and support of those around him is both discussed and left to the reader to muse. Ultimately though I can say I was able to close the book feeling I had all the obtainable facts.

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John Chalmers (ed.), *Andrew Duncan Senior: Physician of the Enlightenment* (Edinburgh: National Museums Scotland,

2010), pp. xvi + 253, £14.99, paperback, ISBN: 978-1-905267-30-9.

In 1750, Mr John Amyat, the King's Chemist, visited Edinburgh. He is said to have remarked to Robert Burns' publisher, William Creech, 'Here I stand at what is called the Cross of Edinburgh, and can, in a few minutes, take fifty men of genius by the hand'. The purpose of John Chalmers' new book might be summed up as the wish to ensure the inclusion of Andrew Duncan Senior in any such roll call of the Scottish Enlightenment. He has been successful in that task.

Professor of the Institutes of Medicine at the University of Edinburgh for thirty years, Andrew Duncan was certainly a prolific author on medical matters (a full list of his writings comprises a valuable appendix to the book). However, Chalmers argues that Duncan should be remembered as much for the manner in which he expressed the values of the Enlightenment in practical initiatives for the benefit of society as for more narrowly intellectual endeavours. There were certainly plenty of the former – Duncan played a major role in the founding of Edinburgh's first Public Dispensary, its Lunatic Asylum (now the Royal Edinburgh Hospital), and the University's chair of Medical Police and Jurisprudence. He was the founding editor of what was arguably the first successful English language medical periodical, *Medical and Philosophical Commentaries*, and the principal editor of the *Edinburgh New Dispensatory* (a major pharmacopoeia) from 1789 to 1801. Duncan also conspicuously displayed the distinctive sociability of the eighteenth-century Scottish intellectual: he personally founded the Aesculapian Club and the Harveian Society – remaining the society's secretary for forty-six years – was a founding member of the Royal Society of Edinburgh and the Medico-Chirurgical Society, as well as serving as President of the Royal College of Physicians of Edinburgh (twice) and the Royal Medical Society (six times). Nor were his activities confined to medicine – he began what became the Royal Caledonian