

scholars as constituting [the ideology of] fascism' (p. 3). Stone's first chapter is devoted to the German Jew, Oscar Levy, the editor of the first complete English edition of Nietzsche's collected works (1909–13). Levy's writings are complex and not easily summarized but he firmly rejected centuries of Judeo-Christian morality and found the answer to Western degeneracy in his book entitled *The Revival of Aristocracy* (1906). This, it might be said, was a strange position for a non-aristocrat to hold at a time when the British aristocracy was declining and abrogating political responsibility at a rate of knots. However, this view, especially when coupled with the observation that the masses were slaves or sheep, was easily sustained by the invocation of Nietzsche. It was in various forms a stance Levy was to take all his life. Levy was an important figure for he brought Nietzsche to the attention of many British writers (intellectuals might be too dignified a word). An important vehicle for this was the journal *New Age*, a periodical for those who wished to put the clock back. Stone's second chapter centres on Anthony Mario Ludovici, perhaps the most reactionary of all the authors he deals with. The long-lived (89 years) Ludovici remained devoted throughout his life to what amounted to hatred of the mob and to a passionate addiction to the importance of heredity in human affairs. Scarcely known now, Ludovici was a prolific writer whose views, according to Stone, changed little during his life. Eugenics, degeneration, race-breeding, anti-Semitism, and an anti-liberal defence of aristocracy were his staple subjects. Women, or at least women who wanted to work, vote and have sex for pleasure, received particular attention. By the time of the Second World War his sympathies for Hitler were explicit. He fell out with Levy with whom he had been a friend, having translated some of Nietzsche's texts for the collected works. Deemed a prophet by some in the Edwardian era, by the 1960s, if noticed at all, he had become a hated reactionary. Stone then takes up Nietzsche and eugenics and race and eugenics. Perhaps the most fascinating chapter, however, is the penultimate one in which he deals with the 'lethal chamber' in eugenic thought (p. 125). Among a minority of the far British right committed to racial purity and aristocracy ideas about gas chambers to achieve eugenic ends circulated freely and apparently developed autonomously with no particular German connection. Stone's book makes it quite clear how important Nietzsche was to many writers of this period. He also shows that Nietzsche was not solely the diet of the right and that the terms liberal, socialist, and conservative had connotations in the period that he deals with which no longer have currency. Figures such as G. B. Shaw, H. G. Wells and Havelock Ellis are not easily pigeonholed in modern categories. So what of Stone's thesis that all the ingredients of a fascist ideology existed in England before the Second World War? There is no doubt they did, but all of them together were espoused by very few individuals. It was perfectly possible in the 1930s for an individual to be a eugenist, an anti-semitic, an opponent of democracy, and an advocate of aristocracy at the same time as being completely out of sympathy with fascism (usually linked with communism). Such individuals might well call themselves liberals. It was not simply parliamentary institutions that ensured the failure of fascism; there was a sense (ideology even) of Englishness at this time that would have nothing to do with national socialism. This is an imaginative and thought-provoking study, well researched and scholarly. The questions it asks are by no means disposed of; rather, they are given more substance and depth.

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PEDER ANKER, *Imperial Ecology: Environmental Order in the British Empire, 1895–1945*. Cambridge, MA: Harvard University Press, 2001. vii+343 pp. £39.95. ISBN 0-674-00595-3.

We have become increasingly aware of the extent to which the development of the environmental sciences has been shaped by the demands of a society which seeks to control the world for economic benefit. Peder Anker's book does a first-rate job of uncovering the extent to which the emergence of ecology in Britain and South Africa was shaped by professional infighting driven by deep philosophical and ideological divisions. At a time when new technologies such as the aeroplane were revolutionizing our ability to survey the Earth, ecology offered itself as a conceptual vehicle by which the exploitation of resources could be controlled and managed. Anker's theme is the conflict between the mechanistic ecology of Arthur Tansley and his Oxford colleagues, including Julian Huxley and Charles Elton, and the

holistic vision promoted by the South African statesman and thinker Jan Christiaan Smuts. However, this was not just a conflict between materialism and idealism. The two positions were also defined by an ideological split on how to link humankind to nature and how to integrate social and economic development. Tansley's group stood for a managerial approach which saw the world as something that could be shaped for human purposes. Initially a student of Freudian psychology, Tansley took it for granted that humans were part of nature and used the human mind as a model for the ecosystem. He made common cause with thinkers such as H. G. Wells who were calling for the scientific management of society and its exploitation of nature. Smuts' more conservative viewpoint sought to legitimize a static model of society which would defend white supremacy in the colonies by seeing it as a product of a natural biological hierarchy.

Since South Africa was part of the British Empire, the two approaches to ecology did not develop in isolation. There were, in any case, plenty of conservatives in Britain more in tune with Smuts' way of thinking than with the mechanists. At Oxford, Tansley had to contend with thinkers such as C. S. Lewis and J. R. R. Tolkien who were passionately opposed to the idea of the scientific management of society. Smuts' holism fitted well with the enthusiasm for emergent evolution and other forms of teleology promoted by those seeking a reconciliation between science and religion, a topic Anker might have explored in a little more detail. It was the physiologist J. S. Haldane, a well-known exponent of idealist philosophy, who engineered a prominent role for Smuts at the 1929 BAAS meeting held in Cape Town. When Smuts' disciple John Phillips promoted his philosophy at the 1930 International Botanical Congress in Cambridge, the challenge stimulated Tansley and Elton to develop their ideas and their techniques for applying them in practice. However, they too had heavyweight supporters who would promote their theories as part of the managerial ideology. Huxley left Oxford but ultimately teamed up with H. G. Wells to write *The Science of Life*, a highly successful popularization of the materialist perspective in biology. Lancelot Hogben rallied the materialist opposition to Smuts during his short spell of teaching in South Africa.

Anker's book is particularly strong in bringing out the way in which the debate was fought outside science and in the popular media. However, his main story is one which is intended to show how developments within scientific ecology were shaped by the ideological and philosophical divisions within the intellectual world of early twentieth-century Britain and South Africa. In the end, Tansley and Elton succeeded in stamping their authority on the newly emerging science, but thanks to Anker we can now see how they were forced to shape their theories in opposition to an influential alternative that had considerable intellectual and social support within Britain and, especially, within the colonies whose resources the British sought to exploit. This book will provide a wealth of ideas and information for historians seeking to further the cause of understanding science as a product of social forces.

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### Instruments and Measurement

LEWIS PYENSON and JEAN-FRANÇOIS GAUVIN, editors, *The Art of Teaching Physics, the Eighteenth-Century Demonstration Apparatus of Jean-Antoine Nollet*. Sillery, Québec: Éditions du Septentrion, 2002. Illus, bibliography, index. xviii+231 pp. \$54.95. ISBN 2-89448-320-1.

*The Art of Teaching Physics* is based on the instruments, in the style of the abbé Jean-Antoine Nollet (1700–70), that are now preserved in the Stewart Museum in Montreal. Founded by the philanthropist David Macdonald Stewart, the museum houses a collection of physics apparatus from the Collège des Gondrans, a Jesuit foundation in Dijon, that illustrates vividly Nollet's interests and activities in the eighteenth-century world of teaching and public demonstration. The volume is in two parts. The first contains a series of essays on Nollet's career, set in a context that is both local and European in scope; it also traces the origin and subsequent vicissitudes of the collection. The second part is devoted to the instruments themselves.

Nollet was of peasant origin. His obvious intelligence led to his being sent to study theology in Paris, where he became a deacon and assumed the title of abbé although without ever becoming a priest. While serving as tutor to the children of the clerk of court at the Hôtel de