

Book Reviews

If divines and physicians could not agree, what was the state supposed to do? Even if a consensus had emerged, was there any administrative body with sufficient authority, efficiency and resources to enforce the necessary measures against an uncertain and unwilling populace?

Slack drily tells us that "The postponement of the Lord Mayor's Show and the celebration of James I's coronation in 1603 must have caused resentment in London." In Nottinghamshire men continued to play football. In Winchester bull baiting continued. Local governments that could not prevent illegal pastimes under normal conditions could hardly be expected to stop legal and traditional activities in times of stress.

Nevertheless, the overall impression left by this volume is that Christianity, society and the state all survived their ordeal by plague better than could have been expected. Men and institutions demonstrated remarkable durability. Even the population of some of the worst hit cities, thanks to an influx of rural migrants, quickly returned to pre-plague levels.

The book is a must for anyone with a serious interest in the history of medicine and the Tudor and Stuart period.

Rosemary Weinstein, Museum of London

DAVID I. GROVE, *A history of human helminthology*, Wallingford, Oxon, C.A.B. International, 1990, pp.viii, 848, £55.00, \$104.50 (0-85198-689-7).

In 1965, W. D. Foster, then at Makerere University College, published what was for many years the standard history of parasitology. In less than 200 pages he covered the diverse strands constituting that generic term, including past discoveries in both protozoology and helminthology. Twenty-five years earlier, on the eve of World War II, H. H. Scott in his *History of Tropical Medicine*, had all but dismissed the history of helminthology with a single sentence: "Ankylostomiasis is almost the only helminthic infestation of man in the tropics which can be said to have a history, at all events a history of sufficient interest to call for any detail".

Now Dr D. I. Grove has most convincingly proved Scott wrong, and amplified Foster's general account with more than 800 pages on the history of helminthology alone, the branch of parasitology dealing with worm infestation. It is an impressively complete rendering of an intriguing subject.

In the first three chapters Grove gives a general introduction to historical attempts to chronicle and understand the nature and infinite variety of the world of parasitic worms, followed by another twenty-four chapters devoted to individual species. Larger parasitic worms were certainly observed and described by a number of classical authors. Hippocrates, Galen, Celsus, and Pliny, were all familiar with tapeworms and roundworms, and by the eighteenth century Linnaeus included *Vermes* as one of the six major classes constituting the animal world. Yet the origin and transmission, and the effects of parasitic worms on the host organism, remained in doubt for a very long time. For much of the eighteenth century, the presence of worms in carcasses of cattle dead of rinderpest, for example, gave rise to speculation on a possible causative rôle in such diseases. Answers to all these questions, as well as that of spontaneous generation, were to be obtained only in the nineteenth century. It is all explained by Dr Grove, who also discusses at some length the etymology of "helminthology" and "parasitology" and related Latin and popular names of individual species, as well as a number of terms dreamed up by nineteenth-century taxonomists and no longer in common use.

The many chapters on individual species, covering more than 600 pages (not including "imaginary worms and pseudoparasites"), and each with its own synopsis of names and synonyms, explain the historical development of the discoveries made concerning life cycles in different hosts and intermediate hosts, transmission of the various stages, pathology, clinical features, diagnostic measures, epidemiology, and finally the search for treatment and effective preventive and control measures. The wealth of information leaves the diligent reader almost breathless and echoing one of the book's more memorable quotes: when confronted with Bojanus's discovery, made in 1817-18, of the cercariae sacs he called "royal yellow worms", the journal's editor, Oken, is said to have remarked that "observations of this kind make one dizzy".

Book Reviews

This definitive history of helminthology concludes with portraits and short biographical sketches of the main authors cited. Were it not ungrateful to ask for more, one might have welcomed a few likenesses of the protagonists, the helminths, in addition to the guinea worm and victim on the cover. Dr Grove himself calls his book a “labour of love”. His readers might call it an invaluable work of reference and a celebration of intestinal worms, and join the author in the gratitude expressed to his wife and children for their “patience and forbearance”. They have been richly rewarded for any personal sacrifice if they are as pleased by the results as those with a professional interest in helminths.

Lise Wilkinson, Royal Postgraduate Medical School

PETER DEAR (ed.), *The literary structure of scientific argument: historical studies*, Philadelphia, University of Pennsylvania Press, 1991, pp. viii, 211, £27.50 (0-8122-8185-3).

Bruce Hunt’s exciting and readable reconstruction of battles fought by “physical mathematician” Oliver Heaviside in the rhetorical dimension of mathematical argumentation, and Lisa Rosner’s account of the constraints imposed on student experimentation by models for the presentation of experimental knowledge at Edinburgh University in the eighteenth century, did not deserve to be included in a collection of otherwise poor or pointless essays.

This is not to say that the two articles are interesting because of what they have to say about “the literary structure of scientific argument”. Hunt discusses the ascent of the ideology of pure, “rigorous” mathematics at Cambridge and the consequences for Heaviside who disagreed with the associated rhetoric (that pure deduction must characterize legitimate mathematical argument); Rosner discusses ways in which a particular method of medical instruction quite severely (but perhaps inadvertently) restricted the literary habits and values of students. There is no doubt that Hunt and Rosner are interested in scientific argument. But there is no reason to think that they are interested in its “literary structure”—whatever that means. Judging by two other articles (Thomas H. Broman’s “J. C. Reil and the ‘journalisation’ of physiology” and Peter Dear’s “Turning experience into science in the seventeenth century”), it means that in the history of science tearing language out of the situations of its usage is where the action still is.

Broman sets out to demonstrate that “there is a reasonably tight correspondence between the formal structures of written genres and their intellectual contents”, because “genres of writing and scientific theories develop together and become established in particular historical circumstances” (p. 17). Not only are the distinctions Broman relies upon (between scientific theories or ideas; the environments in which they are articulated; and the kinds of language or “genres” in which they are expressed), and their relations (the first appear as “responses” to changes in the second, and the third “mediate” between the first two), difficult to grasp (“genres link what is produced in the mind with the world in which those products find their space”, is nonsense)—the evidence he adduces for his thesis is very weak indeed. Dear’s understanding of the function of language leads to no lesser philosophical nonsense. “Thus”, he says as if there were an argument, “the meaning of an account of an experimental event. . . is provided by its implicit reference to a spatiotemporally defined region of clinking glassware or grooved pieces of wood being manipulated by a human agent”; and “the meaning of that spatiotemporal region itself. . . is conferred, reciprocally, by the account of an experimental event” (p. 136). Thus, you will notice, Dear ends up with two “meanings”, that of the account and that of the “spatiotemporal region”—whatever that means. (People who view language as essentially an instrument for achieving reference often saddle themselves with spatiotemporal regions.) Not that what it means really matters for Dear’s conclusion.

The articles by Broman and Dear are full of what is most annoying about this book, besides its aimlessness. It is the smug tone suggesting that the philosophical issues in the literary approach to scientific history are plain to everybody, can be dealt with summarily, and are ultimately dispensable. For ultimately the aim is to go to print.

Alexander Zahar, Wellcome Institute