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concerned with how to approach a scientific enquiry. The manuscript also shows Bacon at work, crossing out, amending, and adding to his amanuensis' copy, and its physical state mirrors the tentative, emergent nature of Bacon's thinking, being, as it was, a stepping-stone to the finished *Historia vitae et mortis*.

Rees has produced an excellent introduction and, with Christopher Upton's help, made a flowing yet generally literal translation. A different approach, however, could have been taken by Rees in his introduction where he is perhaps too much of a historian of ideas. Rees depicts Bacon as a deep, complex and frequently original philosopher who writes at a high level of speculative generality (spirits, life, death) in which specifics are few. Yet in *De viis mortis*, Bacon constantly referred to examples culled from medicine, cookery, metallurgy, and other practical sides of life to illustrate his theoretical points: roasted meats last longer than raw, as do well-baked bricks – because fire distributes the inner spirit of things more evenly. The continued ripening of fruit picked when unripe shows the action of spirits, whilst the practice of sealing up liquids and adding oil to them so that no air remains between stopper and liquid confines the spirit of the liquid and this captivity constitutes the “essential foundation of all conservation”: Bacon, despite Rees, did dwell upon particulars, and his framework of experience was frequently drawn from the most practical areas of medicine (regimen and diet). Even in his speculative philosophy we can see Bacon's belief in the union of practice and theory. Yet Rees is surely correct to distinguish Bacon the speculator from Bacon the inductivist. For Bacon's examples were not part of a chain of inductive logic but rather provided the phenomena behind which he saw hidden actions. For as he wrote in *De viis mortis*, “the subtlety of experiment is far greater than the subtlety of the senses; and the subtlety of the invisible spirits, of the hidden pores in the parts, and of the imperceptible functions . . . is far greater than the subtlety of the visible fabric of veins, and of fibres . . . and suchlike into which the anatomists search with some acuteness.”

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WILLIAM PATON, *Man and mouse. Animals in medical research*, Oxford University Press, 1984, 8vo, pp. xii, 174, illus., £9.95 (£2.95 paperback).

With legislation impending to revise and bring up to date the law on experiments on animals one hopes that this timely book will be widely read. It may help to prevent a viable, and generally well-brought-up, baby being thrown out with the emotional bath water.

Obviously absolutist abolitionist critics will have no need to be confused by the well-presented facts documenting the achievements in improvement of human and animal life stemming from 150 years of experiments on animals. Before returning to their impregnable stronghold, however, they would do well to read the chapter on ethical questions where they share common ground with the pejorative vivisectionists. Here they will find the scientist grappling with the philosophy and morality, whilst eschewing the politics, of the problem; this should, in all but closed minds, stimulate thought.

The often-used slogan of “animal rights” is discussed. The distinction is made between moral agents and moral objects, which underlies the essential difference between man and animal, it is argued. Man, the moral agent, can accept duties and therefore make claim to correlative rights; moral objects (having moral worth) such as animals are those in respect of whom man has duties. However, insofar as moral objects have no duties, cannot make claims, and are not a participant part of society, they do not have rights. In other words, there needs to be some equivalence between rights claimed and duties accepted. Therefore, it would seem more useful and beneficial to replace the term “animal rights”, with its false human analogies, by the “moral worth of animal life”.

The problem of pain and suffering is fully discussed, together with the measures taken to prevent or limit it. The decline in experiments on animals in the last decade is linked with the use of alternatives to animal experiments and improved design of experiments. The twin safeguards of scientists being subjected to peer review at all stages of research, from funding

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and design to publication, together with the system of Home Office licensing and inspection, is described. The latter, it is pointed out, is considerably more rigorous and effective than monitoring of other activities, such as inspection of factories, where considerable human hazard may exist, or other situations where pain and suffering by humans or animals occur.

Finally, the author discusses the way in which the balance should be struck between benefit reaching into the future on the one hand and the suffering that may be entailed on the other. In the climate of change and growth that characterizes an open system such as science this point of balance will continually be revised. Perhaps the point chosen, which justifies animal experiments to establish the safety of cosmetics and toiletries, may not be acceptable to all, even though it represents a very small number of experiments. The arguments used in its favour are the perceived blurred margin between preparations prescribed for dermatological use and the large-scale voluntary use of cosmetics and toiletries, together with society's need to protect the careless and foolish. Presumably, the non-lethal Draize test applying these substances to the eye of the rabbit could be translated to (suitably rewarded) human volunteers?

The book is to be applauded for its fair and balanced presentation of these important issues, even if the reader may not share all the conclusions drawn. A minor irritation is the system of referencing used, which makes it necessary to look in two separate places to find the original source.

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RICHARD B. SHERIDAN, *Doctors and slaves. A medical and demographic history of slavery in the British West Indies, 1680–1834*, Cambridge University Press, 1985, 8vo, pp. xxii, 420, £25.00.

History deals with change, sometimes with development; not only should it record facts, but also provoke discussion and stimulate investigation in new areas. Since, as E.H. Carr writes, "History is a social process", the historian seeks to unravel, reveal, and comprehend human behaviour and to share this knowledge with his readers. Medical history must combine this purpose with that of presenting and discussing scientific information. Professor Sheridan has deftly combined the two to produce an important and impressive work.

The subject of slave medicine in the American colonies has been receiving well-merited attention; however *Doctors and slaves* deals with what has long been required – a general picture of slave medicine and demography in the British West Indies between 1680–1834. Professor Sheridan pays particular attention to conditions in Jamaica as the largest and economically most important island, but the other islands and correlating conditions in the American colonies have not been neglected.

The main purpose of the study is to investigate and define the reasons for the natural decline in the slave population, which caused plantation owners to rely heavily on the maintenance of the slave trade; it also seeks to ascertain the kind of health care given to slaves. The author looks at the role played by the Atlantic trade as a disease vector and examines the environment of the sugar plantation with its brutal labour system, which, Professor Sheridan concludes, combined with inadequate nutrition and poor health care to produce low fertility amongst female slaves and a high infant mortality.

The book is extensively researched (its bibliography is comprehensive) and contains many interesting and discerning social observations. A Professor of Economics at the University of Kansas, the author has many previous publications on the economic and sociological conditions of these islands, and his authority over his material enables him to handle a great quantity of diverse information with ease and clarity, making the book comprehensible both to the medical observer and the interested layman.

*Doctors and slaves* is a major contribution to the knowledge of tropical medicine and health care in an area and at a time in history when disease and economics were indissolubly linked. Professor Sheridan shows us how Britain in her quest for power and wealth pursued inhuman