

descending through increasingly exteriorized grades of expression. The distinction between language and speech is contained within this framework, and much more besides. The subject of *logos* was considered too philosophical to fall within the scope of the book (p. 40), but the fact that its omission led to such a misconception suggests that the scope was somewhat too narrow, since medicine and philosophy were intimately linked throughout the period, and since the author herself inevitably makes many statements of philosophical bearing. For the same reason the scant mention of St. Augustine is inadequate, given his central importance in the development of western theories of speech.

On p. 102, Critchley's failure to find "reference to speechlessness in the *Kitāb al-Hawī* or *Continens* of Rhazes" is noted, but not corrected. Rhazes does refer to speechlessness in terms of differential diagnosis, as well as to other speech impediments.<sup>5</sup>

On p. 163 one reads: "Unexplained and seemingly unexplored by Bernard [of Gordon] was the question why humidity was believed to occlude only the nerves of motion . . . and not the nerves of sensation . . .". But Bernard did explain this: speech (an action) is more difficult and requires more energy than taste (a sense, therefore a passion), and so is more easily disrupted.<sup>6</sup>

Insofar as Dr. O'Neill aims to convince us of the existence of "a coherent body of thought about speech and its impairments" prior to 1600, she has succeeded. But the actual analysis of this thought, and particularly the general characterizations of its various stages, are less successful. Evidently the narrative approach was felt to be the best means of introducing the subject in palatable form – an idea which in itself has much merit. And a strictly chronological order seems to offer the most convenient possibilities for narrative development. But under the circumstances this approach seems to have virtually forced the imposition of a historical dynamic which refuses to arise naturally out of the material and is not about to do so without a great deal of further study. It is claimed, for example, that growing conflict between theology and natural philosophy/medicine affected views on speech during this period. This raises important questions, but the attempted demonstration is naïve in the extreme, both historically and philosophically.

On the whole, chapters 8 and 9, covering the eleventh to fourteenth centuries, seem the most solid. Passages of narrative interest and valuable insight can be found throughout the book, such as the discussion of speech in Roman law (p. 83 f.), or the suggestion that the influence of the silent Cistercian orders might have fostered interest in non-verbal communication (p. 143 n. 44).

Dr. O'Neill, it must be admitted, set herself a difficult task in attempting to trace such a vast subject in such a short space and without benefit of a model. The result is a handbook of issues and sources containing a wealth of information, but less satisfactory in its general conclusions and in many points of factual detail. Despite its faults this book has a certain usefulness and obviously cannot be overlooked by anyone interested in the history of speech and its disorders. But it should be used judiciously.

<sup>5</sup> Rockey and Johnstone, *op. cit.*, note 2 above, esp. p. 234.

<sup>6</sup> *Lilium Medicinae* iii. 20, Naples, 1480, f. 93<sup>a</sup>.

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DERRICK BAXBY, *Jenner's smallpox vaccine. The riddle of vaccinia virus and its origin*. London, Heinemann Educational Books, 1981, 8vo, pp. xiv, 214, illus., £8.50.

The existing literature on Edward Jenner and on what he called the "Variolae Vaccinae" (and that very term was to contribute to his troubles) is copious but has rarely been objective. On the contrary, in most cases authors have given highly subjective, not to say violently partisan, accounts, covering the full range between the extremes of Baron's misguided adulation and Creighton's vituperative onslaught on both Jenner's character and his methods, which has recently been revived in a couple of volumes which might perhaps be described as a demographer's guide to Jenner-debunking. Now, hard on the heels of the global eradication of

## Book Reviews

smallpox thanks to an exemplary vaccination campaign, Dr. Derrick Baxby, himself no mean student of poxviruses, had added yet another volume to the literature on Jenner's vaccine.

If one approaches this latest account with some apprehension one soon settles down to read it with unmitigated pleasure. Dr. Baxby's attempt to trace the origin of vaccinia virus is thorough; it is also readable, objective, and eminently fair to Jenner and to all the other participants in the early struggles to establish vaccination as a universally acceptable method. In thirteen chapters, Dr. Baxby takes his readers through the subject of vaccination and the necessary background material of clinical details of smallpox, early attempts to combat the ravages of the disease, and Edward Jenner's personal and educational background, in particular his relationship to his friend and mentor, John Hunter, who died five years before Jenner published his initial *Inquiry into the causes and effects of the variolae vaccinae*.

But Dr. Baxby is not content just to fill in the background and give us a reasonable up-to-date version of the old story. His sober account of variolation and vaccination, of the achievements and controversies and personalities of nearly two centuries on the road to the eradication of smallpox, is a vehicle for an intriguing and wholly original theory of the origin of the protagonist of the eradication saga. Dr. Baxby believes, on the basis of a mixture of research and conjecture, that none of the possible origins so far suggested for vaccinia virus makes real sense. He has good reasons for opposing even the most attractive of the hypotheses previously put forward, that vaccinia virus might have been the result of hybridization of smallpox and cowpox viruses in the early years of vaccinations carried out within Woodville's Smallpox Hospital. He also has an equally attractive and inspired alternative to offer. He believes that the surviving closely related strains of vaccinia virus may be descendants of the now extinct virus of horsepox, bearing in mind that Jenner himself thought that his cowpox originated in the horse, although he also introduced the unfortunate and confusing concept of "grease".

It is a theory which is unlikely ever to be tested, in spite of the rapid advance of structural analyses of proteins and of DNA at the molecular level, since horsepox disappeared at the beginning of the present century. Dr. Baxby concludes that the origin of the vaccine virus which provided the means for the first planned eradication of a virus disease worldwide may remain forever a mystery. We may add that his contribution, although supplying yet another facet to the mystery, and supported only by the most tenuous of circumstantial evidence, nevertheless offers a beguiling fresh possibility for those who enjoy conjecture in this area, with the added bonus of a refreshingly complete and fair summing-up of the tangled history of Jenner, his friends and foes, and the orthopoxviruses which united and divided them.

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ABRAHAM M. LILIENFELD (editor), *Times, places, and persons. Aspects of the history of epidemiology*, Baltimore, Md., and London, Johns Hopkins University Press, 1980, 8vo, pp. x, 155, £5.50 (paperback).

The Preface of this volume, the fourth of the Henry E. Sigerist Supplements to the *Bulletin of the History of Medicine*, cogently notes that interest in the historical development of a scientific discipline is one mark of its maturation. Given in 1978 at a Conference on the History of Epidemiology, these seven papers reflect this phenomenon in epidemiology as well as some of the problems inherent in organizing the past through methodological and conceptual categories that are defined by contemporary disciplinary boundaries. These loosely connected essays examine such diverse topics as yellow fever in early nineteenth-century Baltimore and late nineteenth-century Cuba, the eradication of smallpox and pellagra, William Farr's statistical thought and influence, the impact of Pierre Louis' teachings on epidemiology, and the limitations of the germ theory "paradigm" for aetiological thinking.

Victor Hilts's essay is a particularly useful examination of statistical investigations into the laws of disease in the second half of the nineteenth century. The best piece of the collection is John Eyler's study of the origins of William Farr's epidemiology in the 1830s; yet this essay