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recurring "innovations" in institutional reform, T. G. Davies on Ernest Jones (not quite the demolition job that the Introduction implies), and Virginia Berridge on the vicissitudes of the disease model of addiction. James Birley's 1974 lecture, the first in the book, compares the work of psychiatrists and painters; Berrios's entire essay (1988), the last, can be read as an amplification of Birley's formulation that it all comes down to the business of "transforming the data . . . by a process of symbolic representation".

What causes "madness"?—the governing élite's nervousness about popular religious radicalism, or rotting teeth? For that matter, whence comes the history of psychiatry? Apparently, out of the divergence of consensus: but a divergence along class lines, between the professions of medicine and history, or simply over time? This book provides ammunition for adherents of all sorts of explanations.

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TOBY A. APPEL, The Cuvier—Geoffroy debate: French biology in the decades before Darwin, Monographs on the History and Philosophy of Biology, New York and Oxford, Oxford University Press, 1987, 8vo, pp. 305, illus., £29.50.

Controversies hold a natural appeal for the historian of science. When the confrontation is between such "two great men" (p. 237) as Georges Cuvier and Étienne Geoffroy Saint-Hilaire, and has wide-ranging ramifications, the attraction is well-nigh irresistible. This book is in most respects a model of how the task of extracting the full meaning as well as the full drama of such an historiographic opportunity should be attempted. The institutional setting of early nineteenth-century French science is lucidly sketched; and the previous careers of the protagonists and their gradual drift into conflict described. After an account of the debate before the Académie proper, the wider contemporary reaction is discussed. The final chapter considers later glosses upon the controversy, and tries to establish its significance in the history of nineteenth-century biology.

From this analysis the Cuvier-Geoffroy debate emerges as a multi-faceted conflict between various interests and ideas. It was both an argument about the control of scientific patronage and about the public role of scientific knowledge. It was, moreover, closely linked to contemporary political events as well as to cultural movements that extended far beyond the boundaries of France. Last, but not least, it was an esoteric technical debate; at issue were not merely the particular points in comparative anatomy that divided Geoffroy and Cuvier, but the whole question of the future goals and conceptual tools of the science.

What one misses in this study is any attempt to show how these various threads hang together. It may be convenient to treat the "internal" and "external" aspects of the debate separately; but to accept this distinction as more than provisional is to concede too much to Cuvier.

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THOMAS D. BROCK, Robert Koch: a life in medicine and bacteriology, Berlin, Springer, 1988, 8vo, pp. ix, 364, illus., DM 48.00 (N. American distributor: Science Tech Publishers, Madison WI).

There was, until the publication of this volume, no English-language biography of Robert Koch. Brock's account of the life and work of this important figure is thus very welcome. Full-length biographies of great medical scientists have been somewhat out of fashion recently, so it is perhaps worth reflecting on what we might now expect to learn from this genre. I would suggest the following: an account of the person's work—the meritorious and the mundane; a discussion of their personality—public and private; an analysis of the context of their work—professional networks, institutions and wider social milieux; and an assessment and explanation of their work. In these days, when historians are interested in the "invention of

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tradition", one might add to this list a question about how recognition ("greatness") was created. On the first two of these points Brock is exemplary, on the rest he is less strong. The account of Koch's work is thorough, and the clarity of the writing should make what was a subject of technical sophistication and cognitive confusion accessible to a wide audience. The full span of Koch's work is covered, even the less productive years after 1890, which included his little-known, but extensive efforts with tropical diseases. Koch is credited with 17 major contributions to medicine and bacteriology, almost any one of which, it is suggested, would have won their discoverer recognition and a place in history. To produce that number and range of major insights was remarkable. However, the notion of a "contribution" will trouble those who now question the cumulative, positivist model of science. In fact, in places it is suggested that Koch's work may best be seen as creating new areas of knowledge and kinds of practice. Given that the book appears in a series entitled "Scientific Revolutionaries", it is perhaps surprising that more was not made of this. The complexity of Koch's character is well portrayed, with clear evidence of the changes wrought by fame, power, and wealth. Brock seems happier when discussing the private man and family relationships than his professional and political life. He mentions close associates like Ehrlich, Behring and Loeffler, but there is little sense of how the Koch group or the wider German biomedical community worked together, or maybe against each other. Also, it would have been nice to have learnt more about "his widespread unpopularity among the medical community" (p. 287). The same applies to his relations with the government and private agencies, where new and historically important links between medicine and the state, and between medicine and pharmaceutical companies were being forged. The explanation of Koch's "greatness" is largely in terms of personal characteristics—"diligence and persistence", "supreme effort", "the willingness to tackle big problems". An alternative explanation of him as one of an outstanding generation of German medical scientists, created by a particular educational, institutional, and professional environment, is hinted at, but not systematically explored. It is somewhat disappointing that such a neglect of the social and institutional context can still be found in major works in the history of medicine in the late 1980s. To obtain this fuller picture of Koch's life, Brock's work will have to be read alongside other, more socially informed work on the history of late nineteenth-century German medicine. However, a strength of Brock's biography is that he follows Koch's activities through to the world stage, so it is not only German historians who will find this book a solid and suggestive departure point for further work.

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A. M. LUYENDIJK-ELSHOUT, G. M. van HETEREN, A. de KNECHT-van EEKELEN, and M. J. D. POULISSEN (eds.), Dutch medicine in the Malay Archipelago 1816–1942: articles presented at a symposium held in honor of Prof. Dr D. de Moulin, Nieuwe Nederlandse Bijdragen tot de Geschiedenis der Geneeskunde en der Natuurwetenschappen 35, Amsterdam, Rodopi, 1989, 8vo, pp. 171, illus., Dfl. 55.00.

This is an interesting and readable collection of essays on various aspects of Dutch medicine in colonial Java, Sumatra, and Malaya, to honour Professor D. de Moulin on the occasion of his seventieth birthday. Unusually, one of his own short papers (on the teaching of medicine in the Dutch East Indies) is included, but this is not a Festschrift; Professor de Moulin received that honour in 1984. As these papers are the products of a symposium they are nicely complementary and add up to more than the mere sum of their parts; for this the editors are to be congratulated. A. Kerkhoff traces the development of the Dutch Indies medical service up to 1880, and the next two papers cover the period 1880–1925; G. van Heteren on medical education in the Netherlands for doctors recruited for tropical service, and A. de Knecht-van Eekelen on the development of tropical medicine in the Netherlands. G. T. Haneveld then examines the role of private health schemes on East Sumatra plantations, while J. P. Verhave's paper on malaria research has photos of Doctors Schüffner and Swellengrebel (assisted by Mrs Swellengrebel) palpating spleens and taking blood samples from Sumatran children. A. P. den