

Book Reviews

contributed enormously to legitimizing lobotomy by giving the procedure a veneer of scientific credibility as well as the imprimatur of Yale science.

Many of the chapters in this book attempt similar reworkings of accepted versions of the lobotomy story. Perhaps the most significant of these is Pressman's detailed study of the records of patients who underwent lobotomies at McLean Hospital in Massachusetts. Since I was familiar with the story of Walter Freeman taking an ice pick to the brains of many indigent patients in state hospitals, reading Pressman's account of thoughtful psychiatrists deciding which affluent patients in this elite hospital would receive the benefit of lobotomy made it easier to see a parallel between the practice of lobotomy and the treatment of severely ill psychiatric patients in the 1990s. Far from whitewashing lobotomy, Pressman's approach provided an historical lens through which to see my own work more critically.

In addition to reconstructing clinical decision-making practices at a single hospital, Pressman also puts the lobotomy story in the context of the evolution of the treatment of severely mentally ill patients in the United States in the twentieth century. One limitation of this is that he has nothing to say about treatment in other countries. Limiting himself to one national context is, however, a wise choice because it allows him to demonstrate social and intellectual synergies that otherwise would have been blurred. Of particular interest is his demonstration of how Adolf Meyer's notion of psychobiology, the most influential psychiatric philosophy in the United States in the first half of this century, provided an intellectual rationale for the practice of lobotomy. Given psychobiology's previous reputation as providing fertile soil for the growth of psychoanalysis, Pressman's observation of its role in supporting the ultimate biological treatment gives the reader a new understanding of just how eclectic psychiatry was in the mid-twentieth century.

Last resort is a fine book that deserves a wide readership. Unfortunately the author's penchant for repeating his arguments again and

again makes the book longer than it needed to be and will probably put off one group who would benefit from reading it—clinical psychiatrists. For historians, however, it is, as the author hoped it would be, both a detailed case study and a fascinating musing on how we tell stories. Gerald Grob's introduction spells out how much we have lost by the untimely death of this talented historian.

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Louise H Marshall and Horace W Magoun, *Discoveries in the human brain: neuroscience prehistory, brain structure, and function*, Totowa, NJ, Humana Press, 1998, pp. xi, 323, illus., \$59.50 (0-896-03435-6).

The history of the study of the brain and the emergence of modern neuroscience, an umbrella assemblage of a wide range of complementary scientific concepts, techniques, approaches and heritages, is of considerable interest to historians and practitioners. In recent years a number of authors have attempted to analyse that history, these include Mary Brazier (*A history of neurophysiology in the 17th and 18th centuries*, New York, 1984; *A history of neurophysiology in the 19th century*, New York, 1988), Anne Harrington (*Medicine, mind, and the double brain*, Princeton, 1987; *So human a brain: knowledge and values in the neurosciences*, Boston, 1991), Marcus Jacobson (*Foundations of neuroscience*, New York, 1993), Stanley Finger (*Origins of neuroscience: a history of explorations into brain function*, New York, 1994), and Charles Gross (*Brain, vision, memory: tales in the history of neuroscience*, Cambridge, Mass., 1998), and perhaps the most successful of them, Edward Clarke (with K Dewhurst, *An illustrated history of brain function*, Berkeley, 1972; with L S Jacyna, *Nineteenth-century origins of neuroscientific concepts*, Berkeley, 1987; with C D O'Malley, *The human brain and spinal cord* (2nd ed.), San Francisco, 1996). Others have focused on

capturing neuroscientists' own accounts, most notably George Adelman and colleagues (*The neurosciences: paths of discovery*, Cambridge, Mass., 1975; *The neurosciences: paths of discovery II*, Boston, 1992), and Larry Squire (*The history of neuroscience in autobiography*, Washington, DC, 1996). What is now needed is a comprehensive, synthetic account that can utilize these and other works in creating a coherent analysis of the development of what is one of the major complexes in modern biomedical science. Unfortunately the present volume, although it promises much, is not that account.

In the introduction Louise Marshall explains that *Discoveries in the human brain* was planned to facilitate and encourage knowledge of the growth of neuroscience from the "neural, behavioural, and communicative sciences", and she stresses the particular attention the authors have paid to the textual and illustrative material of the original investigators. That is certainly true; the book has more than 250 black and white photographs of scientists, their labs and a wide variety of pictures from original scientific papers. Several illustrations have appeared elsewhere, although it is particularly enjoyable to see the range of material selected, including the posed photograph of Santiago Ramón y Cajal in his first laboratory, without a microscope on the table it could be of a dreamy Impressionist (p. 142), the informal shot of J C Eccles with Paul Dell and Alfred Fessard (p. 208), Oskar Kokoschka's striking portrait of August Forel (p. 215), and a delightful photograph of Ernest Spiegel, who helped develop the first human stereotaxic apparatus, with his wife and collaborator Mona Spiegel-Adolf (p. 268).

Clearly an enormous difficulty was the death of one of the authors, Horace Magoun, in 1991. Much of the book was based on a series of posters that Magoun had presented over the years at national and international scientific meetings. Responses, principally from neuroscientists, to those posters, suggested the format for the book, and this volume emerged as an expanded, illustrated brochure to

Magoun's posters. Unfortunately that original idea is less successful in execution than in intention, as the translation of poster material into a full volume has lessened some of the immediacy and vibrancy that a good, focused poster can achieve. The book shows other signs, both large and small, of problems. There are occasional slips, such as the elision of historical facts—for example, the discovery of the physiologically active extract of the adrenal glands was made by Oliver and Schäfer in London in 1894, not by Takamine in 1901 (p. 243), who christened the substance "adrenaline"; nearly one hundred pages (chapters 8–11 inclusive) have faulty running heads; and several typographical errors remain (e.g., "Henry Jallett [sic] Dale . . . of Hempstead [sic] North London" on p. 166, "Zed [sic] Young" on p. 261), although given the size and scope of the book these are perhaps forgivable.

Despite its title, the book has neurological gaps: five of the twelve chapters focus on the cerebrum, whilst the ventricles, cerebellum, thalamo-cortical pathways and pituitary-hypothalamic axis each have a chapter. Other sections cover the "basic postulates", the evolution of the brain, which provides the book's phylogenetic framework, and a consideration of the limbic system, cortico-thalamic connections, and the brainstem-reticular formation as the major integrative systems of the central nervous system. Sub-cortical regions, the brainstem, cranial nerves, the blood-brain barrier, immunology, pharmacology, pathology and disease conditions, are just some of the topics inadequately covered. The authors intend that the brief overview at the end of each chapter should provide "an account of the knowledge prevailing during the third quarter of the twentieth century", but these are sadly inadequate. The chapter on cerebral neurochemistry, for example, makes little or no reference to the chemistry and metabolism of brain lipids, to neural energy requirements and intermediate metabolism, to the wide range of putative neurotransmitters already proposed by the mid-1970s, or to the

astounding impact of drug treatments for neurological and especially psychiatric disease, and the avenues that they opened for new experimental investigations into brain structure and function.

All the history of neuroscience works mentioned above have their particular strengths, and weaknesses, and the present book is no worse, but also no better. It will no doubt find a home in libraries and reference collections, where it will complement, and be complemented by, other texts, but it unlikely to appeal to the individual purchaser.

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Christopher Lawrence and George Weisz (eds), *Greater than the parts: holism in biomedicine, 1920–1950*, Oxford University Press, 1998, pp. xiii, 366, £55.00 (0-19-510904-X).

Since the late nineteenth century, holism, in medicine as in the sciences, has been an oppositional movement, reacting against the trend toward mechanist-reductionism and specialization. By studying “medical holism”, therefore, we gain a richer understanding of the rise of scientific medicine and its reception in various quarters of the medical community. Lawrence and Weisz have put together an unusually coherent collection of high quality essays on an important topic.

For one thing, the volume spans an admirable range of places and subject matters. The essays cover not only Britain and the United States but Germany, France, and Poland. And they focus upon both clinical medicine (including psychosomatic and social medicine) and medical sciences (bacteriology, pathology, physiology, neurology, immunology, neurophysiology). The collection opens with a general introduction by the editors which will be useful for teaching, and Charles Rosenberg contributes a thoughtful conclusion, reflecting upon the varieties of medical holism and their proponents, and placing interwar holism in a

broad historical context continuing up to the present.

So what is “medical holism”? The editors have opted to demarcate the terrain very broadly, and one comes away with a strong sense of the diversity of holisms. There are many ways to categorize such diversity, depending on one’s purposes, but one way is to distinguish four different levels of organization with which holists have been concerned. At the lowest level, some holists have addressed the *functioning of particular organs or organ systems*, arguing that the relations between the parts are interactive or non-additive. This can be seen in Anne Harrington’s essay on the neurological theory of Kurt Goldstein, or Allan Young’s on Walter Cannon and homeostasis. On the level of *the body as a whole* we find other holists calling for an integrated knowledge of the body (sometimes including the mind) to be wielded by a class of medical generalists in order to counteract specialization. Examples are to be found in Chris Lawrence’s and Stephen Jacyna’s portraits of elite London clinicians or Steve Sturdy’s sketch of George Newman’s programme of medical reforms. Moving up a level, we find many holists advocating *constitutionalist theories* of disease which shifted attention away from the microbe alone toward the relationship between host organism and microbe. Such theories were to be found, for example, among clinicians, pathologists, bacteriologists and immunologists in Germany, France, Poland and the United States (cf. the essays by Cay-Rüdiger Prüll, Ilana Löwy, Peter Keating, Sarah Tracy and Andrew Mendelsohn). And at the highest level of aggregation we find holists looking beyond the body and its material environment to emphasize the impact of *psychological and social contexts* upon health. This can be seen in Theodore Brown’s essay on George Canby Robinson or Jack Pressman’s account of the Rockefeller Foundation’s support for “psychobiology”. Finally, each of these forms of medical holism might—or might not—be hitched to a more general metaphysical or ideological programme.