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Andreas Vesalius of Brussels 1514–1564, by C. D. O'MALLEY, Berkeley and Los Angeles, University of California Press (London, Cambridge University Press), 1964, pp. x, 480, 65 illus., \$10, £4.

Sir William Osler, when commenting upon Vesalius and his great book *De humani corporis fabrica*, said: 'A good Life in English should be written.'¹ His wish has at last been fulfilled. Dr. C. D. O'Malley, who was described by the late Charles Singer, himself no mean scholar of Renaissance anatomy and of Vesalius, as 'the greatest living authority on the life of Vesalius',² has supplied the need. For more than a decade writers on Vesalius have referred expectantly to Dr. O'Malley's projected biography, and now that it is published we can say at once that it lives up to all expectations.

Few medical personalities have received so much consideration by so many outstanding writers as Andreas Vesalius. The most important biography, which till now has been the standard work, was written by Professor Moritz Roth of Basel in 1892.³ It was based upon fourteen manuscripts and almost 250 printed sources, as well as upon the writings of Vesalius himself. Since 1892 dozens of books and papers have been printed, dealing with Vesalius or translating portions of his writings;⁴ even a definitive iconography has been compiled, despite the fact that only one portrait, the one in the *De humani corporis fabrica*, can be said to be authentic.⁵ The most noteworthy contribution, however, is the delightful *Bio-Bibliography* by one of the greatest authorities on Vesalius, Harvey Cushing.⁶ It was published posthumously by the late John F. Fulton and Miss Madeline Stanton and it has recently been reprinted with additions. But still there was room for another detailed biography. In the first place, although Roth had prepared his book with exemplary scholarly thoroughness, he had fallen victim of the biographer's occupational hazard. His enthusiasm for his subject produced distortions and the stature of Vesalius was extended to a size larger than life, at the expense of his predecessors and contemporaries. Furthermore, an evaluation and digestion of the voluminous literature that has accumulated in the seventy years since 1892 was already overdue. And finally, the many unsubstantiated anecdotes and the misinterpretations which often grow up around an important and colourful figure such as Vesalius, and which are handed down uncritically from one author to the next, had to be dispelled by an authoritative work. Thus there was a need for another definitive account of the life and works of Andreas Vesalius.

In any century there are only three occasions when Vesalius can be legitimately memorialized: the anniversary of his birth in December 1514; of the publication of his masterpiece, the *De humani corporis fabrica*, in 1543; and of his death in October 1564. The appearance of Dr. O'Malley's book has been timed to coincide with the quater-centenary commemoration of the last of these three. This book, which will remain the standard biography for the remainder of the twentieth century and beyond, is part of the only world-wide celebration which has been possible during the present century. Plans for commemorating 1914 came to nought, for by December of that year Europe was engulfed by the First World War, and the resultant widespread devastation included some of the Vesalian treasures in Belgium the country of Vesalius' birth. Likewise in 1943 men were too involved with methods of human destruction to have time to recall a publication which had shed so much light upon human structure. Thus 1964 is the last occasion until 2014 when we can do honour to the greatest of all anatomists.

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In each of the last four centuries one book has surpassed all other publications by virtue of its revolutionary concepts and vital influence upon medical thought: Virchow's *Cellularpathologie* in the nineteenth century, Jenner's *Inquiry* in the eighteenth, Harvey's *De motu cordis* in the seventeenth, and Vesalius' *De humani corporis fabrica* in the sixteenth. It is natural therefore that Dr. O'Malley should mould his book around the latter and that he should devote almost one-third of its pages to it. His account of Vesalius can therefore be considered in three portions: his life before the publication of the *De fabrica* in 1543, the book itself, and what may be termed the post-*De fabrica* period which terminated with his premature death in 1564. On the basis of Vesalius' teaching in Italy and of the *De fabrica*, the essence of his contribution to the development of anatomical studies can be stated simply as follows. His predecessors and contemporaries, with certain important exceptions which Roth passed over, had accepted without question Galen's animal anatomy as representing that of man. They were content to perpetuate the impossible task of fitting the description of the animal body which they read in Galen's anatomical writings on to the human body which lay before them. So certain were they of Galen's infallibility that they considered active participation in the procedures of dissection unnecessary and unbecoming. Vesalius, however, brought about a revolution in anatomy, first by dissecting the cadaver himself, and, secondly, by pointing out that Galen's apparent errors were due to the fact that, like Aristotle, he had dissected animals only, yet had made the unwarranted extrapolation that their bodily structure was the same as that of man's. The reason why this error was perpetuated seems to have been due to the relative availability of Galen's two anatomical treatises.⁷ In his *Anatomical Procedures* he describes quite clearly the animal material he dissected, but in the *Use of the Parts* he makes no reference to it and speaks only of the human body on to which he was projecting his animal anatomy. Only the *Use of the Parts* was widely available during the medieval period in the West, and so the confused teaching of anatomy, to which Vesalius himself was subjected, resulted. And it was he who by studying each of the Galenic works carefully on the one hand and the human body on the other, gradually began to comprehend the plight of anatomy. He was the first to achieve this complete realization, although others before him had perceived it dimly. But in spite of the fact that he had to denounce Galen, Vesalius was aware that the majority of his predecessors and contemporaries were just as much at fault for blindly accepting the Galenic dogma. In fact he held the 'prince of physicians' in high regard, even though his own influence was to lead eventually to the overthrow of Galen as the traditional authority on the anatomy of man.

To understand Vesalius's contribution to this downfall, the tradition itself must be understood and Dr. O'Malley's book begins with an excellent summary of pre-Vesalian anatomy. In the past few years this subject has received considerable attention, and it is now clear that Roth's contention that Vesalius was the first to question Galen's doctrine and to carry out dissections himself is erroneous. Men like Mondino, Benedetti, Achillini, Massa, and especially Berengario da Carpi, are now known to have done just this so it is clear that Vesalius is certainly not the unique pioneer whom Roth represents in his book. It was Vesalius, however, who was bold enough to attack the old system consistently and who was supported by an impeccable knowledge of the ancient and the new learning. Dr. O'Malley is thus able to present a much more accurate perspective of the great man.

His family is considered next, and his early years in Brussels and Louvain (1514-33), his studies in Paris (1533-6) and his brief return to Louvain are discussed. Next is his work in Padua which preceded the appearance of the *Fabrica* and during which he

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gradually became aware of the shortcomings of anatomy as it was then being taught. Realizing that the only remedy was a completely new approach to the study of the human body he set about a task, the magnitude of which would have daunted a lesser man. In an incredibly short period of time he re-wrote the whole anatomy of man and in 1543 had the immense satisfaction of seeing the splendid *Fabrica* published at Basel. As Edelstein has pointed out,⁸ Vesalius was a true humanist for he states that his primary purpose in compiling this book is to bring about the revival of anatomical studies as they had been pursued in classical times.

Dr. O'Malley now considers in turn the contents of the seven books which make up the work and the description is supplemented in the Appendix by translations of the Preface, his letter to his publisher, and of certain sections dealing with dissection procedure. The illustrations of the *Fabrica* are well known, but their excellence has itself been responsible for some of the misconceptions concerning Vesalius. Authors have often discussed them without making any reference to the text, which in most instances is essential for an adequate appreciation of them. One of Dr. O'Malley's most significant contributions to Vesalian studies is that he has read most, if not all, of what Vesalius wrote in the *Fabrica*. He is therefore probably better informed than some of the original owners of the book if we assume that the fresh state of most surviving copies indicates that they were not read. On the other hand, it could be argued that the unread copies in our possession are the only ones that have not been thumbed out of existence.

The remaining few chapters of the biography deal with the post-*Fabrica* period which is on the whole an anti-climax to the exciting and revolutionary anatomical teaching and research at Padua. Having abandoned his anatomical studies for reasons which can only be conjectured, Vesalius spent the remaining twenty-one years of his life at the court of Charles V and of his son Philip II of Spain in an atmosphere which seems to have been the very antithesis to his university life. And then having determined, as seems likely, to return to the academic fold, tragedy overtook him on the desolate shores of Zante. The Appendix contains translations into English of consultation opinions or consilia and his non-medical correspondence and letters to or concerning Vesalius which have survived.

Criticisms of *Andreas Vesalius of Brussels 1514-1564* are few, and as they are mostly trivial they are not worthy of mention here. Dr. O'Malley has pursued his subject with searching scholarship and painstaking thoroughness. New information resulting from extensive researches can be found in all parts of the book, and his knowledge of Renaissance anatomy in particular exceeds that of the earlier biographer. In addition, his style, as in all his writings, makes the reading of this large book a pleasurable task. The only important criticism concerns the absence of a discussion of Vesalius' influence on the development of medicine as a whole. His revolutionary effect upon the progress of anatomy is obvious enough, as is the application of the new knowledge to related anatomical fields, in particular to morbid anatomy and the growth of the anatomical concept of disease. Moreover, acquaintance with the normal structure of the human body stimulated investigation of its normal function which led directly to Harvey and others in the next century. But most important of all, his insistence upon the scientific method of meticulous observation and original experiment provided an approach to biological problems which is today in full flood. Perhaps a final chapter discussing these factors would have supplemented the first and deepened the historical perspective which Roth had neglected. This could also have been enhanced by considering briefly the background of the other sciences and of philosophy.⁹

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One can criticize the physical features of the book more than its contents. The print is unfortunately rather small but understandably so in view of the size of the work; this is especially true of the notes. The latter are collected by chapter at the end of the volume. Again this is a feature over which the author has no control but footnotes are so much more convenient for the reader. The illustrations are plentiful and well reproduced, although one of them (the lower figure of Plate 16) is upside-down when compared with Dr. O'Malley's paper which first described it¹⁰ and with the subsequent elaboration of it in the *Tabulae anatomicae*. The index is of names only, and its value is thus limited.

Albrecht von Haller deemed the *De fabrica* to be 'an immortal work which made superfluous almost all that had been written before'.¹¹ Although today we cannot agree entirely with Haller, and although we would not wish to be quite so fulsome or sweeping in our praise, there is some measure of truth in this judgement when we apply it to the present work.

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REFERENCES

1. OSLER, WILLIAM, *Bibliotheca Osleriana*, Oxford, Clarendon Press, 1929, p. 58.
2. SINGER, CHARLES, Eighteen years of Vesalian studies, *Med. Hist.*, 1961, 5, 210-20.
3. ROTH, M., *Andreas Vesalius Bruxellensis*, Berlin, Georg Reimer, 1892.
4. Between 1943 and 1961 no less than seven books and fifty papers of note appeared, the most important being the lecture notes of Baldasar Heseler taken during Vesalius's public anatomy in Bologna, 1540. (E. Eriksson (ed.): *Andreas Vesalius' First Public Anatomy at Bologna 1540. An Eyewitness Report by Baldasar Heseler*, Uppsala and Stockholm, Almqvist and Wiksell, 1959.) Charles Singer, *op. cit.*
5. SPIELMANN, M. H., *The Iconography of Andreas Vesalius*, London, John Bale & Son and Danielson Ltd., 1925.
6. CUSHING, HARVEY, *A Bio-Bibliography of Andreas Vesalius*, New York, Schuman, 1943.
7. STRAUSS, WILLIAM L., Jr., and TEMKIN, OWSEI, Vesalius and the problem of variability, *Bull. Hist. Med.*, 1943, 14, 609-33.
8. EDELSTEIN, LUDWIG, Andreas Vesalius, the humanist, *Bull. Hist. Med.*, 1943, 14, 548-61.
9. A particularly noteworthy attempt to do this was made by the philosopher Ernst A. Cassirer (*The 400th Anniversary Celebration of Andreas Vesalius*, Yale University School of Medicine, 1943, pp. 109-19).
10. O'MALLEY, CHARLES D., The anatomical sketches of Vitus Tritonius Athesinus and their relationship to Vesalius's *Tabulae Anatomicae*, *J. Hist. Med.*, 1958, 13, 395-7.
11. HALLER, ALBERT VON, *Bibliotheca anatomica*, vol. 1, Zürich, Orelli, Gessner, Fueseli, et. Socc., 1774, p. 181.