

Essay Review

Renaissance Anatomy

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Andreas Vesalius, *On the fabric of the human body. Book I: The bones and cartilages*, a translation of *De humani corporis fabrica libri septem* by William Frank Richardson, in collaboration with John Burd Carman, San Francisco, Norman Publishing, 1998, pp. lxii, 416, illus., \$225.00 (0-930405-73-0).

Andreas Vesalius, *On the fabric of the human body. Book II: The ligaments and muscles*, a translation of *De humani corporis fabrica libri septem* by William Frank Richardson in collaboration with John Burd Carman, San Francisco, Norman Publishing, 1999, pp. xxix, 490, illus., \$250 (0-930405-75-7). Orders to Norman Publishing, 720 Market Street, San Francisco, CA 94102-2502, USA. Tel.: (415) 781-6402; Fax: (415) 781-5507; email: orders@jnorman.com

Roger French, *Dissection and vivisection in the European Renaissance*, Aldershot, Ashgate, 1999, pp. ix, 289, illus., £49.50 (hardback 1-85928-361-6).

In the past decade, the history of anatomy in the Renaissance has become a topic of wide interest well beyond the small community of medical historians. It has been studied by a bewildering variety of methodologies by scholars coming to it from disciplines such as English or art

history, as well as from more traditional backgrounds in history or medicine. Some conclusions have been reached by diligent archival or bibliographical searches, others by meditation on a specific author or artist, even on a specific poem or print. There have been global claims for a reinterpretation of dissection in terms of religion or as public spectacle alongside investigations of minute, if significant, detail such as the method of wiring a skeleton. There have been studies of the autopsies of saints as well as of the origins of executed and anatomized criminals. We now know more about the creation, transmission and reception of anatomical images, available in large numbers from the late 1540s onwards, and about the wider influence of anatomy among learned groups, particularly in England, France, and Italy. If there has been less engagement with learned anatomical literature in general than with its vernacular and visual transformation, that has been a small price to pay for the many new insights that have been brought to bear.

The books under review, each in their own way, redress the balance by concentrating on university anatomical teaching and its results. Pride of place must go to the first two volumes of the Richardson–Carman translation of Vesalius' *De humani corporis fabrica* of 1543. Beautifully produced, a pleasure to read and to handle, they offer the first ever translation of this major Latin text into English (or, for that matter, any Western vernacular). Roughly half of the *Fabrica* is

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now available in a translation that combines extreme accuracy with elegant English: it is a minor complaint that, at times, the English is too elegant, making Vesalius a little less angular or contorted than he is in Latin. This is a major achievement, the result of long cooperation between a classicist (Richardson) and an anatomist (Carman), and future readers of Vesalius (even those with excellent Latin) will thank the authors for what they have done here. Only those who have wrestled with Vesalius' text (and they have been remarkably few) or with a similarly long treatise can properly appreciate the effort that has gone into this translation, which is far superior in every way to the substantial translations embedded in C D O'Malley's 1964 biography, *Andreas Vesalius of Brussels*. There is no longer any excuse for the fearful to abstain from engagement with Vesalius' verbal message, as opposed to that of his plates, or to comment on his contribution to anatomy as if all he did was to reject Galen and commission beautiful illustrations.

Books 1 and 2, on bones and muscles respectively, are arguably the most important in the *Fabrica*, for they set out Vesalius' methodologies, as well as aiming to impress by the technical sophistication and use of the illustrations. Almost at a stroke, Vesalius, his artist(s), who did not include Titian, his block-cutters, and his printers resolved many of the difficult problems of transferring a three-dimensional object, the body, to the two dimensional page, and, at the same time, of relating the visual to the verbal. The reader is encouraged to move between text, plate, and body in a complex and unprecedented dialogue, in which each contributes something to the understanding of the whole. By making the text available and understandable, by translating captions as well as exposition, and by setting the volume in such a way as to facilitate use (identifying names and anatomical structures), Richardson and Carman, not to

mention their publisher and printer, have performed a distinguished service for all historians of medicine. They have made it easy to read one of the most famous, and visually familiar, of all unread books.

But in the very success of this translation lurk dangers for the future. The introduction and commentary, clear and well organized though they are, do not engage with recent debates, but continue in the O'Malley tradition of near Vesaliolatry. One need not go as far as Juan José Barcia Goyanes in his *El mito de Vesalio* (1994), which is largely a summary of contemporary objections and corrections to the *Fabrica*, to express caution about the truth of many of Vesalius' objections to his predecessors and to see motives for self-advertisement and self-advancement behind some of his language and choice of images. There is some truth in the disgruntled comment by Niccolò Massa in his long "book-review" in his *Epistolae medicales* that Vesalius was gaining the credit for discoveries made by others. Vesalius was not the first to note that Galen had worked almost entirely on animals—Galen himself is perfectly clear on this—and his demands that human anatomy should best be studied on the basis of human bodies would have been accepted by most anatomists and doctors. But, as French points out, they were well aware that animal dissection was, for most purposes, all that was possible, and, indeed, the later sections of the *Fabrica* depend heavily on animal dissection (and often verbatim on Galen). Most Galenists of the time, like Gemusaeus, Melanchthon, and Falloppio, saw Vesalius as developing Galenic ideas in a manner that did not destroy Galenism, and it is arguable that it was sloppy scholarship, at least as much as his abuse of Galen, that enraged Vesalius' most vocal opponents like Caius, or Sylvius. They would certainly not wish to be bracketed together by modern scholars under the hurtful name of pre-Vesalian anatomists.

As well as misrepresenting slightly the

context of the 1543 *Fabrica*, Richardson and Carman's fine translation, by making the book so much easier to read than before, may run the risk of minimizing the changes introduced subsequently by Vesalius in the 1555 edition, which go far beyond what might be supposed from a reading of O'Malley. A rival, Chicago-based project will translate these changes also, which form almost a new treatise in themselves, and show just how much Vesalius was able to add from dissections made after 1542 or performed earlier but not thought worthy of inclusion in 1543. There are other more subtle verbal alterations that cannot be so easily explained on the grounds of new information. One might have wished, too, that Carman and Richardson had said more about the visual tradition of anatomy, but they have wisely stuck to what they know best—with very great benefit to medical historians.

Throughout they have assumed that Vesalius' activity and his new anatomy need no real explanation or justification. This is not the standpoint of Roger French, who in his study of modes of anatomical thinking emphasizes over and over the unusual nature of dissection and vivisection. His book, despite its title, runs from Galen and late-antique Alexandria to Willis and Boyle in the mid-seventeenth century. A polemical preface announces that this volume is to be read as a medieval academic thesis, posing a question which, one learns with some surprise from the author on the penultimate page, is not so much answered as dissolved, a strategy that makes reviewing the book problematical.

Its strengths are obvious. A reader will find careful and clear expositions of the importance of anatomy, its methods, and its procedures, taken from a variety of, usually university-based, sources. All the usual suspects are here—Mondino, Benedetti, Berengario, Colombo, Canano, Massa, Vesalius, Fabricius, Harvey and Descartes, along with a few less familiar names. Particular attention is given to the Paduan

teacher, Gabriele Zerbi, whose ideas are defended against those who have seen him as a medieval medical dinosaur surviving into an age of humanism. French treats his authors seriously, refusing to allow them to be crushed by Vesalius, and explaining their role in teaching and investigation both within and without the walls of the university.

A very recent survey of previously unpublished lectures on Aristotle's *De partibus animalium* by the Bolognese professor of philosophy, Pietro Pomponazzi (1462–1525) in 1521–4 adds relevant material to French's account.¹ Pomponazzi expects at least some of his audience to have attended a public anatomy and been shown "fibres", in form somewhat between an artery and a vein. He himself has often seen thin white fibrous strands forming when blood coagulates, and to disprove a comment by Albertus Magnus, he has had recourse himself to the dissection of a hen. In an aside in Italian he jokes that he found nothing, and then had the bird for dinner. He accepts that, at times, Aristotle was writing about things of which he had no direct knowledge, and hence that the direct evidence of experience should be given preference. But there were other occasions at which the evidence of doctors, "although it seemed to be more based on the senses (*magis sensata*)", was still not enough to carry total conviction. Echoes of Berengario's anatomical teaching in these years are loud and clear.

But there are penalties for sticking close to the primary sources, and to a remarkably restricted list of secondary sources, the more recent usually produced or edited within Cambridge. The book makes hard reading, in part because too many allusions are made to themes and conclusions already dealt with elsewhere by the author or still to

¹ Stefano Peretti, 'Docebo vos dubitare. Il commento inedito di Pietro Pomponazzi al *De partibus animalium* (Bologna 1521–24)', *Documenti e Studi sulla Tradizione filosofica medievale*, 1999, 10: 442–66.

appear in print. There are brief hints, but no more, that the whole topic of Renaissance anatomy has become exciting again, and, above all, one misses the wider impact of anatomy and dissection beyond the classroom. Jonathan Sawday's speculations in *The body emblazoned*, 1995, may have been rightly thought ill-founded, and Bette Talvacchia's provocative examination of Estienne's illustrations in her *Taking positions*, 1999, may have come too late, but K D Roberts and J D W Tomlinson's *The fabric of the body*, appeared in 1992 and Bernard Schulz's *Art and anatomy in Renaissance Italy* as long ago as 1985. In a book devoted to explaining why anatomy developed as it did, page 1, the expectations and use of it by non-medics are legitimate subjects of enquiry. Even on the narrow terms set out in the preface, J J Bylebyl's important article on the visual depiction of the university dissection, *Journal of the History of Medicine*, 1990, 45: 285–316, would have amplified, if not corrected, French's discussion of the role of the professor and the ostensor. The hesitation at page 67, note 7, could easily have been resolved by consulting Richard Durling's major edition of Burgundio's translation, 1992, but already discussed in articles for over a decade before then. It is hardly surprising, then, that the first volume of the Richardson–Carman translation figures neither in the notes nor in the bibliography.

There are a remarkable number of errors for such a small book, albeit almost all trivial—e.g. page 133: “colonus” is not a poetic word; “vetulae” are more than the “old women at the bedside” (as Agrimi and Crisciani showed); page 146: Germans were coming to Italian medical schools much earlier; Corti died in 1544; page 179: “sacramentum” means “oath”, not sacrament. Places and individuals are oddly translated—Hieronymus becomes Gerome, even for an Italian, and Oximus, page 209,

should be either Auximum or Osimo, Most serious of all, in a book which in its preface aims to put forward non-English material in a field “increasingly given over to English language scholarship” (an assertion hard to confirm), is the absence of major work in French, Italian, and German. Gundolf Keil's studies of medieval and early renaissance physicians and surgeons have advanced considerably our understanding of anatomy in Germany and Italy; Danielle Jacquart's studies of Paris deserve at least a mention; Giovanna Ferrari's edition of Benedetti offers a broad ranging commentary on the development on hellenism and its relationship with anatomy. The list could be extended substantially, but I confine myself to one further title. Andrea Carlino's *La fabbrica del corpo. Libri e dissezione nel Rinascimento*, Turin, 1994, is arguably the most challenging work on Renaissance anatomy for some time, combining the literary, the learned, and the visual dimensions of anatomy with a historical sense of the location of the subject within an Italian town. Its methodology could with profit be adopted for other geographical areas such as Germany, England, or the much neglected Spain, and in its close attention to archival material, as well as to the printed word of professors, it avoids many of the faults properly castigated by Dr French in others.

These volumes under review, then, contribute in their own way to our wider understanding of an unusual procedure, cutting up the human body. Dr French draws from me a mixture of applause and frustration at a book that delivers much less than its title (or even its announced thesis) promises. The virtuoso Vesalians, however, less bold in their ideas, but more solid in their performance, must be congratulated and thanked for what they have done so far. Subsequent generations of those both with and without Latin will turn to them for assistance, and will not be disappointed.