THE CUTTING EDGE

AN UNFORTUNATE TECHNICAL ASSISTANT DID THE MESSY WORK WHILE THE LECTURER SAT AT A SAFE DISTANCE READING HIS TEXTBOOK

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Anatomy Lesson
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This year 1543 is notable in the history of science as the date of publication of Copernicus's treatise De Revolutionibus, which proposed a heliocentric model of the universe. But dates can be misleading in the history of ideas, for it was not until the early 17th century that this theory became a subject of bitter controversy in the lifetime of Galileo. Almost as significant, and of more immediate impact, was the other great scientific publication of 1543, Andreas Vesalius's De Humani Corporis Fabrica, the first important illustrated atlas of human anatomy, although not the first scholarly work on the subject.

Most of the structure of the human body and much of its physiology had been studied by ancient medical writers, summed up in the massive corpus of texts by Galen, who lived in the second century AD and who learned much in youth working with gladiators before ending his career as physician to several emperors. Throughout the Middle Ages, although Galen's texts were republished, the original diagrams they would have included — there are drawings in Arabic and Persian manuscripts that may derive from these ancient illustrations — were lost, so that even when medieval universities taught anatomy, they had to rely on words without pictures. Contrary to what is often imagined, medieval universities did carry out dissections, but the professor rarely got close enough to the cadaver to verify or correct Galen's description; an unfortunate technical assistant did the messy work while the lecturer sat at a safe distance reading his textbook.

The real pioneers in this field were the artists of the Renaissance, and in particular Leonardo and Michelangelo, who both cut up bodies to find out how they worked, and made the extraordinary drawings that we still wonder at today. Leonardo, in particular — and characteristically — went far beyond the practical requirements of artistic anatomy and carried out dissections of the inner organs, including the womb — there is a famous drawing of a fetus in utero — and the heart, making remarkably precise drawings of the system of valves between the arteries, veins and chambers of the heart. It is all the more surprising, when we consider what was known of the structure of the heart, that the circulation of blood was not discovered for more than a century.

The lead in the field of anatomy passed back from artists to scientists with Vesalius, who was born in Brussels, became professor at the famous medical school at the University of Padua, and began by publishing a modern edition of Galen's Institutiones Anatomicae (1535), before completing his own monumental work a few years later. It is, incidentally, an index of how much was lost in the fall of the Roman Empire that it took 1300 years for European medical knowledge to equal and then surpass the standard achieved in the last golden age of antiquity.

Vesalius's work may well be said to have revolutionized the anatomy generally available in the 16th century, although he was indicted, as we have seen, to the example of the artists who had preceded him, particularly in regard to the principle and scope of visual illustration; and indeed the woodcuts for his book are believed to have been produced by artists from the studio of Titian in nearby Venice. The story of art and its relation to anatomy in the early modern period has been retold recently in a slim but valuable publication, Domenico Laurenzi's Art and Anatomy in Renaissance Italy, published by the Metropolitan Museum of Art in New York and based on its own extensive collection of prints and drawings.

Many inaccuracies about medical and anatomical textbooks of the Renaissance is contained in the outstanding Print and the Pursuit of Knowledge, originally published as the catalogue for an exhibition held at the Harvard Art Museum (Yale University Press, 2011). Part of the same ground is covered in The Anatomy Lesson at the Ian Potter Museum — one of three simultaneous exhibitions to commemorate the sesquicentenary of the University of Melbourne's school of medicine. The exhibition does not include a copy of Vesalius, unfortunately, but does have many other fascinating early modern publications, open to reveal illustrations that range from dissections of the eye to life-sized drawings of the foot or hand.

Most of these books are not intended primarily for artists. Much of Vesalius already goes well beyond the needs of painters and sculptors, and subsequent work in the field of anatomy tended to deal with inner organs and tissues that are not normally visible in a living body.

By the 17th and especially the 18th century, two kinds of anatomy book were published, one addressed to a medical audience and the other to artists and a public of connoisseurs interested in art and in the history of sculpture, for many illustrations in such volumes were drawn from ancient sources and, in a sense, allowed the viewer to understand their implicit mechanics.
Even among the books in the exhibition there are allusions to ancient art, as in a couple of early illustrations that take as their subject the theme of Hermes cutting the earth-born giant Antaeus in his arms. Most of the illustrations, however, are much more technical, and some of them could be done with a bit more explanation than is provided, especially for viewers who cannot decipher the Latin text of the publications in which they appear. This is a difficult of an osseous anatomy that remains rather obscure, not to mention next to it is a mysterious illustration of a little human figure, specifying regions and leaves, in John Coney's treatise De Veris (1696).

A reference to symphysiologist as an alternative to osseous section — proposed by Severino Pianus in 1597 — should be clarified. It entails, as the name makes clear, cutting the ligament (the symphysis pubis) in the middle of the pubic bone, which would allow the pelvic girdle to open and let the baby through. Still common in developing countries, the operation is otherwise rare today, though recently there has been a scandal about its frequency in poor-world settings.

A whole wall is devoted to a set of prints from the 16th and 17th centuries collected in London in the 1920s. It seems, by Frederic Poynter, a physician like his son John Orde Poynter, who gave this fine collection of images and medical books to the University of Melbourne. These prints are collectively evidence of the profound and continuing interest in anatomy among artists and their public in the wake of the example of the high Renaissance masters and of the scientific work of Vesalius and his successors. Indeed it would be interesting to try to tease out the different roles of these two influences, especially among the mannerist artists who were overhead by the achievements of Michelangelo.

But many of the individual engravings are also particularly interesting, such as Hendrik Golzius's engraving after Cornelis van Haarlem; his painting of two of Cadmus's followers devoured by the dragon, where the artist has deliberately contrived to juxtapose the upper part of one body and the lower part of the other in a kind of anatomical puzzle.

Melchior Meier's engraving of Apollo Flaying Marsyas, the satyr who had unwisely challenged the god to a musical contest, is similarly a mannerist conceit, for a subject that was considered by earlier Renaissance thinkers as a spiritual allegory is here merely an excuse to represent an icon, a figured scene of type used in studies to teach anatomy to pupils. Apollo, who is after all the god of medicine and healing, is here transformed into a professor of anatomy.

Golzius's engraving of the Roman hero Marcus Calpurnius Flaminus displays a similar ambiguity in its subject matter: in principle, the powerful anatomical definition of the figure should serve to express the tribune's strength and martial courage. In reality, one cannot help feeling that the subject is little more than a pretext for a display of the artist's anatomical expertise; certainly, the perfect roundness of the gladiator's maxima seems to interest him far more than the fact of the impaled legionaries in the distance.

The continued pedagogical importance of anatomy is evident in Enos Vico's engraving of Benevento Donati's anatomy, or in those, in which his pupils are at work drawing the antique while surrounded by skeletons and bones. Cornelis Cort's engraving after the ancient Greek sculptor of a painting of a young man stripped to the waist and leaning backwards — and Hugh Ramsey, by whom there is a striking sheen of hands as well as a study of a girl's back that is almost minimalist in its lack of linear detail.

This is inevitably some disjunction between the early modern material, composed of books and prints, and the drawings and studies from a century ago, especially as the latter are only indirectly concerned with anatomy.

The gap could have been bridged by borrowing from the considerable collections of the National Gallery of Victoria, but evidently a decision was made to work with those of the various branches of the University of Melbourne.

This does have its own interest, especially in regard to the Odeon Poynon material, and the coherence of the exhibition is more seriously strained by the inclusion of a number of pieces of recent and contemporary material.

The relevance of Jeann Davin's painting is dubious, and both relevance and quality are questionable in the cases of Vivienne Stark LeWitt and Gordon Bennet; for all the ideological waffle in the catalogue about this last work, the fact remains that the idea is a direct repetition of the body prints and imprints of Yves Klein, which were already a gimmick 50 years ago.

The only contemporary pieces that make much sense in this context are the little anatomical sculptures by Ruth Hutchinson, which turn up in the cases displaying historical works, juxtaposed with scientific illustrations or in other cases displayed on their own. Unassuming but sophisticated, their facility with anatomical structure and rhythm play with illusion and paradox make them a natural partner to the scientific imagery of the early modern period and the mannerist engravings, poised between art and science, which comprise the core of this exhibition.