

l'aiuolo, Michelangelo, Leonardo, Signorelli and many other artists were keen dissectors and they were well ahead of the doctors when it came to making original anatomical observations.

Vesalius therefore decided to produce a new and definitive textbook of anatomy, and in its preparation he took advantage of the graphic talents of his artistic contemporaries. His text was mainly original and although he paid tribute to the pioneering work of the great Galen, he only occasionally accepted the traditional doctrine without criticism. The text was closely integrated with the illustrations, of which many were prepared directly from Vesalius' dissections.

The result was one of the great books of all time: a magnificent giant folio entitled *De Humani Corporis Fabrica* ('On the Structure of the Human Body'). It was published in Basel in 1543 and, together with Vesalius, two other men—the artist and the publisher—must be honoured for this achievement. The experts are not all agreed about the identity of the artist but most of the evidence favours Jan Stefan van Kalkar, who was associated with Titian's studio in Venice. Like Vesalius, he was of Flemish stock and it is quite certain that he had previously collaborated with Vesalius in producing an earlier series of anatomical illustrations. The illustrations of the *De Fabrica* did not only show greater accuracy than ever before;

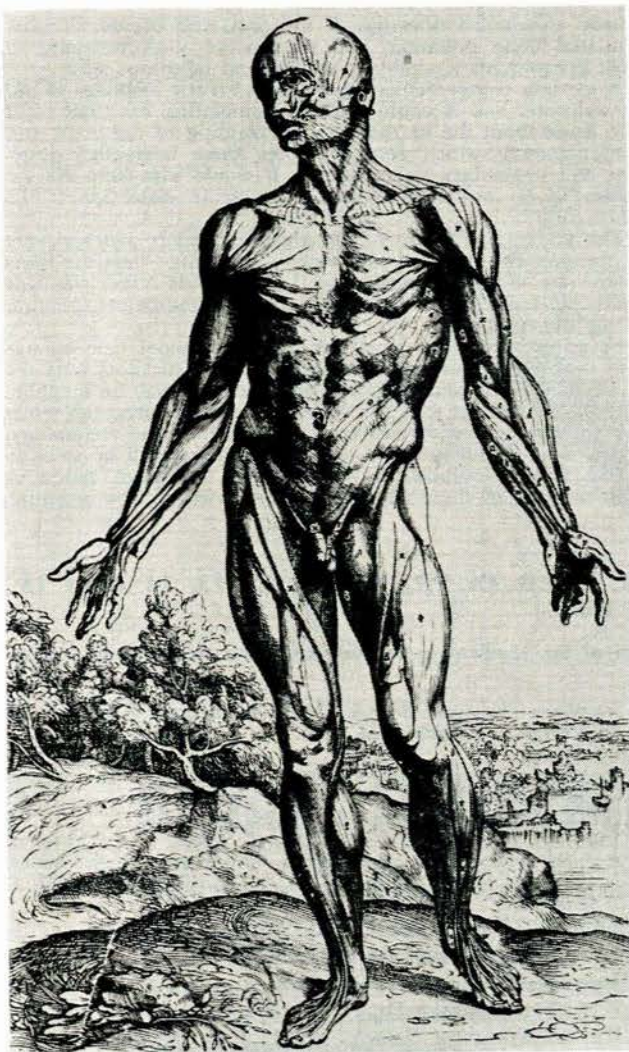


Fig. 3. The third 'muscle-man' from the *De Fabrica*. It is believed that the illustrations for this book were prepared by artists working in Titian's studio in Venice. The background landscape is a view of the countryside on the outskirts of Padua.

they were also artistically superb and superior to any that appeared before or since. Great credit must also go to Johannes Oporinus, the scholar and printer of Basel, who was responsible for consummating the work of the anatomist and the artist in the most magnificent of all medical books. Thanks to him, the *De Fabrica* has remained the chief ornament of any library fortunate enough to own a copy.

Like many other young innovators, Vesalius encountered some obstruction and criticism, but in general his new approach to anatomy was accepted with enthusiasm. Vesalius was in demand as 'guest lecturer' on anatomy at many of the great medical schools of Europe, and soon after the publication of the *De Fabrica* he was appointed physician to the Court of Charles V.

Life as a courtier left Vesalius with little time for original research. His medical counsel was solicited from all over Europe. He consulted Pare at the bedside of the injured King Francis II and he was responsible for the cure of the desperately ill Infante Don Carlos of Spain. Nevertheless, he was able to make some notable contributions to the medical literature of his time, including a useful account of intercostal drainage for empyema of the chest.

Vesalius never lost enthusiasm for anatomy and there is reason to believe that in 1564 he resigned his royal appointment with the intention of returning to his old professorial chair at Padua. Before doing so, he went on a pilgrimage to the Holy Land. On the return journey, the ship in which he was travelling ran into heavy storms and Vesalius was forced to go ashore on the Ionic island of Zante. Here, mysteriously, he died. No trace of his burial has ever been found.

Vesalius owes his celebrity to two related achievements. Firstly, he established the study of anatomy on a sound basis. This was an essential preliminary step before a proper study of the normal function of the body could begin. Following logically and chronologically on Vesalius' anatomical studies, came Harvey's physiological researches in the 17th century. These, in turn, led to the investigations of abnormal structure and function which Morgagni pioneered in the 18th century. Thus, the 'Institutes of Medicine' developed logically from Vesalius' work and prepared the way for the great discoveries of aetiology, pathogenesis, diagnosis and therapeutics in the 19th and 20th centuries.

Vesalius' second achievement is even more important. The work which led to the publication of the *De Fabrica* was the first application in modern scientific history of the method of accurate and independent observation. Traditional, untested beliefs were discarded and the systematic objective investigation of natural phenomena was instituted. The value of independent observations was first demonstrated by Vesalius' study of the human body; soon it was applied to other fields of biology and to the physical sciences. In these studies, careful observation was supplemented by new techniques for accurate measurement and by the development of experimental procedures. In this way, our modern 'scientific method' was conceived.

Much of this important history is graphically illustrated in the exhibition of the University of Cape Town. Some pre-Vesalian anatomical texts and illustrations are shown and these are contrasted with the beautiful 'muscle-men' and skeletal figures from the *De Fabrica*. Unfortunately the University of Cape Town does not possess an original copy of the *De Fabrica*—although William Osler was able to purchase a number of copies for just a few pounds each at the beginning of this century, the 1543 edition is now worth several thousands of pounds and is rarely available for purchase. The exhibition does include a fine modern facsimile of the 1543 edition and an original copy of the 1782 Leyden edition of the osteology section. The latter was edited by Edward Sandifort and is illustrated with copper engravings by Jan Wandelaar.

The exhibition also includes some of the major sources of information about Vesalius and his work. These are the classical biography by Moritz Roth (1892),¹ the famous *Bio-bibliography* by Harvey Cushing (1943)² and the latest and most complete study by C. D. O'Malley (1964).³ To bring the subject near home, the exhibition draws attention to some of the first English translations of sections of the *De Fabrica* prepared by Benjamin Farrington when he was Professor of

Classics at the University of Cape Town^{4,5} and to a recent contribution to Vesalian studies by Professor L. H. Wells, Professor of Anatomy at the University of Cape Town.⁶

The University of Cape Town Medical History Club is grateful to Mrs. Gertrude Glickman and her staff at the Medical School Library, University of Cape Town, for helping with the preparation of this exhibition and for allowing us to display some of the treasures of their library.

The Medical History Club is also grateful to the following who supplied photographs and other illustrative material for the exhibition: Prof. G. Wolf-Heidegger of the Anatomical Institute, University of Basel; Miss Madeline Stanton of the

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