Andreas Vesalius (1514–1564) is one of the greatest anatomists of all time. His lasting recognition is due to two major achievements: being instrumental in making anatomy an empirical science and presenting the results of his work in an extraordinarily innovative way. The latter is also his connection with the arts.

Vesalius was born in Brussels. He started his education in Leuven, attended the University of Paris, and completed his studies at the University of Padua (1, 2). From 1405 Padua was in the territory of the Venetian Republic, by far the strongest of the Renaissance city-states (3). Venice was also a major center of the arts, with artists such as Jacopo, Gentile, and Giovanni Bellini, Giorgione, and Titian (1488/90–1576), who was then regarded as the greatest painter in Europe. In their art, the Venetians emphasized the use of color, in contrast to line, which was dominant in Florentine painting.

Medical knowledge at that time was based on texts rather than empirical observations. The foundations for the practice of medicine were still the writings of a Roman physician, Galen (129 to c 230), whose views had dominated it for over 1300 years (4). During the Renaissance, the humanists’ interest in the human body stimulated progress in anatomy, and anatomical treatises began to appear at the beginning of the 16th century.

At Padua, Vesalius taught anatomy and surgery. He focused the teaching of anatomy on dissection of human cadavers, and taught by personal demonstration. To support his teaching he began to publish anatomical illustrations. The first were the Tabulae Anatomicae Sex (The Six Anatomical Pictures) printed in Venice in 1538, a compilation of drawings he used in teaching (5). The Tabulae became immensely popular—and were extensively plagiarized.

Vesalius’s main book, however, was De Humani Corporis Fabrica Libri Septem (On the Fabric of the Human Body in Seven Volumes), printed in 1543 by Johannes Oporinus in Basel, using woodblocks prepared in either in Padua or Venice. It contains over 600 engravings (6, 7). The different volumes address the skeleton, the muscles, the vascular and the nervous systems, the abdomen, the thorax, and the brain (1). The book devoted to the muscles contained a series of images showing successively uncovered muscular layers. Notably, the human figures were presented in natural, rather than schematic, poses. There clearly was an aim to produce a publication with artistic value. The publication of De Humani Corporis Fabrica was accompanied by the abridged version, the De Humani Corporis Librorum Epitome, which was intended for students (8). There was also a German translation of the Epitome.

Vesalius identified errors in Galen’s texts, particularly the fact that Galenic anatomy was based on animal, not human, dissections. He strongly argued his points with other professors of anatomy, including his own teacher Jacques du Bois, known as Sylvius. Yet, he remained an exponent of Galenic teleological proto-physiology. All in all, Vesalius’s systematic criticism of Galen is his greatest contribution to science: it made anatomy an empirical discipline.

Vesalius created the drawings for the Tabulae together with a Flemish artist, Jan Stephan van Calcar (1499–1546/50). Van Calcar, born in Cleves (today’s Germany), became a pupil of Titian in 1536 (9). Although no name of the artist–illustrator is mentioned in De Humani Corporis Fabrica, the assumption remains that much of it, if not all, is also van Calcar’s work.

Apart from their scientific and educational value, the De Humani Corporis Fabrica and the Epitome are unique as books. They are precursors of book design that, as shown in Fig. 1, integrates images and descriptive text. De Humani Corporis Fabrica is now regarded as one of the most influential books ever published.

The story of Vesalius combines revolutionary re-focusing of a major medical discipline, anatomy, with innovative teaching methods and equally innovative publishing techniques. Thus, it addresses all major academic functions. Interestingly, this multifaceted achievement emerged from an environment that included a leading university in Padua, and an extraordinary center of the arts that was Venice. Altogether, it is yet another testimony to the benefits of collaboration between science and the arts.

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Fig. 1. Andreas Vesalius.
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