
Vesalius' Fabrica – from medical textbook to cultural treasure in Oslo

IN BYGONE DAYS

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Andreas Vesalius (1515–64) is known for his anatomical atlas, *De Humani Corporis Fabrica*, from 1543. The book marked a turning point in the history of science and laid the foundation for modern anatomy. A single copy of the first edition is held in Norway. How and why did it end up here?

If we had to choose a remarkable year in the history of science, 1543 would be a strong contender, as it marked a shift in perspectives on both the universe and the human body. A new worldview was described in the major work of

Copernicus (1473–1543), and the structure of the human body was demonstrated by Andreas Vesalius (1).

Born in Brussels, Vesalius studied at several institutions and, upon completing his medical education, was appointed to the University of Padua in Italy in 1537 (2). Drawing on meticulous dissections, he published *De Humani Corporis Fabrica* (On the Fabric of the Human Body) in 1543 (3). The *Fabrica*, as the book is commonly referred to, was based on his own observations (4). He did not blindly trust the knowledge handed down from antiquity, as had been common practice until then. This is one of the reasons why Padua is known as the cradle of modern anatomy.

Vesalius was just 28 years old when the book was published; it gained wide circulation and was an instant success (5, p. 7). He published a revised edition in 1555 (6), which included several improvements (2, 5, p. 8). Around 700 copies of these two editions have been preserved: 300 of the first edition and 400 of the second edition (5, p. 3 and 9). The book has since been published numerous times, but the first two editions are especially significant because Vesalius himself oversaw their publication (5, p. 3 and 9). Both are now considered great treasures.

«The *Fabrica* is regarded as a printing masterpiece, a *tour de force* of the 16th-century book industry»

The *Fabrica* is actually made up of seven books, as indicated by its full title: *De humani corporis fabrica libri septem* (The Seven Books On the Fabric of the Human Body). It is approximately 700 pages long, in a large folio format, and contains over 200 woodcut illustrations. Each of the seven books presents part of the anatomy, in the following order: bones, muscles, veins, nerves, internal organs, the heart and lungs, and the brain.

Vesalius worked in Italy, but the book was printed in Basel, Switzerland, by the printer Johannes Oporinus (1507–68). The *Fabrica* is regarded as a printing masterpiece, a *tour de force* of the 16th-century book industry (5, p. 6).

A copy of the first edition is located in Norway, at the University of Oslo Library. How and why did the book end up there?

International catalogue and local archive

In 2018, an extensive international catalogue was published with detailed descriptions of all known copies of the 1543 and 1555 editions (5). For Norway, the authors provide in-depth details of one copy of the first edition (5, p. 202) and four copies of the second edition (5, p. 353–5) (Box 1). We have examined the catalogue, as well as literature on the history of the University of Oslo's Department of Anatomy (7–12) and the archives of the former Department of Anatomy.

Box 1 The five copies of the *Fabrica* in Norway

First edition from 1543: The only known copy of the first edition in Norway is held at the University of Oslo Library. It was digitised in the summer of 2024:

[http:// urn.kb.se/resolve?urn=urn:nbn:se:alvin:portal:record-567101](http://urn.kb.se/resolve?urn=urn:nbn:se:alvin:portal:record-567101)

Second edition from 1555: There are reportedly two copies of the second edition held at the University of Oslo Library at two separate locations. The latter, a bequest from Michael Skjelderup in 1852, is missing (see Box 2). There is also a copy at the University of Bergen Library, which was donated in 1954, and one at the National Library of Norway in Oslo, which has been digitised:

https://www.nb.no/items/URN:NBN:no-nb_digibok_2022050428001

How did the book end up here?

The first edition at the University of Oslo Library is described in the international catalogue as 'A complete copy in good condition.' It is bound in calfskin with gold embossing (5, p. 202) (Figure 1).



Figure 1 Norway's only copy of *De Humani Corporis Fabrica* from 1543. There is some damage to the spine. At the bottom, a label marked 'A308' can be seen, which is assumed to be the number assigned to it in the Department of Anatomy's collection,

acquired in 1883. The second edition from 1555, which Michael Skjelderup bequeathed to the department in 1852, has the number A210. Photo: Øivind Larsen

On the illustrated title page is a stamp from the Department of Anatomy's collections, with the date 6 June 1883 (Figure 2) (13). The origin of the copy is unknown, but at the top is the name of one of its former owners, Johannes Demostenes ab Ens, a Dutchman who had purchased it in Rome around 1600 (5). This is consistent with the typical pattern in which copies of the *Fabrica* were originally owned by wealthy doctors and only later incorporated into university libraries (5, p. 4).

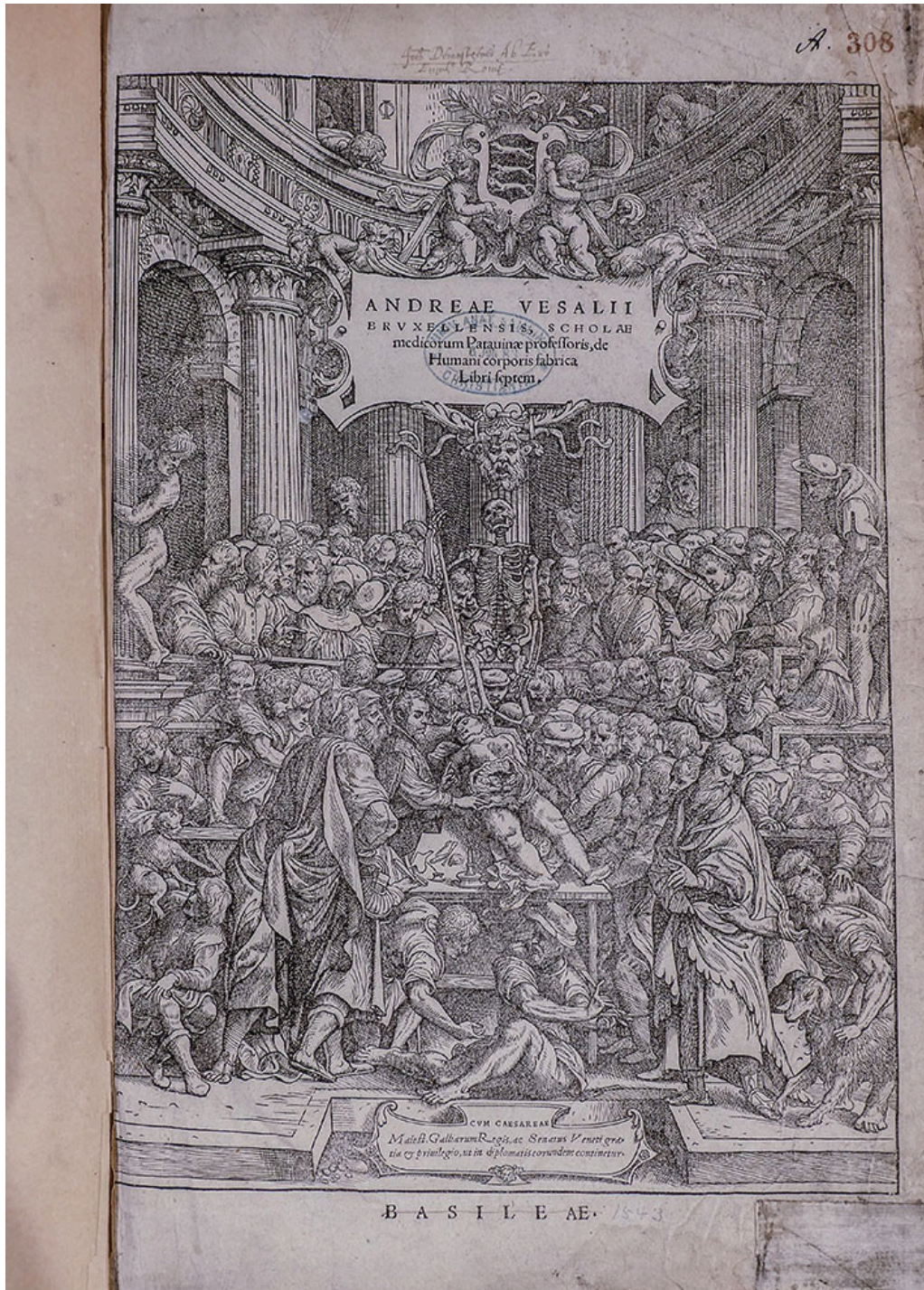


Figure 2 The book's title page. In the centre is the Department of Anatomy's stamp dated 6 June 1883. The title page of the first edition measures 34.8 × 24.5 cm (13). Photo: Øivind Larsen

The ophthalmologist Jacob Munch Heiberg (1843–88) was appointed Professor of Anatomy at the Department of Anatomy in 1878 (Figure 3) (14). He immediately began working to secure better premises and more suitable teaching materials (10). He had spent nearly two years abroad, visited around 25 university towns, and observed the work performed in their anatomy departments (10, p. 96–97). In 1880, a government grant of NOK 12,000 was allocated over a four-year period to improve the Department of Anatomy's teaching materials (10, p. 104).



Figure 3 Jacob Munch Heiberg (1843–88), Professor of Anatomy from 1878 to 1887, arranged for the purchase of the 1543 edition for the Department of Anatomy's library in 1883. In 1882, Christian Krohg (1852–1925) painted his portrait, which has been described as expressive of character, though it 'lacks the strong artistic signature typical of Krohg's works' (14). Painting from the image collection of the Norwegian Medical Society/Norwegian Medical Association. Photo: Øivind Larsen

Heiberg corresponded with antiquarian bookshops in Leipzig, Paris, Edinburgh and London, among other places, to purchase books for the department's library. The archives of the Department of Anatomy contain an extensive collection of documents showing Heiberg's efforts to obtain literature and other teaching materials. The archive is organised chronologically, and a letter dated 12 May 1883 from J.C. Hinrichs'sche Buchhandlung in Leipzig states that the Vesalius book was purchased there (Figure 4). We have not found Heiberg's order, but the bookseller's letter is consistent with the stamp in the book dated 6 June 1883. It is therefore possible to determine how this treasure ended up in Norway. According to the letter, the book cost 50 German marks. The bookseller in Leipzig wrote that the price was high, and compared to many of the other antiquarian books mentioned in the letters, it was.

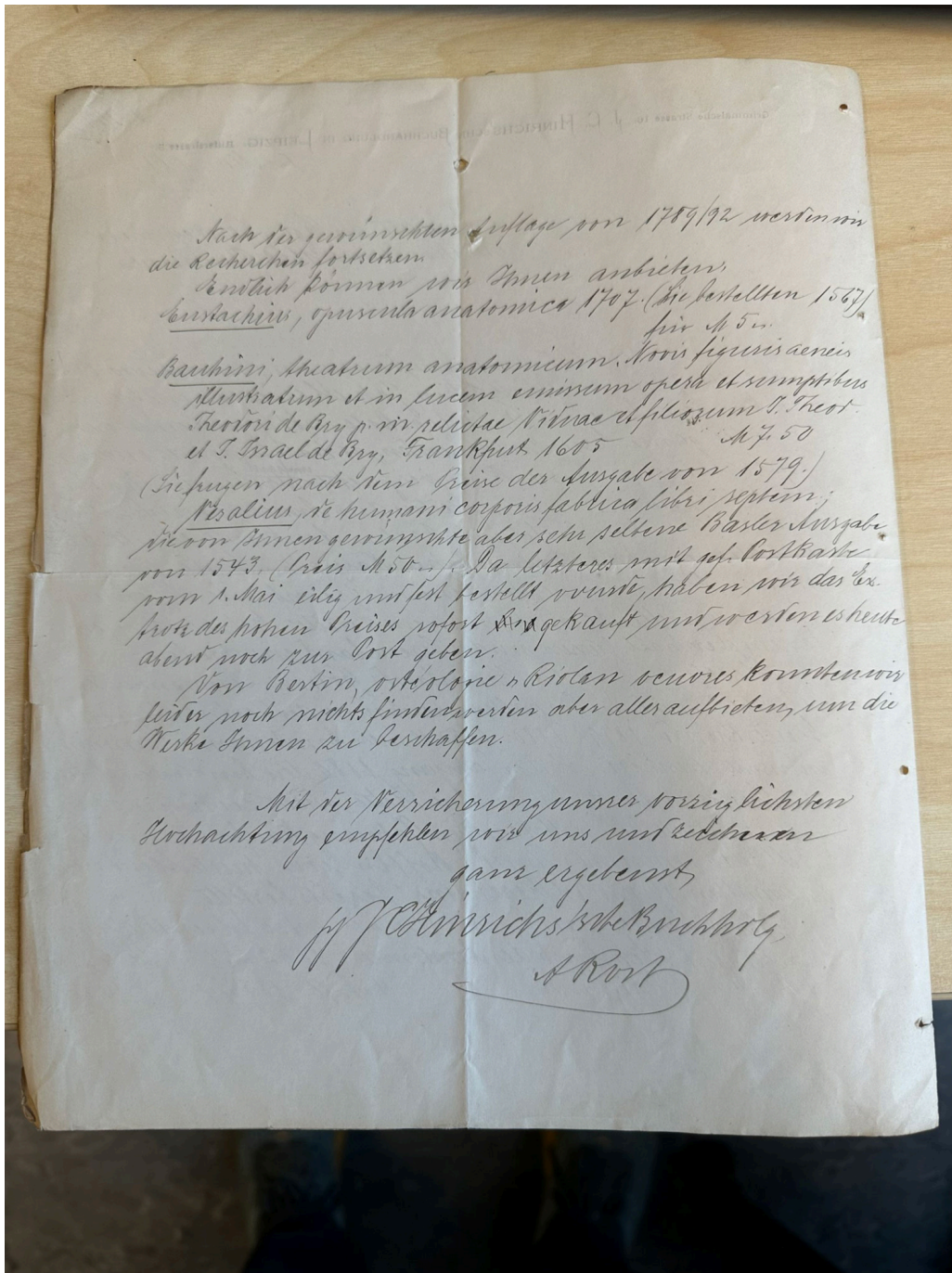


Figure 4 Excerpt from the letter dated 12 May 1883 from the bookseller in Leipzig: 'Vesalius, de humani corporis fabrica libri septem; die von Ihnen gewünschte aber sehr seltene Basler Ausgabe von 1543 (Preis M 50). Da letzteres mit gef[ertigter] Postkarte

vom 1. Mai eilig und fest bestellt wurde, haben wir das Ex. trotz des hohen Preises sofort gekauft und werden es heute Abend noch zur Post geben.' Our translation: 'Vesalius, De humani corporis fabrica libri septem; the requested but very rare Basel edition from 1543 (price 50 German marks). Since this was rapidly and resolutely ordered on your signed postcard dated 1 May, we immediately purchased the copy despite the high price, and we will send it by post this evening.' Photo: Erlend Hem

Why did the book end up here?

Today, it may seem puzzling why a university department would purchase an antiquarian book. What could a 340-year-old book possibly contribute to learning and the development of knowledge? Some 19th-century doctors apparently still used it as a textbook in anatomy (15), and it could be argued that it belonged in the well-equipped anatomy library (5, p. 48), which for several years was known as the Anatomy Museum (7). At that time, it was common practice to purchase older literature for academic libraries (16). Interestingly, the *Fabrica* is not the oldest book in the Department of Anatomy's collection: that honour goes to *Anathomia Mundini* by Jacopo Berengario da Carpi (c. 1460–1530), from 1514 (17).

However, demand for the classics nevertheless declined in the 19th century. Vesalius was, understandably, seen as outdated. It was no longer macroscopic anatomy that was driving progress, and more up-to-date and affordable anatomy books were available on the market.

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The international catalogue from 2018 shows that the University of Christiania (now Oslo) already owned a copy of the *Fabrica* (5). Granted, it was the second edition from 1555, but this version was considered an improvement on the first. Why Heiberg still chose to buy the first edition remains unclear, but examining the medical literature landscape in the 19th century may offer some insight.

When medical studies were introduced at the new university in Christiania in 1814 everything had to be built from scratch. The first of the professors, Michael Skjelderup (1769–1852), taught anatomy. When he died, he bequeathed a copy of Vesalius' second edition to the university's anatomy library (5, p. 354) (Box 2). A few years later, in 1859, the library at the Department of Anatomy held 389 volumes, and a catalogue of the collection from 1863 includes a reference to the *Fabrica* (7). This is likely Skjelderup's copy. It is unclear where he obtained the book, but since he bequeathed it, it is assumed this was his private copy, not part of the duplicate collection from Copenhagen or the gift from King Frederik VI (1768–1839) when the University of Christiania was established.

Box 2 One copy is missing

When working on this article, we discovered that one of the copies of the second edition from 1555 is missing from the University of Oslo Library. This copy, which was bequeathed by Professor Michael Skjelderup, was photographed for inclusion in the international catalogue in 2018 (5). Since then, there has been no knowledge of its whereabouts, according to the library. Its disappearance is somewhat of a mystery. It may, of course, have been returned to the wrong shelf, but given its large format, it should be relatively easy to locate in secure storage if it is there. Are our cultural treasures not safe in public collections?

Professor Dániel Margócsy from the University of Cambridge, first author of the international catalogue, informed us that their team did not personally examine this copy, but that a local colleague photographed relevant pages for them. According to Margócsy, these photographs could help identify the copy if it were to appear on the market.

In 1887, Heiberg had to discontinue his work due to illness. By that time, the Department of Anatomy's book collection had grown to 1000–1200 volumes (10, p. 105) – almost double the number twelve years before. According to the annual report for the spring semester of 1883, the department had purchased 158 volumes over the six-month period (9, p. 38).

The books, however, were only a small part of Heiberg's efforts to obtain better teaching materials. He also purchased 'charts, schematics, skeletons and a collection of oversized wooden anatomical models' (18). In 1884, when the funds were exhausted, Heiberg wrote that teaching aids had been acquired in bone, metal, wood, plaster and wax, as well as a range of instruments. He had accomplished this through his 'extensive correspondence' with numerous individuals and businesses abroad, including Tramond in Paris, which in the 19th century had established itself as a leading supplier of wax models (19). Some items had cost as much as NOK 600–700 (10, p. 104). Over time, it could proudly be stated that 'the collection in this area was comparable to the best in Europe' (18). Some of this material is still currently used in anatomy studies (12).

A unique investment

The *Fabrica* from 1543 is not only a milestone in medical history but also an irreplaceable cultural and historical artifact. The copy in the University of Oslo Library, acquired in 1883, bears witness to how scientific treasures can find their way to new homes. According to the international catalogue, copies of the first edition of the *Fabrica* can be found in 30 countries, including two in Denmark (5, p. 145–6) and three in Sweden (5, p. 213–6).

Although the bookseller in Leipzig described the purchase price in 1883 as high, its equivalent in today's currency is surprisingly low. Heiberg clearly bought at an opportune moment. Compared to other acquisitions of teaching

materials in the early 1880s, the purchase of the *Fabrica* was not a major investment.

«The *Fabrica* from 1543 is not only a milestone in medical history but also an irreplaceable cultural and historical artifact»

The purchasing power of one German mark in 1883 equated to an average of €8.50 in 2023. The purchase price of 50 German marks would therefore have corresponded to €425, which is roughly NOK 4700 in today's money (20). This aligns with information indicating that the book was not in high demand during the 19th century, leading to modest prices (5, p. 14–16). However, prices began to rise towards the end of the 19th century, when the book became a collector's item among wealthy Americans, and they have continued to climb ever since (5, p. 16).

Over the course of the 20th century, Vesalius attained an almost cult-like reverence, causing prices for the *Fabrica* to soar (Box 3) (21–23). The price gap between the first and second edition also grew steadily. Well-preserved copies of the first edition, such as the one in Oslo, can sell for around NOK 4 million (USD 400,000) in today's market (5, p. 1 and 13).

Box 3 A sensation – Vesalius' own copy

In 2007, the Canadian pathologist and book collector Gerard Vogrincic purchased a copy of the second edition of the *Fabrica* from 1555 (21). This was one of the rare copies held privately. His winning bid was approximately NOK 150,000 (USD 14,000). This relatively low price was due to the many crossings-out and annotations in the book. However, it was later discovered that these were made by Vesalius himself. This caused a sensation because there are very few surviving documents bearing his handwriting. The copy was deposited at the University of Toronto, where it underwent thorough examination (22).

It appears that Vesalius had planned a third edition. The book shows that he conducted a detailed review, but made no new discoveries. The changes were primarily linguistic and other adjustments were made to give greater clarity (22). No new edition was published during his lifetime. Vesalius died in 1564, aged 49.

In February 2024, the copy with Vesalius' notes was sold at auction for NOK 24 million (USD 2.23 million) (23) to a university in Belgium. From a historical perspective, this was fitting, as Vesalius was originally from Brussels.

Almost all existing copies of the *Fabrica* are today owned by university libraries and other public institutions. However, the authors of the international catalogue point out that there is no guarantee this will remain the case. Just as the Royal Institution in London sold its copy in 2015 due to financial problems, other libraries may also be forced to take drastic measures in this new era of digital access to information (5, p. 55).

We would like to thank Per Holck for giving us access to the archives of the former Department of Anatomy.

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Publisert: 18 August 2025. *Tidsskr Nor Lægeforen*. DOI: 10.4045/tidsskr.24.0566
Received 29.10.2024, first revision submitted 18.2.2025, accepted 27.2.2025.
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