LEONARDO THE ARTIST

“Perspective is nothing else than seeing a place or objects behind a plane of glass, quite transparent, on the surface of which the objects behind the glass are to be drawn.”

–LEONARDO DA VINCI

At the age of 14, young Leonardo da Vinci took an apprenticeship with Florentine artist Andrea del Verrocchio. Like all Renaissance artists, Leonardo learned to look to the natural world for much of his work. He moved away from flat and stilted depictions of humans and animals by observing the details of the world around him and the innate geometry of nature. Perspective, light, shadow, movement, and shape were imperative to the creation of dimensional art.

Although Leonardo is regarded as one of the most important artists who ever lived, only fifteen of his completed works survive. One of them, *Ginevra de’ Benci*, resides at the National Gallery here in Washington, D.C. There are several reasons why much of his work is incomplete: First, Leonardo dabbled in some disastrous experimentation that resulted in the deterioration of some of his paintings. As a polymath, Leonardo was also prone to mercurial interests and procrastination. However, the numerous notebooks he kept throughout his life survive and are a testament of his artistic genius.

Leonardo da Vinci’s impact on visual art can be felt throughout the ages. Following his death, artists like Raphael and Michaelangelo began to use the techniques Leonardo created. His surviving works have become some of the most recognizable pieces in the world and are firmly cemented in the public consciousness.

LEONARDO THE ANATOMIST

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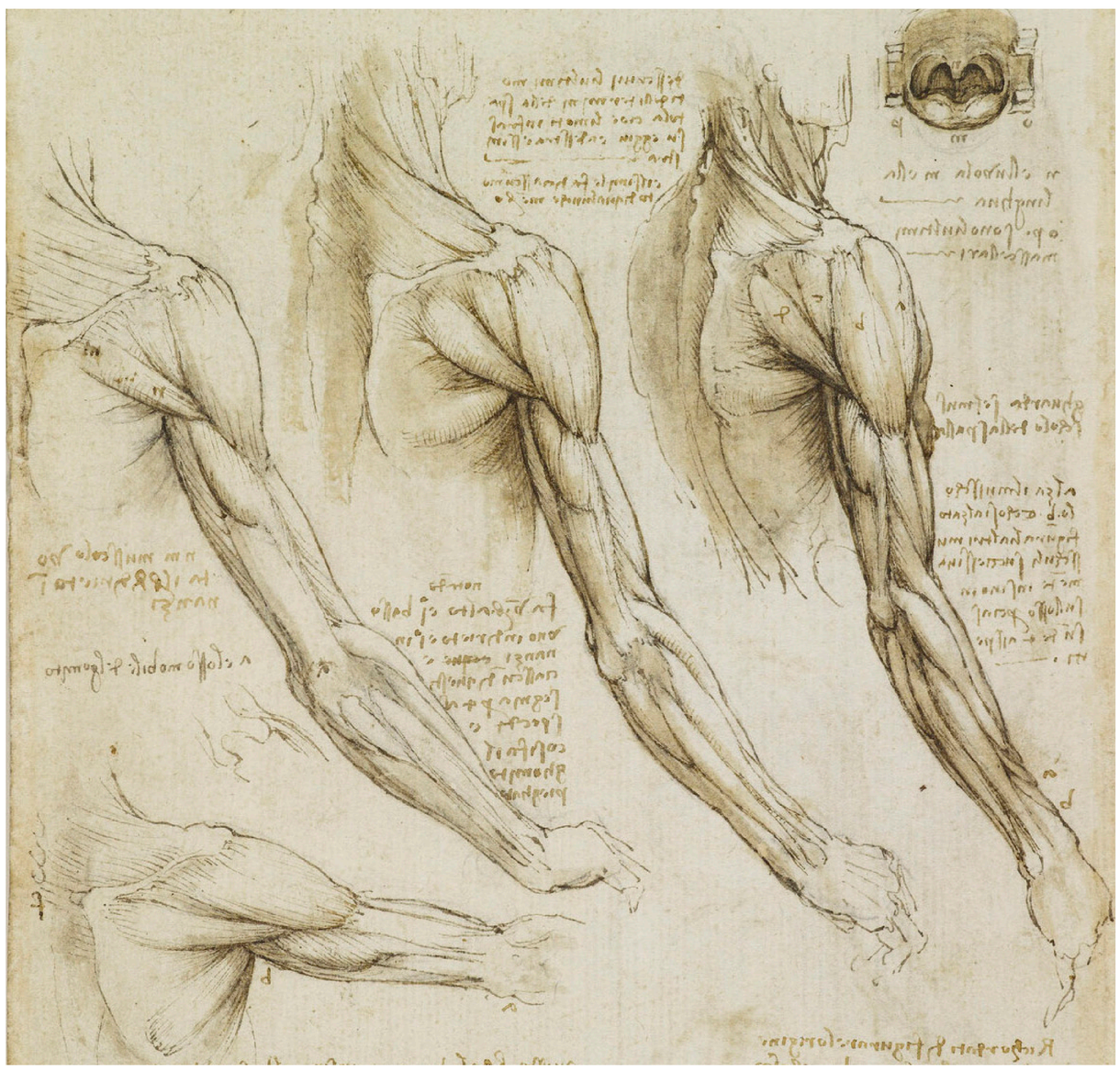

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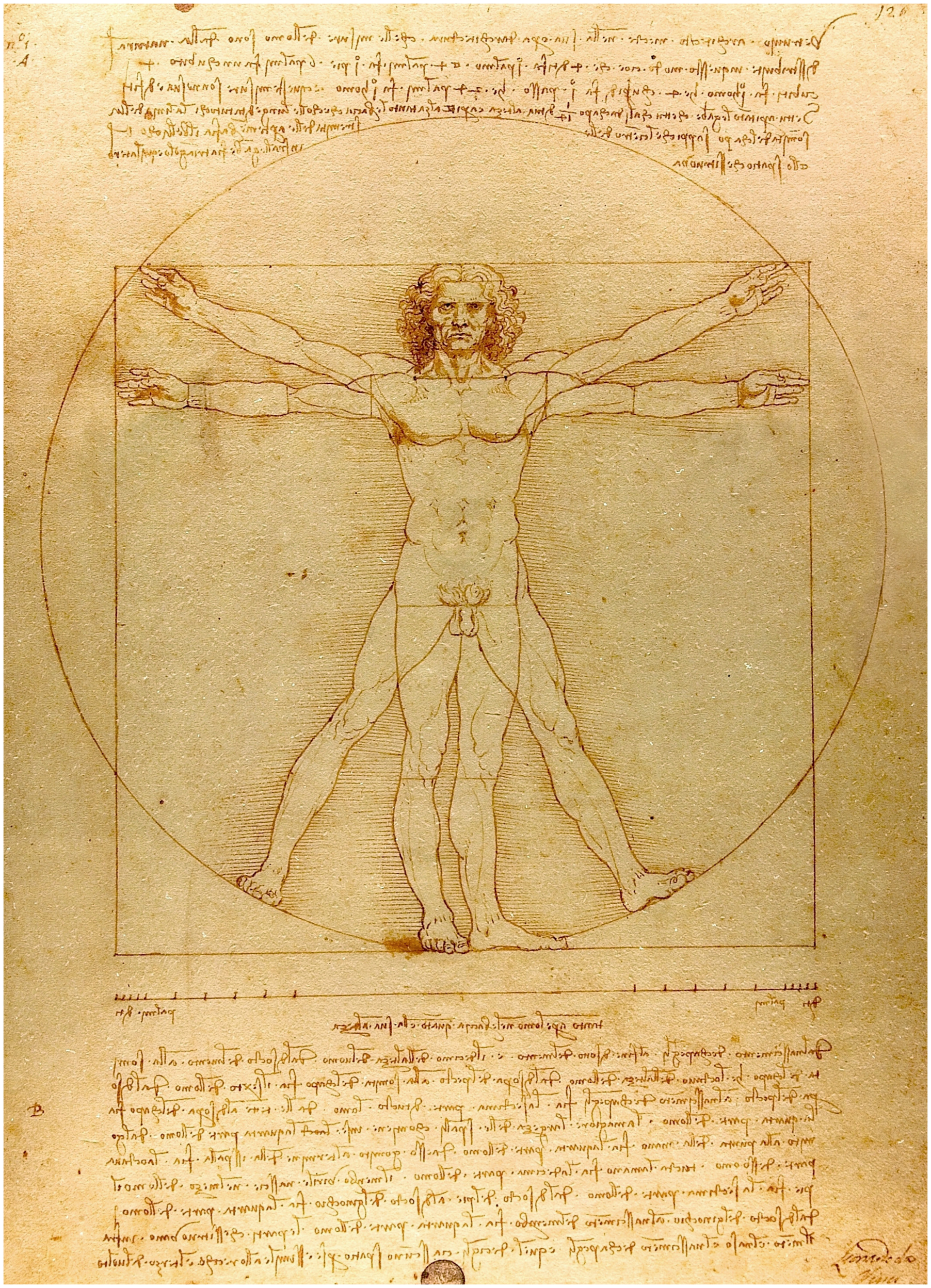
Part of the brilliance of Leonardo da Vinci's work was the strength of his portrayal of human anatomy, guided by his own study of the body. His work began with understanding the skull and the head, wanting to better convey emotion in his painted subjects. He paid special attention to the eyes, believing that the human soul resided within them. As his influence grew, Leonardo began to dissect human and animal corpses to better understand the systems of the body. His studies were detailed in many pages of notes, as well as represented by glass models he made.

Fig. 7
da Vinci, Leonardo, "Superficial anatomy of the shoulder and neck (*recto*)," Pen and ink with wash, over traces of black chalk paper, ca. 1510, Commons.Wikimedia.org.

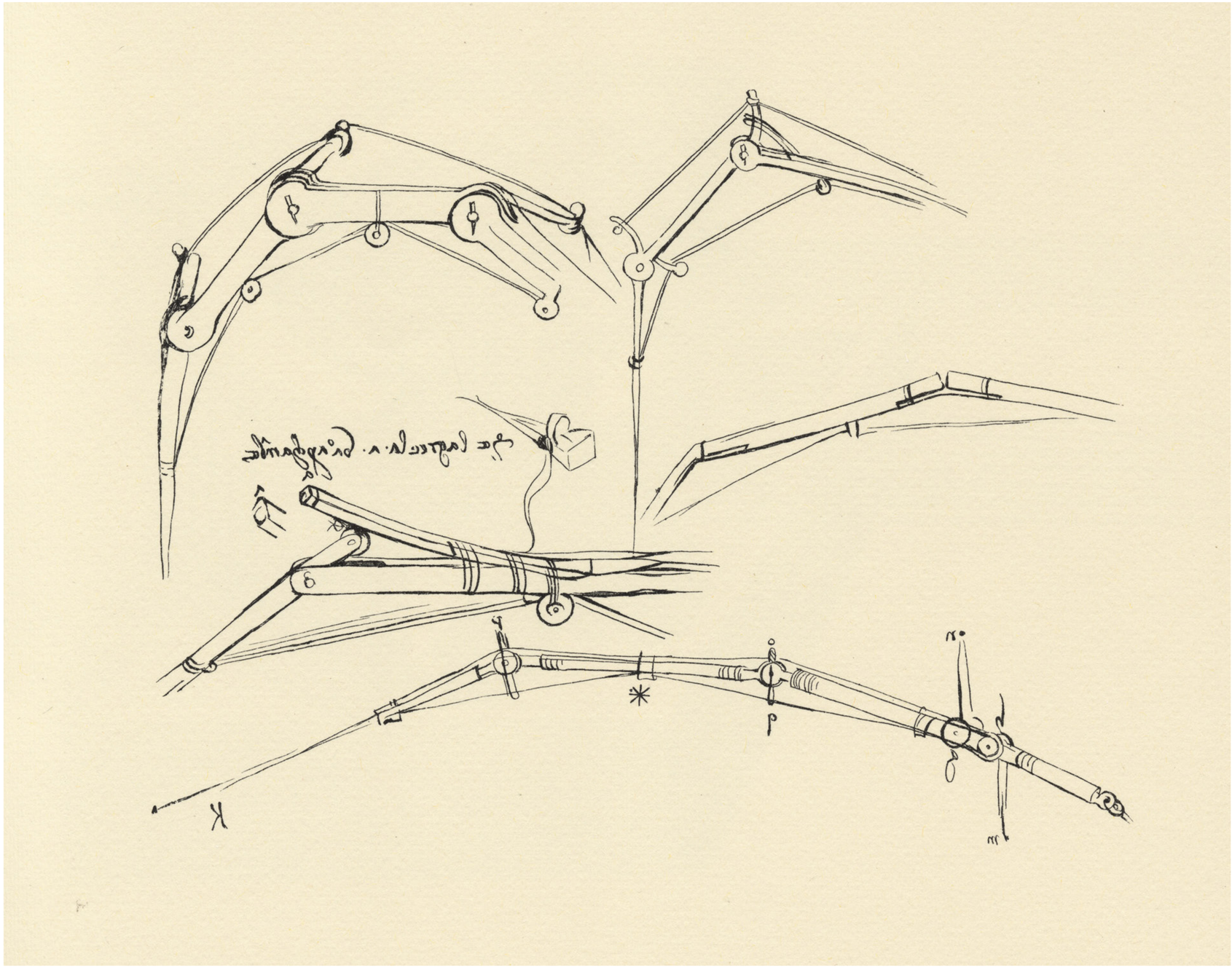
Fig. 8
da Vinci, Leonardo, "*Verso*, The muscles of the shoulder, arm and neck," ca. 1510–11, Commons.Wikimedia.org.



In his lifetime, Leonardo dissected some 30 human cadavers and produced over 550 sheets of anatomical study. Because he was chiefly known as a painter, he did not believe that he should publish his anatomical drawings. He may also have been afraid to publish his findings; many were in direct contradiction to what was then considered common knowledge of human anatomy. The irony is that, had he decided to publish his work, the subject of anatomy would have been profoundly changed and the understanding of how the body works would have moved hundreds of years ahead.

Fig. 9
da Vinci, Leonardo, "*L'uomo vitruviano* (Vitruvian Man)," ca. 1490, Gallerie dell'Accademia, Venice, Luc Viator, Commons.Wikimedia.org.

LEONARDO THE INVENTOR



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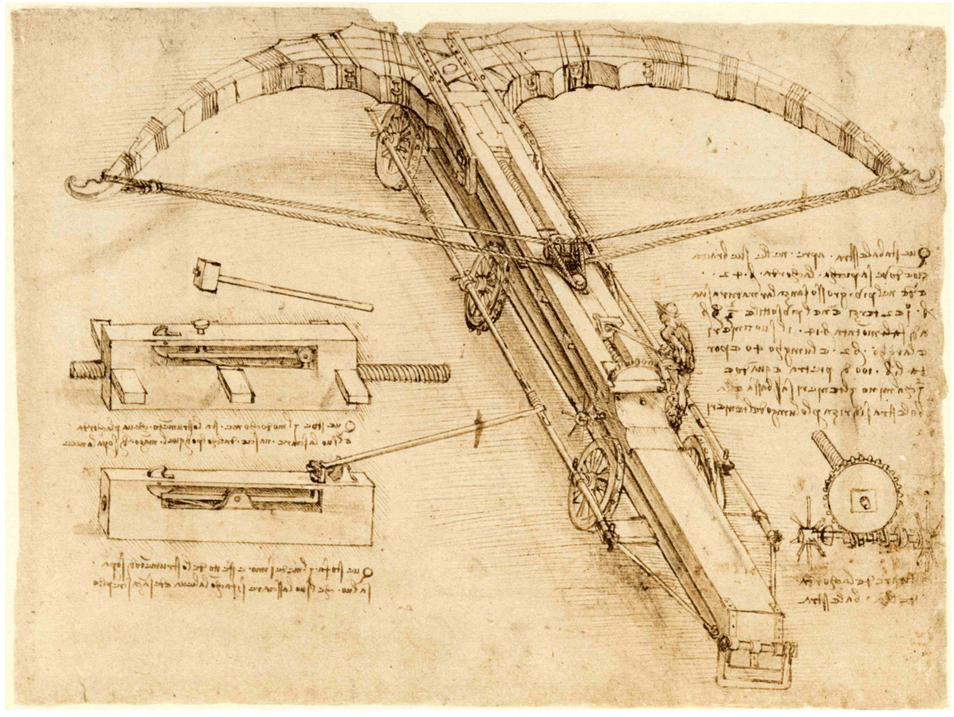

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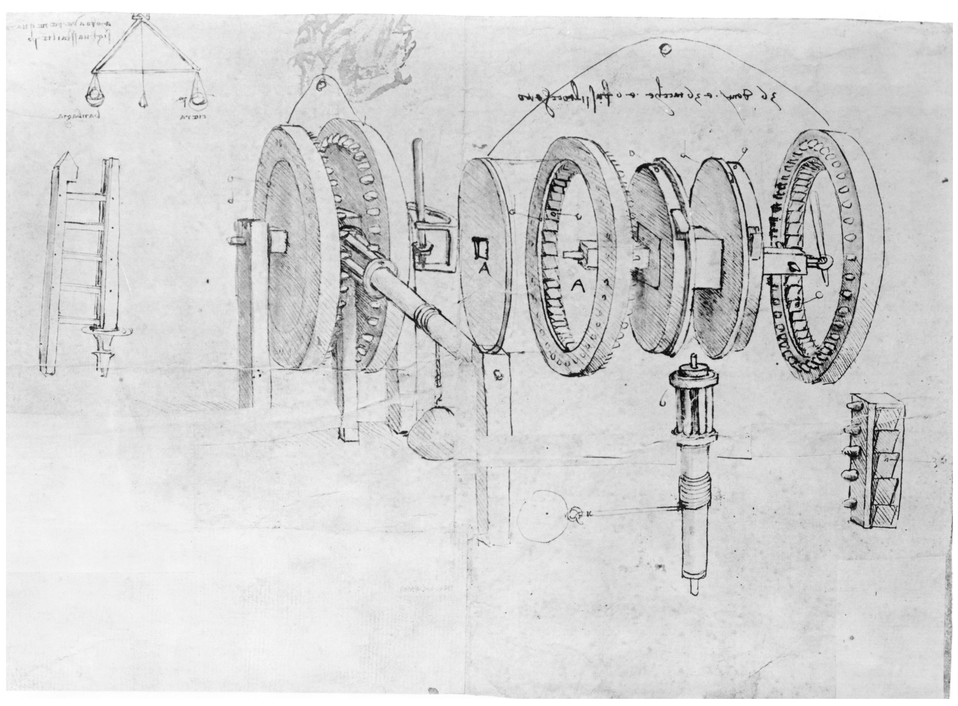

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Leonardo da Vinci's love of invention most likely formed in boyhood, long before he took up an artistic apprenticeship. Some of his earliest notebooks included his observations as he took apart and reassembled machines. He gained practical knowledge of how they worked and was able to translate that knowledge onto the page. This knowledge helped him create inventions of his own—everything from weapons of war to water systems to work tools to flying machines. His notebooks were filled with clear explanations and detailed illustrations to the point that they could be used as blueprints to create working models over 500 years later.

Fig. 10
da Vinci, Leonardo, "Diagram of a proposed flying machine," 1974 reprint, ca. 1789, Toronto Public Library, Flickr.com.

Fig. 11
da Vinci, Leonardo, "*Balestra gigante* (Giant Crossbow)," ca. 1478–1519, Commons.Wikimedia.org.

Fig. 12
da Vinci, Leonardo, "Reproduction of page from notebook of Leonardo da Vinci showing a geared device assembled and disassembled," Photomechanical print, ca. 1894–1904, Library of Congress, LoC.gov.

LEONARDO THE SCIENTIST

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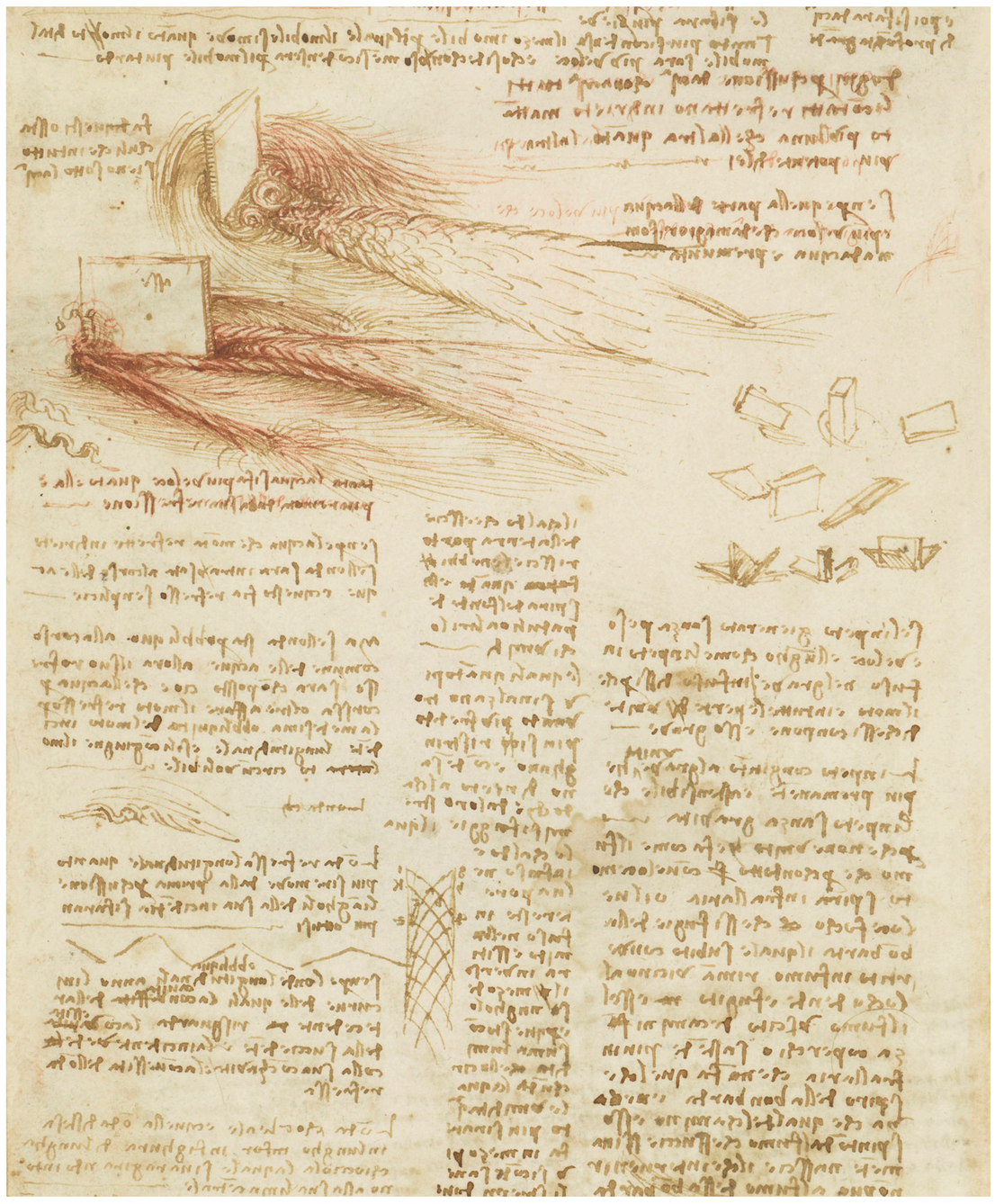

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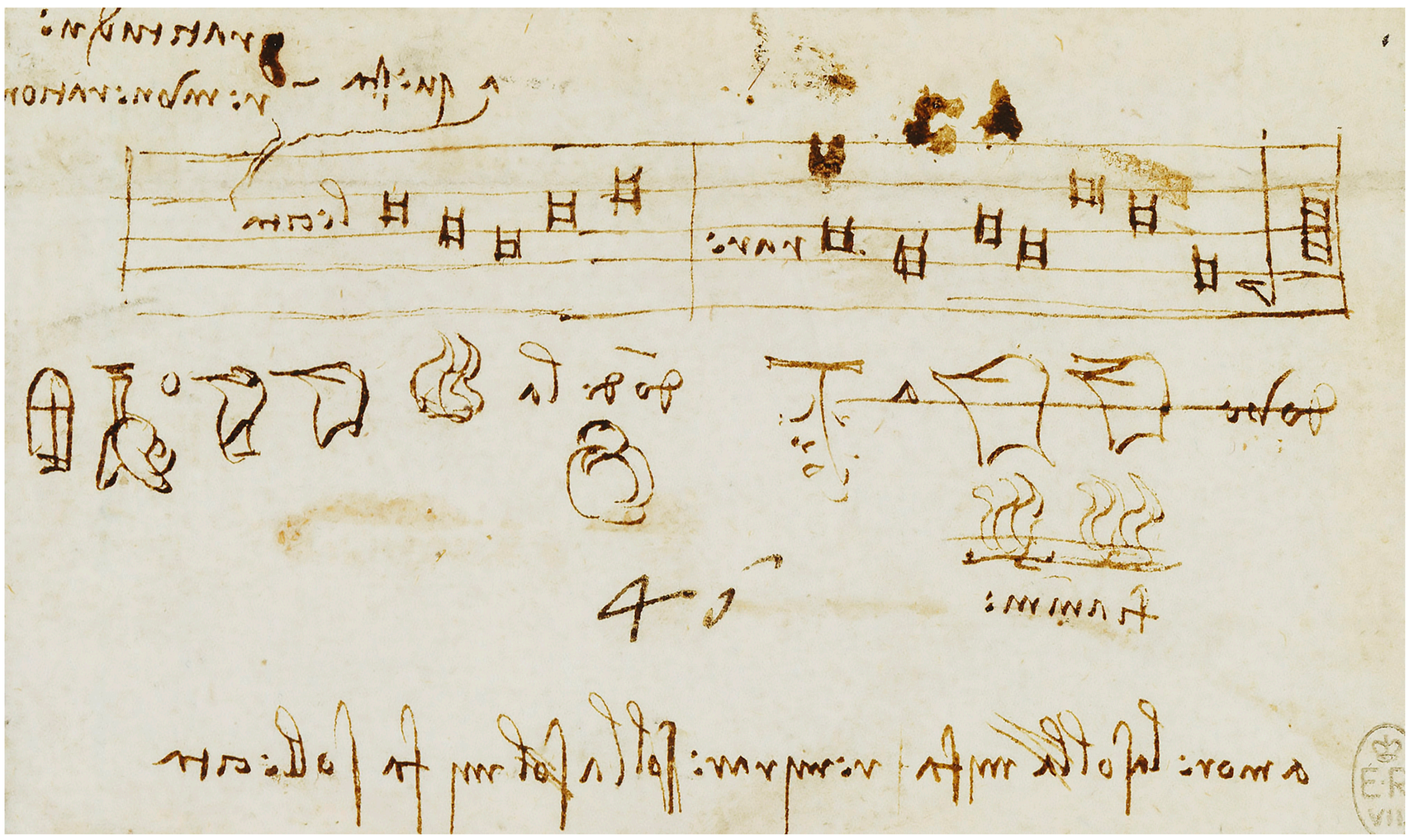
Although he is most famous for his contributions to the world of art, science was a very important part of Leonardo da Vinci's life. He not only dabbled in human anatomy and invention, but also in optics, zoology, botany, hydrodynamics, geology, and so much more. Although his art often served as the impetus for his scientific inquiry—anatomy to study the human body, physics to understand light, chemistry to make paint—Leonardo's innate curiosity gave him a sophisticated understanding of the world. He had advanced knowledge of phenomena like flight, light, and the celestial world that predated many other scientists' observations. In a way, Leonardo da Vinci served as the bridge between the medieval scholarship of science and our own contemporary understanding of the world we live in.

Fig. 13
da Vinci, Leonardo, "Manuscript leaf with anatomical drawings and notes," ca. 1506/08, Weimar Classic Foundation, Commons.Wikimedia.org.

Fig. 14
da Vinci, Leonardo, "Studies of Water," Black chalk, pen and ink, ca. 1510–12, Royal Collection Trust, RCT.uk.

“This is to be a collection without order, taken from many papers, which I have copied here, hoping afterwards to rearrange them according to the subjects of which they treat; and I believe that I shall have to repeat the same thing several times; for which, O reader, blame me not, because the subjects of the world are many, and memory alone cannot retain them.” –**LEONARDO DA VINCI**



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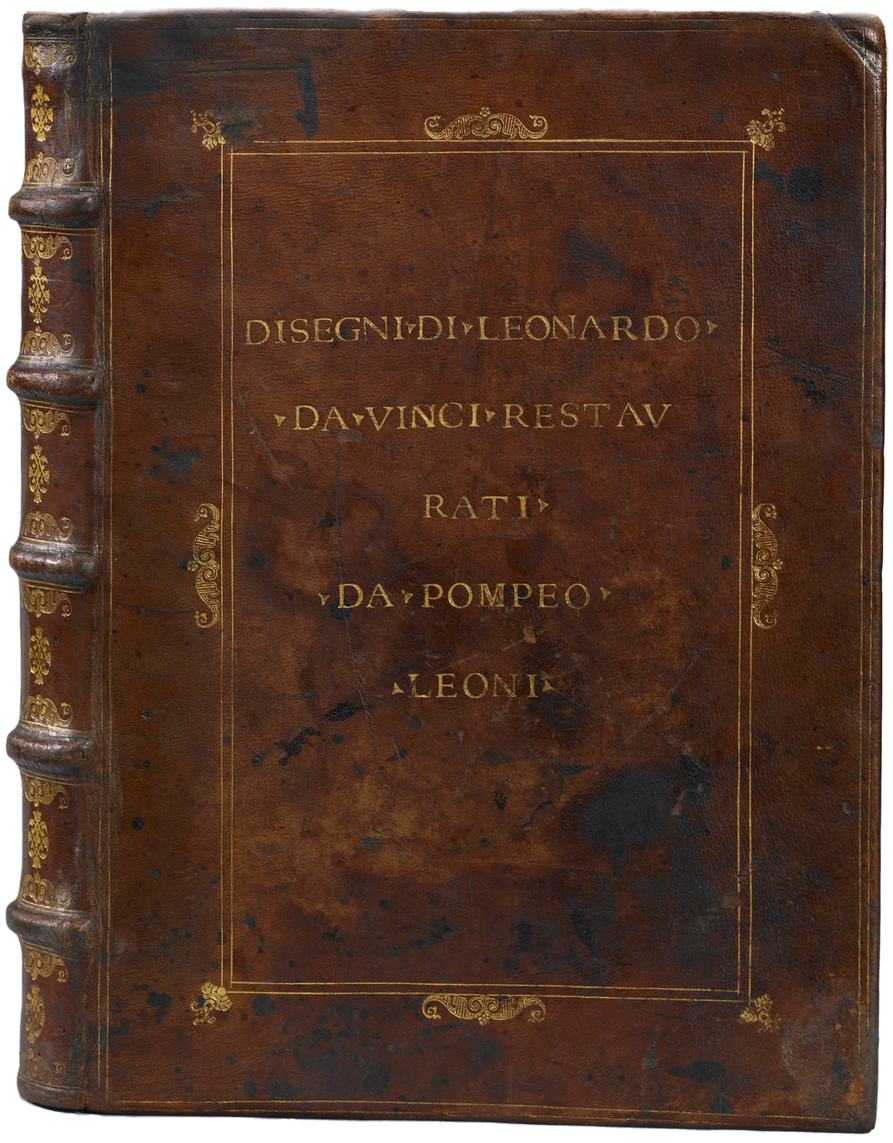

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Upon Leonardo’s death in France on May 2, 1519, he left all of his work (finished and unfinished) to his pupil and companion Francesco Melzi. After Melzi’s death, the sculptor Pompeo Leoni acquired much of Leonardo’s work from Melzi’s son and compiled them into this manuscript.

Fig. 15
da Vinci, Leonardo, “Pictographs,” Pen and ink, ca. 1487–90, Royal Collection Trust, London, England, RCT.uk.

Fig. 16
Leoni, Pompeo, *The Leoni binding*, ca. 1590, Royal Collection Trust, London, England, RCT.uk.