

Handwritten text in Leonardo da Vinci's mirror script, likely discussing the mechanics of flight.



Handwritten text in Leonardo da Vinci's mirror script, continuing the notes on flight.



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Codex on the Flight of Birds

Collection Leonardo Universal

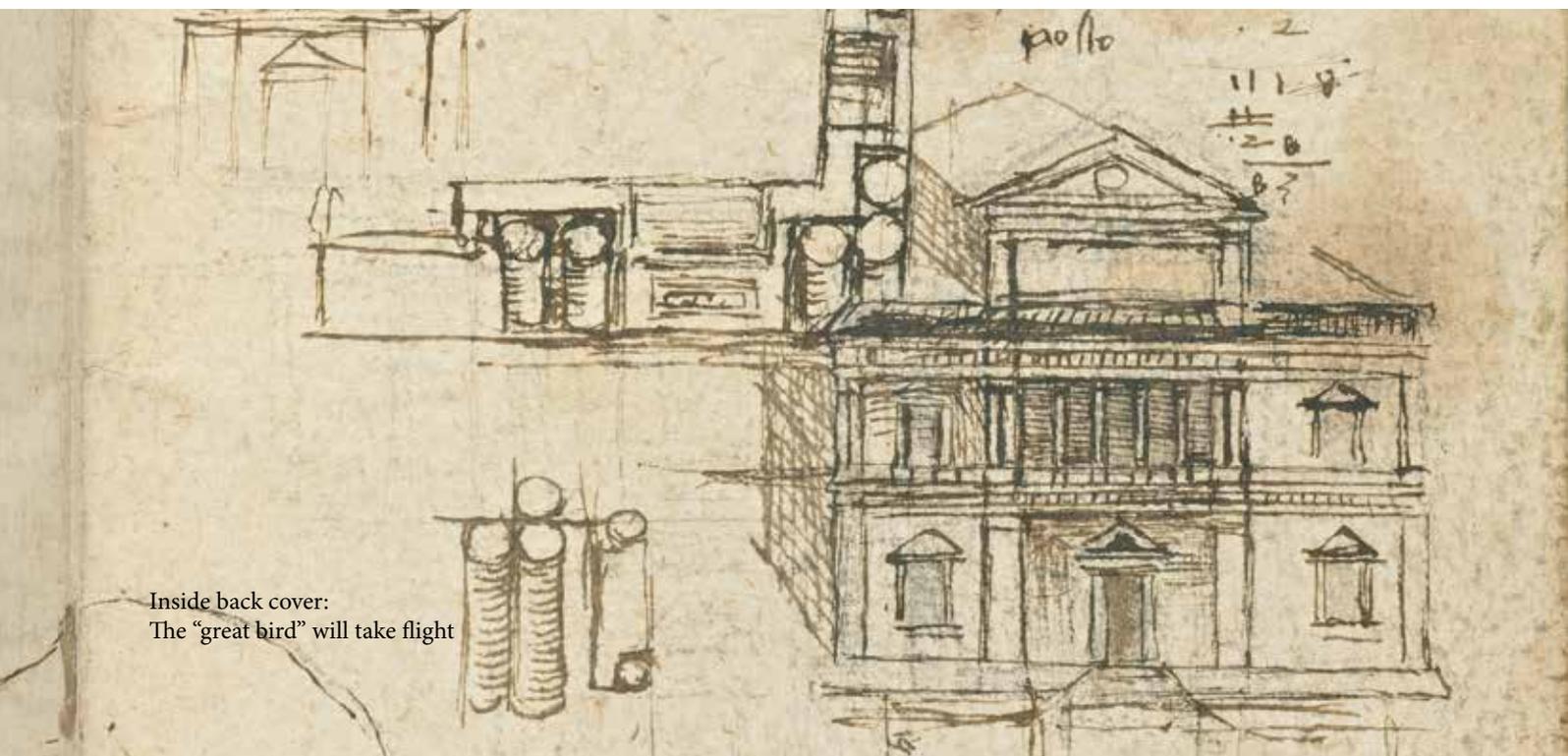
THE BIBLE OF MODERN AERODYNAMICS

THE FOUNDATION OF THE DREAM OF THE HUMAN FLIGHT

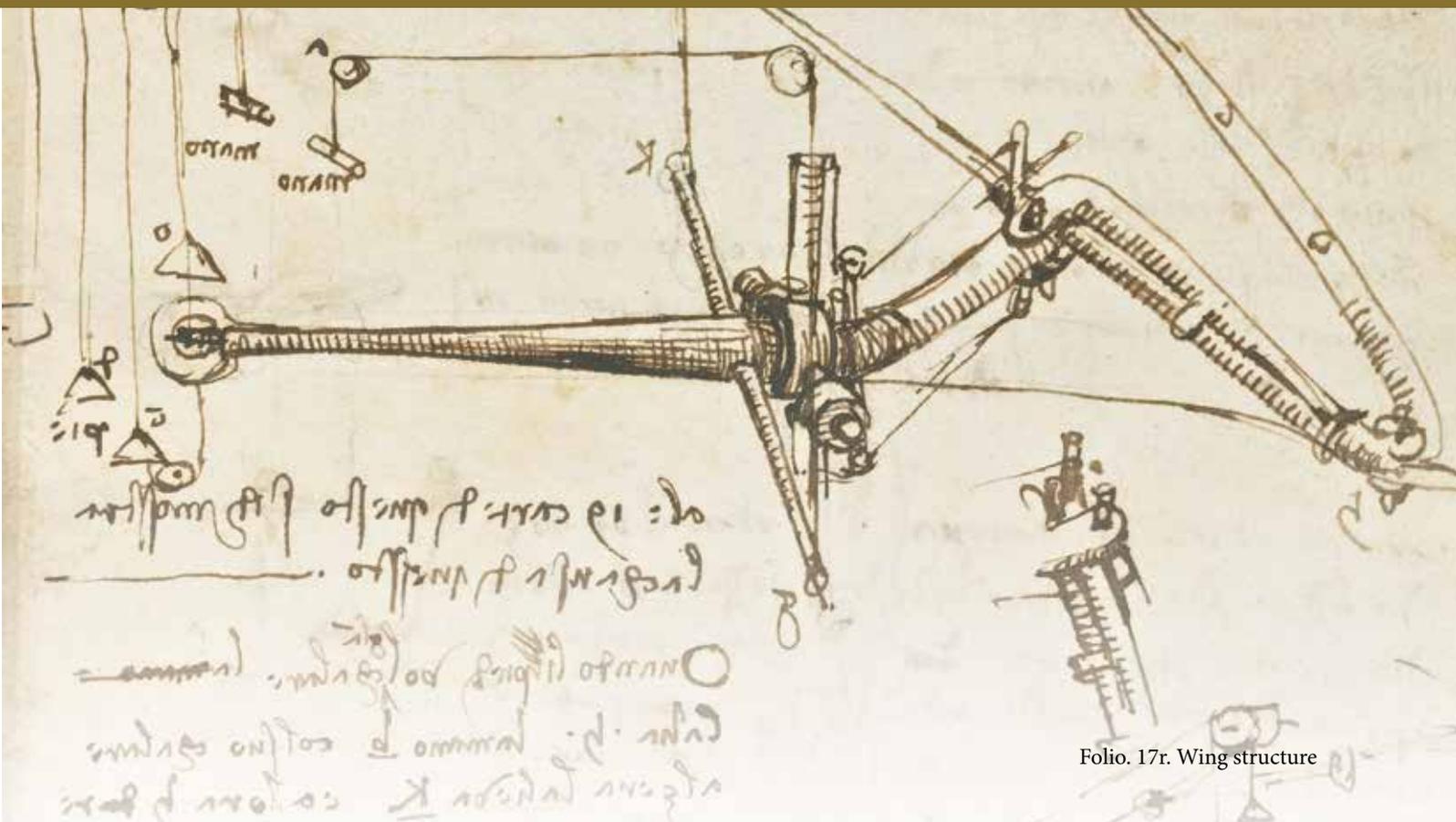
This treasure that holds the thoughts of one of the most important genius in history, Leonardo Da Vinci, is an example of the multitude of disciplines which he had knowledge about: anatomy, physics, optics, mechanics, hydraulic and architecture among others. Leonardo Da Vinci's ideas about flight, which were conceived more than 500 years ago, are determinant for the nowadays aeronautics.

While he was painting the Gioconda, he built the idea about a treatise on the flight and wrote a reminder to divide his observations of the birds in 4 books. First one concerns the way of flying beating the wings; second, the flight without beating the wings in favor of the wind; third, to what it has in common between the flight of birds, bats, flying fish and the insects; fourth and last, to the movement of flight based on a mechanism.

The obsession of Leonardo to understand the flight and copy it with a machine that would allow the man to fly it was evident in this codex on the flight of birds witten in 1505. It has 38 pages of 154x213mm, all of them filled with text with the characteristic specular writing of Leonardo and includes a lot of sketches with dip pen in the wide margins. His attention is focused on three separate topics, although intimately related: how the birds fly, the general principles of aerodynamics and which type of machine would make possible the flight of humans. The visionary Leonardo was almost 400 years ahead of the flight of the Wright brothers. The price of Leonardo's manuscripts beats all records, Bill Gates paid \$ 30,802,500 dollars in Sotheby's New York for the Codex Leicester or Hammer of Leonardo in 1994, which has of 36 pages.



Inside back cover:
The "great bird" will take flight



Folio. 17r. Wing structure

Two of his discoveries, the movement of the air over a bird's wing, similar to the fluids, and how the center of gravity and the pressure center of a bird are different, were extraordinary intuitions that anticipated some of the fundamentals of the modern aeronautic. This document was of such influence for the study of aviation that a digital copy was sent to Mars in the *Curiosity* rover that landed in the red planet in august 2012.

Leonardo continued his observations pointing out the differences between the flexible components of the bird's wings, the feathers and the rigid components, the bones. Leonardo also noticed the importance of the atmospheric conditions and other aerodynamic factors, for these reason he decided to focus on machines that help the man to glide in air currents and thus created one that resembled a big bird of prey. Even some of his thoughts took the form of a flight manual "if the wing and the tail are over the wind, low down half of the opposite wing and will receive the wind strength and will straighten". Among his manuscripts appear the studies and sketches of hang glider and helicopter.

The pages of the codex on the flight of birds also contain multiple unexpected insertions, like the anatomic study of a leg or the sketch of the face of a man under the text lines. The identity of the face remained as a secret for more than 500 years. In 2009 digital analysts were capable of separate the draw from the text and made it possible show the image of Leonardo's self-portrait with the age of 50. For Leonardo, art was the fundament of engineering and the engineering was an expression of art. The artist that painted Mona Lisa and Last Supper was a visionary of the Renaissance that saw the modern world before this was made.

In this way it would also explain the opinion that Francis I, king of France, expressed in 1542 about the scientific knowledge of Leonardo, gathered by Cellini: "I would not like to stop repeating the words that I listened from the king about him, words that were directed to me in presence of the Ferrara's cardinal and Lorena's cardinal and the king of Navarre; he said that he did not believed that existed other man in the world that had so many knowledge as Leonardo, not as much as an sculptor, but as an extraordinary philosopher".

THE TRUE CODE DA VINCI

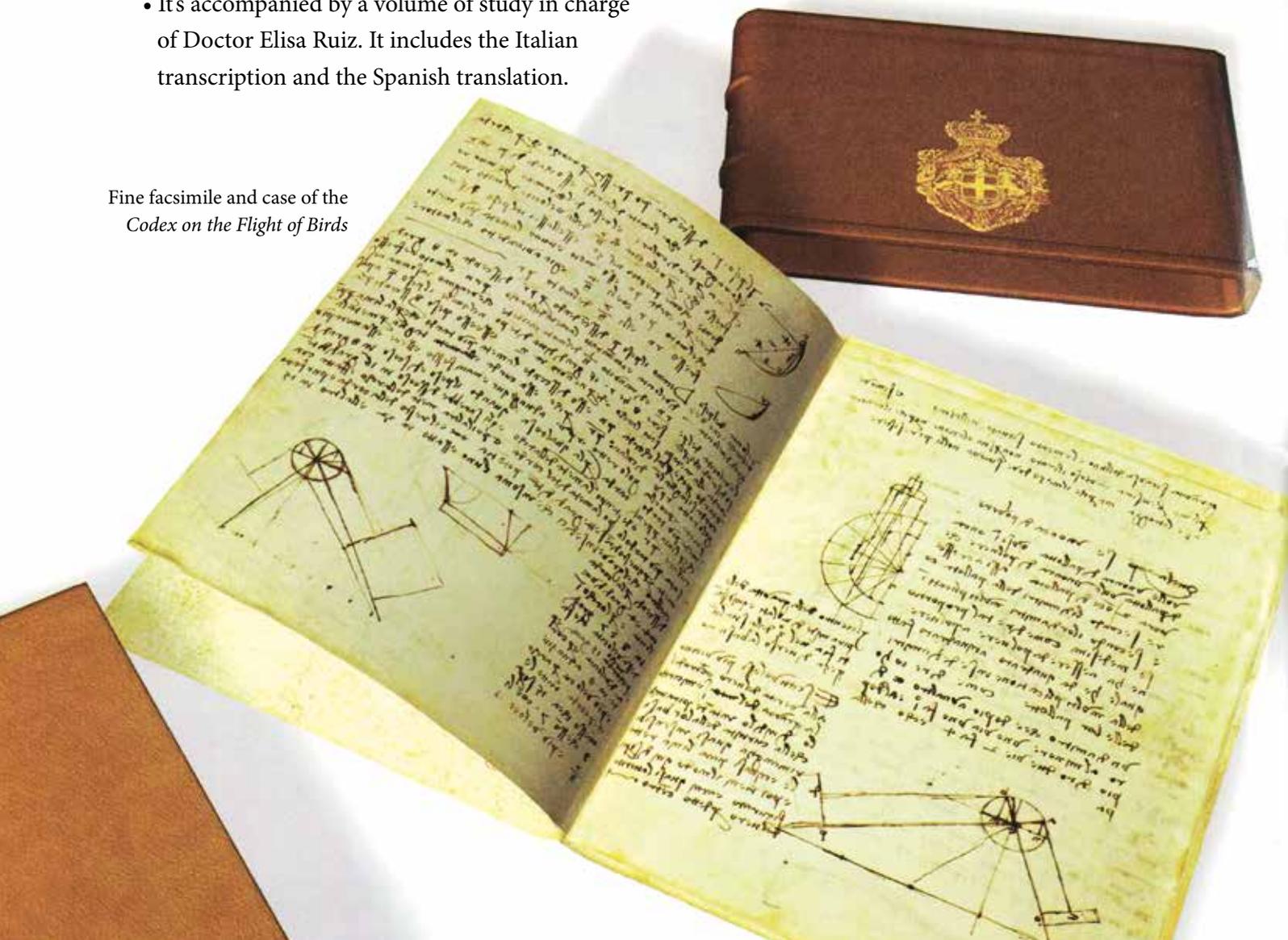
THE PERFECT WORK

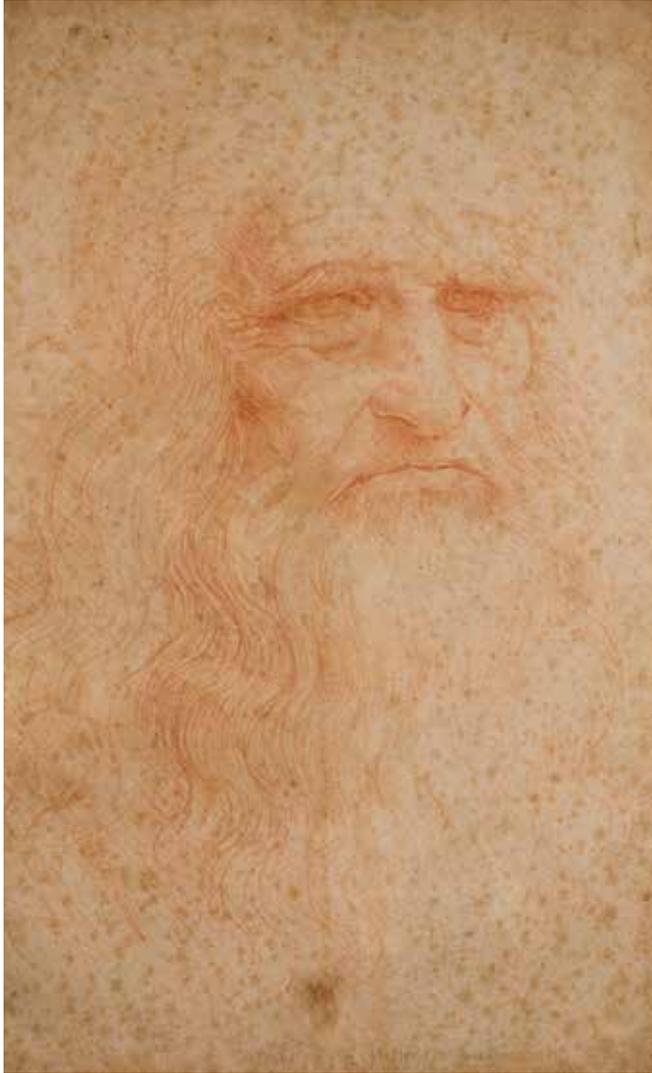
On the occasion of the V LEONARDO CENTENARY, the most important museums in the world chose Patrimonio Ediciones to honor this universal genius, coediting and accurately reproducing his codexes and master pieces. First and only full facsimile edition limited, with its copies numbered and authenticated by notary, which includes the four most famous works by Leonardo, never before reproduced in full facsimile format.

1) *Codex on the Flight of Birds*

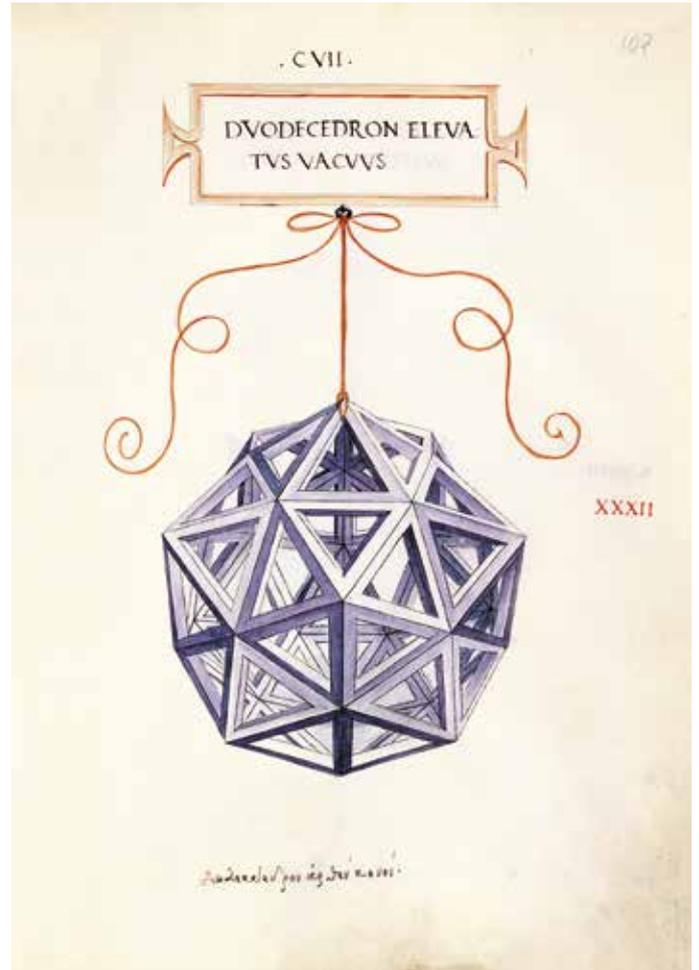
- Current location: Royal Library and Museum of Turin. Ms. Varia 85.
- Period/writing: 1505. Italian, specular writing characteristic of Leonardo.
- Dimensions/extension: 213x154mm. 38 pages.
- Illustrations: all of its pages that include a lot of sketches with dip pen in the wide margins.
- Case: identical to the original in brown leather with shield in the exterior side embossed in gold.
- World edition, unique and limited to 500 copies numbered and authenticated by notary.
- It's accompanied by a volume of study in charge of Doctor Elisa Ruiz. It includes the Italian transcription and the Spanish translation.

Fine facsimile and case of the *Codex on the Flight of Birds*





Leonardo da Vinci's self-portrait



Luca Pacioli credits that Leonardo da Vinci made the illustrations of the geometric bodies with ink and watercolor. Equally the testimony of the printed edition of *De Divina Proportione* in Venice of 1509 refers, once again, to the drawings of Leonardo. Fol. 107r

- 2) *De Divina Proportione*. 260 pages of parchment of 28'5 x 20 cm: 60 of them with geometric bodies illustrated in color and full-page by Leonardo da Vinci, 102 capitular letters illuminated with gold. Binding: original of the fifteenth century (1498) designed by Leonardo Da Vinci; with covers in leather on board with dry embossing, gold and silver aged with zippers bronze bathed in pure 24k gold. Pinacoteca & Ambrosiana Library Sig. & 170 sup. Milan. It is accompanied by a study volume that includes the Spanish translation. World edition, unique and limited to 500 copies numbered and authenticated by notary.
- 3) *The Vitruvian Man*. Scroll of 34'4 x 24'5 cm, Accademia Gallery of Venice.
- 4) *Leonardo da Vinci's self-portrait*. Parchment of 33'5 x 21'6 cm, Royal Library and Museum of Turin.



De Divina Proportione,
binding

What is for Leonardo the proportion?

In 1505 Leonardo writes “proportion is not only found in the numbers and measures, but also in the sounds, weights, times, places and everything that exists”. The occasion came to him with the arrival to Milan, in 1496, of Luca Pacioli, a prestigious math teacher, disciple of Piero della Francesca. He has around 45 years and has just finished the Last Supper with which he seems conscious about the necessity of consider the space through geometrical and harmonic breakdowns. Luca Pacioli is finishing *De Divina Proportione* to which Leonardo contributes with the 60 illustrations. They are geometric bodies depicted in perspective that cover from the simplest form to the most complex polyhedron.

Over centuries it was thought that ancient Greeks used a numeric proportion specific for his ideals of beauty and geometry. This proportion has been called golden ratio, golden measure or divine proportion. The numeric value of this ratio, which is represented with the Greek letter *Phi* [ϕ], is:

$$\phi = \frac{1 + \sqrt{5}}{2} \approx 1.6180339887\dots$$

This type of rectangular proportion can be found in a multitude of architectural works like the Greek Parthenon, the Pyramids, the UN quarters, Nôtre Dame cathedral. In the plastic arts the golden ratio has been used by the most outstanding artists. In music, *Phi* appears in Mozart’s sonatas, in the 5th symphony of Beethoven and in Schubert’s compositions. In nature it can be found numerous shapes with the Golden ratio: digitalfinger prints, the Milky Way. The aesthetic of the human body also contains *Phi*: the distance from head to feet by the distance from the navel to feet gives a perfect golden number.

The work is made of three sections. The first of them speaks about the Golden ratio and regular polyhedrons. In the second one, the golden ratio is used both for architecture and the human body, using the example of *Vitruvius’s* work, and it created the letters in the alphabet; in the last part appears the Italian translation of *De Quinque Corporibus Regularibus* of Piero della Francesca. *De Divina Proportione* is an essential work to understand everything related with the aesthetics of proportions, a mistery that amazes us through the centuries. If we add to that Leonardo Da Vinci’s illustrations, we obtain the perfect work, the true **Da Vinci Code**.



Leonardo was a convinced propagator of the perspectives and proportions including *Phi* in many of his works, for example in *The Last Supper*, whose execution coincided with the period of realization of the illustrations of this manuscript.

BILL GATES PAID FOR THE CODEX HAMMER OF LEONARDO 30.802.500 \$



The golden ratio contributed significantly by connecting the studies of Leonardo da Vinci with his studies of geometry, light and optics with his art, mastering the shading and perspective to model objects on a two-dimensional surface so that these appear to be three-dimensional

LAST COPIES
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