

Looking at Leonardo

An Exhibition of Books, Facsimile Manuscripts
Scale Models, & Websites



A Museum Studies Exhibition
in the Emeriti Gallery of the
Main Library of California
State University, East Bay

Featuring
Prints & Books from Special Collections &
Loans from the Teaching Collection of the
Institute for Aesthetic Development

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Looking at Leonardo

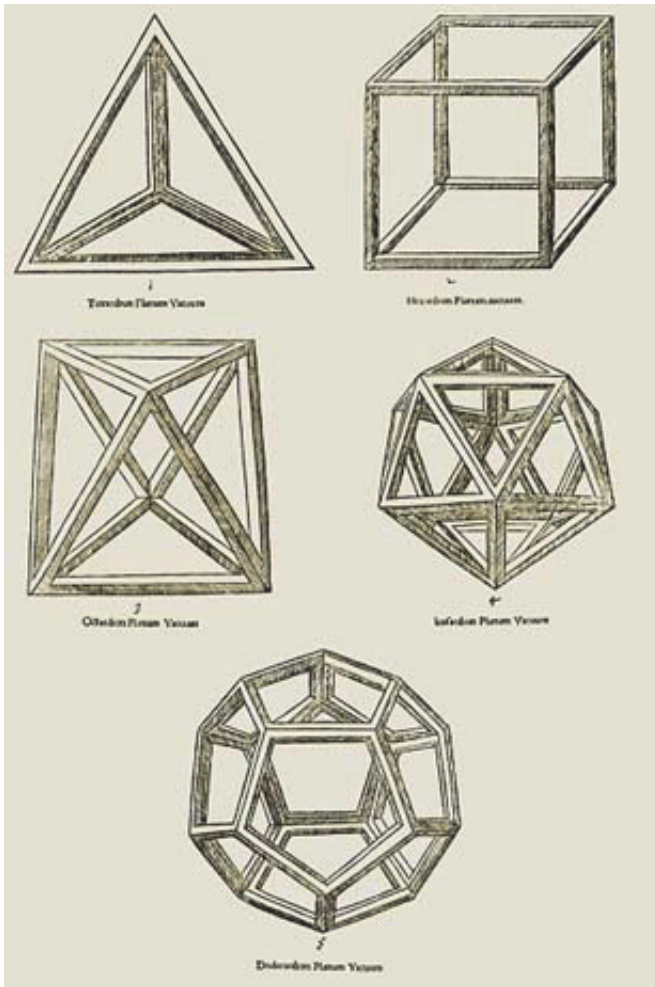
Starting in the Spring Term of 2011
the Emeriti Study Room in the Main Library of CSUEB
was converted into a classroom gallery.
Now known as the Emeriti Gallery,
it has become a place for interns in the
Art Museum & Gallery Studies Certificate Program
to gain experience in exhibition design using
prints and books from Special Collections
and loans from the Teaching Collection
of the Institute for Aesthetic Development.

The first exhibition in the newly remodeled gallery
was “European Traditions, Renaissance to Modern.”
It filled the entire space. Its purpose was
to develop and demonstrate the principles that would
ideally be used in the proposed World History Museum,
a teaching museum that is being planned inside the
Main Library of California State University, East Bay.

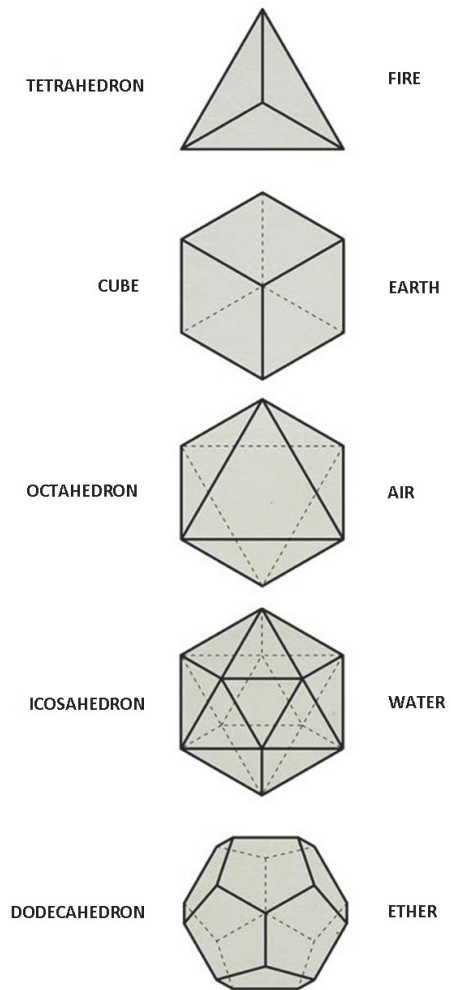
On each wall is an original work of art from a particular era
that is surrounded by museum-quality replicas
from the same era, works that help students to visualize
each cultural period of World History as a whole.
A special feature of this exhibition design is that on each wall
is an original print by a major artist seen next to
a deluxe edition of a book illustrated by the same artist.
The “illustrated book” tradition goes back thousands of years.

In one corner of the Gallery is an exhibition-within-an-exhibition
called “Looking at Leonardo: an Exhibition of Books, Facsimile Manuscripts,
Scale Models, & Websites.” This is a concise overview of the work of Leonardo as a whole, represent-
ing his work as a painter, engineer, scientist, and book illustrator.
It centers on the book Leonardo illustrated, Divina Proportione (1509).
An internet portal allows a student to explore many aspects of Leonardo
while standing in the presence of his remarkable work.

Leonardo is *the* archetypical figure in whom art and science are of equal importance.
The World History Museum is being planned as a way of visualizing history as a whole,
with art, science, and cultural values being given equal attention. The Wisdom Traditions of many
cultures (Tribal, Taoist, Hindu, Buddhist, Jewish, Christian, and Islamic) teach that only when thought
and feeling are of equal importance, only when the left-brain and right-brain are equally active on a
regular basis, can we achieve the fullness of our humanity.



Leonardo's Drawings of the Polyhedrons



Symbolism of Leonardo's Polyhedrons



Botticelli's Book

Models of Leonardo's Polyhedrons

LEONARDO'S PLATONIC POLYHEDRONS

This group of geometric shapes are those rendered by Leonardo in his only illustrated book. The set of related forms represents the “Four Elements” (Fire, Air, Earth, Water) and the non-material “Ether” from which all matter is said to condense. Seen next to this set of brass polyhedrons is a rare edition of Dante’s Divine Comedy that was illustrated by Botticelli, Leonardo’s older contemporary and the only artist mentioned in Leonardo’s manuscripts. Botticelli worked on these illustrations for many years in the late 15th century, just as Leonardo was illustrating his book. Botticelli’s lyrical approach to The Transcendent was figurative. His images picture the journey of a soul in the form of a man (Dante himself) who is guided through stages towards the starry heaven by a loving spirit (Beatrice).

Leonardo also used human figures as metaphors for how consciousness can attain a heavenly state of eternal bliss by linkage with The Transcendent. For example, his “St. Jerome” moves toward heaven by meditating in the desert. His agony is the pain of overcoming the selfishness of ego. His ecstasy is the bliss that follows the victory of the soul. In Leonardo’s picture of the “Annunciation” Mary’s soul is already open to receiving the impregnating Light of God because of the purity of Her spirit. She has become all-loving. Mythologically speaking, Her virginity is a “virginity” (or purity) of the soul which qualifies Her to “marry” the Heavenly Father. At another level, Catholic nuns also are said to “marry” Jesus.

Leonardo also had a special feeling for geometric symbols of The Transcendent. The cosmic symbolism of these five polyhedrons derives from Plato who probably continued it from Pythagoras. These five regular polyhedrons, the only polyhedrons that have equal sides, represent the so-called “Four Elements” (Fire, Air, Earth, & Water) and Ether. It is from infinite, luminous, non-material Ether that the material world is said to descend. In traditional metaphysics, Air, Earth, Fire, and Water are not “elements” in the modern chemical sense. Rather they are the four “conditions” of matter: liquid, solid, etc.

Among philosophers, this special group of five geometric forms is called the “Platonic Solids,” and Leonardo illustrated them as solids. However, Leonardo also illustrated them as voids contained only by edges. This is the first time such illustrations are known to have been made. They enable one to “see” all sides of each form at the same time. Pacioli used models, much like those you are looking at, to teach geometry and metaphysics. The city of Milan found these models, and what they represent, to be so important that they displayed a set of these polyhedrons in the city hall.

There is more to these visualizations of how the material world is constructed than mathematical beauty. Leonardo’s highly developed metaphysical system includes what he called “nothingness” at the core of every “thing” that is. These so-called skeletal drawings appear to reflect this insight. That there is a non-material dimension called “no-thing” at the center of “everything” is a very uncommon way of perceiving the universe in the Western World but is very common in the Eastern World of Taoism, Hinduism, and Buddhism.



THE LEONARDO BOOK STAND

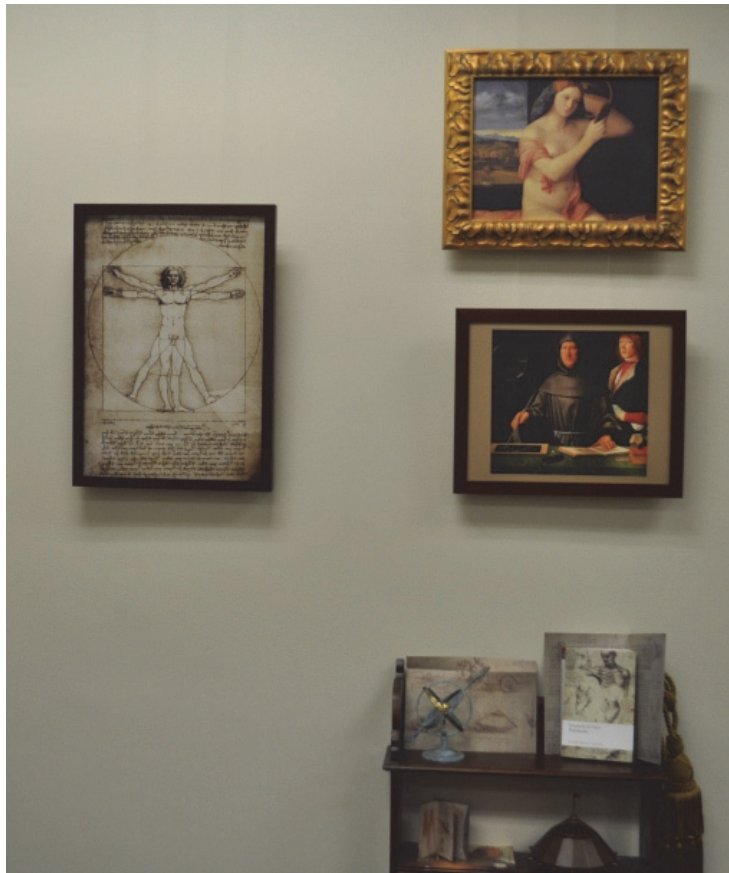
The European Gallery provides a concise overview of the last six centuries of Western art, in other words, the whole of the modern era since the Renaissance. In addition to prints and paintings, the structural themes that connect all the walls in this gallery are books illustrated by great artists from each century, together with major literary and scientific developments from each period. On top of this stand is a facsimile edition of Divina Proportione (published in 1509), illustrated by Leonardo in the 1490s. It is displayed over a selection of contemporary Leonardo books and magazines. This 21st century selection includes the most recent scholarly volumes, more general books on his many aspects as an artist-scientist-engineer, and popular magazine articles, as well as a few children's books. You are welcome to examine any of these publications. Please replace them when you've had a look. To check out similar publications consult the Haystack library catalogue.

This antique wooden book stand is positioned under two wooden replicas of *studiolo* panels from Urbino, the design of which has been attributed to Botticelli during Leonardo's lifetime. A *studiolo* was a small private space that was a combination library and museum. Surrounded by books and works of art, Renaissance gentlemen and high-born ladies read while seeking truth, looked while seeking beauty, meditated on noble virtues, and reflected on the meaning of life. In modern middle-class culture, the closest equivalent is the "den."



LEONARDO'S "VITRUVIAN MAN"

This is perhaps the most reproduced drawing ever made. Leonardo probably inked this drawing during the 1490s when he was starting to study "divine proportions" with Fra Pacioli, a noted mathematics professor and philosopher. Much has been written about the symbolism of this drawing. There is little question that the basic concept derives from statements on proportions by the Roman architect Vitruvius, whom Leonardo refers to underneath the drawing. Much debated is the question of what else was in Leonardo's mind. Was he trying to "square the circle" in an Alchemical manner? Perhaps. Did he actually divide all the major parts of the human body into segments that correspond to what Pacioli, Leonardo's teacher, called the "Divine Proportion," a proportion that also is known as the Golden Ratio? Perhaps. It also may well be that Leonardo's intention was to represent the ideal harmony that the circle & square have represented for centuries in the sacred art of the great spiritual traditions. In Taoism, Hinduism, Buddhism, Christianity, and Islam the square symbolizes the material world and the circle symbolizes the spiritual dimension that permeates all of matter. Said another way, the Microcosm is a reflection of the Macrocosm.



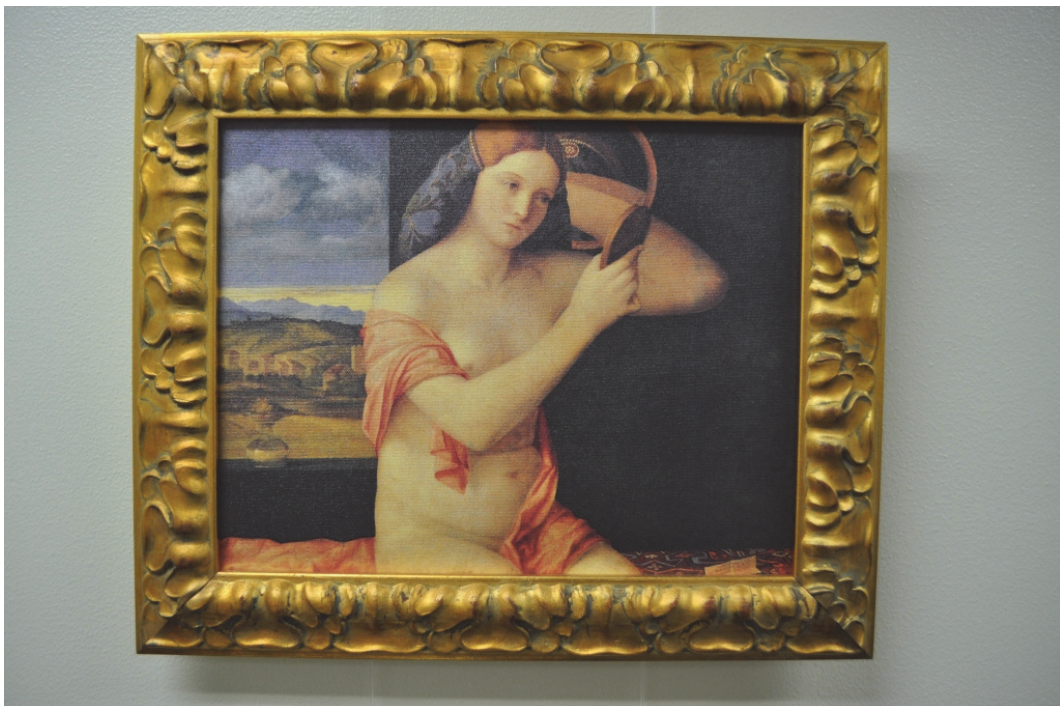
LEONARDO'S TEACHER

This portrait of Fra Pacioli probably was painted by Jacopo Barbari about 1495. Barbari was a painter-printmaker from Venice and a close student of human proportions. His monograph was the mystical caduceus. He knew Giovanni Bellini in Venice and Albrecht Durer during and after Durer's visits to Venice. Pacioli is shown illustrating a theorem of Euclid, the ancient Greek mathematician who is considered the "Father of Geometry." On the table are tools of his trade. Placed on a book is a geometric object Pacioli used to teach both math and metaphysics. It is a dodecahedron, a regular polyhedron that has 12 flat pentagonal faces. This geometric form, the 5th of the 5 traditional "Platonic Solids," was to Plato and to Pacioli symbolic of the so-called "quintessence" – the unqualified, infinite Ether from which derives all that is material, that is to say, all that is qualified into specific forms so as to be perceivable inside the sphere of space and time. The identity of the student standing beside Pacioli is uncertain. Some think it may be Durer, the German genius who brought the art of Renaissance proportions from Northern Italy to Northern Europe.



BELLINI'S "NUDE WITH A MIRROR"

Hanging above the Paciolo portrait is "Nude with a Mirror" painted by Giovanni Bellini in 1515. When Leonardo visited Venice in 1500 he functioned as a connecting link between the High Renaissance in Florence, where line was favored over color, and the High Renaissance in Venice, where color was favored over line. Leonardo seems to have had an important influence on Bellini and on Bellini's student, Giorgione, who both began to incorporate some of Leonardo's *sfumato* technique to soften the edges of their forms to such an extent that forms tend to evaporate into the field. The result is that their formerly crisp lines seemed to moisten into an extremely subtle, smoky, shadowy haze, a haze that has a mysterious character which hovers between line and color. One of Leonardo's primary achievements was creating faces and figure-forms that for the first time in the art of the Italian Renaissance seemed to his contemporaries (and to us) to be "real people." Leonardo's pioneering leap into modern realism may well have inspired Bellini and Giorgione to make further leaps into how to picture their own feelings about modern reality. They moved with Leonardo past the medieval world of halos into the compelling dimensions of daily life. Among the dramatic outpourings from the sensuous brushes of Bellini and Giorgione, newly enriched by the deep colors of oil paint, were compositions such as this "Nude with a Mirror," one of the first secular female nudes made in the Western World since the ancient art of Greece and Rome. Some think the subject is merely vanity. Perhaps. Christian dogma asserts that the ego's vain love of itself keeps one from heaven. Some think it is nothing but uninhibited eroticism. Perhaps. Bellini did have some very sensuous patrons. However, in Neoplatonic philosophy, which was important in Bellini's circle, looking in a mirror symbolizes the kind of meditative self-reflection that tends to keep erotic egos under control.

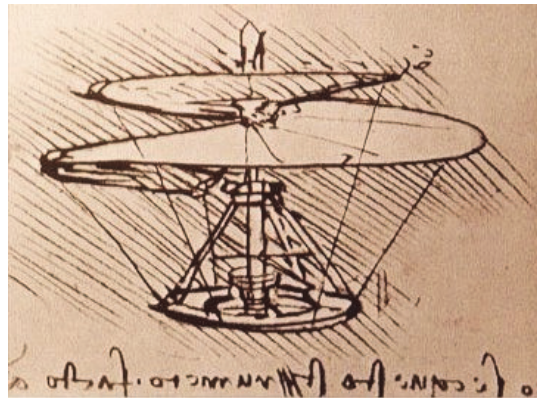




THE LEONARDO MODEL STAND

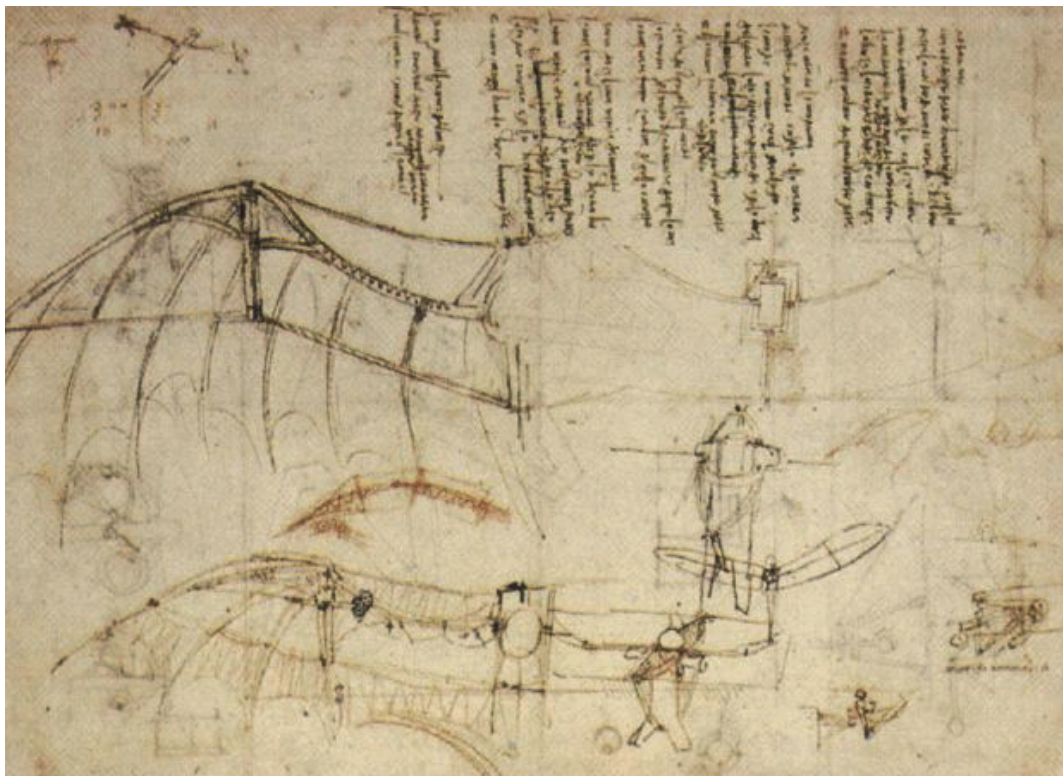
This display stand holds scale models of some of his best-known mechanical designs for a glider, a helicopter, and a tank. Next to them are facsimiles of the manuscripts on which he drew his revolutionary designs for these machines, machines that would not see the light of day until the 20th century. A recent realistic test of a full-scale replica of Leonardo's glider shows that it could actually fly. In fact, the length of its test flights were longer than the first 1903 test flights of the Wright Brothers aeroplane at Kittyhawk, the first powered aircraft to fly. Leonardo is also credited with designing and building the world's first robots. No drawings survive of Leonardo's robots, including a medieval knight and small lion. However, a number of quite possible "reconstructions" have been built. Given Leonardo's robotics, and his remarkable contributions to the science of human anatomy, it is fitting that a recent innovative machine that makes possible extremely precise robotic surgery has been named the Da Vinci.







Model of Leonardo's Glider



SEMINAR TOPICS

for CSUEB graduate students in the Museum Studies Certificate Program:

What is it about Leonardo's "Last Supper" that makes it perhaps the best known sacred painting in the world? Write a wall label for museum visitors about this topic.

What is it about Leonardo's "Mona Lisa" that makes it perhaps the best known secular painting in the world? Write a wall label for museum visitors about this topic.

What is it about Leonardo's "Vitruvian Man" that makes it perhaps the best known drawing in the world? Write a wall label for museum visitors about this topic.

Hanging in this Leonardo Gallery, next to the "Vitruvian Man" and over the only published book Leonardo ever illustrated, is a portrait of Pacioli. This noted mathematician and philosopher was Leonardo's teacher and friend. Leonardo illustrated Pacioli's book, Divina Proportione (1509). It is one of the most important books of the Renaissance. Write a wall label about this book and its illustrations.

Leonardo's primary illustrations in Divina Proportione represent the so-called "Platonic Solids." Pacioli taught with 3-D models of these regular polyhedrons. There are 3-D models on view in this Leonardo Gallery. What is the metaphysical symbolism here? Write a wall label on this topic.

Why are surgeons, particularly heart surgeons, still impressed by the anatomical drawings Leonardo made during his secret dissections of cadavers? Write a wall label on this topic.

Leonardo's designs for flying machines are famous, but are they practical? Would they actually fly? Write a wall label on the topic.

Leonardo is credited with inventing the first robot. Write a wall label on this topic.

How many paintings are widely accepted as by Leonardo's own hand? How do you know? Write a wall label on this topic.

The Louvre is thinking about cleaning the "Mona Lisa." Is this a good idea? Write a wall label on this topic.

What did Leonardo look like? How do you know? Write a wall label on this topic.

In The Da Vinci Code, the suggestion is made that the "Mona Lisa" is an androgynous portrait, and therefore contains a mystical secret. What is this secret? Write a wall label on this topic (including a reference to the image opposite)

BIBLIOGRAPHIC NOTE

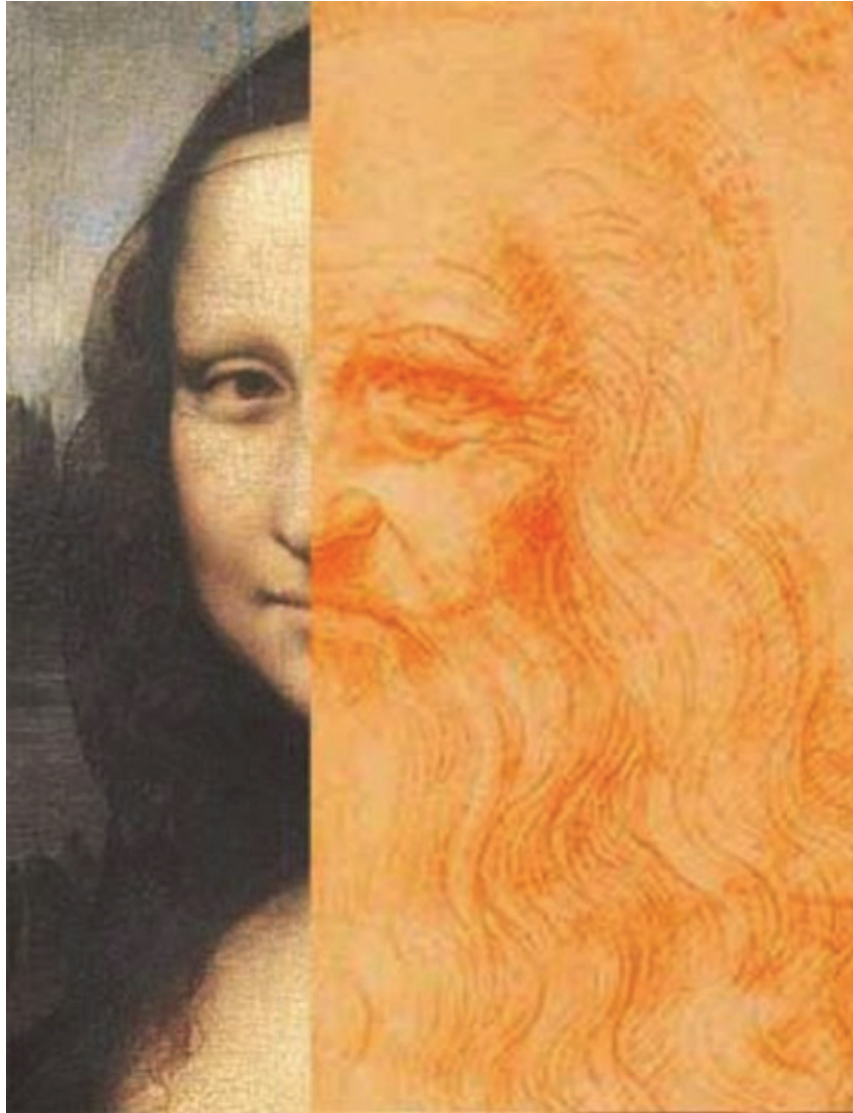
A majority of the most important recent scholarly books and some of the more interesting popular articles on Leonardo in magazines and newspapers have been gathered in this gallery. They have been purchased by the Institute for Aesthetic Development and placed on the Leonardo Book Stand for your use. Feel free to look through them for however long you wish and then return them to the stand. There are also a few small books for children, including pop-up books. These resources introduce you to the remarkable range of his work as an artist, architectural designer, engineer, and anatomist of astonishing brilliance.

Facsimiles of Leonardo's own manuscript pages that he illustrated with his secret studies of the human anatomy, studies which are still amazing modern surgeons, are available for close examination. Facsimile drawings of some of his most innovative engineering designs have been placed beside scale models of his revolutionary glider, helicopter, and tank. You can pick up and hold all of them for close examination. The internet offers thousands of pages of information on Leonardo. Much of it excellent, and some of it is not. Evaluating such resources requires a good deal of critical thinking. A selection of the better websites has been bookmarked.

RESEARCH NOTE

The Leonardo scholars who have published the most in recent decades are Martin Kemp, who is at Oxford University, and Carlo Pedretti, who is at UCLA. I recommend that as a guide to your research projects you consult their books, most of which are scholarly but some of which are popular. For the drawings, first read A. E. Popham.

I began my Leonardo studies under A. E. Popham in the 1960s. I have written quite a few articles on various aspects of Leonardo's art and philosophy over the years and am completing a book on his life and thought. For those of you who want to do advanced study please ask me for a specialized bibliography. If you are a registered student in one of my classes feel free to ask me whatever you have in mind at any time.



For a long time, many have considered the “Mona Lisa” to be a man/woman (or an Androgyne), partly because “she” has an Adam’s Apple. Women do not have Adam’s Apples. This computer-generated image lends support to the Androgyny theory by suggesting the “Mona Lisa” is actually a self-portrait of Leonardo as an Androgyne. This striking image (called “Mona Leo” by its maker) was constructed at Bell Labs in 1987 by Lillian Schwartz, long before digital art became commonplace.

That Leonardo was an enlightened Androgyne is not an absurd idea. There are other Androgynous images in his work, such as “St. John the Baptist.” Moreover, what we know of his metaphysics (such as his profound idea of “nothingness”) is consistent with Androgyne philosophy. In traditional metaphysical philosophy, Androgyny is not a physical condition and has nothing to do with bisexuality or any other form of sexual preference. Androgyny is understood as a rare mode of awareness in which so-called “maleness” (rationality) and “femaleness” (emotionality) have been integrated. The result is an extremely high form of consciousness. In the sacred art of many religions, the divine Androgyne has been a symbol for Enlightenment, or Buddhahood, or Cosmic Consciousness, for thousands of years. For a concise survey of the Androgyne in World Art, see my book Duchamp & Androgyny: Art, Gender, and Metaphysics, Berkeley: No-Thing Press, 2003.