

Leonardo da Vinci: Face to Face

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Who was Leonardo da Vinci? He was the spokesman of nature in all its variety, revealing and concealing its infinity in never ending transformations. Nature was his master. Mathematics is the language that allows Leonardo a discrete approximation to the continuum of nature. Experience, *l'esperienza*, is the path of science in order to avoid the pitfalls of speculation. Leonardo is not Kant. We are natural beings having the capacity of judging what we think and do without submitting nature to *a priori* forms of human knowledge. Leonardo is aware of space-time infinity. His *sfumato* makes it manifest for the senses. He thinks in form of notes and sketches. Thinking is design and design is thinking. His notes, written underway, are the matter of *possible* treatises that turn to be themselves sketches, not an *opus*. Although he recommends the painter in the after his death compiled Trattato della Pittura (in the following as TP) to be lonely (*solitario*) in order to be himself (*E se tu sarai solo, tu sarai tutto tuo*, II, 48)¹ his thinking is dialogical. He addresses his readers either as future painters or just as human beings. He faces animals, plants, mountains, rocks, air, fire or rivers letting them be what they are. Leonardo is a phenomenologist *avant la lettre*. Mathematics is the *via regia* of science. But science is the small daughter (*figliola*) of experience, not its master. "Truth was only the small daughter of time" (*La verità fu sola figliola del tempo*, Pensieri e Aforismi, 103). Printed books can be endless imitated in contrast to the uniqueness of painting, as Leonardo remarks at the beginning of the Trattato della Pittura (TP I, 4). He says of himself to be *omo senza lettere*, a non-philosopher, not having learned Greek and Latin, (Frammenti per un' autobiografia spirituale, 7). He rejects the speculations of the School. He is an empirical philosopher. He reads the classics, beginning with Ovid's *Metamorphoses*, in Italian translation (*volgare*).²

The following notes deal with *some* of Leonardo's *personal* encounters with painters and academics. The cities where they took place were mainly Florence and Milan. I group them roughly according to these cities although Leonardo travelled to other cities and places where other personal encounters took place. The Florence time was between 1469 and 1481, Milan between 1482 and 1499, Rome between 1514 and 1516 and Clos Lucé between 1517 and 1519. Between 1499 and 1512 Leonardo was in Venice, Mantua, and again in Florence.

¹ References to quotes of Leonardo refer to: Leonardo da Vinci. Scritti. ed. J. Recupero. Rusconi 2009. See also my Understanding Leonardo: <http://www.capurro.de/leonardo.html>. Abridged version: <http://www.capurro.de/understandingleonardo.pdf>

² On Leonardo as a philosopher see my notes <http://www.capurro.de/leonardo3.html#IX>.

My sources are *Wikipedia* articles, Jacopo Recupero, editor of the *Scritti* (in the following: Recupero), and Bruno Nardini.³ This is my selection:

I. Florence

Andrea del Verrocchio (ca. 1435-1488)

Pietro Perugino (ca. 1446/1452 – 1523)

Lorenzo di Credi (ca. 1459 – 1537)

Sandro Botticelli (ca. 1445 – 1510)

Raffaello Sanzio da Urbino (1483 - 1520)

Ioannis Argyropoulos (ca. 1415 – 1487)

Michelangelo di Lodovico Buonarroti Simoni (1475 – 1564)

II. Milan

Francesco di Melzi (1491 – 1570)

Luca Pacioli (ca. 1445 - 1517)

Jacopo Andrea da Ferrara (? – 1500)

Giorgio Valla (1447-1500)

Francesco di Giorgio Martini (1439 – 1501)

Donato Bramante (1444 – 1514)

Giuliano da Sangallo (1445 - 1516)

Giovanni Ambrogio de Predis (ca. 1455 - 1509)

Baldassare Taccone (1461 - 1521)

From Andrea del Verrocchio Leonardo learns the basics of painting. Luca Pacioli is his teacher of mathematics and one of his best friends. Raffael is his most famous admirer and Michelangelo his antagonist.

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³ Bruno Nardini: Leonardo. Portrait of a Master, Florence 1999. For a comprehensive list of artists, politicians, intellectuals, poets, musicians, scientists and scholars who were in contact with Leonardo see my Understanding Leonardo <http://www.capurro.de/leonardo.html>. Abridged version: <http://www.capurro.de/understandingleonardo.pdf>. For a biography of Leonardo see, for instance, Carlo Vecce: Leonardo. Roma: Salerno Editrice 1998. See the list of Leonardo experts in my <http://www.capurro.de/leonardo4.html>. See also my notes on Leonardo's library: http://www.capurro.de/leonardo3_1.html See also the Dizionario Biografico degli Italiani della Treccani <http://www.treccani.it/enciclopedia/>

Andrea del Verrochio

ca. 1435 - 1488



https://en.wikipedia.org/wiki/Andrea_del_Verrocchio

born Andrea di Michele di Francesco de' Cioni, was an Italian painter, sculptor, and goldsmith who was a master of an important workshop in Florence. He apparently became known as Verrocchio after the surname of his master, a goldsmith. Few paintings are attributed to him with certainty, but a number of important painters were trained at his workshop. His pupils included Leonardo da Vinci, Pietro Perugino and Lorenzo di Credi. His greatest importance was as a sculptor and his last work, the Equestrian statue of Bartolomeo Colleoni in Venice, is generally accepted as a masterpiece.

https://it.wikipedia.org/wiki/Andrea_del_Verrocchio

Lo stile del Verrocchio in pittura è intensamente realistico, con modi ripresi dalla pittura fiamminga, costituito da una linea espressiva e ricca di pathos. Tra il 1474 e il 1475 realizzò il Battesimo di Cristo, ora agli Uffizi, con il giovane allievo Leonardo da Vinci, che dipinse quasi sicuramente l'angelo di sinistra e i fondali paesistici.



Andrea del Verrocchio e Leonardo da Vinci, *Battesimo di Cristo*, Firenze, Uffizi

Recupero, xiv-xv:

La quieta vita nel borgo natale s'interrompe con il trasferimento della famiglia a Firenze. Morta la buonamatrigna, morto il nonno, il giovane segue il padre, passato a nuove nozze con Francesca Lanfredini, in città, dove ben presto sarà allogato col Verrocchio. [ca. 1472, RC]

Era il Verrocchio l'artista più originale e colto della Firenze di quegli anni tra il 1470 e il 1480: musico e matematico, dovette esercitare sul giovane allievo un grande fascino, avviandolo a quelle curiosità enciclopediche, cui naturalmente il singolare discepolo si sentiva portato

Sulla scorta delle affermazioni vasariane, si è voluto attribuire all'influenza del giovane taluni aspetti più nuovi dell'arte verrocchiesca: la sua ricerca di modi che mitigano la drammaticità di Donatello, la preferenza per movimenti armoniosamente risolti, l'amore per la grazia elegante delle forme, per il sorriso appena accennato dei volti, per certa aria trasognata e come assente delle figure femminili. Molti critici, però, hanno ragionevolmente riportato quanto sembra preleonardesco nel Verrocchio a un gusto che si incomincia a diffondere nell'arte fiorentina circa il 1475 ed è dallo scultore interpretato con sottile perizia attraverso gli effetti di luce dolcemente degradante sulle levigate superfici dei bronzi. E in questo momento, come ci vien tramandato, con gli esempi del maestro sotto gli occhi, Leonardo ebbe modo di esercitare la scultura e "facendo... di terra alcune teste di femine che ridono... e parimente teste di putti che parevano usciti di mano d'un maestro" (G. Vasari, *Vita di L. da V.*, Roma 1964, p. 468).

Pietro Perugino
ca. 1446/1452 – 1523



https://en.wikipedia.org/wiki/Pietro_Perugino

born Pietro Vannucci, was an Italian Renaissance painter of the Umbrian school, who developed some of the qualities that found classic expression in the High Renaissance. Raphael was his most famous pupil. He was born Pietro Vannucci in Città della Pieve, Umbria, the son of Cristoforo Maria Vannucci. His nickname characterizes him as from Perugia, the chief city of Umbria. Scholars continue to dispute the socioeconomic status of the Vannucci family.

While certain academics maintain that Vannucci worked his way out of poverty, others argue that his family was among the wealthiest in the town. His exact date of birth is not known, but based on his age at death that was mentioned by Vasari and Giovanni Santi, it is believed that he was born between 1446 and 1452.

Pietro most likely began studying painting in local workshops in Perugia such as those of Bartolomeo Caporali or Fiorenzo di Lorenzo. The date of the first Florentine sojourn is unknown; some make it as early as 1466/1470, others push the date to 1479. According to Vasari, he was apprenticed to the workshop of Andrea del Verrocchio alongside Leonardo da Vinci, Domenico Ghirlandaio, Lorenzo di Credi, Filippino Lippi and others. Piero della Francesca is thought to have taught him perspective form. In 1472, he must have completed his apprenticeship since he was enrolled as a master in the Confraternity of St Luke. Pietro, although very talented, was not extremely enthusiastic about his work. Perugino was one of the earliest Italian practitioners of oil painting. Some of his early works were extensive frescoes for the convent of the Ingessati fathers, destroyed during the Siege of

Florence; he produced for them also many cartoons, which they executed with brilliant effect in stained glass. A good specimen of his early style in tempera is the *tondo* (circular picture) in the Musée du Louvre of the *Virgin and Child Enthroned between Saints*.

Lorenzo di Credi

c. 1459 – 1537



https://en.wikipedia.org/wiki/Lorenzo_di_Credi

was an Italian Renaissance painter and sculptor, known for his paintings on religious subjects. He first influenced Leonardo da Vinci and then was greatly influenced by him. Born in Florence, son of goldsmith Andrea di Oderigo Barducci, he had started work in Andrea del Verrocchio's workshop by 1480. After the death of his master, he inherited the direction of the workshop. For Pistoia Cathedral he completed the painting of the *Madonna Enthroned between John the Baptist and St. Donatus* which had been partially painted by his master, Verrocchio, but was left unfinished when Verrocchio went to Venice. Amongst his other early works are an *Annunciation* in the Uffizi, a *Madonna with Child* in the Galleria Sabauda of Turin, and *Adoration of the Child* in the Querini Stampalia of Venice. Of a later period are a *Madonna and Saints* (1493; Musée du Louvre, Paris) and an *Adoration of the Child* in the Uffizi. In Fiesole, he remade parts of Fra Angelico's panels on the altars of the church of San Domenico.

Lorenzo's mature works (such as the *Crucifixion* in the Göttingen City Museum, the *Adoration of the Shepherds* of the Uffizi, the *Annunciation* in Cambridge and the *Madonna and Saints* of Pistoia) are influenced by Fra Bartolomeo, Perugino and the

young Raphael.

In recent times, one of di Credi's works gained attention when scholars pointed out a resemblance between the face of Monna Lisa by Leonardo da Vinci and the face of Caterina Sforza in a portrait by him. Caterina Sforza was the Lady of Forlì and Imola in Romagna, later prisoner of Cesare Borgia. The portrait, known also as *La dama dei gelsomini*, is now in the Pinacoteca of Forlì.



La dama dei gelsomini, by Lorenzo di Credi
(Pinacoteca Civica di Forlì),
presumed portrait of Caterina Sforza.

Bruno Nardini: Portrait of a Master. Florence 2001, 30-31



Disegno del cadavere di Bernardo Bandini Baroncelli (1420-1479)
https://it.wikipedia.org/wiki/Bernardo_Bandini_Baroncelli
Leonardo da Vinci (1479), il quale assistette all'impiccagione.
Giuliano de' Medici (1453-1478)



Ritratto di Giuliano de' Medici, Sandro Botticelli

Pazzi Conspiracy

https://en.wikipedia.org/wiki/Pazzi_conspiracy

The tan cap

"Leonardo what are you doing?" Leonardo turned with a smile. Lorenzo di Credi, standing behind him, was staring at the notebook where his friend was drawing a picture of a hanged

man.

Around the two painters was a crowd of curious onlookers, staring upward with their noses in the air. From a window of the law court palace hung a rope, at the end of which swayed the body of Bernardo Bandini de' Baroncelli, the assassin of Giuliano de' Medici.

"Cap of tan color,
doublet of black satin,
black lined gown,
turquoise jacket lined with fox
and the collar of the jacket lined with
black and red velvet,
Bernardo Bandini Baroncigli. Black stockings".

The drawing was not enough. Leonardo was also taking note of the hanged man's clothing, underlying the colors in his notebook. Lorenzo di Credi signed himself with the cross; but whether taht sign was asking mercy for Bandini or for Leonardo he could not say. The friend who had painted the angel's head of Verrocchio's altarpiece with such loving care was now observing a cadaver with cold, inhuman detachment, and taking notes as if that hanged man were not a Christian like himself.

Realizing how disturbed his friend was, Leonardo placed a hand on his shoulder.

"Is this not also an act of men? The painter is an observer of nature. There is external nature, which is the world with its stones, plants and animals, and there is a more secret nature, that of man. A few days ago I saw an Annunciation where the angel, in his announcing seemd about to drive the Madonna out of the room, with an insulting gesture, that of an enemy. And it seemed that the Madonna, desperately frightened, wanted to throw herself out of the window. No, Lorenzo", continued Leonardo, "in the same way that God made man in his own image the painter makes his figures, which always bear the imprint of their maker. That hanged man is Bandini, but this drawing is not Bandini alone, it is myself as well, and you too, all of us who are there to look. And it is also the Magnificent who has brought him back from Constantinople to vindicate his brother, betrayed and killed, and the hangman who executed him, everyone".

"I don't know how to explain it", continued Leonardo gazing intently into his friend's eyes, "it's difficult. The painter who paints by practice and judgement of the eye, without reasoning, is like a mirror, which imitates all things placed before it but has knowledge of none. But we, instead, we search for knowledge because only from that can we have the certainty of things.

The two friends, intent on their conversation, were walking toward Verrocchio's house. Although he no longer lived there Leonardo continued to visit the shop and even accepted commissions for some minor works."

Sandro Botticelli

ca. 1445 – 1510



Probable self-portrait of Botticelli, in his *Adoration of the Magi* (1475)

https://en.wikipedia.org/wiki/Sandro_Botticelli

Alessandro di Mariano di Vanni Filipepi, known as Sandro Botticelli, was an Italian painter of the Early Renaissance. He belonged to the Florentine School under the patronage of Lorenzo de' Medici, a movement that Giorgio Vasari would characterize less than a hundred years later in his *Vita* of Botticelli as a "golden age". Botticelli's posthumous reputation suffered until the late 19th century; since then, his work has been seen to represent the linear grace of Early Renaissance painting.

As well as the small number of mythological subjects which are his best known works today, he painted a wide range of religious subjects and also some portraits. He and his workshop were especially known for their *Madonna and Childs*, many in the round *tondo* shape. Botticelli's best-known works are *The Birth of Venus and Primavera*, both in the Uffizi in Florence. He lived all his life in the same neighbourhood of Florence, with probably his only significant time elsewhere the months he spent painting in Pisa in 1474 and the Sistine Chapel in Rome in 1481–82.

Only one of his paintings is dated, though others can be dated from other records with varying degrees of certainty, and the development of his style traced with confidence. He was an independent master for all the 1470s, growing in mastery and reputation, and the 1480s were his most successful decade, when all his large mythological paintings were done, and many of his best *Madonnas*. By the 1490s his style became more personal and to some extent mannered, and he could be seen as moving in a direction opposite to that of Leonardo da Vinci (seven years his junior) and a new generation of painters creating the High Renaissance style as Botticelli returned in some ways to the Gothic style.

He has been described as "an outsider in the mainstream of Italian painting", who had a limited interest in many of the developments most associated with *Quattrocento* painting, such as the realistic depiction of human anatomy, perspective, and landscape, and the use of direct borrowings from classical art. His training enabled him to represent all these aspects of painting, without adopting or contributing to their development.

Religious paintings after Rome

Botticelli returned from Rome in 1482 with a reputation considerably enhanced by his work there. As with his secular paintings, many religious commissions are larger and no doubt more expensive than before. Altogether more datable works by Botticelli come from the 1480s than any other decade, and most of these are religious. By the mid-1480s, many leading Florentine artists had left the city, some never to return. The rising star Leonardo da Vinci, who scoffed at Botticelli's landscapes, left in 1481 for Milan, the Pollaiuolo brothers in 1484 for Rome, and Andrea Verrochio in 1485 for Venice.

Recupero xv

Nella bottega del Verrocchio gli erano compagni Pietro Perugino e Lorenzo di Credi; vi lavorava, inoltre, più come aiuto d'Andrea che allievo, anche Sandro Botticelli, ricordato da Leonardo in due note che recano traccia delle vivaci discussioni con cui si affrontavano i nuovi problemi dell'arte:

Quello non sarà universale che non ama egualmente tutte le cose che si contengono nella pittura; come se uno non gli piace i paesi, esso stima quelli esser cosa di breve e semplice investigazione, come disse il nostro Botticella, che tale studio era vano, perché col solo gettare de una spugna piena di diversi colori in un muro, essa lascia in esso muro una macchia, dove si vede un bel paese. (TP II, 57)

Alla proposizione di Botticelli, insensibile al fascino del paesaggio, segue la risposta di Leonardo:

Egli è ben vero che in tale macchia si vedono varie invenzioni di ciò che l'uomo vuole cercare in quella, cioè teste d'uomini, diversi animali, battaglie, scogli, mari, nuvoli e boschi ed altre simil cose; e fa come il suono delle campane, nelle quali si può intendere quelle dire quel che a te pare. Ma ancora ch'esse macchie ti diano invenzione, esse non t'insegnano finire nessun particolare. (TP II, 57)

Un eco delle discussioni di bottega che, a distanza di anni, ritornano vive alla memoria, come mostra l'altro brano sulla prospettiva di diminuzione, in cui Leonardo apostrofa direttamente il suo antico compagno e amico:

Sandro, tu non di perché tali cose seconde paiono più basse delle terze. (*Atl.* 120 r)

Raffaello Sanzio da Urbino

1483 – 1520



Presunto autoritratto (1506 circa), Galleria degli Uffizi, [Firenze](#)

<https://en.wikipedia.org/wiki/Raphael>

known as Raphael, was an Italian painter and architect of the High Renaissance. His work is admired for its clarity of form, ease of composition, and visual achievement of the Neoplatonic ideal of human grandeur. Together with Michelangelo and Leonardo da Vinci, he forms the traditional trinity of great masters of that period.

Raphael was enormously productive, running an unusually large workshop and, despite his death at 37, leaving a large body of work. Many of his works are found in the Vatican Palace, where the frescoed Raphael Rooms were the central, and the largest, work of his career. The best known work is *The School of Athens* in the Vatican Stanza della Segnatura. After his early years in Rome, much of his work was executed by his workshop from his drawings, with considerable loss of quality. He was extremely influential in his lifetime, though outside Rome his work was mostly known from his collaborative printmaking. After his death, the influence of his great rival Michelangelo was more widespread until the 18th and 19th centuries, when Raphael's more serene and harmonious qualities were again regarded as the highest models. His career falls naturally into three phases and three styles, first described by Giorgio Vasari: his early years in Umbria, then a period of about four years (1504–1508) absorbing the artistic traditions of Florence, followed by his last hectic and triumphant twelve years in Rome, working for two Popes and their close associates.

Urbino

Raphael was born in the small but artistically significant central Italian city of Urbino in the Marche region, where his father Giovanni Santi was court painter to the Duke. The reputation of the court had been established by Federico da Montefeltro, a highly successful condottiere who had been created Duke of Urbino by Pope Sixtus IV – Urbino formed part of the Papal States – and who died the year before Raphael was born. The emphasis of Federico's court was rather more literary than artistic, but Giovanni Santi was a poet of sorts as well as a painter, and had written a rhymed chronicle of the life of Federico, and both wrote the texts and produced the decor for masque-like court entertainments. His poem to Federico shows him as keen to show awareness of the most advanced North Italian painters, and Early Netherlandish artists as well. In the very small court of Urbino he was probably more integrated into the central circle of the ruling family than most court painters.

Federico was succeeded by his son Guidobaldo da Montefeltro, who married Elisabetta Gonzaga, daughter of the ruler of Mantua, the most brilliant of the smaller Italian courts for both music and the visual arts. Under them, the court continued as a centre for literary culture. Growing up in the circle of this small court gave Raphael the excellent manners and social skills stressed by Vasari. Court life in Urbino at just after this period was to become set as the model of the virtues of the Italian humanist court through Baldassare Castiglione's depiction of it in his classic work *The Book of the Courtier*, published in 1528. Castiglione moved to Urbino in 1504, when Raphael was no longer based there but frequently visited, and they became good friends. He became close to other regular visitors to the court: Pietro Bibbiena and Pietro Bembo, both later cardinals, were already becoming well known as writers, and would be in Rome during Raphael's period there. Raphael mixed easily in the highest circles throughout his life, one of the factors that tended to give a misleading impression of effortlessness to his career. He did not receive a full humanistic education however; it is unclear how easily he read Latin.

Early life and work

His mother Mâgia died in 1491 when Raphael was eight, followed on August 1, 1494 by his father, who had already remarried. Raphael was thus orphaned at eleven; his formal guardian became his only paternal uncle Bartolomeo, a priest, who subsequently engaged in litigation with his stepmother. He probably continued to live with his stepmother when not staying as an apprentice with a master. He had already shown talent, according to Vasari, who says that Raphael had been "a great help to his father". A self-portrait drawing from his teenage years shows his precocity. His father's workshop continued and, probably together with his

stepmother, Raphael evidently played a part in managing it from a very early age. In Urbino, he came into contact with the works of Paolo Uccello, previously the court painter (d. 1475), and Luca Signorelli, who until 1498 was based in nearby Città di Castello. According to Vasari, his father placed him in the workshop of the Umbrian master Pietro Perugino as an apprentice "despite the tears of his mother". The evidence of an apprenticeship comes only from Vasari and another source, and has been disputed—eight was very early for an apprenticeship to begin. An alternative theory is that he received at least some training from Timoteo Viti, who acted as court painter in Urbino from 1495. Most modern historians agree that Raphael at least worked as an assistant to Perugino from around 1500; the influence of Perugino on Raphael's early work is very clear: "probably no other pupil of genius has ever absorbed so much of his master's teaching as Raphael did", according to Wölfflin. Vasari wrote that it was impossible to distinguish between their hands at this period, but many modern art historians claim to do better and detect his hand in specific areas of works by Perugino or his workshop. Apart from stylistic closeness, their techniques are very similar as well, for example having paint applied thickly, using an oil varnish medium, in shadows and darker garments, but very thinly on flesh areas. An excess of resin in the varnish often causes cracking of areas of paint in the works of both masters. The Perugino workshop was active in both Perugia and Florence, perhaps maintaining two permanent branches. Raphael is described as a "master", that is to say fully trained, in December 1500.

His first documented work was the Baronci altarpiece for the church of Saint Nicholas of Tolentino in Città di Castello, a town halfway between Perugia and Urbino. Evangelista da Pian di Meleto, who had worked for his father, was also named in the commission. It was commissioned in 1500 and finished in 1501; now only some cut sections and a preparatory drawing remain. In the following years he painted works for other churches there, including the Mond Crucifixion (about 1503) and the Brera Wedding of the Virgin (1504), and for Perugia, such as the Oddi Altarpiece. He very probably also visited Florence in this period. These are large works, some in fresco, where Raphael confidently marshals his compositions in the somewhat static style of Perugino. He also painted many small and exquisite cabinet paintings in these years, probably mostly for the connoisseurs in the Urbino court, like the Three Graces and St. Michael, and he began to paint Madonnas and portraits. In 1502 he went to Siena at the invitation of another pupil of Perugino, Pinturicchio, "being a friend of Raphael and knowing him to be a draughtsman of the highest quality" to help with the cartoons, and very likely the designs, for a fresco series in the Piccolomini

Library in Siena Cathedral. He was evidently already much in demand even at this early stage in his career.

Influence of Florence

Raphael led a "nomadic" life, working in various centres in Northern Italy, but spent a good deal of time in Florence, perhaps from about 1504. Although there is traditional reference to a "Florentine period" of about 1504–8, he was possibly never a continuous resident there. He may have needed to visit the city to secure materials in any case. There is a letter of recommendation of Raphael, dated October 1504, from the mother of the next Duke of Urbino to the Gonfaloniere of Florence: "The bearer of this will be found to be Raphael, painter of Urbino, who, being greatly gifted in his profession has determined to spend some time in Florence to study. And because his father was most worthy and I was very attached to him, and the son is a sensible and well-mannered young man, on both accounts, I bear him great love..."

As earlier with Perugino and others, Raphael was able to assimilate the influence of Florentine art, whilst keeping his own developing style. Frescos in Perugia of about 1505 show a new monumental quality in the figures which may represent the influence of Fra Bartolomeo, who Vasari says was a friend of Raphael.

But the most striking influence in the work of these years is Leonardo da Vinci, who returned to the city from 1500 to 1506. Raphael's figures begin to take more dynamic and complex positions, and though as yet his painted subjects are still mostly tranquil, he made drawn studies of fighting nude men, one of the obsessions of the period in Florence. Another drawing is a portrait of a young woman that uses the three-quarter length pyramidal composition of the just-completed *Monna Lisa*, but still looks completely Raphaellesque.

Another of Leonardo's compositional inventions, the pyramidal Holy Family, was repeated in a series of works that remain among his most famous easel paintings. There is a drawing by Raphael in the Royal Collection of Leonardo's lost *Leda and the Swan*, from which he adapted the contrappostopose of his own *Saint Catherine of Alexandria*. He also perfects his own version of Leonardo's *sfumato* modelling, to give subtlety to his painting of flesh, and develops the interplay of glances between his groups, which are much less enigmatic than those of Leonardo. But he keeps the soft clear light of Perugino in his paintings.

Leonardo was more than thirty years older than Raphael, but Michelangelo, who was in Rome for this period, was just eight years his senior. Michelangelo already disliked Leonardo, and in Rome came to dislike Raphael even more, attributing conspiracies against him to the younger man. Raphael would have been aware of his works in Florence, but in his most

original work of these years, he strikes out in a different direction. His *Deposition of Christ* draws on classical sarcophagi to spread the figures across the front of the picture space in a complex and not wholly successful arrangement. Wöllflin detects in the kneeling figure on the right the influence of the Madonna in Michelangelo's *Doni Tondo*, but the rest of the composition is far removed from his style, or that of Leonardo. Though highly regarded at the time, and much later forcibly removed from Perugia by the Borghese, it stands rather alone in Raphael's work. His classicism would later take a less literal direction.

Roman period

Vatican "Stanze"

By the end of 1508, Raphael had moved to Rome, where he lived for the rest of his life. He was invited by the new Pope Julius II, perhaps at the suggestion of his architect Donato Bramante, then engaged on St. Peter's Basilica, who came from just outside Urbino and was distantly related to Raphael. Unlike Michelangelo, who had been kept lingering in Rome for several months after his first summons, Raphael was immediately commissioned by Julius to fresco what was intended to become the Pope's private library at the Vatican Palace. This was a much larger and more important commission than any he had received before; he had only painted one altarpiece in Florence itself. Several other artists and their teams of assistants were already at work on different rooms, many painting over recently completed paintings commissioned by Julius's loathed predecessor, Alexander VI, whose contributions, and arms, Julius was determined to efface from the palace. Michelangelo, meanwhile, had been commissioned to paint the Sistine Chapel ceiling.

This first of the famous "Stanze" or "Raphael Rooms" to be painted, now known as the *Stanza della Segnatura* after its use in Vasari's time, was to make a stunning impact on Roman art, and remains generally regarded as his greatest masterpiece, containing *The School of Athens*, *The Parnassus* and the *Disputa*. Raphael was then given further rooms to paint, displacing other artists including Perugino and Signorelli. He completed a sequence of three rooms, each with paintings on each wall and often the ceilings too, increasingly leaving the work of painting from his detailed drawings to the large and skilled workshop team he had acquired, who added a fourth room, probably only including some elements designed by Raphael, after his early death in 1520. The death of Julius in 1513 did not interrupt the work at all, as he was succeeded by Raphael's last Pope, the Medici Pope Leo X, with whom Raphael formed an even closer relationship, and who continued to commission him. Raphael's friend Cardinal Bibbiena was also one of Leo's old tutors, and a close friend and advisor.



Raffaello Sanzio: School of Athens (1510/1511), Stanza della Segnatura, Vatikan
https://en.wikipedia.org/wiki/Raphael#/media/File:Raffael_Stanza_della_Segnatura.jpg



Raffael: Die Schule von Athen. Plato as Leonardo da Vinci
https://de.wikipedia.org/wiki/Die_Schule_von_Athen#/media/File:Raffael_067.jpg

Raphael was clearly influenced by Michelangelo's Sistine Chapel ceiling in the course of painting the room. Vasari said Bramante let him in secretly. The first section was completed in 1511 and the reaction of other artists to the daunting force of Michelangelo was the dominating question in Italian art for the following few decades. Raphael, who had already shown his gift for absorbing influences into his own personal style, rose to the challenge perhaps better than any other artist. One of the first and clearest instances was the portrait in *The School of Athens* of Michelangelo himself, as Heraclitus, which seems to draw clearly from the Sybils and ignudi of the Sistine ceiling. Other figures in that and later paintings in the room show the same influences, but as still cohesive with a development of Raphael's own style. Michelangelo accused Raphael of plagiarism and years after Raphael's death, complained in a letter that "everything he knew about art he got from me", although other quotations show more generous reactions.

These very large and complex compositions have been regarded ever since as among the supreme works of the grand manner of the High Renaissance, and the "classic art" of the post-

antique West. They give a highly idealised depiction of the forms represented, and the compositions, though very carefully conceived in drawings, achieve "sprezzatura", a term invented by his friend Castiglione, who defined it as "a certain nonchalance which conceals all artistry and makes whatever one says or does seem uncontrived and effortless ...". According to Michael Levey, "Raphael gives his [figures] a superhuman clarity and grace in a universe of Euclidian certainties". The painting is nearly all of the highest quality in the first two rooms, but the later compositions in the Stanze, especially those involving dramatic action, are not entirely as successful either in conception or their execution by the workshop.

Raffaello e Leonardo

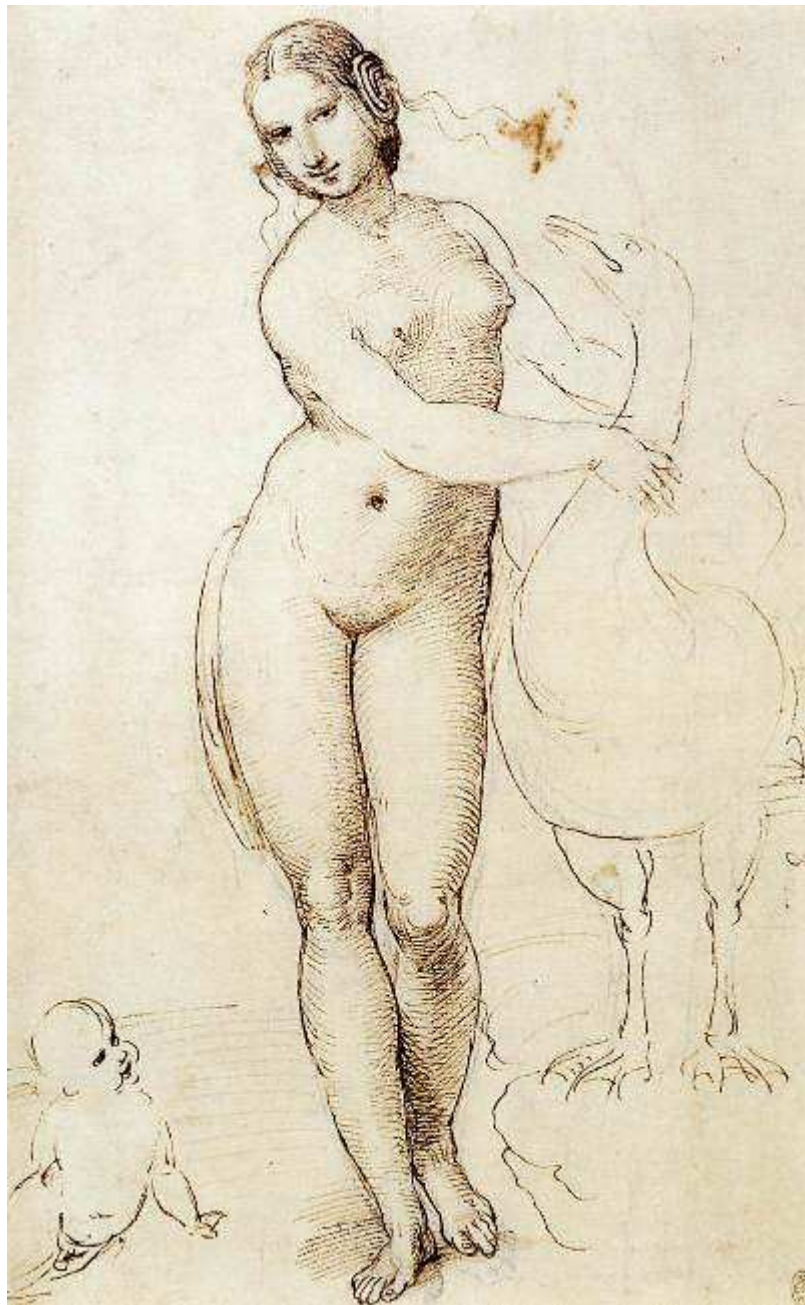
https://it.wikipedia.org/wiki/Raffaello_Sanzio

Leonardo era già più che trentenne quando Raffaello nacque, ma la sua fama di pittore innovativo e capace di esiti straordinari era ancora ben viva quando il Sanzio decise di recarsi a Firenze, per ammirare, tra l'altro, la sua *Battaglia di Anghiari*. L'influenza di Leonardo, del suo modo di legare le figure in composizioni armoniche caratterizzate da schemi geometrici, e del suo sfumato fu una delle componenti fondamentali del linguaggio raffaellesco, anche se venne rielaborata con esiti completamente diversi. Opere come la *Madonna del Belvedere* mostra una composizione piramidale derivata da Leonardo, ma è del tutto assente il senso di mistero e l'inquietante carica di allusioni e suggestioni del pittore di Vinci, sostituiti da un sentimento di calma e spontanea familiarità.

Sicuramente l'esempio di Leonardo inculcò nel giovane la volontà di superare le sterili repliche di modelli di repertorio (come era solito fare il Perugino), in favore di una continua rielaborazione e studio organico di tutte le figure e del paesaggio, spesso rilevato dal vero, per favorire una rappresentazione più naturale e credibile. Lo stesso Vasari testimoniò come al giovane Raffaello "piacendogli la maniera di Leonardo più che qualunque altra avesse veduta mai, si mise a studiarla", distaccandosene però a poco a poco, verso uno stile pienamente proprio. resta ad esempio una copia della Leda col cigno leonardesca di mano del Sanzio.

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Raffaello, studi della Leda col cigno di Leonardo

https://it.wikipedia.org/wiki/Raffaello_Sanzio#/media/File:Raffaello,_studio_della_leda_e_il_cigno_di_leonardo.jpg

Leonardo fu a Roma nel 1514-1516 e qui ebbe sicuramente modo di venire in contatto con Raffaello, il maggior pittore alla corte papale. Non c'è notizia di contatti diretti tra i due, né di commissioni pittoriche a Leonardo in quel periodo, però opere di Raffaello di quegli ultimi anni mostrano un rinnovato interesse per l'arte di Leonardo, anche quella vista magari un decennio prima. Ad esempio nella Perla del Prado lo schema riprende quello della Vergine delle Rocce, mentre nella Trasfigurazione alcune figure riprendono direttamente quelle di Leonardo nell'Adorazione dei Magi.

Madonna del Belvedere

https://it.wikipedia.org/wiki/Madonna_del_Belvedere

Immersi in un ampio paesaggio lacustre, dall'orizzonte particolarmente alto, si trovano la Madonna seduta, che regge tra le gambe Gesù Bambino, il quale sembra muovere i primi passi incerti della fanciullaggine, e san Giovannino che, inginocchiato a sinistra, offre la croce astile, suo tipico attributo, al gioco dell'altro fanciullo. Nel gesto di Gesù che afferra la croce c'è un richiamo al destino del suo martirio.



Raffaello Sanzio: Madonna del Belvedere, 1506
Kunsthistorisches Museum, Wien

La composizione, sciolta e di forma piramidale, con i protagonisti legati dalla concatenazione di sguardi e gesti, deriva con evidenza da modelli leonardeschi, come la Sant'Anna, la Vergine e il Bambino con l'agnellino, ma se ne distacca sostituendo, al senso di mistero e all'inquietante carica di allusioni e suggestioni, un sentimento di calma e spontanea familiarità. Al posto dei "moti dell'animo" reconditi, Raffaello mise in atto una rappresentazione

dell'affettuosità, dove è ormai sfumata anche la tradizionale malinconia della Vergine, che premonisce il destino tragico del figlio.

Maria ha una posa contrapposta, con la gamba destra distesa lungo una diagonale, che trascina con sé il manto azzurro bordato d'oro; alla massa azzurra si contrappone quella rossa della veste. Il rosso rappresentava la Passione di Cristo e il blu la Chiesa, per cui nella Madonna vi era sottintesa l'unione della Madre Chiesa con il sacrificio di suo Figlio. Il suo busto è quindi ruotato verso destra, ma la testa e lo sguardo si dirigono invece in basso a sinistra, verso i fanciulli. Il sole è sostituito dal volto della Vergine, che irradia il paesaggio circostante. È presente una netta linea di contorno tra i personaggi e il paesaggio che, a differenza della pittura leonardesca, viene posto in secondo piano.

Tra le varie specie botaniche raffigurate con cura, un altro stilema derivato da Leonardo, spicca a destra un papavero rosso: il colore, anche in questo caso, è un riferimento alla Passione, morte e resurrezione di Cristo.

Ioannis Argyropoulos

ca. 1415 – 1487



John Argyropoulos as depicted by Domenico Ghirlandaio in 1481 in the *Vocation of the Apostles* fresco in the Sistine Chapel, Rome
https://it.wikipedia.org/wiki/Vocazione_dei_primi_apostoli

https://en.wikipedia.org/wiki/John_Argyropoulos

John Argyropoulos was born in c. 1415, in Constantinople. He was Greek.

Argyropoulos studied theology and philosophy in Constantinople. As a teacher in Constantinople, Argyropoulos had amongst his pupils the scholar Constantine Lascaris. He was an official in the service of one of the rulers of the Byzantine Morea and in 1439 was a member of the Byzantine delegation to the Council of Florence, when they accepted Catholicism and abjured Greek Orthodoxy. In 1443/4, he received a Doctor of Theology degree from the University of Padua before returning to Constantinople.

When Constantinople fell in 1453, he left it for the Peloponnesus and in 1456, took refuge in Italy, where he worked as a teacher in the revival of Greek philosophy as head of the Greek department at Florence's Florentine Studium. In 1471, on the outbreak of the plague, he moved to Rome, where he continued to act as a teacher of Greek till his death. He made efforts to transport Greek philosophy to Western Europe.

He left a number of Latin translations, including many of Aristotle's works. His principal works were translations of the following portions of Aristotle, *Categoriae*, *De Interpretatione*, *Analytica Posteriora*, *Physica*, *De Caelo*, *De Anima*, *Metaphysica*, *Ethica Nicomachea*, *Politica*; and an *Expositio Ethicorum Aristotelis*. Several of his writings exist still in manuscript. His students included Pietro de' Medici and Lorenzo de' Medici, Angelo Poliziano and Johann Reuchlin, and Leonardo da Vinci. He died on June 26, 1487 in Florence, supposedly of consuming too much watermelon.

Michelangelo di Lodovico Buonarroti Simoni

1475 – 1564



Portrait of Michelangelo by Daniele da Volterra

<https://en.wikipedia.org/wiki/Michelangelo>

or more commonly known by his first name Michelangelo was an Italian sculptor, painter, architect and poet of the High Renaissance born in the Republic of Florence, who exerted an unparalleled influence on the development of Western art. Considered by many the greatest artist of his lifetime, and by some the greatest artist of all time, his artistic versatility was of such a high order that he is often considered a contender for the title of the archetypal Renaissance man, along with his rival, the fellow Florentine and client of the Medici, Leonardo da Vinci.

Florence, 1499–1505

The Statue of David, completed by Michelangelo in 1504, is one of the most renowned works of the Renaissance.

Michelangelo returned to Florence in 1499. The republic was changing after the fall of its leader, anti-Renaissance priest Girolamo Savonarola, who was executed in 1498, and the rise of the gonfaloniere Piero Soderini. Michelangelo was asked by the consuls of the Guild of *Wool to complete an unfinished project begun 40 years earlier by Agostino di Duccio: a colossal statue of Carrara marble portraying David as a symbol of Florentine freedom to be placed on the gable of Florence Cathedral. Michelangelo responded by completing his most famous work, the statue of David, in 1504. The masterwork definitively established his prominence as a sculptor of extraordinary technical skill and strength of symbolic imagination. A team of consultants, including Botticelli and Leonardo da Vinci, was called together to decide upon its placement, ultimately the Piazza della Signoria, in front of the Palazzo Vecchio. It now stands in the Academia while a replica occupies its place in the square.

With the completion of the David came another commission. In early 1504 Leonardo da Vinci had been commissioned to paint The Battle of Anghiara in the council chamber of the Palazzo Vecchio, depicting the battle between Florence and Milan in 1440. Michelangelo was then commissioned to paint the Battle of Cascina. The two paintings are very different: Leonardo depicts soldiers fighting on horseback, while Michelangelo has soldiers being ambushed as they bathe in the river. Neither work was completed and both were lost forever when the chamber was refurbished. Both works were much admired, and copies remain of them, Leonardo's work having been copied by Rubens and Michelangelo's by Bastiano da Sangallo.

Also during this period, Michelangelo was commissioned by Angelo Doni to paint a "Holy Family" as a present for his wife, Maddalena Strozzi. It is known as the Doni Tondo and hangs in the Uffizi Gallery in its original magnificent frame, which Michelangelo may have

designed. He also may have painted the Madonna and Child with John the Baptist, known as the Manchester Madonna and now in the National Gallery, London.

Bruno Nardini: Leonardo. Portrait of a Master

Florence 2001, 125-127.

Bastiano da Sangallo, the son of Antonio and grandson of the great architect Giuliano, worked with Perugino in the Church of the Santissima Annunziata.

[Nel 2007, nella parte ovest del convento oggi sede dell'Istituto Geografico Militare, vennero scoperti alcuni ambienti, tra cui uno scalone realizzato da Michelozzo, precedentemente nascosto, una lunetta con un'Annunciazione attribuita dubitativamente a Paolo Uccello, delle grottesche di Morto da Feltre e degli affreschi di uccelli in volo di mano forse di Leonardo da Vinci e della sua scuola. Leonardo risiedette infatti nel convento della Santissima Annunziata per due anni.] (my addition, RC)

Source https://it.wikipedia.org/wiki/Basilica_della_Santissima_Annunziata

He [Bastiano] was a restless pupil, subject at times to "philosophical" crisis that induced him to leave aside painting to study humanistic doctrines

His dramatic reaction to the sight of Michelangelo's cartoon is just understandable.



Copy of the Battle of Cascina by Michelangelo's pupil Aristotele da Sangallo, 1542
[https://en.wikipedia.org/wiki/Battle_of_Cascina_\(Michelangelo\)#/media/File:Battagliadicascina.jpg](https://en.wikipedia.org/wiki/Battle_of_Cascina_(Michelangelo)#/media/File:Battagliadicascina.jpg)

He abandoned Perugino and literally moved into Sant'Onofrio to explain to the people the marvelous art and the underlying philosophic message of the Battle of Cascina.

[The work was commissioned from Michelangelo by Piero Soderini, statesman of the Democratic of Florence. It was intended for a wall of the Salone dei Cinquecento in the Palazzo Vecchio. The opposite wall was to be decorated by Leonardo da Vinci, who was commissioned to depict the Battle of Anghiari. The two battles were notable medieval Florentine victories. The Battle of Cascina was fought on 28 July 1364 between the troops of

Florence and Pisa, resulting in victory of the former. A thousand Pisans were killed and two hundred more were captured.] (my addition, RC) Source: [https://en.wikipedia.org/wiki/Battle_of_Cascina_\(Michelangelo\)](https://en.wikipedia.org/wiki/Battle_of_Cascina_(Michelangelo))

His speeches were filled with so many quotations from the classics, Aristotle in particular, that he was given the affectionately admiring nicknames of "Aristotile da Sangallo". At this same time another young man, another of Perugino's pupils, was dazzled like St. Paul on the road to Damascus by the sight of cartoons, but this time they were those of the Battle of Anghiari exhibited in Santa Maria Novella. The overwhelmed admirer was named Raffaello Sanzio, later to be known as Raphael, from Urbino.

"Maestro", he said, when he managed to be introduced to Leonardo, "I have studied the cartoon of St. Anne and have copied it several times, and now I am asking you to let me come and study these cartoons of the battle".



Leonardo da Vinci - St. Anne cartoon (ca. 1500-1505), National Gallery, London
https://it.wikipedia.org/wiki/Cartone_di_sant%27Anna#/media/File:Leonardo_-_St._Anne_cartoon.jpg

"Have you got any drawings to show me?", asked Leonardo.

The young man opened a folder to show his drawings: sketches, notes, studies of details and perspective. They revealed a sure hand, a gaze sharpened by observation, and a mind capable of guiding the hand.

"Good", said Leonardo, "You have made progress, your style has softened, I would almost say that you are freeing yourself from the Perugino influence".

Raphael blushed.

"I have already seen some of your paintings. They showed them to me in Urbino. Come back tomorrow. I have something to show you".

The next day Raphael punctually returned to Santa Maria Novella.

"Come with me", Leonardo said, leading him across the square.

"Here is a painter that the whole world will speak of", he told Monna Lisa. "He is from Urbino, and is called Raphael. I told Antonfrancesco Doni [1513-1574] about him yesterday, suggesting that he have him paint his portrait. And now look", he added, turning to the young man and uncovering the canvas on the easel.

Raphael gazed long and wordlessly at the portrait of Monna Lisa. He felt he was dreaming.

That painting went beyond any human possibility. It was something entirely new, never seen before.

"Well, Raphael, why don't you say anything?"

"I cannot", replied the young in a strangled voice. "Now I understand, now I see what painting really is. I am so happy, Maestro, that I am moved to tears."

II. MILAN

Francesco di Melzi
1491 – 1570



Portrait by Giovanni Boltraffio, c. 1496-1498

https://en.wikipedia.org/wiki/Francesco_Melzi#/media/File:Melzi_Boltraffio.jpg

https://en.wikipedia.org/wiki/Francesco_Melzi

was an Italian painter born into a family of the Milanese nobility in Lombardy. He was one of Leonardo da Vinci's pupils.

Early life and training

Francesco's father, Gerolamo Melzi, was an engineer for Francesco II Sforza's military and a captain in the militia in Milan under Louis XII. Francesco lived with his family in the Villa Melzi in Vaprio d'Adda (not to be confused with the Villa Melzi d'Eril in Bellagio, Lombardy), which today is still under the ownership of the Dukes Melzi d'Eril. Francesco grew up in the Milanese court, and was raised with proper manners and was granted a good education, which included training in the arts. He was reasonably talented in the arts and worked very hard. As a member of a prominent family of the Milanese court, however, Francesco would have had political and social responsibilities as he got older that would have caused him to discontinue his studies in art had it not been for Leonardo da Vinci. Leonardo returned to Milan for some time around 1505 and stayed with the Melzi family. It was there that he met Francesco for the first time, enticed by his good nature and handsomeness. In a

biography of Leonardo da Vinci, it is argued that he felt compelled to stay in Milan longer than he had intended after meeting with the young Francesco. Francesco is described in literature as charming and graceful, an adolescent without the awkwardness or lack of manners typical of boys around this age. Francesco and another pupil of Leonardo's, Boltraffio, stood out from the other students as they were capable painters, very bright, and well-learned. Because of his upbringing in the high court, Francesco was gracious and dignified, and had a very good education. Shortly after they met, Francesco began studying and working at Leonardo's workshop and quickly became his master's favorite pupil, and the most devoted as well. Despite this, fairly little is written about the apprentice painter, and what is known about him is almost exclusively within the context of Leonardo. In fact, other than Francesco, none of Leonardo's pupils went on to become respected artists. And although he is not well-known, Francesco is referred to as being the first person responsible for collecting, organizing, and preserving Leonardo da Vinci's notes on painting, and transforming it into a manuscript copy known as the Codex Urbinas. After Leonardo's death in 1519, Francesco returned to Italy and married Angiola di Landriani, and with her he fathered eight children. One of his children, Orazio, would inherit Leonardo's manuscripts after Francesco's death in 1569/70.

Career and Life

Francesco Melzi's career is inextricably linked to Leonardo da Vinci, and this could be a reason that he is not well-known, because his master overshadowed him. Sigmund Freud attributed the lack of success of Leonardo's pupils, including the talented Francesco, to their inability to distinguish themselves as separate from their master, and thus their careers were unable to flourish after his death. Before Leonardo's death in 1519, Francesco's career consisted largely of being an assistant to, and an executor for, Leonardo. Because of their close relationship, more like father-son rather than master-apprentice, he was content with aiding and caring for Leonardo, a companion/secretary. One of his main tasks was to scribe his master's Codex Trivulzianus, a manuscript of learned words and ideas, which is presumed to have been written entirely in Milan because Francesco (or Leonardo) scribed "Milan" on the last page. Francesco was Leonardo's only pupil who stayed with him until his death, traveling and working with him in Milan, Rome, and France. He accompanied the master painter to Milan, where the French governor of Milan Charles d'Amboise was Leonardo's patron, and went to Rome with him in 1513. In his notebook Leonardo wrote, "I left Milan for Rome on the 24th day of September 1513, with Giovanni Boltraffio, Francesco de' Melzi, Lorenzo di Credi, and il Fanfoia." After three years in Rome, Francesco accompanied Leonardo to France in 1516 where they stayed in the Chateau de

Cloux in Amboise. During this time, Francis I of France was Leonardo's patron, and the French court account books logged Leonardo's annual payment was 1000 gold crowns (écus de soleil), while Francesco Melzi received 400. During this time in France, Andrea Salaí, another pupil, left Leonardo and built a house on his (Leonardo's) estate in Italy, and so Francesco was the last pupil who continued to work for his master until his death. He was the executor and heir of Leonardo's will. Although Francesco was Leonardo's official heir and was bequeathed with his master's manuscripts, drawings, workshop materials and machinery, Andrea Salaino (Andrea Salaí) received Leonardo's paintings in 1524 in France and brought them back to Milan. Francesco's responsibility attaching him to Leonardo da Vinci was to care for his late master's works after he passed. Leonardo wanted his works to be shared with the world and read by others after his death, however Francesco never fully accomplished this. The works would eventually be compiled, and published as the *Codex Urbinas*. In addition to this, Melzi actually executed and completed a number of plans for paintings, and paintings themselves, that were left unfinished after Leonardo's passing.

Francesco Melzi is known for creating the *Codex Urbinas*, which is a selection and careful compilation of Leonardo's thousands of pages of notes and sketches under the title "On Painting", and was later known as the *Trattato della Pittura* (Treatise on Painting). Although today we would not have the many manuscript copies and versions of Leonardo's notes and sketches if it weren't for Francesco's initial efforts, we can also attribute the loss of much of Leonardo's genius to Francesco. Once he inherited Leonardo's manuscripts, he extensively catalogued them and most likely had the intention to publish them. However the reality is that Leonardo's works were not seen for the larger part of the 16th century. After Francesco's death in ca. 1570 the manuscripts were not properly cared for. His son Orazio Melzi, who was a lawyer, inherited the manuscripts. He knew very little of Leonardo da Vinci and the manuscripts his father kept and therefore did not understand their value, so they laid neglected in his attic for years. When Orazio died on his estate in Vaprio d'Adda, his heirs sold the collection of Leonardo's works, and thus began their dispersal.

Despite his failure to publish them, Francesco did in fact ensure the future preservation of his late master's works that he treasured so greatly. He gathered 944 short chapters from Leonardo's scattered notes, but had difficulty organizing and arranging the material and even left some pages blank. Being a Milanese noble, he must have employed helpers to sort through the thousands of pages of notes, but he was the only one who could decipher Leonardo's unique left-handed mirror-like writing style and enigmatic abbreviations and

spellings. However, this was just the beginning. Before the manuscript was published at least five copies were hand scribed by students after Francesco's original copy, some of which reside today in The Elmer Belt Library of Vinciana at the University of California, Los Angeles Library. We can see each of these efforts, starting with Francesco's, as steps leading up to the final production and printing of the manuscript. In addition, he made Leonardo's works accessible to scholars at the time such as Vasari, Lomazzo, Antonio Gaddiano, Cardano, among others, whose names are listed in numerous manuscript copies.

Legacy

In addition to preserving Leonardo's manuscripts, Francesco Melzi also is said to have contributed greatly towards the legacy of Leonardo in future generations. Because he owned his master's manuscripts, notes, and works, after his death, he was able to share with the next generation of artists Leonardo's genius, techniques, and oeuvre. This Leonardismo, the continued influence that Leonardo's legacy had on future painters' style and thought, continued throughout the 1500s. For example, Francesco's pupil, Girolamo Figino, was described by the Italian scholar Francesco Albuizio in his *Memorie per servire alla storia de' pittori, scultori e architect milanesi* (1776) as "illuminator and disciple of Francesco Melzi." Girolamo created two paintings which are references to his predecessors; his *Madonna and Saints* is thought to be inspired by Melzi's *Vertumnus and Pomona*, and his *Portrait of Margherita Colleoni* references Leonardo's *Monna Lisa*, which is a testimony to the continuation of Leonardo's teachings after his death.

Relationship with Leonardo da Vinci

From the time Francesco Melzi became an apprentice at Leonardo da Vinci's workshop, his life largely revolved around his master's. Leonardo took an immediate liking to Francesco when he met him as an adolescent at his house in Milan and took him under his wing as an apprentice. Francesco became like a son to his master, and Leonardo like a father, and followed him up until his death in 1519. Francesco quickly became aware of his master's loneliness, seeing past his legendary fame and genius, and felt impelled to care for him, essentially devoting his whole life to him. Leonardo's second Milanese period, when he resided with the Melzi family, is by some considered his most creative years in art and canal engineering. This is the time when he created the engineering plans for the Martesana Canal, which was completed and still regulates the Arno river in Milan today (the Arno runs through Florence).

Because the two were so close, lived together, and cared for each other so deeply, there have been theories that Leonardo and Francesco engaged in romantic, homosexual

relations. However, these theories have no hard evidence and have been largely refuted, stating their relationship never extended past platonic or familial affection. It does, however, seem plausible based on Leonardo's past. There have been no accounts of Leonardo having sexual or romantic relations of any kind with a woman, and he was also charged with homosexual acts that were at the time forbidden during his apprenticeship with Verrocchio, however was acquitted. Francesco also influenced his master's religious beliefs. As a man of science, Leonardo was not particularly religious. In Giorgio Vasari's first edition of *Lives of the Artists* he accused the polymath of having heretical beliefs, however in his second edition revised this statement and states that he "earnestly resolved to learn about the doctrines of the Catholic faith and the good and holy Christian religion." Although he may have overstated his master's devotion to Christianity, it is true that he was a firm believer towards the end of his life, and that his apprentice influenced him greatly—Francesco was a very devoted Christian and they spent much time together. In fact, the only people at Leonardo's deathbed were Francesco and members of the clergy—the vicar of the church of St. Denis at Amboise, two Franciscan friars, and two priests. Because Francesco was the only person resembling family at Leonardo's deathbed, it was he who notified the master's brothers of his death. He described in his letter Leonardo's love for his pupils as "sviscerato e ardentissimo amore", meaning "uncontrolled and passionate love."



Portrait of Leonardo by Francesco Melzi

https://en.wikipedia.org/wiki/Francesco_Melzi#/media/File:Francesco_Melzi_-_Portrait_of_Leonardo_-_WGA14795.jpg

Luca Pacioli

ca. 1445 - 1517



Luca Pacioli avec son élève Guidobaldo Ier de Montefeltro (1495) attribué à Jacopo de' Barbari, musée Capodimonte de Naples.
https://fr.wikipedia.org/wiki/Petit_rhombicubocta%C3%A8dre

Dans le portrait de Luca Pacioli par Jacopo de' Barbari, le polyèdre suspendu, à gauche de l'image, est un petit rhombicuboctaèdre de verre à moitié rempli d'eau.

Le dodécaèdre régulier en bas à droite est construit à partir d'un patron.

Le rhombicuboctaèdre de Michel Coignet est un cadran solaire portatif en bronze construit au xvie siècle.

https://en.wikipedia.org/wiki/Luca_Pacioli

Fra Luca Bartolomeo de Pacioli was an Italian mathematician, Franciscan friar, collaborator with Leonardo da Vinci, and an early contributor to the field now known as accounting. He is referred to as "The Father of Accounting and Bookkeeping" in Europe and he was the first person to publish a work on the double-entry system of book-keeping on the continent. He was also called Luca di Borgo after his birthplace, Borgo Sansepolcro, Tuscany.

Life

Luca Pacioli was born between 1446 and 1448 in the Tuscan town of Sansepolcro where he received an *abbaco* education. This was education in the vernacular (i.e., the local tongue) rather than Latin and focused on the knowledge required of merchants. His father was Bartolomeo Pacioli; however, Luca Pacioli was said to have lived with the Befolci family as a child in his birth town Sansepolcro. He moved to Venice around 1464, where he continued his

own education while working as a tutor to the three sons of a merchant. It was during this period that he wrote his first book, a treatise on arithmetic for the boys he was tutoring. Between 1472 and 1475, he became a Franciscan friar. Thus, he could be referred to as Fra ('Friar') Luca.

In 1475, he started teaching in Perugia, first as a private teacher, from 1477 holding the first chair in mathematics. He wrote a comprehensive textbook in the vernacular for his students. He continued to work as a private tutor of mathematics and was instructed to stop teaching at this level in Sansepolcro in 1491. In 1494, his first book, *Summa de arithmetica, geometria, Proportioni et proportionalita*, was published in Venice. In 1497, he accepted an invitation from Duke Ludovico Sforza to work in Milan. There he met, taught mathematics to, collaborated, and lived with Leonardo da Vinci. In 1499, Pacioli and Leonardo were forced to flee Milan when Louis XII of France seized the city and drove out their patron. Their paths appear to have finally separated around 1506. Pacioli died at about the age of 70 on 19 June 1517, most likely in Sansepolcro where it is thought that he had spent much of his final years.

Mathematics

Pacioli published several works on mathematics, including:

Tractatus mathematicus ad discipulos perusinos (Ms. Vatican Library, Lat. 3129), a nearly 600-page textbook dedicated to his students at the University of Perugia where Pacioli taught from 1477 to 1480. The manuscript was written between December 1477 and 29 April 1478. It contains 16 sections on merchant arithmetic, such as barter, exchange, profit, mixing metals, and algebra. One part of 25 pages is missing from the chapter on algebra. A modern transcription has been published by Calzoni and Cavazzoni (1996) along with a partial translation of the chapter on partitioning problems.

Summa de arithmetica, geometria. Proportioni et proportionalita (Venice 1494), a textbook for use in the schools of Northern Italy. It was a synthesis of the mathematical knowledge of his time and contained the first printed work on algebra written in the vernacular (i.e., the spoken language of the day). It is also notable for including one of the first published descriptions of the bookkeeping method that Venetian merchants used during the Italian Renaissance, known as the double-entry accounting system. The system he published included most of the accounting cycle as we know it today. He described the use of journals and ledgers, and warned that a person should not go to sleep at night until the debits equalled the credits. His ledger had accounts for assets (including receivables and inventories), liabilities, capital, income, and expenses — the account categories that are reported on an organization's balance sheet and income statement, respectively. He demonstrated year-end

closing entries and proposed that a trial balance be used to prove a balanced ledger. He is widely considered the "Father of Accounting". Additionally, his treatise touches on a wide range of related topics from accounting ethics to cost accounting. He introduced the Rule of 72, using an approximation of $100 \cdot \ln 2$ more than 100 years before Napier and Briggs.

De viribus quantitatis (Ms. Università degli Studi di Bologna, 1496–1508), a treatise on mathematics and magic. Written between 1496 and 1508, it contains the first reference to card tricks as well as guidance on how to juggle, eat fire, and make coins dance. It is the first work to note that Leonardo was left-handed. *De viribus quantitatis* is divided into three sections: mathematical problems, puzzles, and tricks, along with a collection of proverbs and verses.

The book has been described as the "foundation of modern magic and numerical puzzles", but it was never published and sat in the archives of the University of Bologna, where it was seen by only a small number of scholars during the Middle Ages. The book was rediscovered after David Singmaster, a mathematician, came across a reference to it in a 19th-century manuscript. An English translation was published for the first time in 2007.

Geometry (1509), a Latin translation of Euclid's Elements.

Divina proportione

(written in Milan in 1496–98, published in Venice in 1509).

Two versions of the original manuscript are extant, one in the Biblioteca Ambrosiana in Milan, the other in the Bibliothèque Publique et Universitaire in Geneva. The subject was mathematical and artistic proportion, especially the mathematics of the golden ratio and its application in architecture. Leonardo da Vinci drew the illustrations of the regular solids in *Divina proportione* while he lived with and took mathematics lessons from Pacioli. Leonardo's drawings are probably the first illustrations of skeletal solids, which allowed an easy distinction between front and back. The work also discusses the use of perspective by painters such as Piero della Francesca, Melozzo da Forlì, and Marco Palmezzano.

Translation of Piero della Francesca's work

The majority of the second volume of *Summa de arithmetica, geometria. Proportioni et proportionalita* was a slightly rewritten version of one of Piero della Francesca's works. The third volume of Pacioli's *Divina proportione* was an Italian translation of Piero della Francesca's Latin writings *On [the] Five Regular Solids*. In neither case, did Pacioli include an attribution to Piero. He was severely criticized for this and accused of plagiarism by sixteenth-century art historian and biographer Giorgio Vasari. R. Emmett Taylor (1889–1956) said that Pacioli may have had nothing to do with the translated volume *Divina proportione*, and that it

may just have been appended to his work. However, no such defence can be presented concerning the inclusion of Piero della Francesca's material in Pacioli's Summa.

Impact on accounting and business

Pacioli dramatically affected the practice of accounting by describing the double-entry accounting method used in parts of Italy. This revolutionized how businesses oversaw their operations, enabling improved efficiency and profitability. The Summa's section on accounting was used internationally as an accounting textbook up to the mid-16th century. The essentials of double-entry accounting have for the most part remain unchanged for over 500 years. "Accounting practitioners in public accounting, industry, and not-for-profit organizations, as well as investors, lending institutions, business firms, and all other users for financial information are indebted to Luca Pacioli for his monumental role in the development of accounting."

The ICAEW Library's rare book collection at Chartered Accountants' Hall holds the complete published works of Luca Pacioli. Sections of two of Pacioli's books, 'Summa de arithmetica' and 'Divina proportione' can be viewed online using Turning the Pages, an interactive tool developed by the British Library.

Chess

Luca Pacioli also wrote an unpublished treatise on chess, *De ludo scachorum* (On the Game of Chess). Long thought to have been lost, a surviving manuscript was rediscovered in 2006, in the 22,000-volume library of Count Guglielmo Coronini. A facsimile edition of the book was published in Pacioli's home town of Sansepolcro in 2008. Based on Leonardo da Vinci's long association with the author and his having illustrated Divina proportione, some scholars speculate that Leonardo either drew the chess problems that appear in the manuscript or at least designed the chess pieces used in the problems.

Leonardo da Vinci: Freundschaft mit Luca Paccioli

https://de.wikipedia.org/wiki/Leonardo_da_Vinci

Nach dem Erfolg seines Abendmahls fuhr Leonardo mit der Arbeit am Sforza-Monument – dem Cavallo – fort, dessen sieben Meter hohes Tonmodell bereits drei Jahre lang im Corte Vecchio des Castello stand und allgemein bewundert wurde. Nun sollte das Monument in Bronze gegossen werden.



Leonardo da Vinci: Studio per il primo progetto, 1489

[https://de.wikipedia.org/wiki/Leonardo_da_Vinci#/media/File:Leonardo_da_Vinci_-_Study_for_an_equestrian_monument_\(recto\).jpg](https://de.wikipedia.org/wiki/Leonardo_da_Vinci#/media/File:Leonardo_da_Vinci_-_Study_for_an_equestrian_monument_(recto).jpg)
[Google Art Project.jpg](#)

Hilfe für die schwierigen Berechnungen für den Bronzeguss bekam Leonardo von dem Mathematiker Luca Pacioli aus Borgo San Sepolcro, dessen *Summa de aritmetica, geometrica* etc. Leonardo bei ihrer Ersterscheinung in Pavia erworben hatte. Der Mathematiker bewunderte Leonardos Malereien und Skulpturen und mehr noch seine mathematischen, physikalischen und anatomischen Forschungen, die er in den Manuskriptsammlungen Leonardos kennenlernte. Beide arbeiteten an Paciolis nächstem Buch *De divina proportione* („Über das göttliche Verhältnis“), das den Goldenen Schnitt behandelte. Auch die seit der Antike bestehende mathematische Aufgabenstellung zur Quadratur des Kreises versuchten beide zu lösen.

Bald beteiligte sich Pacioli auch an der Fertigstellung der Innendekoration bestimmter Kammern des Castello, der Saletta Negra und der Sala delle Asse, die bereits von anderen Künstlern begonnen worden war. Bei Reparaturarbeiten Ende des 19. Jahrhunderts legte Paul Müller-Walde unter den neu verputzten und getünchten Raumdecken Spuren von Leonardos Handwerk frei; so wurden in der großen Sala delle Asse viele Spuren Leonardos gefunden. Ein Großteil der Dekoration war gut erhalten und deshalb restaurierbar.

Für diese und andere künstlerische Arbeiten wurde Leonardo 1498 mit einem Garten außerhalb der Porta Vercelli belohnt, zu einer Zeit, als Geld nur spärlich floss und sein Gehalt

lange im Rückstand war. Aber wiederum konnte er die Aufgabe nicht beenden, genauso wie das Bronzemonument, das der Herzog aus Mangel an Bronze (die er für Waffen benötigte) schließlich einstellen ließ. Dies half ihm aber nicht, seine Vertreibung im Jahre 1499 durch den französischen König Ludwig XII. zu verhindern. Ludovico musste fliehen, Leonardo und andere Künstler verließen Mailand.

Luca Pacioli: Divina Proportione

https://en.wikipedia.org/wiki/Divina_proportione

Author: Luca Pacioli;

Illustrator: Leonardo da Vinci

Venice 1509

Divina proportione (Divine proportion), later also called *De divina proportione* (The divine proportion) is a book on mathematics written by Luca Pacioli and illustrated by Leonardo da Vinci, composed around 1498 in Milan and first printed in 1509. Its subject was mathematical proportions (the title refers to the golden ratio) and their applications to geometry, visual art through perspective, and architecture. The clarity of the written material and Leonardo's excellent diagrams helped the book to achieve an impact beyond mathematical circles, popularizing contemporary geometric concepts and images.

Contents of the book

The book consists of three separate manuscripts, which Pacioli worked on between 1496 and 1498. He credits Fibonacci as the main source for the mathematics he presents.

Compendio divina proportione

The first part, *Compendio divina proportione* (Compendium on the Divine Proportion), studies the golden ratio from a mathematical perspective (following the relevant work of Euclid) and explores its applications to various arts, in seventy-one chapters. Pacioli points out that golden rectangles can be inscribed by an icosahedron, and in the fifth chapter, gives five reasons why the golden ratio should be referred to as the "Divine Proportion":

Its value represents divine simplicity.

Its definition invokes three lengths, symbolizing the Holy Trinity.

Its irrationality represents God's incomprehensibility.

Its self-similarity recalls God's omnipresence and invariability.

Its relation to the dodecahedron, which represents the quintessence

It also contains a discourse on the regular and semiregular polyhedra, as well as a discussion of the use of geometric perspective by painters such as Piero della Francesca, Melozzo da Forlì and Marco Palmezzano.

Trattato dell'architettura

The second part, *Trattato dell'architettura* (Treatise on Architecture), discusses the ideas of Vitruvius (from his *De architectura*) on the application of mathematics to architecture in twenty chapters. The text compares the proportions of the human body to those of artificial structures, with examples from classical Greco-Roman architecture.

Libellus in tres partiales divisus

The third part, *Libellus in tres partiales divisus* (Book divided into three parts), is mainly an Italian translation of Piero della Francesca's Latin writings *On [the] Five Regular Solids* ("De quinque corporibus regularibus") and mathematical examples. In 1550 Giorgio Vasari wrote a biography of della Francesca, in which he accused Pacioli of plagiarism and claimed that he stole della Francesca's work on perspective, on arithmetic and on geometry.

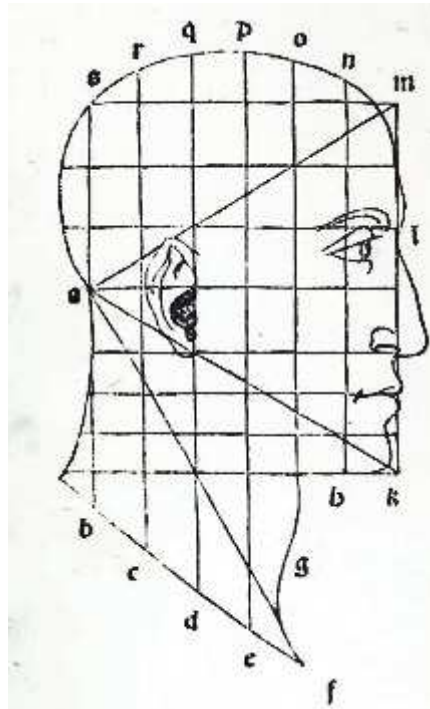
Illustrations

After these three parts are appended two sections of illustrations, the first showing twenty-three capital letters drawn with a ruler and compass by Pacioli and the second with some sixty illustrations in woodcut after drawings by Leonardo da Vinci. Leonardo drew the illustrations of the regular solids while he lived with and took mathematics lessons from Pacioli. Leonardo's drawings are probably the first illustrations of skeletonic solids which allowed an easy distinction between front and back.

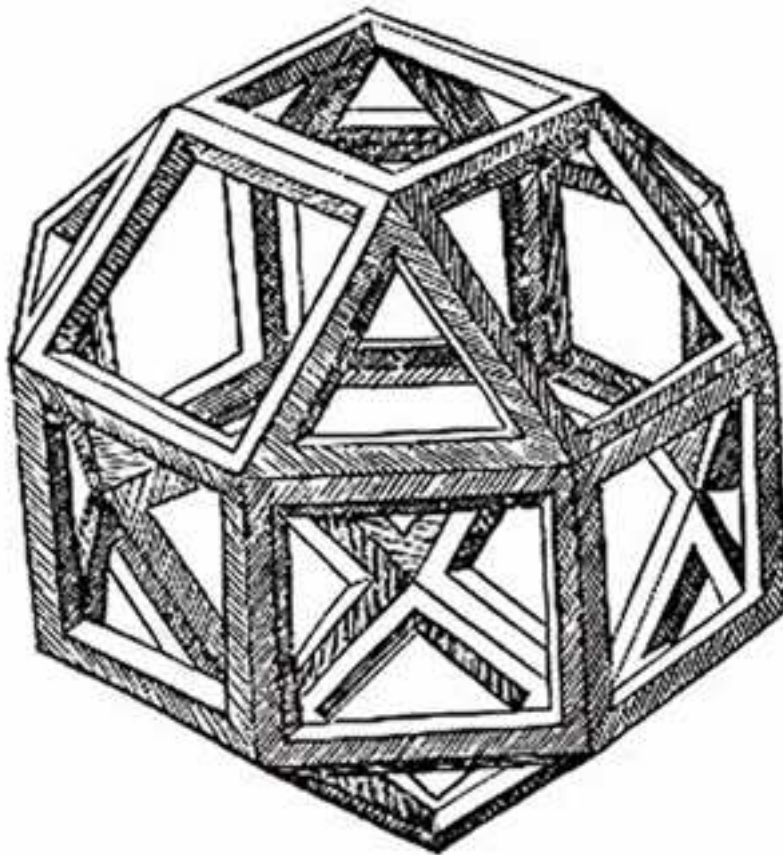
Another collaboration between Pacioli and Leonardo existed: Pacioli planned a book of mathematics and proverbs called *De Viribus Quantitatis* (The powers of numbers) which Leonardo was to illustrate, but Pacioli died before he could publish it.

History

Pacioli produced three manuscripts of the treatise by different scribes. He gave the first copy with a dedication to the Duke of Milan, Ludovico il Moro; this manuscript is now preserved in Switzerland at the Bibliothèque de Genève in Geneva. A second copy was donated to Galeazzo da Sanseverino and now rests at the Biblioteca Ambrosiana in Milan. The third, which has gone missing, was given to Pier Soderini, the Gonfaloniere of Florence. On 1 June 1509 the first printed edition was published in Venice by Paganino Paganini; it has since been reprinted several times.



Woodcut illustrating the proportions of the human face from the second part of Divina proportione, which covers the Vitruvian system https://en.wikipedia.org/wiki/Luca_Pacioli



Leonardos Darstellung eines [Rhombenkuboktaeders](https://en.wikipedia.org/wiki/Rhombenkuboktaeders) für Luca Paciolis De Divina Proportione https://en.wikipedia.org/wiki/Divina_proportione

De Divina Proportione
https://it.wikipedia.org/wiki/De_Divina_Proportione

Le copie originali

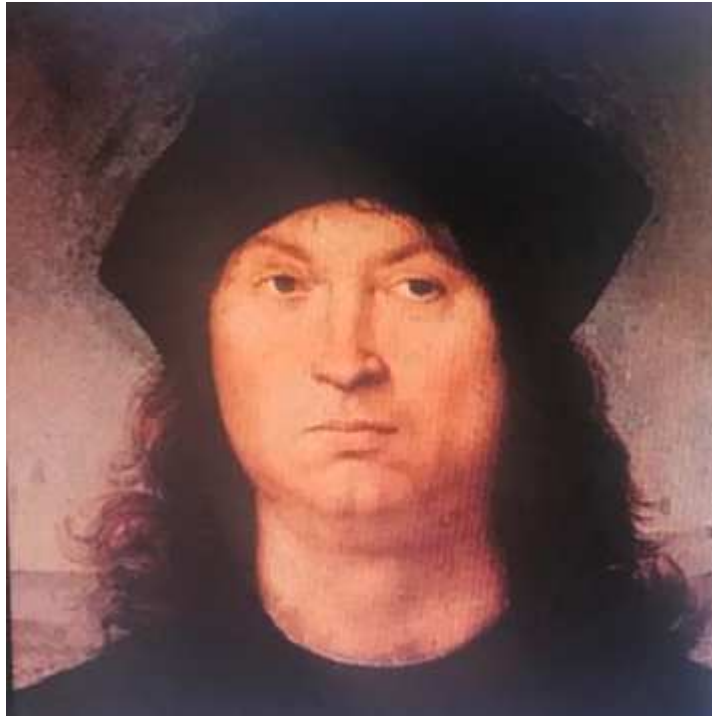
Luca Pacioli fece eseguire tre copie del trattato da amanuensi diversi; di queste copie se ne sono conservate due, una presso la Biblioteca Ambrosiana a Milano e la seconda presso la Bibliothèque Publique et Universitaire di Ginevra in Svizzera. Pacioli regalò la prima copia con dedica a Ludovico il Moro ed è quella conservata in Svizzera, un'altra copia fu invece regalata a Galeazzo Sanseverino, quella di Milano, mentre la terza, della quale si sono perse le tracce, fu invece offerta a Pier Soderini, Gonfaloniere di Firenze. Il *Divina Proportione* viene quindi stampato a Venezia nel 1509 ad opera di Paganino Paganini (A. Paganus Paganinus characteribus elegantissimis accuratissime imprimebat). Luca Pacioli lavora al *Divina Proportione* dal 1496 fino alla fine del 1497; nella versione a stampa, alla fine della prima parte, quella più strettamente connessa con la sezione aurea, il frate data il momento in cui termina il suo lavoro: Finis adi decembre in Milano nel nostro almo convento MCCCCXCVII (dicembre 1497).

Contenuto

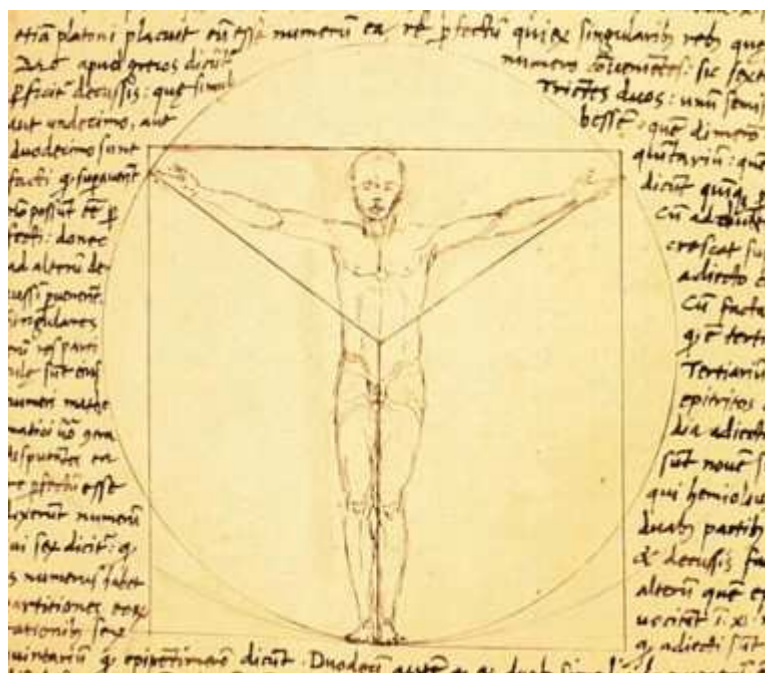
Nel suo lavoro Pacioli riprende molte opere precedenti, tra cui la nota *De prospectiva pingendi* di Piero della Francesca. La proporzione divina, secondo Luca Pacioli, si applica a tutte le arti ed è necessario che tutti gli uomini di ingegno abbiano una copia dell'opera da cui avranno diletto e nuova conoscenza: "Opera a tutti gl'ingegni perspicaci e curiosi necessari, ove ciascun studioso di Philosophia, Prospectiva, Pictura, Sculptura, Architectura, Musica e altre Mathematice, suavissima sottile e admirabile doctrina consequirà e delectarassi co' varie questione de secretissima scientia".

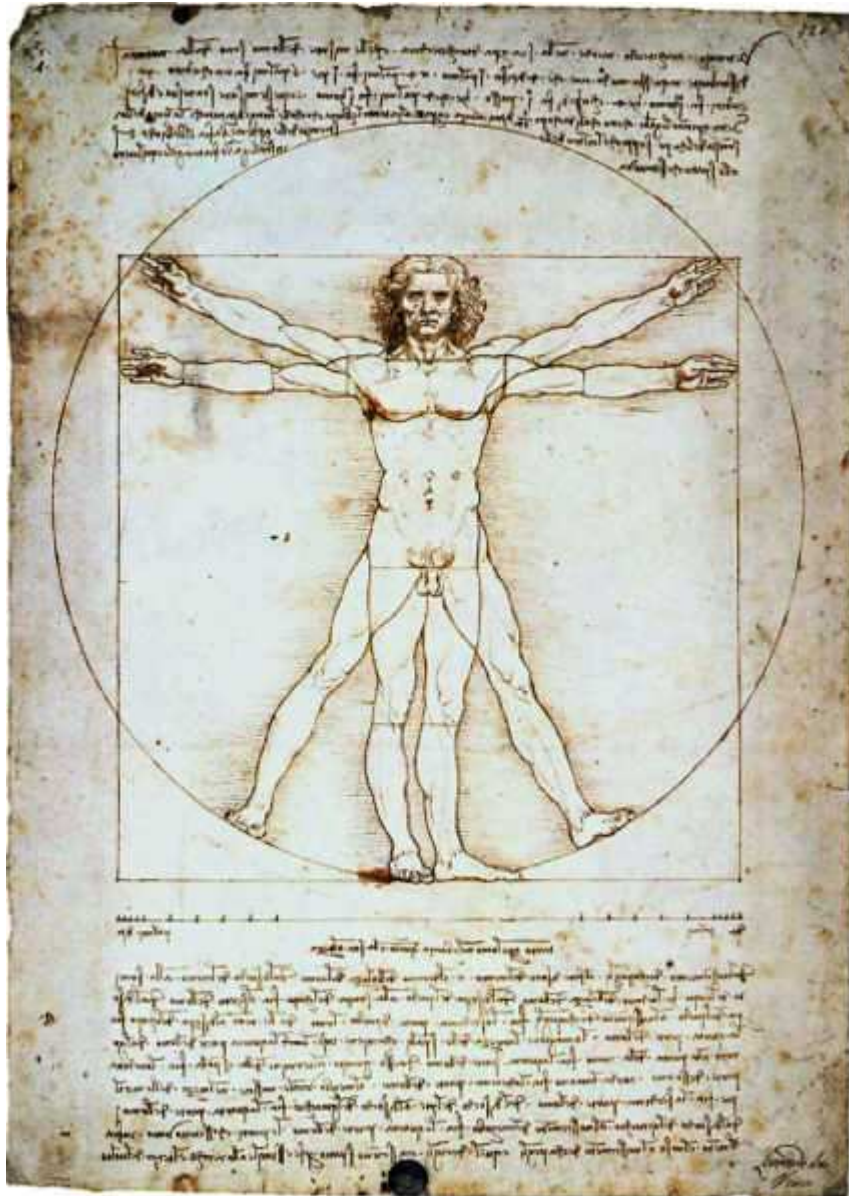
La versione a stampa del 1509 è composta da tre parti ben distinte, la prima in 71 capitoli che tratta del rapporto aureo e delle sue applicazioni nelle varie arti; la seconda in 20 capitoli è invece un trattato di architettura che si rifà alla teoria di Vitruvio; la terza parte è in realtà la traduzione in italiano del *Libellus de quinque corporibus regularibus* di Piero della Francesca sui cinque solidi regolari. Per questo il frate toscano verrà poi accusato di plagio dal Vasari. Al termine delle tre parti vi sono due sezioni di illustrazioni, la prima con le lettere maiuscole dell'alfabeto disegnate utilizzando riga e compasso da Luca Pacioli stesso e la seconda con le 60 tavole di Leonardo.

Jacopo Andrea da Ferrara
? – 1500



Jacopo [Iacomo] Andrea da Ferrara était un architecte de Ferrare et l'auteur d'un texte sur Vitruve. Très peu de choses sont connues au sujet de ses travaux architecturaux et son nom ne figure sur aucun bâtiments de Milan. Luca Pacioli a écrit que Andrea était presque comme un frère pour Léonard de Vinci. Andrea a été loyal envers la famille Sforza. Après l'occupation de Milan par les Français, il aurait comploté contre les Français. Il a été traduit en justice et condamné à mort. L'archevêque Pallavicini plaida sans succès en sa faveur. Il a été décapité en public le 12 mai 1500. Son corps a été écartelé et des parties ont été placées aux quatre portes de la ville. Iacomo Andrea: Vitruvian man: https://en.wikipedia.org/wiki/Iacomo_Andrea





Leonardo da Vinci, ca. 1490.
Feder und Tinte auf Papier; 34,4 x 24,5 cm Galleria dell' Accademia, Venedig

Giorgio Valla

1447 - 1500

https://en.wikipedia.org/wiki/Giorgio_Valla

Giorgio Valla (Latin: Georgius Valla; 1447–1500) was an Italian academic, mathematician, philologist and translator. Among his works is a Latin translation of Aristarchus's *On the Sizes and Distances* (1488)

Treatises

De orthographia (1495), Vienna

De expedita ratione argumentandi (1498; also Basel, 1529)

Logica (1498), Venice
 De simplicium natura (1528) Strassburg (on pharmacology)
 Georgii Vallae Placentini viri class. De expetendis et fugiendis rebus (1501, 40 books in 2 vols.), pr. Aldus Manutius, Venice.
Commentaries, critical editions and translations
 Problemata Alexandri Aphrodisei, per Georgium Vallam in latinum translata Venice: Antonio de Strada, 1488
 Galeni introductorium ad medicinam Georgio Valla interprete (1491), pr. Bartholomaeus de Zanis, Venice
 Opus magnorum moralium Aristotelis (1522), with Latin translation by Girardo Ruffo Vaccariensi, Paris
 Juvenalis cum tribus commentariis (1485, repr. 1495), Venice
 M. Tullii Ciceronis epistolae familiares (1505), Lyons
 Preface to the Commentary on Juvenal of Antonio Mancinelli (1494), Venice.

https://it.wikipedia.org/wiki/Giorgio_Valla

Giorgio Valla era figlio di Andrea Valla e di Cornelia Corvini. Dopo aver appreso i primi rudimenti a Piacenza, all'età di quindici anni si trasferì a Milano, ove frequentò le lezioni di lingua greca tenute da Costantino Lascaris. Qui rimase fino alla partenza di Lascaris da Milano, nel 1465, ed ebbe intensi contatti con intellettuali del calibro di Gian Giacomo Trivulzio. Per qualche tempo assolve l'incarico di precettore dei figli di Francesco Sforza.

L'approfondimento dello studio del greco si realizza a seguito del trasferimento da Milano a Pavia: qui, infatti, egli poté attendere alle lezioni di un altro greco, Andronico Callisto; intanto si avvicina anche allo studio della matematica sotto la guida di Giovanni Marliani. A questo periodo risale la conoscenza di Leonardo Da Vinci.

A partire dalla fine degli anni Sessanta, Valla alterna le attività di traduttore dai classici latini e greci e di insegnante delle due lingue. È attivo come insegnante a Pavia dal 1466 fino al 1485, con alcune diversioni a Milano e a Genova. Dopo il 1485 si trasferisce a Venezia sulla cattedra lasciata vacante da Giorgio Merula, su auspicio di Ermolao Barbaro nel frattempo divenuto ambasciatore della Serenissima a Milano.

La permanenza a Venezia consentì a Valla anche di intensificare i rapporti scientifici e filologici con gli intellettuali di maggior spicco della società europea e di intrattenere proficui rapporti sociali con i potenti veneziani, come i Loredan e i Mocenigo. A Venezia rimane fino alla morte, continuamente impegnato, oltre che in varie traduzioni, soprattutto nella composizione della sua opera principale, il *De expetendis et fugiendis rebus*, che verrà pubblicato solo postumo e a cura del figlio adottivo Giovanni Pietro da Cademosto.

Quest'opera si giovò soprattutto dell'intenso lavoro di traduzione sui testi di matematici greci, in primis di Archimede, del quale egli possedeva un manoscritto antico,

del IX secolo, poi andato perduto: nel *De expetendis* si leggono anche traduzioni da Euclide e Tolomeo.

Nel 1496 fu arrestato per via dei suoi legami di amicizia con Trivulzio: in quell'anno, infatti, la Repubblica di Venezia aveva stretto un'alleanza con Ludovico il Moro per fronteggiare la discesa in Italia del re di Francia, Carlo VIII, a sua volta alleato appunto con Trivulzio. Valla rimase in carcere per ben otto mesi, alla fine dei quali fu però rilasciato per l'acclarata insussistenza dei sospetti che gli erano stati mossi.

La morte colse Giorgio Valla a Venezia nel 1500: fu sepolto nella Chiesa di Santa Maria della Carità.

Francesco di Giorgio Martini

1439 – 1501



Francesco Sanese
scultore et architetto
Giorgio Vasari, *Le Vite*, 1568

https://it.wikipedia.org/wiki/Francesco_di_Giorgio_Martini

è stato un architetto, teorico dell'architettura, pittore, ingegnere, scultore, medaglista italiano.

Figlio di Giorgio di Martino del Viva, viene battezzato il 23 settembre 1439 a Siena come Franciescho Maurizio di Giorgio di Martino pollaiolo.

Il periodo di formazione a Siena

Il primo documento che lo riguarda come artista risale al 1460, quando viene nominato come pittore con Benvenuto di Giovanni e il Vecchietta, facendo presupporre che fosse allievo di quest'ultimo. Ma è comunque lo stile delle prime opere di Francesco di Giorgio ad indicare un periodo di formazione presso la bottega del Vecchietta.

Ritorno a Siena

A partire dal 1485 la Repubblica di Siena chiede ripetutamente il rientro del suo artista, ormai divenuto famoso, ma il rientro avviene ogni volta solo in maniera temporanea. Durante questo periodo di transizione Francesco di Giorgio si dedica nella città natale ad alcune fortificazioni militari, come ad esempio alla riparazione e fortificazione del ponte di Maciareto. Solo nel 1489 torna stabilmente a Siena, senza tuttavia disdegnare viaggi in tutta Italia per avere pareri, consulenze, progetti soprattutto nel campo delle fortificazioni.

Per esempio nel 1490 Giovanni della Rovere richiese inutilmente il suo ritorno nelle Marche, mentre nello stesso anno Martini si recò da Virginio Orsini per consigliarlo sulla Rocca di Bracciano e sul Castello di Campagnano ed a Milano dove incontrò Leonardo da Vinci, Bramante e Giovanni Antonio Amadeo in occasione di una sua consulenza per l'erezione del tiburio del Duomo di Milano, commissionata da Ludovico il Moro e per la cattedrale di Pavia. Nello stesso anno si registrano viaggi anche a Bologna e Venezia.

Il corpus teorico di Martini è molto vasto e variegato e comprende anche un'"Opera di architettura" dedicata al Duca Alfonso di Calabria. Una copia del suo trattato, che ebbe grande diffusione e vasta rinomanza, fu in possesso di Leonardo da Vinci che lo commentò minuziosamente; tale copia è conservata nella Biblioteca Medicea Laurenziana a Firenze.

Donato Bramante

1444 – 1514



https://en.wikipedia.org/wiki/Donato_Bramante

born as Donato di Pascuccio d'Antonio and also known as Bramante Lazzari, was an Italian architect. He introduced Renaissance architecture to Milan and the High Renaissance style to Rome, where his plan for St. Peter's Basilica formed the basis of design executed by Michelangelo. His Tempietto (San Pietro in Montorio) marked the beginning of the High Renaissance in Rome (1502) when Pope Julius II appointed him to build a sanctuary over the spot where Peter was allegedly crucified.

Urbino

Bramante was born under the name Donato d'Agnolo, Donato di Pascuccio d'Antonio, or Donato Pascuccio d'Antonio in Fermignano near Urbino. Here, in 1467, Luciano Laurana was adding to the Palazzo Ducale an arcaded courtyard and other Renaissance features to Federico da Montefeltro's ducal palace. Bramante's architecture has eclipsed his painting skills: he knew the painters Melozzo da Forlì and Piero della Francesca well, who were interested in the rules of perspective and illusionistic features in Mantegna's painting.

Milan

Around 1474, Bramante moved to Milan, a city with a deep Gothic architectural tradition, and built several churches in the new Antique style. The Duke, Ludovico Sforza, made him virtually his court architect, beginning in 1476, with commissions that culminated in the famous trompe-l'oeil choir of the church of Santa Maria presso San Satiro (1482–1486). Space was limited, and Bramante made a theatrical apse in bas-relief, combining the painterly arts of perspective with Roman details. There is an octagonal sacristy, surmounted by a dome. In Milan, Bramante also built the tribune of Santa Maria delle Grazie (1492–99); other early works include the Cloisters of Sant'Ambrogio, Milan (1497–1498), and some other constructions in Pavia and possibly Legnano. However, in 1499, with his Sforza patron driven from Milan by an invading French army, Bramante made his way to Rome, where he was already known to the powerful Cardinal Riario.

<https://it.wikipedia.org/wiki/Bramante>

I contatti culturali con Leonardo e con la corte

Nel 1487 Bramante partecipò, come anche Leonardo, Francesco di Giorgio Martini, Amadeo ed altri, al concorso per il tiburio del Duomo di Milano, presentando un progetto a pianta quadrata e con un appoggio diretto sui piloni, per il quale realizzò un modello ligneo perduto e che forse è rappresentato in un'incisione del trattato di Cesare Cesariano che fu suo allievo. Sulla questione Bramante scrisse una relazione, conosciuta come *Opinio super Domicilium*

seu Templum Magnum. Si tratta dell'unico scritto teorico d'architettura di Bramante che ci sia pervenuto, in cui, interpretando Vitruvio, indica come caratteristiche dell'architettura la "fortezza", la "conformità cum el resto de l'edificio", la "legiereza" e la "beleza". Durante il suo periodo milanese Bramante esercitò, nell'ambiente di corte, anche la sua passione letteraria. Infatti Bramante all'epoca era lodato anche come musicista e poeta e "fu di facundia grande ne' versi", come scrive nel 1521 Caporali. Ci ha lasciato infatti un piccolo canzoniere di 25 sonetti, 15 di tema amoroso petrarchesco e altri di argomento burlesco o biografico, tra cui uno in cui lamenta lo stato delle sue scarse finanze.

Giuliano da Sangallo

ca. 1445 - 1516



Portrait by Piero di Cosimo, c. 1482-1485 (Rijksmuseum, Amsterdam)

https://en.wikipedia.org/wiki/Giuliano_da_Sangallo

Giuliano da Sangallo (ca. 1445 – 1516) was an Italian sculptor, architect and military engineer active during the Italian Renaissance. He is known primarily for being the favored architect of Lorenzo de' Medici, his patron. In this role, Giuliano designed a villa for Lorenzo as well as a monastery for Augustinians and a church where a miracle was said to have taken place. Additionally, Giuliano was commissioned to build multiple structures for Pope Julius II and Pope Leo X. Leon Battista Alberti and Filippo Brunelleschi heavily influenced Sangallo and in turn, he influenced other important Renaissance figures such

as Raphael, Leonardo da Vinci, his brother Antonio da Sangallo the Elder, and his sons, Antonio da Sangallo the Younger and Francesco da Sangallo.

Early life

Giuliano da Sangallo (né Giuliano Giamberti) was born c. 1445 in Florence. His father, Francesco Giamberti, was a woodworker and an architect who worked closely with Cosimo de' Medici. This proved to be helpful to Giuliano and his brother, Antonio, later in life as it helped them to develop a close working relationship and friendship with Cosimo's grandson, Lorenzo de' Medici. As a child, Giuliano became an apprentice to a joiner. As an apprentice, his woodworking, building and sculpting skills drew the attention of Lorenzo de' Medici. In addition to his work as a joiner's apprentice, Giuliano had the opportunity to study the works of ancient architects such as Pliny the Younger and Vitruvius as well as his more immediate predecessors such as Leonardo Battista Alberti and Filippo Brunelleschi. Through this, he was able to develop his creative eye, learn about classical design, and also develop what became a lifelong business relationship with Lorenzo de' Medici. Giuliano's first major, independent commission came from none other than the Medici family and it showed not only his architectural skill, but also his knowledge of defensive fortifications. Lorenzo the Magnificent called upon Giuliano to build military fortifications and manage the artillery in the town of Castellina against an invasion led by the Duke of Calabria. In this role, Giuliano successfully pushed out the Calabrian forces and showed his natural talent for military building and strategy.

https://it.wikipedia.org/wiki/Giuliano_da_Sangallo

In giro per l'Europa

Morto Lorenzo nel 1492 e cacciati i Medici nel 1494, Giuliano, dopo essersi dedicato alla chiesa di Prato e visto che i cantieri medicei erano stati abbandonati ed il nuovo clima politico non prometteva nuove committenze, lasciò Firenze.

Nel 1492, su incarico di Piero dei Medici, fu a Milano, dove incontrò Leonardo e Bramante, per presentare un modello della villa di Poggio a Caiano e, forse, di un nuovo palazzo a Ludovico il Moro.

Nel 1494 si recò in Francia su invito di Carlo VIII. Tra il 1495 ed il 1497 risiedette a Savona per costruire il palazzo del cardinale Giuliano della Rovere (futuro Giulio II) al seguito del quale, nel 1496, fu di nuovo in Francia, presentò un modello di palazzo al Re che si trovava a Lione e viaggiò in Provenza disegnando i resti romani della regione (per esempio

l'arco di trionfo e il teatro di Orange). Lavorò anche a Siena e tra il 1499 e il 1500 si recò a Loreto per occuparsi della cupola del santuario della Santa Casa.

Giovanni Ambrogio de Predis

ca. 1455 - 1509

https://en.wikipedia.org/wiki/Giovanni_Ambrogio_de_Predis

Giovanni Ambrogio de Predis (Preda, c. 1455 – Milan, c. 1508) was an Italian Renaissance painter, illuminator and designer of coins active in Milan. Ambrogio gained a reputation as a portraitist, including as a painter of miniatures, at the court of Ludovico Sforza. Ambrogio de Predis was born in a family of artists from Lombardy. His brothers and half-brothers including Evangelista, Bernardino and Cristoforo were also painters. Little is known about his training. He initially worked as an illuminator in collaboration with his half-brother Cristoforo. He produced seven miniatures for a Book of Hours in 1472 (the work no longer exists) and again for a Book of Hours in 1474. He then worked on designs for the local mint in Milan along with his brother Bernardino. He subsequently worked for the court of the Sforzas for a number of years, mainly as a portrait painter. It is during this time that he offered hospitality to Leonardo da Vinci when he arrived in Milan.

A marriage was arranged between Emperor Maximilian I and Bianca Maria Sforza, niece of Ludovico il Moro, but before the former would commit to the arrangement, he requested a portrait of his proposed bride. The portrait of Bianca Maria was painted by Ambrogio, who followed her to Innsbruck after the wedding in 1493, and there he worked for several years in the lady's service before returning to Milan, where he designed coins for the mint, designed and supervised tapestry works, and prepared stage scenery. In 1502 he produced his only surviving signed and dated work, a portrait of the Emperor Maximilian. Much of Ambrogio de Predis's artistic output remains in dispute.

Work

He and his brother Evangelista are known to have collaborated with Leonardo da Vinci on the painting of the Virgin of the Rocks for the altarpiece in the chapel of the Confraternity of the Immaculate Conception at the Church of San Francesco Grande, Milan. Leonardo painted the central panel with the Virgin of the Rocks (National Gallery, London), while the two brothers created the side panels. The side panels for the Virgin of the Rocks, now in the National

Gallery, London were stated by the brothers to have been painted by them during the legal dispute over the altarpiece, and this is accepted by art historians.



Virgin of the Rocks, National Gallery

Baldassare Taccone

1461 - 1521

Baldassare Taccone (Alessandria, 1461 – Milan, 1521) est un poète italien.

Chancelier à la cour de Ludovic Sforza dit « le More » et poète officiel du duc, Baldassare Taccone est surtout connu pour être l’auteur de Danae, « favola » ou comédie chantée en cinq actes, mise en scène par Léonard de Vinci en 1496 à Milan, comme en témoigne un feuillet de l’artiste aujourd’hui conservé au Metropolitan Museum of Art de New York. Ce feuillet contient non seulement les croquis des machines et dispositifs scéniques créés par Léonard de Vinci, mais aussi les noms des artistes ayant participé au spectacle.

L’intrigue de la pièce, détaillée dans l’édition bolognaise de 1888 de la Danae de Taccone, reprend le mythe de Danaé, belle vierge aimée de Jupiter mais tenue captive dans une tour inaccessible par son père possessif. Jupiter, après avoir inutilement tenté de séduire Danaé avec la complicité de Mercure, rejoint finalement la jeune femme sous forme d’une pluie d’or et s’unit à elle. Condamnée à mort par son père car elle est enceinte, Danaé est sauvée par Jupiter qui la transforme en étoile et la fait monter au ciel dans une explosion de lumières et de sons. Tout au long de la pièce, le personnage de Mercure

passé son temps à voler entre la Terre et le Mont Olympe afin de faire honneur à la machine ascensionnelle conçue par Léonard de Vinci. L'Olympe était couvert d'un ciel contenant de nombreuses lampes à huile en guise d'étoiles. Dans les didascalies de la pièce, Taccone indique également que l'orchestre était invisible, dissimulé derrière les machines de scène tandis que les « piffari » (instruments à vent), cornemuses, percussions et autres instruments étaient distribués derrière les scènes inférieure et supérieure. Baldassare Taccone reste chancelier sous l'occupation de Milan par les Français et meurt en 1521.

See this amazing Video: *Leonardo da Vinci – La festa del paradiso*

http://septemliterary.altervista.org/leonardo-da-vinci-la-festa-del-paradiso/?doing_wp_cron=1562961805.6984250545501708984375

Conclusion

Leonardo's face to face encounters with artists, academics, intellectuals as well as with politicians and members of the Catholic church is a large and complex issue. I have not mentioned his encounters with politicians such as Lorenzo il Magnifico, Ludovico Sforza 'il Moro', Charles d'Amboise or François Ier as well as with many other intellectuals, poets, musicians, scientists and scholars. Some of them were not face to face but, in case of intellectuals, scientists or writers, on the basis of their publications either during Leonardo's lifetime or before it. I also did not mention all those face to face encounters dealing with painting of real or imagined persons particularly dealing with religious matters or battles or as a matter of illustration of his scientific studies such as the Vitruvian man.

Leonardo mentions several times that the most important challenge for a painter is to make "in his mind" ("nella mente") (TP II, 53) a clear idea of the nature of what he wants to paint, so that it remains in his mind when the thing disappears (TP, II, 69). Vasari reports the story about Leonardo's painting the *Last Supper* but letting the head of Christ unfinished as "he was incapable of achieving the celestial divinity of the image of Christ required." The face of *Monna Lisa* is no less puzzling and enigmatic as the one of *St. John the Baptist*, the *Virgin and Child with St Anne*, the two versions of the *Virgin of the Rocks*, or the face of *Ginevra de' Benci*, to mention just a few.

Leonardo is a philosopher-painter as well as a philosopher-scientist. His face to face encounters with persons are no less enigmatic than the ones with all kinds of natural phenomena that he describes with words and drawings in an effort to catch what he sees as the appearance of an infinity of possibilities for which mathematics can provide only an approximation.