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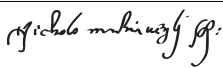
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# Niccolò Machiavelli

## Niccolò Machiavelli



Portrait of Niccolò Machiavelli by Santi di Tito

<b>Born</b>	3 May 1469 Florence, Republic of Florence
<b>Died</b>	21 June 1527 (aged 58) Florence, Republic of Florence
<b>Era</b>	Renaissance philosophy
<b>Region</b>	Western philosophy
<b>School</b>	Renaissance humanism, political realism, classical republicanism
<b>Main interests</b>	Politics and political philosophy, military theory, history
<b>Signature</b>	

**Niccolò di Bernardo dei Machiavelli** (Italian: [nikkoˈlɔ makjaˈvɛlli]; 3 May 1469 – 21 June 1527) was an Italian historian, politician, diplomat, philosopher, humanist and writer based in Florence during the Renaissance. He was for many years an official in the Florentine Republic, with responsibilities in diplomatic and military affairs. He was a founder of modern political science, and more specifically political ethics. He also wrote comedies, carnival songs, and poetry. His personal correspondence is renowned in the Italian language. He was Secretary to the Second Chancery of the Republic of Florence from 1498 to 1512, when the Medici were out of power. He wrote his masterpiece, *The Prince*, after the Medici had recovered power and he no longer held a position of responsibility in Florence.

"Machiavellianism", is a widely used negative term to characterize unscrupulous politicians of the sort Machiavelli described in *The Prince*. The book itself gained enormous notoriety and wide readership because the author seemed to be endorsing this evil behavior.

## Life

Machiavelli was born in Florence, Italy, the first son and third child of attorney Bernardo di Niccolò Machiavelli and his wife Bartolomea di Stefano Nelli.<sup>[1]</sup> The Machiavelli family are believed to be descended from the old marquesses of Tuscany and to have produced thirteen Florentine Gonfalonieres of Justice,<sup>[2]</sup> one of the offices of a group of nine citizens selected by drawing lots every two months, who formed the government, or Signoria. However he was never a full citizen of Florence, due to the nature of Florentine citizenship in that time, even under the republican regime.<sup>[3]</sup>



Machiavelli was born in a tumultuous era—popes waged acquisitive wars against Italian city-states, and people and cities often fell from power. Along with the pope and the major cities like Venice and Florence, foreign powers such as France, Spain, the Holy Roman Empire, and even Switzerland battled for regional influence and control. Political-military alliances continually changed, featuring condottieri (mercenary leaders) who changed sides without warning, and the rise and fall of many short-lived governments.<sup>[4]</sup>

Machiavelli was taught grammar, rhetoric, and Latin. It is thought that he did not learn Greek, even though Florence was at the time one of the centers of Greek scholarship in Europe. In 1494, Florence restored the republic—expelling the Medici family, who had ruled Florence for some sixty years. In June 1498, shortly after the execution of Savonarola, Machiavelli, at the age of 29, was elected as head of the second chancery. In July 1498, he was also made the secretary of the *Dieci di Libertà e Pace*. He was in a diplomatic council responsible for negotiation and military affairs. Between 1499 and 1512 he carried out several diplomatic missions: to the court of Louis XII in France; to the court of Ferdinand II of Aragón, in Spain; in Germany; and to the Papacy in Rome, in the Italian states. Moreover, from 1502 to 1503 he witnessed the brutal reality of the state-building methods of Cesare

Borgia (1475–1507) and his father Pope Alexander VI, who were then engaged in the process of trying to bring a large part of central Italy under their possession. The pretext of defending Church interests was used as a partial justification by the Borgias.

Between 1503 and 1506 Machiavelli was responsible for the Florentine militia, including the City's defense. He distrusted mercenaries (a distrust he explained in his official reports and then later in his theoretical works), preferring a politically invested citizen-militia, a philosophy that bore fruit: under his command Florentine citizen-soldiers defeated Pisa in 1509. However, in August 1512 the Medici, helped by Pope Julius II, used Spanish troops to defeat the Florentines at Prato. Piero Soderini resigned as Florentine head of state and left in exile. The Florentine city-state and the Republic was dissolved. Machiavelli was deprived of office in 1512 by the Medici. In 1513 he was accused of conspiracy, arrested, and imprisoned for a time. Despite having been subjected to torture ("with the rope", where the prisoner is hanged from his bound wrists, from the back, forcing the arms to bear the body's weight, thus dislocating the shoulders), he denied involvement and was released.

Machiavelli then retired to his estate at Sant'Andrea in Percussina (near San Casciano in Val di Pesa), and devoted himself to study and to the writing of the political treatises that earned his intellectual place in the development of political philosophy and political conduct.<sup>[5]</sup> Despairing of the opportunity to remain directly involved in political matters, after a time Machiavelli began to participate in intellectual groups in Florence and wrote several plays that (unlike his works on political theory) were both popular and widely known in his lifetime. Still politics remained his main passion, and to satisfy this interest he maintained a well-known correspondence with better politically connected friends, attempting to become involved once again in political life.<sup>[6]</sup>

In a letter to Francesco Vettori, he described his exile:

When evening comes, I go back home, and go to my study. On the threshold, I take off my work clothes, covered in mud and filth, and I put on the clothes an ambassador would wear. Decently dressed, I enter the ancient courts of rulers who have long since died. There, I am warmly welcomed, and I feed on the only food I find nourishing and was born to savor. I am not ashamed to talk to them and ask them to explain their actions and they, out of kindness, answer me. Four hours go by without my feeling any anxiety. I forget every worry. I am no longer afraid of poverty or frightened of death. I live entirely through them.<sup>[7]</sup>

Machiavelli died in 1527 at the age of 58. He was buried at the Church of Santa Croce in Florence, Italy. An epitaph honoring him is inscribed on his monument. The Latin legend reads: TANTO NOMINI NULLUM PAR ELOGIUM ("so great a name (has) no adequate praise" or "no eulogy (would be appropriate to) such a great name").

## Works

### *The Prince*

Machiavelli's best-known book, *Il Principe*, contains a number of maxims concerning politics, but rather than the more traditional subject of a hereditary prince, it concentrates on the possibility of a "new prince". To retain power, the hereditary prince must carefully maintain the sociopolitical institutions to which the people are accustomed; whereas a new prince has the more difficult task in ruling, since he must first stabilize his newfound power in order to build an enduring political structure. He asserted that social benefits of stability and security could be achieved in the face of moral corruption. Aside from that, Machiavelli believed that public and private morality had to be understood as two different things in order to rule well. As a result, a ruler must be concerned not only with reputation, but also must be positively willing to act immorally at the right times. As a political scientist, Machiavelli emphasized the occasional need for the methodical exercise of brute force or deceit.



Machiavelli's cenotaph in the Santa Croce Church in Florence



Lorenzo di Piero de' Medici to whom the final version of the *Prince* was dedicated.

Scholars often note that Machiavelli glorifies instrumentality in statebuilding—an approach embodied by the saying that "the ends justify the means". Violence may be necessary for the successful stabilization of power and introduction of new legal institutions. Force may be used to eliminate political rivals, to coerce resistant populations, and to purge the community of other men strong enough of character to rule, who will inevitably attempt to replace the ruler. Machiavelli has become infamous for such political advice, ensuring that he would be remembered in history through the adjective, "Machiavellian".

Notwithstanding some mitigating themes, the Catholic Church banned *The Prince*, registering it to the *Index Librorum Prohibitorum*, and humanists also viewed the book negatively. Among them was Erasmus of Rotterdam. As a treatise, its primary intellectual contribution to the history of political thought is the fundamental break between political realism and political idealism, because *The Prince* is a manual to acquiring and keeping political power. In contrast with Plato and Aristotle, Machiavelli insisted that an imaginary ideal society is not a model by which a prince should orient himself.

Concerning the differences and similarities in Machiavelli's advice to ruthless and tyrannical princes in *The Prince* and his more republican exhortations in *Discourses on Livy*, many have concluded that *The Prince*, although written as advice for a monarchical prince, contains arguments for the superiority of republican regimes, similar to those found in the *Discourses*. In the 18th century the work was even called a satire, for example by Jean-Jacques Rousseau.<sup>[8][9]</sup> More recently, commentators such as Leo Strauss and Harvey Mansfield have agreed that the *Prince* can be read as having a deliberate comical irony.<sup>[citation needed]</sup> Among commentators who have not seen the work as ironic, many still agree that the *Prince* is republican to some extent.<sup>[citation needed]</sup>

Other interpretations include for example that of Antonio Gramsci, who argued that Machiavelli's audience for this work was not even the ruling class but the common people because the rulers already knew these methods through their education.

### ***Discourses on Livy***

The *Discourses on the First Ten Books of Titus Livy*, often referred to simply as the "Discourses" or *Discorsi*, is nominally a discussion regarding the classical history of early Ancient Rome, although it strays very far from this subject matter and also uses contemporary political examples to illustrate points. Machiavelli presents it as a series of lessons on how a republic *should* be started and structured. It is a larger work than the *Prince*, and while it more openly explains the advantages of republics, it also contains many similar themes. Commentators disagree about how much the two works agree with each other, frequently referring to leaders of democracies as "princes". It includes early versions of the concept of checks and balances, and asserts the superiority of a republic over a principality. It became one of the central texts of republicanism, and has often been argued to be a superior work to the *Prince*.<sup>[10]</sup>

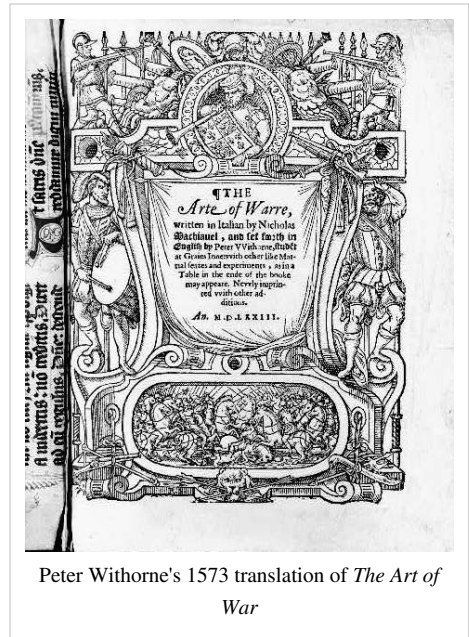
From *The Discourses*:

- "In fact, when there is combined under the same constitution a prince, a nobility, and the power of the people, then these three powers will watch and keep each other reciprocally in check." Book I, Chapter II
- "Doubtless these means [of attaining power] are cruel and destructive of all civilized life, and neither Christian, nor even human, and should be avoided by every one. In fact, the life of a private citizen would be preferable to that of a king at the expense of the ruin of so many human beings." Bk I, Ch XXVI
- "Now, in a well-ordered republic, it should never be necessary to resort to extra-constitutional measures. . . ." Bk I, Ch XXXIV
- ". . . the governments of the people are better than those of princes." Book I, Chapter LVIII
- ". . . if we compare the faults of a people with those of princes, as well as their respective good qualities, we shall find the people vastly superior in all that is good and glorious". Book I, Chapter LVIII
- "For government consists mainly in so keeping your subjects that they shall be neither able, nor disposed to injure you. . . ." Bk II, Ch XXIII
- ". . . no prince is ever benefited by making himself hated." Book III, Chapter XIX

- “Let not princes complain of the faults committed by the people subjected to their authority, for they result entirely from their own negligence or bad example.” Bk III, Ch XXIX <sup>[11]</sup>

## Other political and historical works

- *Discorso sopra le cose di Pisa* (1499)
- *Del modo di trattare i popoli della Valdichiana ribellati* (1502)
- *Del modo tenuto dal duca Valentino nell' ammazzare Vitellozzo Vitelli, Oliverotto da Fermo, etc.* (1502) — *A Description of the Methods Adopted by the Duke Valentino when Murdering Vitellozzo Vitelli, Oliverotto da Fermo, the Signor Pagolo, and the Duke di Gravina Orsini*
- *Discorso sopra la provisione del danaro* (1502) — A discourse about the provision of money.
- *Ritratti delle cose di Francia* (1510) — Portrait of the affairs of France.
- *Ritratto delle cose della Magna* (1508–1512) - Portrait of the affairs of Germany.
- *Dell'Arte della Guerra* (1519–1520) — *The Art of War*, high military science.
- *Discorso sopra il riformare lo stato di Firenze* (1520) — A discourse about the reforming of Florence.
- *Sommario delle cose della citta di Lucca* (1520) — A summary of the affairs of the city of Lucca.
- *The Life of Castruccio Castracani of Lucca* (1520) — *Vita di Castruccio Castracani da Lucca*, a short biography.
- *Istorie Florentine* (1520–1525) — *Florentine Histories*, an eight-volume history book of the city-state, Florence, commissioned by Giulio di Giuliano de' Medici, later Pope Clement VII.



## Fictional works

Besides being a statesman and political scientist, Machiavelli also translated classical works, and was a dramaturge (*Clizia*, *Mandragola*), a poet (*Sonetti*, *Canzoni*, *Ottave*, *Canti carnascialeschi*), and a novelist (*Belfagor arcidiavolo*).

Some of his other work:

- *Decennale primo* (1506), a poem in terza rima.
- *Decennale secondo* (1509), a poem.
- *Andria* or *The Woman of Andros* (1517), a Classical comedy, translated from Terence.
- *Mandragola* (1518) — *The Mandrake*, a five-act prose comedy, with a verse prologue.
- *Clizia* (1525), a prose comedy.
- *Belfagor arcidiavolo* (1515), a novella.
- *Asino d'oro* (1517) — *The Golden Ass* is a terza rima poem, a new version of the classic work by Apuleius.
- *Frammenti storici* (1525) — Fragments of stories.

## Other works

*Della Lingua* (Italian for "Of the Language") (1514), a dialogue about Italy's language is normally attributed to Machiavelli.

Machiavelli's literary executor, Giuliano de' Ricci, also reported having seen that Machiavelli, his grandfather, made a comedy in the style of Aristophanes which included living Florentines as characters, and to be titled *Le Maschere*. It has been suggested that due to such things as this and his style of writing to his superiors generally, there was very likely some animosity to Machiavelli even before the return of the Medici.<sup>[12]</sup>

## Originality

Commentators have taken very different approaches to Machiavelli, and not always agreed. Major discussion has tended to be especially about two issues, first how unified and philosophical his work is, and secondly concerning how innovative or traditional it is.<sup>□</sup>

## Coherence

There is some disagreement concerning how best to describe the unifying themes, if there are any, that can be found in Machiavelli's works, especially in the two major political works, *The Prince* and *Discourses*. Some commentators have described him as inconsistent, and perhaps as not even putting a high priority in consistency.<sup>□</sup> Others such as Hans Baron have argued that his ideas must have changed dramatically over time. Some have argued that his conclusions are best understood as a product of his times, experiences and education. Others, such as Leo Strauss and Harvey Mansfield, have argued strongly that there is a very strong and deliberate consistency and distinctness, even arguing that this extends to all of Machiavelli's works including his comedies and letters.<sup>□</sup>

## Influences

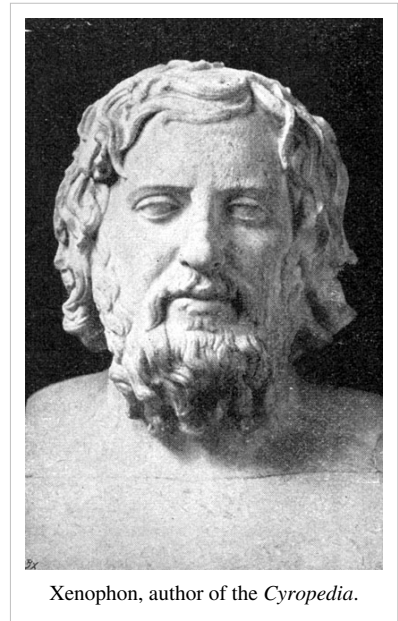
Commentators such as Leo Strauss have gone so far as to name Machiavelli as the deliberate originator of modernity itself. Others have argued that Machiavelli is only a particularly interesting example of trends which were happening around him. In any case Machiavelli presented himself at various times as someone reminding Italians of the old virtues of the Romans and Greeks, and other times as someone promoting a completely new approach to politics.<sup>□</sup>

That Machiavelli had a wide range of influences is in itself not controversial. Their relative importance is however a subject of on-going discussion. It is possible to summarize some of the main influences emphasized by different commentators.

**1. The Mirror of Princes genre.** Gilbert (1938) summarized the similarities between *The Prince* and the genre it obviously imitates, the so-called "Mirror of Princes" style. This was a classically influenced genre, with models at least as far back as Xenophon and Isocrates, that was still quite popular during Machiavelli's life. While Gilbert emphasizes the similarities however, he agrees with all other commentators that Machiavelli was particularly novel in the way he used this genre, even when compared to his contemporaries such as Baldassare Castiglione and Erasmus. One of the major innovations Gilbert noted was that Machiavelli focused upon the "deliberate purpose of dealing with a new ruler who will need to establish himself in defiance of custom". Normally, these types of works were addressed only to hereditary princes.

**2. Classical republicanism.** Commentators such as Quentin Skinner and J.G.A. Pocock, in the so-called "Cambridge School" of interpretation have been able to show that some of the republican themes in Machiavelli's political works, particularly the *Discourses on Livy*, can be found in medieval Italian literature which was influenced by classical authors such as Sallust.

**3. Classical political philosophy: Xenophon, Plato and Aristotle.** The Socratic school of classical political philosophy, especially Aristotle, had become a major influence upon European political thinking in the late Middle Ages. It existed both in the catholicised form presented by Thomas Aquinas, and in the more controversial "Averroist" form of authors like Marsilius of Padua. Machiavelli was critical of catholic political thinking and may have been influenced by Averroism. But he cites Plato and Aristotle very infrequently and apparently did not approve of them. Leo Strauss argued that the strong influence of Xenophon, a student of Socrates more known as an historian, rhetorician and soldier, was a major source of Socratic ideas for Machiavelli, sometimes not in line with Aristotle. While interest in Plato was increasing in Florence during Machiavelli's lifetime he also does not show particular interest in him, but was indirectly influenced by his readings of authors such as Polybius, Plutarch and Cicero.



Xenophon, author of the *Cyropedia*.

The major difference between Machiavelli and the Socratics, according to Strauss, is Machiavelli's materialism and therefore his rejection of both a teleological view of nature, and of the view that philosophy is higher than politics. Aimed-for things which the Socratics argued would tend to happen by nature, Machiavelli said would happen by chance.<sup>[1]</sup>

**4. Classical materialism.** Strauss argued that Machiavelli may have seen himself as influenced by some ideas from classical materialists such as Democritus, Epicurus and Lucretius. Strauss however sees this also as a sign of major innovation in Machiavelli, because classical materialists did not share the Socratic regard for political life, while Machiavelli clearly did.<sup>[1]</sup>

**5. Thucydides.** Some scholars note the similarity between Machiavellian and the Greek historian Thucydides, since both emphasized power politics.<sup>[13][14]</sup> Strauss argued that Machiavelli may indeed have been influenced by pre-Socratic philosophers, but he felt it was a new combination:-

...contemporary readers are reminded by Machiavelli's teaching of Thucydides; they find in both authors the same "realism," i.e., the same denial of the power of the gods or of justice and the same sensitivity to harsh necessity and elusive chance. Yet Thucydides never calls in question the intrinsic superiority of nobility to baseness, a superiority that shines forth particularly when the noble is destroyed by the base. Therefore Thucydides' History arouses in the reader a sadness which is never aroused by Machiavelli's books. In Machiavelli we find comedies, parodies, and satires but nothing reminding of tragedy. One half of humanity remains outside of his thought. There is no tragedy in Machiavelli because he has no sense of the sacredness of "the common." — Strauss (1958, p. 292)

## Beliefs

Amongst commentators, there are a few consistently made proposals concerning what was most new in Machiavelli's work.

## Empiricism and realism versus idealism

Machiavelli is sometimes seen as the prototype of a modern empirical scientist, building generalizations from experience and historical facts, and emphasizing the uselessness of theorizing with the imagination.<sup>[1]</sup>

He emancipated politics from theology and moral philosophy. He undertook to describe simply what rulers actually did and thus anticipated what was later called the scientific spirit in which questions of good and bad are ignored, and the observer attempts to discover only what really happens.

—Joshua Kaplan, 2005<sup>[1]</sup>

Machiavelli felt that his early schooling along the lines of a traditional classical education was essentially useless for the purpose of understanding politics.<sup>[1]</sup> Nevertheless, he advocated intensive study of the past, particularly regarding the founding of a city, which he felt was a key to understanding its later development.<sup>[1]</sup> Moreover, he studied the way people lived and aimed to inform leaders how they should rule and even how they themselves should live. For example, Machiavelli denies that living virtuously necessarily leads to happiness. And Machiavelli viewed misery as *one of the vices that enables a prince to rule*.<sup>[15]</sup> Machiavelli stated that *it would be best to be both loved and feared. But since the two rarely come together, anyone compelled to choose will find greater security in being feared than in being loved*.<sup>[16]</sup> In much of Machiavelli's work, it seems that the ruler must adopt unsavory policies for the sake of the continuance of his regime.

A related and more controversial proposal often made is that he described how to do things in politics in a way which seemed neutral concerning who used the advice - tyrants or good rulers.<sup>[1]</sup> That Machiavelli strove for realism is not doubted, but for four centuries scholars have debated how best to describe his morality. *The Prince* made the word "Machiavellian" a byword for deceit, despotism, and political manipulation. Even if Machiavelli was not himself evil, Leo Strauss declared himself inclined toward the traditional view that Machiavelli was self-consciously a "teacher of evil," since he counsels the princes to avoid the values of justice, mercy, temperance, wisdom, and love of their people in preference to the use of cruelty, violence, fear, and deception.<sup>[17]</sup> Italian anti-fascist philosopher Benedetto Croce (1925) concludes Machiavelli is simply a "realist" or "pragmatist" who accurately states that moral values in reality do not greatly affect the decisions that political leaders make.<sup>[18]</sup> German philosopher Ernst Cassirer (1946) held that Machiavelli simply adopts the stance of a political scientist—a Galileo of politics—in distinguishing between the "facts" of political life and the "values" of moral judgment.<sup>[19]</sup>

## Fortune

Machiavelli is generally seen as being critical of Christianity as it existed in his time, specifically its effect upon politics, and also everyday life. In his opinion, Christianity, along with the teleological Aristotelianism that the church had come to accept, allowed practical decisions to be guided too much by imaginary ideals and encouraged people to lazily leave events up to providence or, as he would put it, chance, luck or fortune. While Christianity sees modesty as a virtue and pride as sinful, Machiavelli took a more classical position, seeing ambition, spiritedness, and the pursuit of glory as good and natural things, and part of the virtue and prudence that good princes should have. Therefore, while it was traditional to say that leaders should have virtues, especially prudence, Machiavelli's use of the words *virtù* and *prudenza* was unusual for his time, implying a spirited and immodest ambition. Famously, Machiavelli argued that virtue and prudence can help a man control more of his future, in the place of allowing fortune to do so.

Najemy (1993) has argued that this same approach can be found in Machiavelli's approach to love and desire, as seen in his comedies and correspondence. Najemy shows how Machiavelli's friend Vettori argued against Machiavelli and cited a more traditional understanding of fortune.

On the other hand, humanism in Machiavelli's time meant that classical pre-Christian ideas about virtue and prudence, including the possibility of trying to control one's future, were not unique to him. But humanists did not go so far as to promote the extra glory of deliberately aiming to establish a new state, in defiance of traditions and laws.

While Machiavelli's approach had classical precedents, it has been argued that it did more than just bring back old ideas, and that Machiavelli was not a typical humanist. Strauss (1958) argues that the way Machiavelli combines classical ideas is new. While Xenophon and Plato also described realistic politics, and were closer to Machiavelli than Aristotle was, they, like Aristotle, also saw Philosophy as something higher than politics. Machiavelli was apparently a materialist who objected to explanations involving formal and final causation, or teleology.

Machiavelli's promotion of ambition among leaders while denying any higher standard meant that he encouraged risk taking, and innovation, most famously the founding of new modes and orders. His advice to prince was therefore certainly not limited to discussing how to maintain a state. It has been argued that Machiavelli's promotion of

innovation led directly to the argument for progress as an aim of politics and civilization. But while a belief that humanity can control its own future, control nature, and "progress" has been long lasting, Machiavelli's followers, starting with his own friend Guicciardini, have tended to prefer peaceful progress through economic development, and not warlike progress. As Harvey Mansfield (1995, p. 74) wrote: "In attempting other, more regular and scientific modes of overcoming fortune, Machiavelli's successors formalized and emasculated his notion of virtue."

Machiavelli however, along with some of his classical predecessors, saw ambition and spiritedness, and therefore war, as inevitable and part of human nature.

Strauss concludes his 1958 *Thoughts on Machiavelli* by proposing that this promotion of progress leads directly to the modern arms race. Strauss argued that the unavoidable nature of such arms races, which have existed before modern times and led to the collapse of peaceful civilizations, provides us with both an explanation of what is most truly dangerous in Machiavelli's innovations, but also the way in which the aims of his apparently immoral innovation can be understood.

## Religion

Machiavelli explains repeatedly that religion is man-made, and that the value of religion lies in its contribution to social order and the rules of morality must be dispensed if security required it. In *The Prince*, the *Discourses*, and in the *Life of Castruccio Castracani*, he describes "prophets", as he calls them, like Moses, Romulus, Cyrus the Great, and Theseus (he treated pagan and Christian patriarchs in the same way) as the greatest of new princes, the glorious and brutal founders of the most novel innovations in politics, and men whom Machiavelli assures us have always used a large amount of armed force and murder against their own people. He estimated that these sects last from 1666 to 3000 years each time, which, as pointed out by Leo Strauss, would mean that Christianity became due to start finishing about 150 years after Machiavelli.<sup>[20]</sup> Machiavelli's concern with Christianity as a sect was that it makes men weak and inactive, delivering politics into the hands of cruel and wicked men without a fight.

While fear of God can be replaced by fear of the prince, if there is a strong enough prince, Machiavelli felt that having a religion is in any case especially essential to keeping a republic in order. For Machiavelli, a truly great prince can never be conventionally religious himself, but he should make his people religious if he can. According to Strauss (1958, pp. 226–227) he was not the first person to ever explain religion in this way, but his description of religion was novel because of the way he integrated this into his general account of princes.

Machiavelli's judgment that democracies need religion for practical political reasons was widespread among modern proponents of republics until approximately the time of the French revolution. This therefore represents a point of disagreement between himself and late modernity.<sup>[21]</sup>

## The positive side to factional and individual vice

Despite the classical precedents, which Machiavelli was not the only one to promote in his time, Machiavelli's realism and willingness to argue that good ends justify bad things, is seen as a critical stimulus towards some of the most important theories of modern politics.

Firstly, particularly in the *Discourses on Livy*, Machiavelli is unusual in the positive side he sometimes seems to describe in factionalism in republics. For example quite early in the *Discourses*, (in Book I, chapter 4), a chapter title announces that *the disunion* of the plebs and senate in Rome "*kept Rome free.*" That a community has different components whose interests must be balanced in any good regime is an idea with classical precedents, but Machiavelli's particularly extreme presentation is seen as a critical step towards the later political ideas of both a division of powers or checks and balances, ideas which lay behind the US constitution (and most modern constitutions).

Similarly, the modern economic argument for capitalism, and most modern forms of economics, was often stated in the form of "public virtue from private vices." Also in this case, even though there are classical precedents, Machiavelli's insistence on being both realistic and ambitious, not only admitting that vice exists but being willing to

risk encouraging it, is a critical step on the path to this insight.

Mansfield however argues that Machiavelli's own aims have not been shared by those influenced by him. Machiavelli argued against seeing mere peace and economic growth as worthy aims on their own, if they would lead to what Mansfield calls the "taming of the prince."<sup>[22]</sup>

### ***Machiavellian***

Machiavelli is most famous for a short political treatise, *The Prince*, written in 1513 but not published until 1532, five years after his death. Although he privately circulated *The Prince* among friends, the only theoretical work to be printed in his lifetime was *The Art of War*, about military science. Since the 16th century, generations of politicians remain attracted and repelled by its apparently neutral acceptance, or even positive encouragement, of the immorality of powerful men, described especially in *The Prince* but also in his other works.

His works are sometimes even said to have contributed to the modern negative connotations of the words *politics* and *politician*,<sup>[23]</sup> and it is sometimes thought that it is because of him that *Old Nick* became an English term for the Devil<sup>[24]</sup> and the adjective *Machiavellian* became a pejorative term describing someone who aims to deceive and manipulate others for personal advantage. *Machiavellianism* also remains a popular term used in speeches and journalism; while in psychology, it denotes a personality type.

While Machiavellianism is notable in the works of Machiavelli, Machiavelli's works are complex and he is generally agreed to have been more than just "Machiavellian" himself. For example, J.G.A. Pocock (1975) saw him as a major source of the republicanism that spread throughout England and North America in the 17th and 18th centuries and Leo Strauss (1958), whose view of Machiavelli is quite different in many ways, agreed about Machiavelli's influence on republicanism and argued that even though Machiavelli was a teacher of evil he had a nobility of spirit that led him to advocate ignoble actions. Whatever his intentions, which are still debated today, he has become associated with any proposal where "the end justifies the means". For example Leo Strauss (1958, p. 297) wrote:

Machiavelli is the only political thinker whose name has come into common use for designating a kind of politics, which exists and will continue to exist independently of his influence, a politics guided exclusively by considerations of expediency, which uses all means, fair or foul, iron or poison, for achieving its ends - its end being the aggrandizement of one's country or fatherland - but also using the fatherland in the service of the self-aggrandizement of the politician or statesman or one's party.

### **Impact**

To quote Robert Bireley:<sup>[25]</sup>

...there were in circulation approximately fifteen editions of the *Prince* and nineteen of the *Discourses* and French translations of each before they were placed on the Index of Paul IV in 1559, a measure which nearly stopped publication in Catholic areas except in France. Three principal writers took the field against Machiavelli between the publication of his works and their condemnation in 1559 and again by the Tridentine Index in 1564. These were the English cardinal Reginald Pole and the Portuguese bishop Jeronymo Osorio, both of whom lived for many years in Italy, and the Italian humanist and later bishop, Ambrogio Caterino Politi.

Machiavelli's ideas had a profound impact on political leaders throughout the modern west, helped by the new technology of the printing press. During the first generations after Machiavelli, his main influence was in non-Republican governments. Pole reported that the *Prince* was spoken of highly by Thomas Cromwell in England and had influenced Henry VIII in his turn towards Protestantism, and in his tactics, for example during the Pilgrimage of Grace.<sup>[1]</sup> A copy was also possessed by the Catholic king and emperor Charles V.<sup>[26]</sup> In France, after an initially mixed reaction, Machiavelli came to be associated with Catherine de' Medici and the St. Bartholomew's Day massacre. As Bireley (1990:17) reports, in the 16th century, Catholic writers "associated Machiavelli with the

Protestants, whereas Protestant authors saw him as Italian and Catholic". In fact, he was apparently influencing both Catholic and Protestant kings.<sup>[27]</sup>

One of the most important early works dedicated to criticism of Machiavelli, especially *The Prince*, was that of the Huguenot, Innocent Gentillet, whose work commonly referred to as *Discourse against Machiavelli* or *Anti Machiavel* was published in Geneva in 1576.<sup>[28]</sup> He accused Machiavelli of being an atheist and accused politicians of his time by saying that his works were the "Koran of the courtiers", that "he is of no reputation in the court of France which hath not Machiavel's writings at the fingers ends".<sup>[29]</sup> Another theme of Gentillet was more in the spirit of Machiavelli himself: he questioned the effectiveness of immoral strategies (just as Machiavelli had himself done, despite also explaining how they could sometimes work). This became the theme of much future political discourse in Europe during the 17th century. This includes the Catholic Counter Reformation writers summarised by Bireley: Giovanni Botero, Justus Lipsius, Carlo Scribani, Adam Contzen, Pedro de Ribadeneira, and Diego Saavedra Fajardo.<sup>[30]</sup> These authors criticized Machiavelli, but also followed him in many ways. They accepted the need for a prince to be concerned with reputation, and even a need for cunning and deceit, but compared to Machiavelli, and like later modernist writers, they emphasized economic progress much more than the riskier ventures of war. These authors tended to cite Tacitus as their source for realist political advice, rather than Machiavelli, and this pretense came to be known as "Tacitism".<sup>[31]</sup> "Black tacitism" was in support of princely rule, but "red tacitism" arguing the case for republics, more in the original spirit of Machiavelli himself, became increasingly important.

Modern materialist philosophy developed in the 16th, 17th and 18th centuries, starting in the generations after Machiavelli. This philosophy tended to be republican, more in the original spirit of Machiavellian, but as with the Catholic authors Machiavelli's realism and encouragement of using innovation to try to control one's own fortune were more accepted than his emphasis upon war and politics. Not only was innovative economics and politics a result, but also modern science, leading some commentators to say that the 18th century Enlightenment involved a "humanitarian" moderating of Machiavellianism.<sup>[32]</sup>

The importance of Machiavelli's influence is notable in many important figures in this endeavor, for example Bodin,<sup>[33]</sup> Francis Bacon,<sup>[34]</sup> Algernon Sidney,<sup>[35]</sup> Harrington, John Milton,<sup>[36]</sup> Spinoza,<sup>[37]</sup> Rousseau, Hume,<sup>[38]</sup> Edward Gibbon, and Adam Smith. Although he was not always mentioned by name as an inspiration, due to his controversy, he is also thought to have been an influence for other major philosophers, such as Montaigne,<sup>[39]</sup> Descartes,<sup>[40]</sup> Hobbes, Locke<sup>[41]</sup> and Montesquieu.<sup>[42]</sup>

In the seventeenth century it was in England that Machiavelli's ideas were most substantially developed and adapted, and that republicanism came once more to life; and out of seventeenth-century English republicanism there were to emerge in the next century not only a theme of English political and historical reflection - of the writings of the Bolingbroke circle and of Gibbon and of early parliamentary radicals - but a stimulus to the Enlightenment in Scotland, on the Continent, and in America.<sup>[43]</sup>

Scholars have argued that Machiavelli was a major indirect and direct influence upon the political thinking of the Founding Fathers of the United States. Benjamin Franklin, James Madison and Thomas Jefferson followed Machiavelli's republicanism when they opposed what they saw as the emerging aristocracy that they feared Alexander Hamilton was creating with the Federalist Party.<sup>[44]</sup> Hamilton learned from Machiavelli about the importance of foreign policy for domestic policy, but may have broken from him regarding how rapacious a republic



Francis Bacon argued the case for what would become modern science which would be based more upon real experience and experimentation, free from assumptions about metaphysics, and aimed at increasing control of nature. He named Machiavelli as a predecessor.

needed to be in order to survive<sup>[45][46]</sup> (George Washington was probably less influenced by Machiavelli).<sup>[47]</sup> However, the Founding Father who perhaps most studied and valued Machiavelli as a political philosopher was John Adams, who profusely commented on the Italian's thought in his work, *A Defence of the Constitutions of Government of the United States of America*.<sup>□</sup>

In his *Defence of the Constitutions of Government of the United States*, John Adams praised Machiavelli, with Algernon Sidney and Montesquieu, as a philosophic defender of mixed government. For Adams, Machiavelli restored empirical reason to politics, while his analysis of factions was commendable. Adams likewise agreed with the Florentine that human nature was immutable and driven by passions. He also accepted Machiavelli's belief that all societies were subject to cyclical periods of growth and decay. For Adams, Machiavelli lacked only a clear understanding of the institutions necessary for good government.<sup>□</sup>

## 20th century

The 20th-century Italian Communist Antonio Gramsci drew great inspiration from Machiavelli's writings on ethics, morals, and how they relate to the State and revolution in his writings on Passive Revolution, and how a society can be manipulated by controlling popular notions of morality.<sup>[48]</sup>

Joseph Stalin read *The Prince* and annotated his own copy.<sup>[49]</sup>

## Revival of interest in the comedies

In the 20th century there was also renewed interest in Machiavelli's *La Mandragola* (1518), which received numerous stagings, including several in New York, at the New York Shakespeare Festival in 1976 and the Riverside Shakespeare Company in 1979, as a musical comedy by Peer Raben in Munich's antiteater in 1971, and at London's National Theatre in 1984.<sup>[50]</sup>

## Appearances in popular culture

Machiavelli is featured in the popular historical video game series *Assassin's Creed* where he is portrayed as a member and leader for the secret society of the Assassins. He appears in the later stages of the *Assassin's Creed 2* and becomes a regular character in *Assassin's Creed: Brotherhood*.

Television dramas centering around the early renaissance have also made use of Machiavelli to underscore his influence in early modern political philosophy. Machiavelli has been featured in *The Tudors* and *The Borgias*.

Besides these, Machiavelli is a major character in the novel series *The Secrets of the Immortal Nicholas Flamel* by Michael Scott.

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- [28] The first English edition was *A Discourse upon the meanes of wel governing and maintaining in good peace, a Kingdome, or other principallitie*, translated by Simon Patericke.
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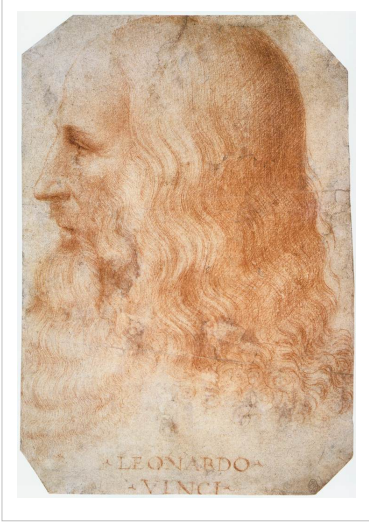
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# Leonardo da Vinci

<b>Leonardo da Vinci</b>	
	
Portrait of Leonardo by Melzi	
<b>Born</b>	Leonardo di ser Piero da Vinci April 15, 1452 Vinci, Republic of Florence (present-day Italy)
<b>Died</b>	May 2, 1519 (aged 67) Amboise, Kingdom of France
<b>Nationality</b>	Italian
<b>Known for</b>	Diverse fields of the arts and sciences
<b>Notable work(s)</b>	<i>Mona Lisa</i> <i>The Last Supper</i> <i>The Vitruvian Man</i> <i>Lady with an Ermine</i>
<b>Style</b>	High Renaissance
<b>Signature</b>	

**Leonardo di ser Piero da Vinci** (Italian pronunciation: [leoˈnardo da vˈvintʃi]  <sup>ⓘ</sup>  <sup>Ⓘ</sup> pronunciation Wikipedia:Media helpFile:it-Leonardo di ser Piero da Vinci.ogg; April 15, 1452 – May 2, 1519, Old Style) was an Italian Renaissance polymath: painter, sculptor, architect, musician, mathematician, engineer, inventor, anatomist, geologist, cartographer, botanist, and writer. His genius, perhaps more than that of any other figure, epitomized the Renaissance humanist ideal. Leonardo has often been described as the archetype of the Renaissance Man, a man of "unquenchable curiosity" and "feverishly inventive imagination".<sup>[1]</sup> He is widely considered to be one of the greatest painters of all time and perhaps the most diversely talented person ever to have lived.<sup>[1]</sup> According to art historian Helen Gardner, the scope and depth of his interests were without precedent and "his mind and personality seem to us superhuman, the man himself mysterious and remote".<sup>[1]</sup> Marco Rosci states that while there is much speculation about Leonardo, his vision of the world is essentially logical rather than mysterious, and that the empirical methods he employed were unusual for his time.<sup>[2]</sup>

Born out of wedlock to a notary, Piero da Vinci, and a peasant woman, Caterina, in Vinci in the region of Florence, Leonardo was educated in the studio of the renowned Florentine painter, Verrocchio. Much of his earlier working

life was spent in the service of Ludovico il Moro in Milan. He later worked in Rome, Bologna and Venice, and he spent his last years in France at the home awarded him by Francis I.

Leonardo was, and is, renowned primarily as a painter. Among his works, the *Mona Lisa* is the most famous and most parodied portrait<sup>[3]</sup> and *The Last Supper* the most reproduced religious painting of all time, with their fame approached only by Michelangelo's *The Creation of Adam*.<sup>[1]</sup> Leonardo's drawing of the *Vitruvian Man* is also regarded as a cultural icon,<sup>[4]</sup> being reproduced on items as varied as the euro coin, textbooks, and T-shirts. Perhaps fifteen of his paintings survive, the small number because of his constant, and frequently disastrous, experimentation with new techniques, and his chronic procrastination.<sup>[5]</sup> Nevertheless, these few works, together with his notebooks, which contain drawings, scientific diagrams, and his thoughts on the nature of painting, compose a contribution to later generations of artists rivalled only by that of his contemporary, Michelangelo.

Leonardo is revered for his technological ingenuity. He conceptualised a helicopter, a tank, concentrated solar power, an adding machine,<sup>[1]</sup> and the double hull, also outlining a rudimentary theory of plate tectonics. Relatively few of his designs were constructed or were even feasible during his lifetime,<sup>[6]</sup> but some of his smaller inventions, such as an automated bobbin winder and a machine for testing the tensile strength of wire, entered the world of manufacturing unheralded.<sup>[7]</sup> He made important discoveries in anatomy, civil engineering, optics, and hydrodynamics, but he did not publish his findings and they had no direct influence on later science.<sup>[8]</sup>

## Life

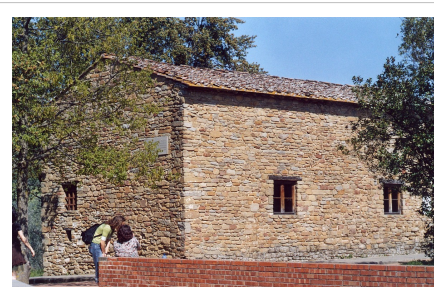
### Childhood, 1452–66

Leonardo was born on April 15, 1452 (Old Style), "at the third hour of the night"<sup>[9]</sup> in the Tuscan hill town of Vinci, in the lower valley of the Arno River in the territory of the Medici-ruled Republic of Florence.<sup>[10]</sup> He was the out-of-wedlock son of the wealthy Messer Piero Fruosino di Antonio da Vinci, a Florentine legal notary, and Caterina, a peasant.<sup>[1][11]</sup> Leonardo had no surname in the modern sense, "da Vinci" simply meaning "of Vinci": his full birth name was "Lionardo di ser Piero da Vinci", meaning "Leonardo, (son) of (Mes)ser Piero from Vinci".<sup>[10]</sup> The inclusion of the title "ser" indicated that Leonardo's father was a gentleman.

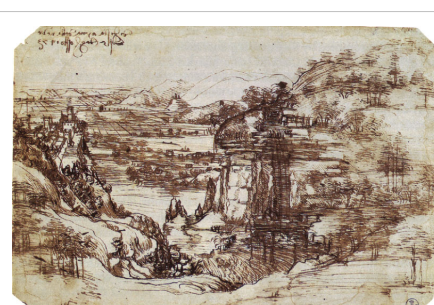
Little is known about Leonardo's early life. He spent his first five years in the hamlet of Anchiano in the home of his mother, then from 1457 he lived in the household of his father, grandparents and uncle, Francesco, in the small town of Vinci. His father had married a sixteen-year-old girl named Albiera, who loved Leonardo but died young.<sup>[1]</sup> When Leonardo was sixteen his father married again, to twenty-year-old Francesca Lanfredini. It was not until his third and fourth marriages that Ser Piero produced legitimate heirs.<sup>[12]</sup>

Leonardo received an informal education in Latin, geometry and mathematics. In later life, Leonardo recorded only two childhood incidents. One, which he regarded as an omen, was when a kite dropped from the sky and hovered over his cradle, its tail feathers brushing his face.<sup>[13]</sup> The second occurred while exploring in the mountains. He discovered a cave and was both terrified that some great monster might lurk there and driven by curiosity to find out what was inside.<sup>[1]</sup>

Leonardo's early life has been the subject of historical conjecture.<sup>[14]</sup> Vasari, the 16th-century biographer of Renaissance painters, tells of how a local peasant made himself a round shield and requested that Ser Piero have it



Leonardo's childhood home in Anchiano



Leonardo's earliest known drawing, the Arno Valley (1473), Uffizi

painted for him. Leonardo responded with a painting of a monster spitting fire which was so terrifying that Ser Piero sold it to a Florentine art dealer, who sold it to the Duke of Milan. Meanwhile, having made a profit, Ser Piero bought a shield decorated with a heart pierced by an arrow, which he gave to the peasant.<sup>[15]</sup>



*The Baptism of Christ* (1472–1475)—Uffizi, by Verrocchio and Leonardo

### Verrocchio's workshop, 1466–76

In 1466, at the age of fourteen, Leonardo was apprenticed to the artist Andrea di Cione, known as Verrocchio, whose workshop was "one of the finest in Florence".<sup>[16]</sup> Other famous painters apprenticed or associated with the workshop include Domenico Ghirlandaio, Perugino, Botticelli, and Lorenzo di Credi.<sup>[17]</sup> Leonardo would have been exposed to both theoretical training and a vast range of technical skills<sup>[17]</sup> including drafting, chemistry, metallurgy, metal working, plaster casting, leather working, mechanics and carpentry as well as the artistic skills of drawing, painting, sculpting and modelling.<sup>[18]</sup>

Much of the painted production of Verrocchio's workshop was done by his employees. According to Vasari, Leonardo collaborated with Verrocchio on his *The Baptism of Christ*, painting the young angel holding Jesus' robe in a manner that was so far superior to his master's that Verrocchio put down his brush and never painted again.<sup>[19]</sup> On

close examination, the painting reveals much that has been painted or touched-up over the tempera using the new technique of oil paint, with the landscape, the rocks that can be seen through the brown mountain stream and much of the figure of Jesus bearing witness to the hand of Leonardo.<sup>[20]</sup> Leonardo may have been the model for two works by Verrocchio: the bronze statue of *David* in the Bargello and the Archangel Raphael in *Tobias and the Angel*.<sup>[1]</sup>

By 1472, at the age of twenty, Leonardo qualified as a master in the Guild of St Luke, the guild of artists and doctors of medicine,<sup>[21]</sup> but even after his father set him up in his own workshop, his attachment to Verrocchio was such that he continued to collaborate with him.<sup>[1]</sup> Leonardo's earliest known dated work is a drawing in pen and ink of the Arno valley, drawn on August 5, 1473.<sup>[22][1]</sup>

### Professional life, 1476–1513

Florentine court records of 1476 show that Leonardo and three other young men were charged with sodomy but acquitted.<sup>[23]</sup> From that date until 1478 there is no record of his work or even of his whereabouts.<sup>[1]</sup> In 1478 he left Verrocchio's studio and was no longer resident at his father's house. One writer, the "Anonimo" Gaddiano claims that in 1480 Leonardo was living with the Medici and working in the Garden of the Piazza San Marco in Florence, a Neo-Platonic academy of artists, poets and philosophers which the Medici had established.<sup>[1]</sup> In January 1478, he received his first of two independent commissions: to paint an altarpiece for the Chapel of St. Bernard in the Palazzo Vecchio and, in March 1481, *The Adoration of the Magi* for the monks of San Donato a Scopeto.<sup>[1]</sup> Neither commission was completed, the second being interrupted when Leonardo went to Milan.



*The Adoration of the Magi*, (1481)—Uffizi

In 1482 Leonardo, who according to Vasari was a most talented musician,<sup>[24]</sup> created a silver lyre in the shape of a horse's head. Lorenzo de' Medici sent Leonardo to Milan, bearing the lyre as a gift, to secure peace with Ludovico Sforza, Duke of Milan.<sup>[25]</sup> At this time Leonardo wrote an often-quoted letter describing the many marvellous and diverse things that he could achieve in the field of engineering and informing Ludovico that he could also paint.<sup>[26]</sup>

Leonardo worked in Milan from 1482 until 1499. He was commissioned to paint the *Virgin of the Rocks* for the Confraternity of the Immaculate Conception and *The Last Supper* for the monastery of Santa Maria delle Grazie.<sup>[1]</sup> In the spring of 1485, Leonardo travelled to Hungary on behalf of Ludovico to meet Matthias Corvinus, for whom he is believed to have painted a Holy Family.<sup>[27]</sup> Between 1493 and 1495 Leonardo listed a woman called Caterina among his dependents in his taxation documents. When she died in 1495, the list of funeral expenditures suggests that she was his mother.<sup>[28]</sup>



Study of horse from Leonardo's journals – Royal Library, Windsor Castle

Leonardo was employed on many different projects for Ludovico, including the preparation of floats and pageants for special occasions, designs for a dome for Milan Cathedral and a model for a huge equestrian monument to Francesco Sforza, Ludovico's predecessor. Seventy tons of bronze were set aside for casting it. The monument remained unfinished for several years, which was not unusual for Leonardo. In 1492 the clay model of the horse was completed. It surpassed in size the only two large equestrian statues of the Renaissance, Donatello's *Gattamelata* in Padua and Verrocchio's *Bartolomeo Colleoni* in Venice, and became known as the "Gran Cavallo".<sup>[29]</sup> Leonardo began making detailed plans for its casting;<sup>[1]</sup> however, Michelangelo insulted Leonardo by implying that he was unable to cast it.<sup>[1]</sup> In November 1494 Ludovico gave the bronze to be used for cannon to defend the city from invasion by Charles VIII.<sup>[1]</sup>

At the start of the Second Italian War in 1499, the invading French troops used the life-size clay model for the "Gran Cavallo" for target practice. With Ludovico Sforza overthrown, Leonardo, with his assistant Salai and friend, the mathematician Luca Pacioli, fled Milan for Venice<sup>[30]</sup> where he was employed as a military architect and engineer, devising methods to defend the city from naval attack.<sup>[1]</sup> On his return to Florence in 1500, he and his household were guests of the Servite monks at the monastery of Santissima Annunziata and were provided with a workshop where,

according to Vasari, Leonardo created the cartoon of *The Virgin and Child with St. Anne and St. John the Baptist*, a work that won such admiration that "men and women, young and old" flocked to see it "as if they were attending a great festival".<sup>[31][32]</sup>

In Cesena, in 1502 Leonardo entered the service of Cesare Borgia, the son of Pope Alexander VI, acting as a military architect and engineer and travelling throughout Italy with his patron.<sup>[30]</sup> Leonardo created a map of Cesare Borgia's stronghold, a town plan of Imola in order to win his patronage. Maps were extremely rare at the time and it would have seemed like a new concept; upon seeing it, Cesare hired Leonardo as his chief military engineer and architect. Later in the year, Leonardo produced another map for his patron, one of Chiana Valley, Tuscany, so as to give his patron a better overlay of the land and greater strategic position. He created this map in conjunction with his other project of constructing a dam from the sea to Florence, in order to allow a supply of water to sustain the canal during all seasons.



Leonardo da Vinci's very accurate map of Imola, created for Cesare Borgia

Leonardo returned to Florence where he rejoined the Guild of St Luke on October 18, 1503, and spent two years designing and painting a mural of *The Battle of Anghiari* for the Signoria,<sup>[30]</sup> with Michelangelo designing its companion piece, *The Battle of Cascina*.<sup>[33]</sup> Leonardo's painting is only known from preparatory sketches and several copies of the centre section, of which the best known, and probably least accurate, is by Peter Paul Rubens.<sup>[34]</sup> In Florence in 1504, he was part of a committee formed to relocate, against the artist's will, Michelangelo's statue of *David*.<sup>[35]</sup>

In 1506 Leonardo returned to Milan. Many of his most prominent pupils or followers in painting either knew or worked with him in Milan,<sup>[1]</sup> including Bernardino Luini, Giovanni Antonio Boltraffio and Marco d'Oggione.<sup>[36]</sup> However, he did not stay in Milan for long because his father had died in 1504, and in 1507 he was back in Florence trying to sort out problems with his brothers over his father's estate. By 1508 Leonardo was back in Milan, living in his own house in Porta Orientale in the parish of Santa Babila.<sup>[37]</sup>

## Old age, 1513–19

From September 1513 to 1516, under Pope Leo X, Leonardo spent much of his time living in the Belvedere in the Vatican in Rome, where Raphael and Michelangelo were both active at the time.<sup>[37]</sup> In October 1515, Francis I of France recaptured Milan.<sup>[1]</sup> On December 19, Leonardo was present at the meeting of Francis I and Pope Leo X, which took place in Bologna.<sup>[38][39]</sup> Leonardo was commissioned to make for Francis a mechanical lion which could walk forward, then open its chest to reveal a cluster of lilies.<sup>[40][41]</sup> In 1516, he entered François' service, being given the use of the manor house Clos Lucé<sup>[42]</sup> near the king's residence at the royal Château d'Amboise. It was here that he spent the last three years of his life, accompanied by his friend and apprentice, Count Francesco Melzi, and supported by a pension totalling 10,000 scudi.<sup>[37]</sup>

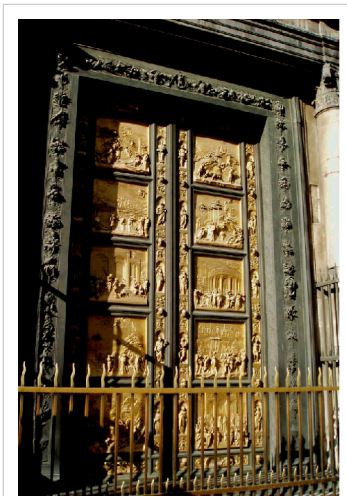
Leonardo died at Clos Lucé, on May 2, 1519. Francis I had become a close friend. Vasari records that the king held Leonardo's head in his arms as he died, although this story, beloved by the French and portrayed in romantic paintings by Ingres, Ménégeot and other French artists, as well as by Angelica Kauffman, may be legend rather than fact.<sup>[43]</sup> Vasari states that in his last days, Leonardo sent for a priest to make his confession and to receive the Holy Sacrament.<sup>[44]</sup> In accordance with his will, sixty beggars followed his casket.<sup>[45]</sup> Melzi was the principal heir and executor, receiving as well as money, Leonardo's paintings, tools, library and personal effects. Leonardo also remembered his other long-time pupil and companion, Salai and his servant Battista di Vilussis, who each received half of Leonardo's vineyards, his brothers who received land, and his serving woman who received a black cloak "of good stuff" with a fur edge.<sup>[46][47]</sup> Leonardo da Vinci was buried in the Chapel of Saint-Hubert in Château d'Amboise, in France.



Clos Lucé in France, where Leonardo died in 1519

Some 20 years after Leonardo's death, Francis was reported by the goldsmith and sculptor Benvenuto Cellini as saying: "There had never been another man born in the world who knew as much as Leonardo, not so much about painting, sculpture and architecture, as that he was a very great philosopher."<sup>[48]</sup>

## Relationships and influences



Ghiberti's *Gates of Paradise*, (1425–1452) were a source of communal pride. Many artists assisted in their creation.

### Florence: Leonardo's artistic and social background

Florence, at the time of Leonardo's youth, was the centre of Christian Humanist thought and culture.<sup>[16]</sup> Leonardo commenced his apprenticeship with Verrocchio in 1466, the year that Verrocchio's master, the great sculptor Donatello, died. The painter Uccello, whose early experiments with perspective were to influence the development of landscape painting, was a very old man. The painters Piero della Francesca and Fra Filippo Lippi, sculptor Luca della Robbia, and architect and writer Leon Battista Alberti were in their sixties. The successful artists of the next generation were Leonardo's teacher Verrocchio, Antonio Pollaiuolo and the portrait sculptor, Mino da Fiesole whose lifelike busts give the most reliable likenesses of Lorenzo Medici's father Piero and uncle Giovanni.<sup>[[49]]</sup>

Leonardo's youth was spent in a Florence that was ornamented by the works of these artists and by Donatello's contemporaries, Masaccio, whose figurative frescoes were imbued with realism and emotion and Ghiberti whose *Gates of Paradise*, gleaming with gold leaf, displayed the art of combining complex figure compositions with detailed architectural backgrounds. Piero della Francesca had made a detailed study of perspective,<sup>[50]</sup> and was the first painter to make a scientific study of light. These studies and Alberti's *Treatise*<sup>[51]</sup> were to have a profound effect on younger artists and in particular on Leonardo's own observations and artworks.<sup>[[[</sup>

Massaccio's "The Expulsion from the Garden of Eden" depicting the naked and distraught Adam and Eve created a powerfully expressive image of the human form, cast into three dimensions by the use of light and shade, which was to be developed in the works of Leonardo in a way that was to be influential in the course of painting. The humanist influence of Donatello's "David" can be seen in Leonardo's late paintings, particularly *John the Baptist*.<sup>[[49]</sup>

A prevalent tradition in Florence was the small altarpiece of the Virgin and Child. Many of these were created in tempera or glazed terracotta by the workshops of Filippo Lippi, Verrocchio and the prolific della Robbia family.<sup>□</sup> Leonardo's early Madonnas such as *The Madonna with a carnation* and *The Benois Madonna* followed this tradition while showing idiosyncratic departures, particularly in the case of the Benois Madonna in which the Virgin is set at an oblique angle to the picture space with the Christ Child at the opposite angle. This compositional theme was to emerge in Leonardo's later paintings such as *The Virgin and Child with St. Anne*.<sup>□</sup>



Small devotional picture by  
Verrocchio, c. 1470

Leonardo was a contemporary of Botticelli, Domenico Ghirlandaio and Perugino, who were all slightly older than he was.<sup>[49]</sup> He would have met them at the workshop of Verrocchio, with whom they had associations, and at the Academy of the Medici.<sup>□</sup> Botticelli was a particular favourite of the Medici family, and thus his success as a painter was assured. Ghirlandaio and Perugino were both prolific and ran large workshops. They competently delivered commissions to well-satisfied patrons who appreciated Ghirlandaio's ability to portray the wealthy citizens of Florence within large religious frescoes, and Perugino's ability to deliver a multitude of saints and angels of unflinching sweetness and innocence.<sup>□</sup>



*The Portinari Altarpiece*, by Hugo van der Goes  
for a Florentine family

These three were among those commissioned to paint the walls of the Sistine Chapel, the work commencing with Perugino's employment in 1479. Leonardo was not part of this prestigious commission. His first significant commission, *The Adoration of the Magi* for the Monks of Scopeto, was never completed.<sup>□</sup>

In 1476, during the time of Leonardo's association with Verrocchio's workshop, the Portinari Altarpiece by Hugo van der Goes arrived in Florence, bringing new painterly techniques from Northern Europe which were to profoundly affect Leonardo, Ghirlandaio, Perugino and others.<sup>[49]</sup> In 1479, the Sicilian painter Antonello da Messina, who worked exclusively in oils, traveled north on his way to Venice, where the leading painter Giovanni Bellini adopted the technique of oil

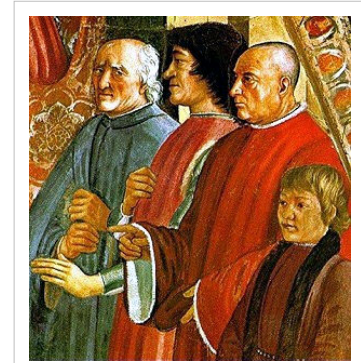
painting, quickly making it the preferred method in Venice. Leonardo was also later to visit Venice.<sup>[49]□</sup>

Like the two contemporary architects Bramante and Antonio da Sangallo the Elder Leonardo experimented with designs for centrally planned churches, a number of which appear in his journals, as both plans and views, although none was ever realised.<sup>[49][52]</sup>

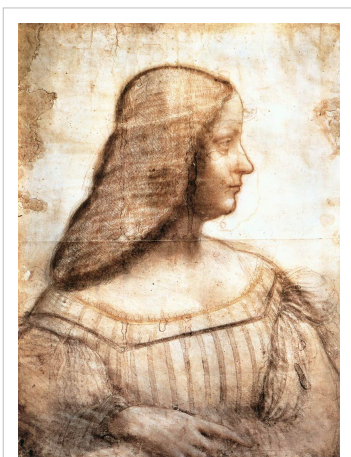
Leonardo's political contemporaries were Lorenzo Medici (il Magnifico), who was three years older, and his younger brother Giuliano who was slain in the Pazzi Conspiracy in 1478. Ludovico il Moro who ruled Milan between 1479–1499 and to whom Leonardo was sent as ambassador from the Medici court, was also of Leonardo's age.<sup>[49]</sup>

With Alberti, Leonardo visited the home of the Medici and through them came to know the older Humanist philosophers of whom Marsiglio Ficino, proponent of Neo Platonism; Cristoforo Landino, writer of commentaries on Classical writings, and John Argyropoulos, teacher of Greek and translator of Aristotle were the foremost. Also associated with the Academy of the Medici was Leonardo's contemporary, the brilliant young poet and philosopher Pico della Mirandola.<sup>[49][53]</sup> Leonardo later wrote in the margin of a journal "The Medici made me and the Medici destroyed me." While it was through the action of Lorenzo that Leonardo received his employment at the court of Milan, it is not known exactly what Leonardo meant by this cryptic comment.<sup>[1]</sup>

Although usually named together as the three giants of the High Renaissance, Leonardo, Michelangelo and Raphael were not of the same generation. Leonardo was twenty-three when Michelangelo was born and thirty-one when Raphael was born.<sup>[49]</sup> Raphael only lived until the age of 37 and died in 1520, the year after Leonardo, but Michelangelo went on creating for another 45 years.<sup>[11]</sup>



Lorenzo de' Medici between Antonio Pucci and Francesco Sassetti, with Giulio de' Medici, fresco by Ghirlandaio



Study for a portrait of Isabella d'Este (1500) Louvre

## Personal life

Within Leonardo's lifetime, his extraordinary powers of invention, his "outstanding physical beauty", "infinite grace", "great strength and generosity", "regal spirit and tremendous breadth of mind" as described by Vasari,<sup>[54]</sup> as well as all other aspects of his life, attracted the curiosity of others. One such aspect is his respect for life evidenced by his vegetarianism and his habit, according to Vasari, of purchasing caged birds and releasing them.<sup>[55][56]</sup>

Leonardo had many friends who are now renowned either in their fields or for their historical significance. They included the mathematician Luca Pacioli,<sup>[57]</sup> with whom he collaborated on the book *De Divina Proportione* in the 1490s. Leonardo appears to have had no close relationships with women except for his friendship with Cecilia Gallerani and the two Este sisters, Beatrice and Isabella.<sup>[58]</sup> He drew a portrait of Isabella while on a journey which took him through Mantua, and which appears to have been used to create a painted

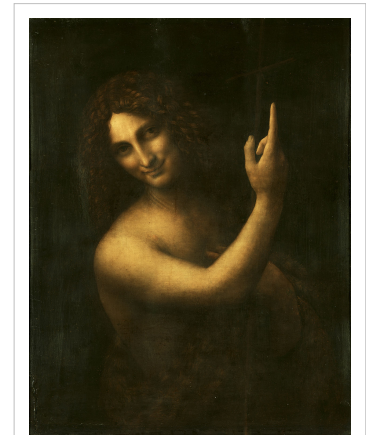
portrait, now lost.<sup>[1]</sup>

Beyond friendship, Leonardo kept his private life secret. His sexuality has been the subject of satire, analysis, and speculation. This trend began in the mid-16th century and was revived in the 19th and 20th centuries, most notably by Sigmund Freud.<sup>[59]</sup> Leonardo's most intimate relationships were perhaps with his pupils Salai and Melzi. Melzi, writing to inform Leonardo's brothers of his death, described Leonardo's feelings for his pupils as both loving and passionate. It has been claimed since the 16th century that these relationships were of a sexual or erotic nature. Court records of 1476, when he was aged twenty-four, show that Leonardo and three other young men were charged with sodomy in an incident involving a well-known male prostitute. The charges were dismissed for lack of evidence, and there is speculation that since one of the accused, Lionardo de Tornabuoni, was related to Lorenzo de' Medici, the family exerted its influence to secure the dismissal.<sup>[60]</sup> Since that date much has been written about his presumed homosexuality and its role in his art, particularly in the androgyny and eroticism manifested in *John the Baptist* and

*Bacchus* and more explicitly in a number of erotic drawings.<sup>[61]</sup>

## Assistants and pupils

Gian Giacomo Caprotti da Oreno, nicknamed *Salai* or *Il Salaino* ("The Little Unclean One" i.e., the devil), entered Leonardo's household in 1490. After only a year, Leonardo made a list of his misdemeanours, calling him "a thief, a liar, stubborn, and a glutton", after he had made off with money and valuables on at least five occasions and spent a fortune on clothes.<sup>[62]</sup> Nevertheless, Leonardo treated him with great indulgence, and he remained in Leonardo's household for the next thirty years.<sup>[63]</sup> Salai executed a number of paintings under the name of Andrea Salai, but although Vasari claims that Leonardo "taught him a great deal about painting",<sup>[40]</sup> his work is generally considered to be of less artistic merit than others among Leonardo's pupils, such as Marco d'Oggione and Boltraffio. In 1515, he painted a nude version of the *Mona Lisa*, known as *Monna Vanna*.<sup>[64]</sup> Salai owned the *Mona Lisa* at the time of his death in 1525, and in his will it was assessed at 505 lire, an exceptionally high valuation for a small panel portrait.<sup>□</sup>



*John the Baptist*. Salai is thought to have been the model.<sup>□</sup> (c. 1514)—Louvre.

In 1506, Leonardo took on another pupil, Count Francesco Melzi, the son of a Lombard aristocrat, who is considered to have been his favourite student. He travelled to France with Leonardo and remained with him until Leonardo's death.<sup>□</sup> Melzi inherited the artistic and scientific works, manuscripts, and collections of Leonardo and administered the estate.

## Painting

Despite the recent awareness and admiration of Leonardo as a scientist and inventor, for the better part of four hundred years his fame rested on his achievements as a painter and on a handful of works, either authenticated or attributed to him that have been regarded as among the masterpieces.<sup>[65]</sup>

These paintings are famous for a variety of qualities which have been

much imitated by students and discussed at great length by connoisseurs and critics. Among the qualities that make Leonardo's work unique are the innovative techniques which he used in laying on the paint, his detailed knowledge of anatomy, light, botany and geology, his interest in physiognomy and the way in which humans register emotion in expression and gesture, his innovative use of the human form in figurative composition, and his use of the subtle gradation of tone. All these qualities come together in his most famous painted works, the *Mona Lisa*, the *Last Supper* and the *Virgin of the Rocks*.<sup>[66]</sup>



*Annunciation* (1475–1480)—Uffizi, is thought to be Leonardo's earliest complete work.



Unfinished painting of *St. Jerome in the Wilderness*, (c. 1480), Vatican.

## Early works

Leonardo's early works begin with the *Baptism of Christ* painted in conjunction with Verrocchio. Two other paintings appear to date from his time at the workshop, both of which are Annunciations. One is small, 59 centimetres (23 in) long and 14 centimetres (5.5 in) high. It is a "predella" to go at the base of a larger composition, in this case a painting by Lorenzo di Credi from which it has become separated. The other is a much larger work, 217 centimetres (85 in) long.<sup>[67]</sup> In both these Annunciations, Leonardo used a formal arrangement, such as in Fra Angelico's two well-known pictures of the same subject, of the Virgin Mary sitting or kneeling to the right of the picture, approached from the left by an angel in profile, with a rich flowing garment, raised wings and bearing a lily. Although previously attributed to Ghirlandaio, the larger work is now generally attributed to Leonardo.<sup>[1]</sup>

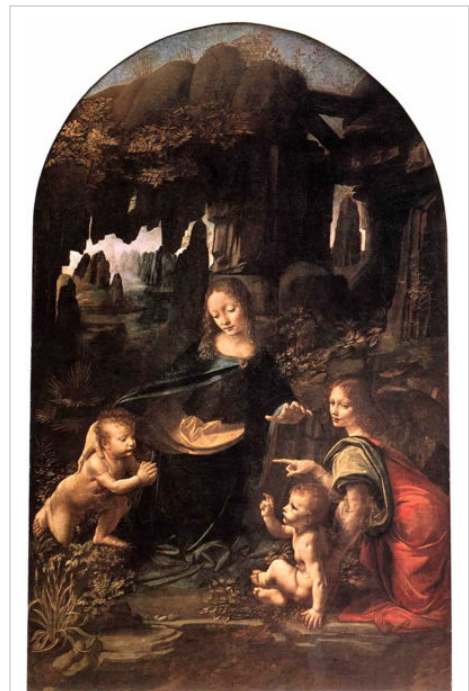
In the smaller picture Mary averts her eyes and folds her hands in a gesture that symbolised submission to God's will. In the larger picture, however, Mary is not submissive. The girl, interrupted in her reading by this unexpected messenger, puts a finger in her bible to mark the place and raises her hand in a formal gesture of greeting or surprise.<sup>[1]</sup> This calm young woman appears to accept her role as the Mother of God, not with resignation but with confidence. In this painting the young Leonardo presents the humanist face of the Virgin Mary, recognising humanity's role in God's incarnation.<sup>[68]</sup>

## Paintings of the 1480s

In the 1480s Leonardo received two very important commissions and commenced another work which was also of ground-breaking importance in terms of composition. Two of the three were never finished, and the third took so long that it was subject to lengthy negotiations over completion and payment. One of these paintings is that of *St. Jerome in the Wilderness*. Bortolon associates this picture with a difficult period of Leonardo's life, as evidenced in his diary: "I thought I was learning to live; I was only learning to die."<sup>[1]</sup>

Although the painting is barely begun, the composition can be seen and it is very unusual.<sup>[69]</sup> It is probable that outer parts of the composition are missing. Jerome, as a penitent, occupies the middle of the picture, set on a slight diagonal and viewed somewhat from above. His kneeling form takes on a trapezoid shape, with one arm stretched to the outer edge of the painting and his gaze looking in the opposite direction. J. Wasserman points out the link between this painting and Leonardo's anatomical studies.<sup>[1]</sup> Across the foreground sprawls his symbol, a great lion whose body and tail make a double spiral across the base of the picture space. The other remarkable feature is the sketchy landscape of craggy rocks against which the figure is silhouetted.

The daring display of figure composition, the landscape elements and personal drama also appear in the great unfinished masterpiece, the *Adoration of the Magi*, a commission from the Monks of San Donato a Scopeto. It is a complex composition, of about 250 x 250 centimetres. Leonardo did numerous drawings and preparatory studies,



*Virgin of the Rocks*, Louvre, demonstrates Leonardo's interest in nature.

including a detailed one in linear perspective of the ruined classical architecture which makes part of the backdrop to the scene. But in 1482 Leonardo went off to Milan at the behest of Lorenzo de' Medici in order to win favour with Ludovico il Moro, and the painting was abandoned.<sup>[1]</sup>

The third important work of this period is the *Virgin of the Rocks* which was commissioned in Milan for the Confraternity of the Immaculate Conception. The painting, to be done with the assistance of the de Predis brothers, was to fill a large complex altarpiece, already constructed.<sup>[70]</sup> Leonardo chose to paint an apocryphal moment of the infancy of Christ when the infant John the Baptist, in protection of an angel, met the Holy Family on the road to Egypt. In this scene, as painted by Leonardo, John recognizes and worships Jesus as the Christ. The painting demonstrates an eerie beauty as the graceful figures kneel in adoration around the infant Christ in a wild landscape of tumbling rock and whirling water.<sup>[71]</sup> While the painting is quite large, about 200 × 120 centimetres, it is not nearly as complex as the painting ordered by the monks of St Donato, having only four figures rather than about fifty and a rocky landscape rather than architectural details. The painting was eventually finished; in fact, two versions of the painting were finished, one which remained at the chapel of the Confraternity and the other which Leonardo carried away to France. But the Brothers did not get their painting, or the de Predis their payment, until the next century.<sup>[130]</sup>



*The Last Supper* (1498)—Convent of Sta. Maria delle Grazie, Milan, Italy

### Paintings of the 1490s

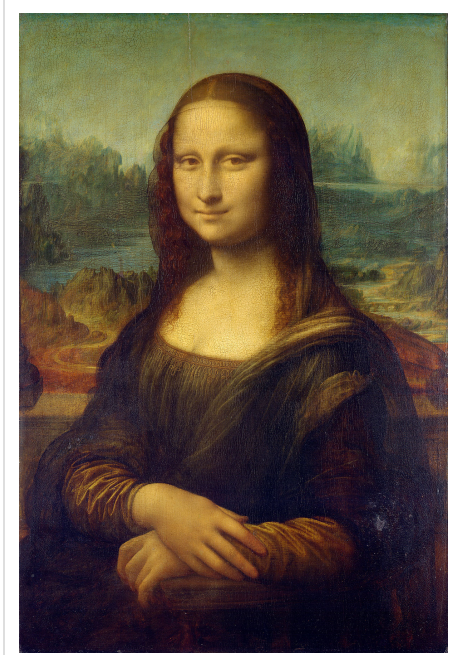
Leonardo's most famous painting of the 1490s is *The Last Supper*, painted for the refectory of the Convent of Santa Maria della Grazie in Milan. The painting represents the last meal shared by Jesus with his disciples before his capture and death. It shows specifically the moment when Jesus has just said "one of you will betray me". Leonardo tells the story of the consternation that this statement caused to the twelve followers of Jesus.<sup>[1]</sup>

The novelist Matteo Bandello observed Leonardo at work and wrote that some days he would paint from dawn till dusk without stopping to eat and then not paint for three or four days at a time.<sup>[72]</sup> This was beyond the comprehension of the prior of the convent, who hounded him until Leonardo asked Ludovico to intervene. Vasari describes how Leonardo, troubled over his ability to adequately depict the faces of Christ and the traitor Judas, told the Duke that he might be obliged to use the prior as his model.<sup>[73]</sup>

When finished, the painting was acclaimed as a masterpiece of design and characterisation,<sup>[74]</sup> but it deteriorated rapidly, so that within a hundred years it was described by one viewer as "completely ruined".<sup>[75]</sup> Leonardo, instead of using the reliable technique of fresco, had used tempera over a ground that was mainly gesso, resulting in a surface which was subject to mold and to flaking.<sup>[76]</sup> Despite this, the painting has remained one of the most reproduced works of art, countless copies being made in every medium from carpets to cameos.

## Paintings of the 1500s

Among the works created by Leonardo in the 16th century is the small portrait known as the *Mona Lisa* or "la Gioconda", the laughing one. In the present era it is arguably the most famous painting in the world. Its fame rests, in particular, on the elusive smile on the woman's face, its mysterious quality brought about perhaps by the fact that the artist has subtly shadowed the corners of the mouth and eyes so that the exact nature of the smile cannot be determined. The shadowy quality for which the work is renowned came to be called "sfumato" or Leonardo's smoke. Vasari, who is generally thought to have known the painting only by repute, said that "the smile was so pleasing that it seemed divine rather than human; and those who saw it were amazed to find that it was as alive as the original".<sup>[77][78]</sup></ref>



*Mona Lisa* or *La Gioconda*  
(1503–1505/1507)—Louvre, Paris, France

Other characteristics found in this work are the unadorned dress, in which the eyes and hands have no competition from other details, the dramatic landscape background in which the world seems to be in a state of flux, the subdued colouring and the extremely smooth nature of the painterly technique, employing oils, but laid on much like tempera and blended on the surface so that the brushstrokes are indistinguishable.<sup>[79]</sup></ref> Vasari expressed the opinion that the

manner of painting would make even "the most confident master ... despair and lose heart."<sup>[80]</sup> The perfect state of preservation and the fact that there is no sign of repair or overpainting is rare in a panel painting of this date.<sup>[81]</sup>

In the painting *Virgin and Child with St. Anne* the composition again picks up the theme of figures in a landscape which Wasserman describes as "breathtakingly beautiful"<sup>[82]</sup> and harkens back to the St Jerome picture with the figure set at an oblique angle. What makes this painting unusual is that there are two obliquely set figures superimposed. Mary is seated on the knee of her mother, St Anne. She leans forward to restrain the Christ Child as he plays roughly with a lamb, the sign of his own impending sacrifice.<sup>[1]</sup> This painting, which was copied many times, influenced Michelangelo, Raphael, and Andrea del Sarto,<sup>[83]</sup> and through them Pontormo and Correggio. The trends in composition were adopted in particular by the Venetian painters Tintoretto and Veronese.



*The Virgin and Child with St. Anne*, (c. 1510)-Louvre Museum



*The Virgin and Child with St. Anne and St. John the Baptist* (c. 1499–1500)—National Gallery, London

## Drawings

Leonardo was not a prolific painter, but he was a most prolific draftsman, keeping journals full of small sketches and detailed drawings recording all manner of things that took his attention. As well as the journals there exist many studies for paintings, some of which can be identified as preparatory to particular works such as *The Adoration of the Magi*, *The Virgin of the Rocks* and *The Last Supper*.<sup>[1]</sup> His earliest dated drawing is a *Landscape of the Arno Valley*, 1473, which shows the river, the mountains, Montelupo Castle and the farmlands beyond it in great detail.<sup>[2]</sup>

Among his famous drawings are the *Vitruvian Man*, a study of the proportions of the human body, the *Head of an Angel*, for *The Virgin of the Rocks* in the Louvre, a botanical study of *Star of Bethlehem* and a large drawing (160×100 cm) in black chalk on coloured paper of *The Virgin and Child with St. Anne and St. John the Baptist* in the National Gallery, London.<sup>[3]</sup> This drawing employs the subtle *sfumato* technique of shading, in the manner of the *Mona Lisa*. It is thought that Leonardo never made a painting from it, the closest similarity being to *The Virgin and Child with St. Anne* in the Louvre.<sup>[84]</sup>

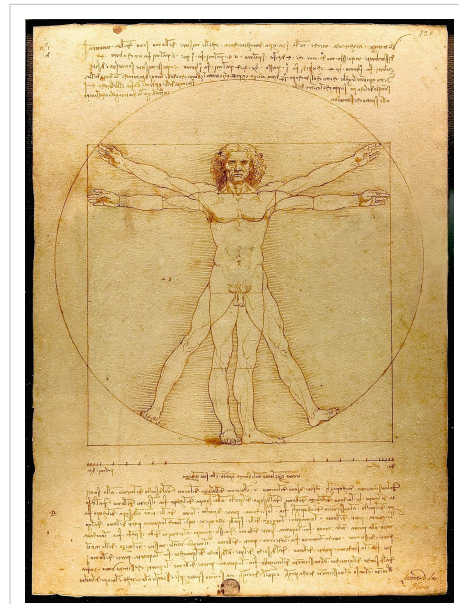
Other drawings of interest include numerous studies generally referred to as "caricatures" because, although exaggerated, they appear to be based upon observation of live models. Vasari relates that if Leonardo saw a person with an interesting face he would follow them around all day observing them.<sup>[85]</sup> There are numerous studies of beautiful young men, often associated with Salai, with the rare and much admired facial feature, the so-called "Grecian profile".<sup>[86]</sup> These faces are often contrasted with that of a warrior.<sup>[1]</sup> Salai is often depicted in fancy-dress costume. Leonardo is known to have designed sets for pageants with which these may be associated. Other, often meticulous, drawings show studies of drapery. A marked development in Leonardo's ability to draw drapery occurred in his early works. Another often-reproduced drawing is a macabre sketch that was done by Leonardo in Florence in 1479 showing the body of Bernardo Baroncelli, hanged in connection with the murder of Giuliano, brother of Lorenzo de' Medici, in the Pazzi Conspiracy.<sup>[1]</sup> With dispassionate integrity Leonardo has registered in neat mirror writing the colours of the robes that Baroncelli was wearing when he died.

## Observation and invention

### Journals and notes

Renaissance humanism recognized no mutually exclusive polarities between the sciences and the arts, and Leonardo's studies in science and engineering are as impressive and innovative as his artistic work.<sup>[1]</sup> These studies were recorded in 13,000 pages of notes and drawings, which fuse art and natural philosophy (the forerunner of modern science), made and maintained daily throughout Leonardo's life and travels, as he made continual observations of the world around him.<sup>[1]</sup>

Leonardo's writings are mostly in mirror-image cursive. The reason may have been more a practical expediency than for reasons of secrecy as is often suggested. Since Leonardo wrote with his left hand, it is probable that it was easier for him to write from right to left.<sup>[87]</sup>



The Vitruvian Man (c. 1485) Accademia, Venice



A page showing Leonardo's study of a fetus in the womb (c. 1510) Royal Library, Windsor Castle

His notes and drawings display an enormous range of interests and preoccupations, some as mundane as lists of groceries and people who owed him money and some as intriguing as designs for wings and shoes for walking on water. There are compositions for paintings, studies of details and drapery, studies of faces and emotions, of animals, babies, dissections, plant studies, rock formations, whirlpools, war machines, helicopters and architecture.<sup>[1]</sup>

These notebooks—originally loose papers of different types and sizes, distributed by friends after his death—have found their way into major collections such as the Royal Library at Windsor Castle, the Louvre, the Biblioteca Nacional de España, the Victoria and Albert Museum, the Biblioteca Ambrosiana in Milan which holds the twelve-volume Codex Atlanticus, and British Library in London which has put a selection from the Codex Arundel (BL Arundel MS 263) online.<sup>[88]</sup> The *Codex Leicester* is the only major scientific work of Leonardo's in private hands. It is owned by Bill Gates and is displayed once a year in different cities around the world.

Leonardo's notes appear to have been intended for publication because many of the sheets have a form and order that would facilitate this. In

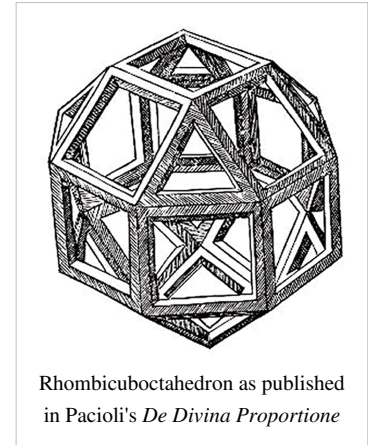
many cases a single topic, for example, the heart or the human fetus, is covered in detail in both words and pictures on a single sheet.<sup>[89][90]</sup> Why they were not published within Leonardo's lifetime is unknown.<sup>[1]</sup>

## Scientific studies

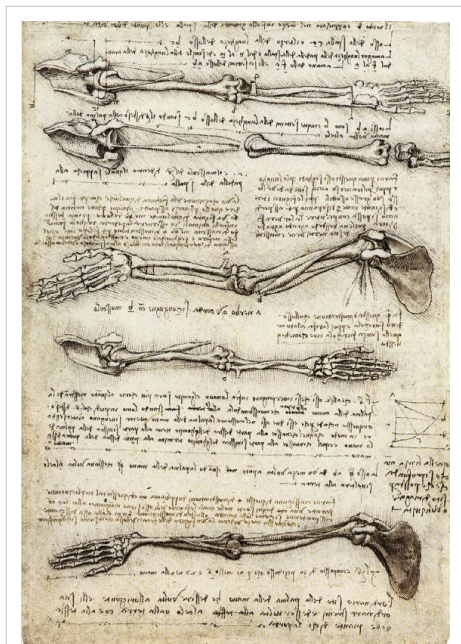
Leonardo's approach to science was an observational one: he tried to understand a phenomenon by describing and depicting it in utmost detail and did not emphasize experiments or theoretical explanation. Since he lacked formal education in Latin and mathematics, contemporary scholars mostly ignored Leonardo the scientist, although he did teach himself Latin. In the 1490s he studied mathematics under Luca Pacioli and prepared a series of drawings of regular solids in a skeletal form to be engraved as plates for Pacioli's book *De Divina Proportione*, published in 1509.<sup>[1]</sup>

It appears that from the content of his journals he was planning a series of treatises to be published on a variety of subjects. A coherent treatise on anatomy was said to have been observed during a visit by Cardinal Louis 'D' Aragon's secretary in 1517.<sup>[91]</sup> Aspects of his work on the studies of anatomy, light and the landscape were assembled for publication by his pupil Francesco Melzi and eventually published as *Treatise on Painting by Leonardo da Vinci* in France and Italy in 1651 and Germany in 1724,<sup>[92]</sup> with engravings based upon drawings by the Classical painter Nicolas Poussin.<sup>[93]</sup> According to Arasse, the treatise, which in France went into 62 editions in fifty years, caused Leonardo to be seen as "the precursor of French academic thought on art".<sup>[1]</sup>

While Leonardo's experimentation followed clear scientific methods, a recent and exhaustive analysis of Leonardo as a scientist by Fritjof Capra argues that Leonardo was a fundamentally different kind of scientist from Galileo, Newton and other scientists who followed him in that, as a Renaissance Man, his theorising and hypothesising integrated the arts and particularly painting.<sup>[94]</sup>



Rhombicuboctahedron as published in Pacioli's *De Divina Proportione*



Anatomical study of the arm, (c. 1510)

## Anatomy

Leonardo's formal training in the anatomy of the human body began with his apprenticeship to Andrea del Verrocchio, who insisted that all his pupils learn anatomy. As an artist, he quickly became master of *topographic anatomy*, drawing many studies of muscles, tendons and other visible anatomical features.

As a successful artist, he was given permission to dissect human corpses at the Hospital of Santa Maria Nuova in Florence and later at hospitals in Milan and Rome. From 1510 to 1511 he collaborated in his studies with the doctor Marcantonio della Torre. Leonardo made over 240 detailed drawings and wrote about 13,000 words towards a treatise on anatomy.<sup>[95]</sup> These papers were left to his heir, Francesco Melzi, for publication, a task of overwhelming difficulty because of its scope and Leonardo's idiosyncratic writing.<sup>[96]</sup> It was left incomplete at the time of Melzi's death more than fifty years later, with only a small amount of the material on anatomy included in Leonardo's *Treatise on painting*, published in France in 1632.<sup>[1][96]</sup> During the time that Melzi was ordering the material into chapters for publication, they were

examined by a number of anatomists and artists, including Vasari, Cellini and Albrecht Dürer who made a number of drawings from them.<sup>[96]</sup>

Leonardo's anatomical drawings include many studies of the human skeleton and its parts, and studies muscles and sinews. He studied the mechanical functions of the skeleton and the muscular forces that are applied to it in a manner that prefigured the modern science of biomechanics.<sup>[1]</sup> He drew the heart and vascular system, the sex organs and

other internal organs, making one of the first scientific drawings of a fetus *in utero*.<sup>[1]</sup> The drawings and notation are far ahead of their time, and if published, would undoubtedly have made a major contribution to medical science.<sup>[95][97]</sup>

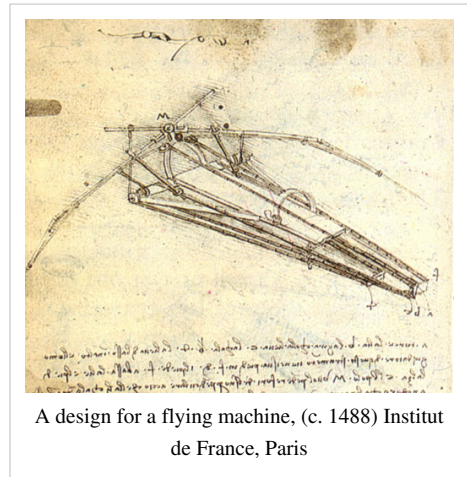
As an artist, Leonardo also closely observed and recorded the effects of age and of human emotion on the physiology, studying in particular the effects of rage. He also drew many figures who had significant facial deformities or signs of illness.<sup>[1]</sup> Leonardo also studied and drew the anatomy of many animals, dissecting cows, birds, monkeys, bears, and frogs, and comparing in his drawings their anatomical structure with that of humans. He also made a number of studies of horses.<sup>[1]</sup>

## Engineering and inventions

During his lifetime Leonardo was valued as an engineer. In a letter to Ludovico il Moro he claimed to be able to create all sorts of machines both for the protection of a city and for siege. When he fled to Venice in 1499 he found employment as an engineer and devised a system of moveable barricades to protect the city from attack. He also had a scheme for diverting the flow of the Arno River, a project on which Niccolò Machiavelli also worked.<sup>[98][99]</sup> Leonardo's journals include a vast number of inventions, both practical and impractical. They include musical instruments, hydraulic pumps, reversible crank mechanisms, finned mortar shells, and a steam cannon.<sup>[1]</sup>

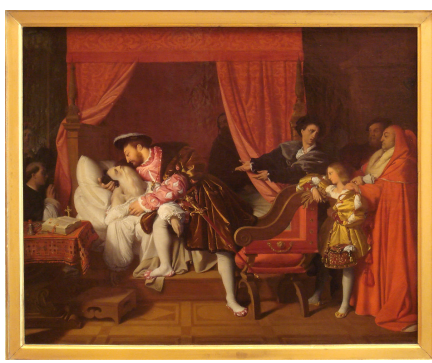
In 1502, Leonardo produced a drawing of a single span 720-foot (220 m) bridge as part of a civil engineering project for Ottoman Sultan Beyazid II of Constantinople. The bridge was intended to span an inlet at the mouth of the Bosphorus known as the Golden Horn. Beyazid did not pursue the project because he believed that such a construction was impossible. Leonardo's vision was resurrected in 2001 when a smaller bridge based on his design was constructed in Norway.<sup>[100][101]</sup>

For much of his life, Leonardo was fascinated by the phenomenon of flight, producing many studies of the flight of birds, including his c. 1505 Codex on the Flight of Birds, as well as plans for several flying machines, including a light hang glider and a machine resembling a helicopter.<sup>[1]</sup> The British television station Channel Four commissioned a documentary *Leonardo's Dream Machines*, for broadcast in 2003. Leonardo's machines were built and tested according to his original designs.<sup>[102]</sup> Some of those designs proved a success, whilst others fared less well when practically tested.



A design for a flying machine, (c. 1488) Institut de France, Paris

## Fame and reputation



*Francis I of France receiving the last breath of Leonardo da Vinci, by Ingres, 1818*

Within Leonardo's own lifetime his fame was such that the King of France carried him away like a trophy and was claimed to have supported him in his old age and held him in his arms as he died. Interest in Leonardo has never diminished. The crowds still queue to see his most famous artworks, T-shirts bear his most famous drawing, and writers continue to marvel at his genius and speculate about his private life and, particularly, about what one so intelligent actually believed in.<sup>[1]</sup>

Giorgio Vasari, in the enlarged edition of *Lives of the Artists*, 1568,<sup>[103]</sup> introduced his chapter on Leonardo da Vinci with the following words:

In the normal course of events many men and women are born with remarkable talents; but occasionally, in a way that transcends nature, a single person is marvellously endowed by Heaven with beauty, grace and talent in such abundance that he leaves other men far behind, all his actions seem inspired and indeed everything he does clearly comes from God rather than from human skill. Everyone acknowledged that this was true of Leonardo da Vinci, an artist of outstanding physical beauty, who displayed infinite grace in everything that he did and who cultivated his genius so brilliantly that all problems he studied he solved with ease.

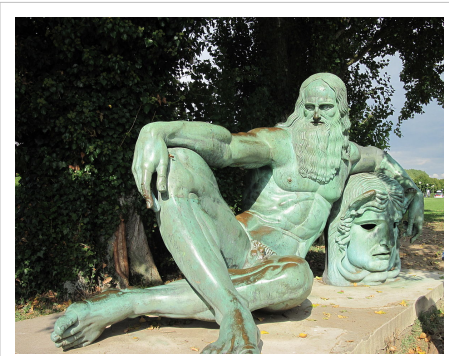
—Giorgio Vasari

The continued admiration that Leonardo commanded from painters, critics and historians is reflected in many other written tributes. Baldassare Castiglione, author of *Il Cortegiano* ("The Courtier"), wrote in 1528: "... Another of the greatest painters in this world looks down on this art in which he is unequalled ..." <sup>[104]</sup> while the biographer known as "Anonimo Gaddiano" wrote, c. 1540: "His genius was so rare and universal that it can be said that nature worked a miracle on his behalf ..." <sup>[105]</sup>

The 19th century brought a particular admiration for Leonardo's genius, causing Henry Fuseli to write in 1801: "Such was the dawn of modern art, when Leonardo da Vinci broke forth with a splendour that distanced former excellence: made up of all the elements that constitute the essence of genius ..." <sup>[106]</sup> This is echoed by A. E. Rio who wrote in 1861: "He towered above all other artists through the strength and the nobility of his talents." <sup>[107]</sup>

By the 19th century, the scope of Leonardo's notebooks was known, as well as his paintings. Hippolyte Taine wrote in 1866: "There may not be in the world an example of another genius so universal, so incapable of fulfilment, so full of yearning for the infinite, so naturally refined, so far ahead of his own century and the following centuries." <sup>[108]</sup> Art historian Bernard Berenson wrote in 1896: "Leonardo is the one artist of whom it may be said with perfect literalness: Nothing that he touched but turned into a thing of eternal beauty. Whether it be the cross section of a skull, the structure of a weed, or a study of muscles, he, with his feeling for line and for light and shade, forever transmuted it into life-communicating values." <sup>[109]</sup>

The interest in Leonardo's genius has continued unabated; experts study and translate his writings, analyse his paintings using scientific techniques, argue over attributions and search for works which have been recorded but never found. <sup>[110]</sup> Liana Bortolon, writing in 1967, said: "Because of the multiplicity of interests that spurred him to pursue every field of knowledge ... Leonardo can be considered, quite rightly, to have been the universal genius par excellence, and with all the disquieting overtones inherent in that term. Man is as uncomfortable today, faced with a



Statue of Leonardo in Amboise

genius, as he was in the 16th century. Five centuries have passed, yet we still view Leonardo with awe."<sup>[1]</sup>

## Footnotes

- [1] See the quotations from the following authors, in section **Fame and reputation**: Vasari, Boltraffio, Castiglione, "Anonimo" Gaddiano, Berensen, Taine, Fuseli, Rio, Bortolon.
- [3] John Lichfield, *The Moving of the Mona Lisa* (<http://www.independent.co.uk/news/world/europe/the-moving-of-the-mona-lisa-6149165.html>), The Independent, 2005-04-02 (accessed 2012-03-09)
- [4] Vitruvian Man is referred to as "iconic" at the following websites and many others: Vitruvian Man (<http://www.italian-renaissance-art.com/Vitruvian-Man.html>), Fine Art Classics (<http://artpassions.com/art/1109-Fine-Art-Classics/0000067329-Leonardo-Da-Vinci-Vitruvian-Man.html>), Key Images in the History of Science (<http://www.timeshighereducation.co.uk/story.asp?storyCode=403230&sectioncode=26>); Curiosity and difference (<http://www.ingenious.org.uk/read/identity/bodyimage/Curiosityanddifference/>); The Guardian: The Real da Vinci Code (<http://www.guardian.co.uk/artanddesign/2006/aug/30/art1>)
- [5] There are 15 significant artworks which are ascribed, either in whole or in large part, to Leonardo by most art historians. This number is made up principally of paintings on panel but includes a mural, a large drawing on paper and two works which are in the early stages of preparation. There are a number of other works that have also been variously attributed to Leonardo.
- [6] Modern scientific approaches to metallurgy and engineering were only in their infancy during the Renaissance.
- [7] A number of Leonardo's most practical inventions are displayed as working models at the Museum of Vinci.
- [8] Capra, pp.5–6
- [9] His birth is recorded in the diary of his paternal grandfather Ser Antonio, as cited by Angela Ottino della Chiesa in *Leonardo da Vinci*, and Reynal & Co., *Leonardo da Vinci* (William Morrow and Company, 1956): "A grandson of mine was born April 15, Saturday, three hours into the night". The date was recorded in the Julian calendar; as it was Florentine time and sunset was 6:40 pm, three hours after sunset would be sometime around 9:40 pm which was still April 14 by modern reckoning. The conversion to the New Style calendar adds nine days; hence Leonardo was born April 23 according to the modern calendar. UNIQ-ref-0-4f47a6394464b99b-QINU
- [10] His birth is recorded in the diary of his paternal grandfather Ser Antonio, as cited by Angela Ottino della Chiesa in *Leonardo da Vinci*, p. 83
- [11] It has been suggested that Caterina may have been a slave from the Middle East "or at least, from the Mediterranean". According to Alessandro Vezzosi, head of the Leonardo Museum in Vinci, there is evidence that Piero owned a Middle Eastern slave called Caterina. That Leonardo had Middle Eastern blood is claimed to be supported by the reconstruction of a fingerprint as reported by . The evidence, as stated in the article, is that 60% of people of Middle Eastern origin share the pattern of whirls found on the reconstructed fingerprint. The article also states that the claim is refuted by Simon Cole, associate professor of criminology, law and society at the University of California at Irvine: "You can't predict one person's race from these kinds of incidences, especially if looking at only one finger."
- [12] Rosci, p. 20.
- [13] Rosci, p. 21.
- [16] Rosci, p.13
- [17] Rosci, p.27
- [18] The "diverse arts" and technical skills of Medieval and Renaissance workshops are described in detail in the 12th-century text *On Divers Arts* by Theophilus Presbyter and in the early 15th-century text *Il Libro Dell'arte O Trattato Della Pittui* by Cennino Cennini.
- [19] Vasari, p.258
- [20] della Chiesa, p.88
- [21] That Leonardo joined the guild before this time is deduced from the record of payment made to the Compagnia di San Luca in the company's register, Libro Rosso A, 1472–1520, Accademia di Belle Arti.
- [22] This work is now in the collection of the Uffizi, Drawing No. 8P.
- [23] Homosexual acts were illegal in Renaissance Florence.
- [27] Franz-Joachim Verspohl, *Michelangelo Buonarroti und Leonardo Da Vinci: Republikanischer Alltag und Künstlerkonkurrenz in Florenz zwischen 1501 und 1505* (Wallstein Verlag, 2007), p. 151.
- [28] Codex II, 95 r, Victoria and Albert Museum, as cited by della Chiesa p. 85
- [29] Verrocchio's statue of Bartolomeo Colleoni was not cast until 1488, after his death, and after Leonardo had already begun work on the statue for Ludovico.
- [30] della Chiesa, p.85
- [31] Vasari, p.256
- [32] In 2005, the studio was rediscovered during the restoration of part of a building occupied for 100 years by the Department of Military Geography.<ref>
- [33] Both works are lost. While the entire composition of Michelangelo's painting is known from a copy by Aristotole da Sangallo, 1542.<ref>
- [34] della Chiesa, pp.106–107
- [35] Gaetano Milanese, *Epistolario Buonarroti*, Florence (1875), as cited by della Chiesa.
- [36] D'Oggione is known in part for his contemporary copies of the *Last Supper*.
- [37] della Chiesa, p.86
- [38] Georges Goyau, *François I*, Transcribed by Gerald Rossi. The Catholic Encyclopedia, Volume VI. Published 1909. New York: Robert Appleton Company. Retrieved on 2007-10-04

- [40] Vasari, p.265
- [41] It is unknown for what occasion the mechanical lion was made but it is believed to have greeted the king at his entry into Lyon and perhaps was used for the peace talks between the French king and Pope Leo X in Bologna. A conjectural recreation of the lion has been made and is on display in the Museum of Bologna.<ref>
- [42] Clos Lucé, also called Cloux, is now a public museum.
- [43] On the day of Leonardo's death, a royal edict was issued by the king at Saint-Germain-en-Laye, a two-day journey from Clos Lucé. This has been taken as evidence that King François cannot have been present at Leonardo's deathbed. However, White in *Leonardo: The First Scientist* points out that the edict was not signed by the king.
- [44] Vasari, p.270
- [45] This was a charitable legacy as each of the sixty paupers would have been awarded an established mourner's fee in the terms of Leonardo's will.
- [46] The black cloak, of good quality material, was a ready-made item from a clothier, with the fur trim being an additional luxury. The possession of this garment meant that Leonardo's house keeper could attend his funeral "respectably" attired at no expense to herself.
- [49] Rosci, *Leonardo*, chapter 1, *the historical setting*, pp.9–20
- [50] Piero della Francesca, *On Perspective for Painting (De Prospectiva Pingendi)*
- [51] Leon Battista Alberti, *De Pictura*, 1435. *On Painting*, in English (<http://www.noteaccess.com/Texts/Alberti/>), *De Pictura*, in Latin ([http://www.liberliber.it/mediateca/libri/a/alberti/de\\_pictura/html/depictur.htm](http://www.liberliber.it/mediateca/libri/a/alberti/de_pictura/html/depictur.htm))
- [52] Hartt, pp.391–2
- [54] Vasari, p.253
- [55] Vasari, p.257
- [56] Eugene Muntz, *Leonardo da Vinci Artist, Thinker, and Man of Science* (1898), quoted at Leonardo da Vinci's Ethical Vegetarianism (<http://www.ivu.org/history/davinci/hurwitz.html>)
- [58] Cartwright Ady, Julia. Beatrice d'Este, Duchess of Milan, 1475–1497. Publisher: J.M. Dent, 1899; Cartwright Ady, Julia. Isabella D'Este, Marchioness of Mantua, 1474–1539. Publisher: J.M. Dent, 1903.
- [59] Sigmund Freud, *Eine Kindheitserinnerung des Leonardo da Vinci*, (1910)
- [61] Michael Rocke, *Forbidden Friendships* epigraph, p. 148 & N120 p.298
- [62] Leonardo, Codex C. 15v, Institut of France. Trans. Richter
- [63] della Chiesa, p.84
- [65] By the 1490s Leonardo had already been described as a "Divine" painter. His fame is discussed by Daniel Arasse in *Leonardo da Vinci*, pp.11–15
- [66] These qualities of Leonardo's works are discussed by Frederick Hartt in *A History of Italian Renaissance Art*, pp.387–411.
- [67] della Chiesa, pp. 88, 90
- [68] Michael Baxandall lists 5 "laudable conditions" or reactions of Mary to the presence and announcement of the angel. These are: Disquiet, Reflection, Inquiry, Submission and Merit. In this painting Mary's attitude does not comply with any of the accepted traditions.<ref>
- [69] The painting, which in the 18th century belonged to Angelica Kauffman, was later cut up. The two main sections were found in a junk shop and cobbler's shop and were reunited.<ref name=Wasser2>Wasserman, pp.104–6
- [70] Wasserman, p.108
- [72] Wasserman, p.124
- [73] Vasari, p.263
- [74] Vasari, p.262
- [75] della Chiesa, p.97
- [76] della Chiesa, p.98
- [77] Vasari, p.267
- [78] Whether or not Vasari had seen the Mona Lisa is the subject of debate. The opinion that he had *not* seen the painting is based mainly on the fact that he describes the Mona Lisa as having eyebrows. Daniel Arasse in *Leonardo da Vinci* discusses the possibility that Leonardo may have painted the figure with eyebrows which were subsequently removed. (They were not fashionable in the mid-16th century.) See the quotations from the following authors, in section **Fame and reputation**: Vasari, Boltraffio, Castiglione, "Anonimo" Gaddiano, Berensen, Taine, Fuseli, Rio, Bortolon. The analysis of high resolution scans made by Pascal Cotte has revealed that the Mona Lisa had eyebrows and eyelashes which have been subsequently removed.<ref>
- [79] Jack Wasserman writes of "the inimitable treatment of the surfaces" of this painting.<ref>Wasserman, p.144
- [80] Vasari, p.266
- [81] della Chiesa, p.103
- [82] Wasserman, p.150
- [83] della Chiesa, p.109
- [84] della Chiesa, p.102
- [85] Vasari, p.261
- [86] The "Grecian profile" has a continuous straight line from forehead to nose-tip, the bridge of the nose being exceptionally high. It is a feature of many Classical Greek statues.
- [87] Left-handed writers using a split nib or quill pen experience difficulty pushing the pen from left to right across the page.

- [89] Windsor Castle, Royal Library, sheets RL 19073v-19074v and RL 19102 respectively.
- [90] This method of organisation minimises of loss of data in the case of pages being mixed up or destroyed.
- [92] della Chiesa, p.117
- [94] Capra, Fritjof. *The Science of Leonardo; Inside the Mind of the Genius of the Renaissance*. (New York, Doubleday, 2007)
- [95] Alistair Sooke, *The Daily Telegraph*, 28 July 2013, Online (<http://www.telegraph.co.uk/culture/art/leonardo-da-vinci/10202124/Leonardo-da-Vinci-Anatomy-of-an-artist.html>), accessed 29 July 2013.
- [96] Kenneth D. Keele, *Leonardo da Vinci's Influence on Renaissance Anatomy* (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1033412/pdf/medhist00157-0072.pdf>). (1964)
- [97] Hannah Furness, *The Daily Telegraph*, 12 March 2013, Online (<http://www.telegraph.co.uk/culture/theatre/edinburgh-festival/9923336/Leonardo-da-Vinci-was-right-all-along-new-medical-scans-show.html>), accessed 28 July 2013.
- [102] *Leonardo's Dream Machines* (<http://www.imdb.com/title/tt0365434/>)
- [103] Vasari, p.255
- [105] "Anonimo Gaddiani", elaborating on *Libro di Antonio Billi*, 1537–1542


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## External links

-  "Leonardo da Vinci" in the 1913 *Catholic Encyclopedia*.
- Leonardo da Vinci and *the Virgin of the Rocks*, A different point of view (<http://leonardovirginoftherocks.blogspot.com/>)
- Works by Leonardo da Vinci ([http://www.gutenberg.org/author/Leonardo\\_da\\_Vinci](http://www.gutenberg.org/author/Leonardo_da_Vinci)) at Project Gutenberg
- *Leonardo da Vinci by Maurice Walter Brockwell* at Project Gutenberg
- Complete text & images of Richter's translation of the Notebooks (<http://www.sacred-texts.com/aor/dv/index.htm>)
- Web Gallery of Leonardo Paintings (<http://www.wga.hu/frames-e.html?html/l/leonardo/>)
- Drawings of Leonardo da Vinci (<http://www.drawingsofleonardo.org/>)
- Da Vinci Decoded (<http://arts.guardian.co.uk/features/story/0,,1860869,00.html>) Article from *The Guardian*
- The true face of Leonardo Da Vinci? (<http://www.ted.com/index.php/talks/view/id/235>)
- Leonardo da Vinci's Ethical Vegetarianism (<http://www.ivu.org/history/davinci/hurwitz.html>)
- The Notebooks of Leonardo da Vinci (<http://fulltextarchive.com/pages/The-Notebooks-of-Leonardo-Da-Vinci-Complete1.php>)
- Leonardo da Vinci at BBC Science (<http://www.bbc.co.uk/science/leonardo>)
- Leonardo da Vinci's "prophecies" from Volume II of the notebooks (translated) (<http://www.propheties.it/variouspeople/leonardo.htm>)
- Yahoo news, 500-year-old Leonardo da Vinci sculpture 'Horse and Rider' unveiled (<http://news.yahoo.com/blogs/sideshow/exclusive-500-old-leonardo-da-vinci-sculpture-horse-201456519.html>)
- Leonardo da Vinci: Anatomist (<http://www.royalcollection.org.uk/exhibitions/leonardo-da-vinci-anatomist>) The Queen's Gallery, Buckingham Palace, Friday, 4 May 2012 to Sunday, 7 October 2012. High-resolution

anatomical drawings.

## Michelangelo

Michelangelo	
	
Portrait of Michelangelo by Jacopino del Conte (after 1535) at the age of 60	
<b>Birth name</b>	Michelangelo di Lodovico Buonarroti Simoni
<b>Born</b>	6 March 1475 Caprese near Arezzo, Republic of Florence (present-day Tuscany, Italy)
<b>Died</b>	18 February 1564 (aged 88) Rome, Papal States (present-day Italy)
<b>Field</b>	Sculpture, painting, architecture, and poetry
<b>Movement</b>	High Renaissance
<b>Works</b>	<ul style="list-style-type: none"> <li>• <i>David</i></li> <li>• <i>Pietà</i></li> <li>• <i>The Last Judgment</i></li> <li>• Sistine Chapel Ceiling</li> </ul>

**Michelangelo di Lodovico Buonarroti Simoni** (6 March 1475 – 18 February 1564), commonly known as **Michelangelo** (Italian pronunciation: [mikeˈlandʒelo]), was an Italian sculptor, painter, architect, poet, and engineer of the High Renaissance who exerted an unparalleled influence on the development of Western art.<sup>[1]</sup> Despite making few forays beyond the arts, his versatility in the disciplines he took up was of such a high order that he is often considered a contender for the title of the archetypal Renaissance man, along with his fellow Italian Leonardo da Vinci.

Michelangelo was considered the greatest living artist in his lifetime, and ever since then he has been held to be one of the greatest artists of all time.<sup>[1]</sup> A number of his works in painting, sculpture, and architecture rank among the most famous in existence.<sup>[1]</sup> His output in every field during his long life was prodigious; when the sheer volume of correspondence, sketches, and reminiscences that survive is also taken into account, he is the best-documented artist of the 16th century.

Two of his best-known works, the *Pietà* and *David*, were sculpted before he turned thirty. Despite his low opinion of painting, Michelangelo also created two of the most influential works in fresco in the history of Western art: the

scenes from Genesis on the ceiling and *The Last Judgment* on the altar wall of the Sistine Chapel in Rome. As an architect, Michelangelo pioneered the Mannerist style at the Laurentian Library. At 74 he succeeded Antonio da Sangallo the Younger as the architect of St. Peter's Basilica. Michelangelo transformed the plan, the western end being finished to Michelangelo's design, the dome being completed after his death with some modification.

In a demonstration of Michelangelo's unique standing, he was the first Western artist whose biography was published while he was alive.<sup>[1]</sup> Two biographies were published of him during his lifetime; one of them, by Giorgio Vasari, proposed that he was the pinnacle of all artistic achievement since the beginning of the Renaissance, a viewpoint that continued to have currency in art history for centuries.

In his lifetime he was also often called *Il Divino* ("the divine one").<sup>[2]</sup> One of the qualities most admired by his contemporaries was his *terribilità*, a sense of awe-inspiring grandeur, and it was the attempts of subsequent artists to imitate<sup>[3]</sup> Michelangelo's impassioned and highly personal style that resulted in Mannerism, the next major movement in Western art after the High Renaissance.

## Life

### Early life, 1475-88

Michelangelo was born on 6 March 1475<sup>[a]</sup> in Caprese near Arezzo, Tuscany.<sup>[4]</sup> (Today, Caprese is known as Caprese Michelangelo). For several generations, his family had been small-scale bankers in Florence, the bank had failed and his father, Ludovico di Leonardo di Buonarrotto Simoni, briefly took a government post in Caprese, where Michelangelo was born.<sup>[1]</sup> At the time of Michelangelo's birth, his father was the Judicial administrator of the small town of Caprese and local administrator of Chiusi. Michelangelo's mother was Francesca di Neri del Miniato di Siena.<sup>[5]</sup> The Buonarrotis claimed to descend from the Countess Mathilde of Canossa; this claim remains unproven, but Michelangelo himself believed it.<sup>[6]</sup> Several months after Michelangelo's birth, the family returned to Florence, where Michelangelo was raised. At later times, during his mother's prolonged illness and after her death in 1481, when he was just six years old, Michelangelo lived with a stonecutter and his wife and family in the town of Settignano, where his father owned a marble quarry and a small farm.<sup>[5]</sup> Giorgio Vasari quotes Michelangelo:

"If there is some good in me, it is because I was born in the subtle atmosphere of your country of Arezzo. Along with the milk of my nurse I received the knack of handling chisel and hammer, with which I make my figures."<sup>[4]</sup>

### Apprenticeships, 1488-92

As a young boy Michelangelo was sent to Florence to study grammar under the Humanist Francesco da Urbino.<sup>[4][7][b]</sup> The young artist, however, showed no interest in his schooling, preferring to copy paintings from churches and seek the company of painters.<sup>[7]</sup>

The city of Florence was at that time the greatest centre of the arts and learning in Italy.<sup>[8]</sup> Art was sponsored by the Signoria (the town council), by the merchant guilds and by wealthy patrons such as the Medici and their banking associates.<sup>[9]</sup> The Renaissance, a renewal of Classical scholarship and the arts, had its first flowering in Florence.<sup>[8]</sup> In the early 1400s, the architect Brunelleschi has studied the remains of Classical buildings in Rome and created two churches, San Lorenzo's and Santo Spirito, which embodied the Classical precepts.<sup>[10]</sup> The sculptor Lorenzo Ghiberti had laboured for fifty years to create the bronze doors of the Baptistry, which Michelangelo was to describe as "The



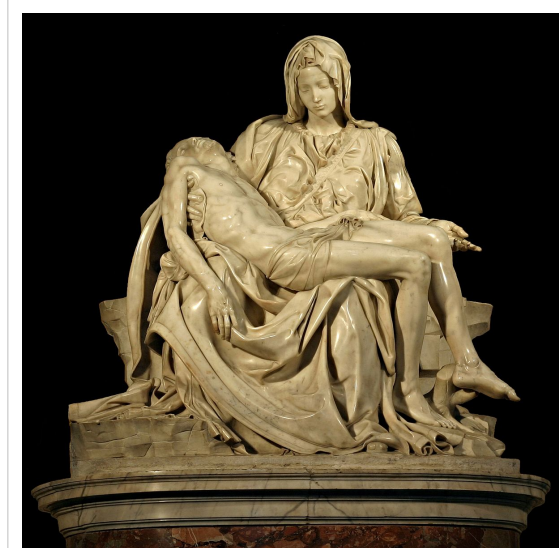
The *Madonna of the Steps*  
(1490–1492), Michelangelo's earliest  
known work

Gates of Paradise".<sup>[11]</sup> The exterior niches of the Church of Or' San Michele contained a gallery of works by the greatest sculptors of Florence, Donatello, Ghiberti, Verrocchio, and Nanni di Banco.<sup>[9]</sup> The interiors of the older churches were covered with frescos, mostly in the Late Medieval style, but also in the Early Renaissance style, begun by Giotto and continued by Massaccio in the Brancacci Chapel, both of whose works Michelangelo studied and copied in drawings.<sup>[12]</sup> During Michelangelo's childhood, a team of painters had been called from Florence to the Vatican, in order to decorate the walls of the Sistine Chapel. Among them was Domenico Ghirlandaio, a master of the technique of fresco painting, of perspective, figure drawing and portraiture. He had the largest workshop in Florence, at that period.<sup>[9]</sup>

In 1488, at thirteen, Michelangelo was apprenticed to Ghirlandaio.<sup>[13]</sup> When he was only fourteen, his father persuaded Ghirlandaio to pay his apprentice as an artist, which was highly unusual at the time.<sup>[14]</sup> When in 1489, Lorenzo de' Medici, de facto ruler of Florence, asked Ghirlandaio for his two best pupils, Ghirlandaio sent Michelangelo and Francesco Granacci.<sup>[15]</sup> From 1490 to 1492, Michelangelo attended the Humanist academy which the Medici had founded along Neo Platonic lines. At the academy, both Michelangelo's outlook and his art were subject to the influence of many of the most prominent philosophers and writers of the day including Marsilio Ficino, Pico della Mirandola and Poliziano.<sup>[16]</sup> At this time, Michelangelo sculpted the reliefs *Madonna of the Steps* (1490–1492) and *Battle of the Centaurs* (1491–1492).<sup>[12]</sup> The latter was based on a theme suggested by Poliziano and was commissioned by Lorenzo de Medici.<sup>[17]</sup> Michelangelo worked for a time with the sculptor Bertoldo di Giovanni. When he was seventeen, another pupil, Pietro Torrigiano, struck him on the nose, causing the disfigurement which is conspicuous in all the portraits of Michelangelo.<sup>[18]</sup>

### Bologna, Florence and Rome, 1492-99

Lorenzo de' Medici's death on 8 April 1492 brought a reversal of Michelangelo's circumstances.<sup>[19]</sup> Michelangelo left the security of the Medici court and returned to his father's house. In the following months he carved a polychrome wooden *Crucifix* (1493), as a gift to the prior of the Florentine church of Santo Spirito, which had permitted him some studies of anatomy on the corpses of the church's hospital.<sup>[20]</sup> Between 1493 and 1494 he bought a block of marble, and carved a larger than life statue of Hercules, which was sent to France and subsequently disappeared sometime circa 18th century.<sup>[17][c]</sup> On 20 January 1494, after heavy snowfalls, Lorenzo's heir, Piero de Medici, commissioned a snow statue, and Michelangelo again entered the court of the Medici.



Michelangelo's *Pietà*, St Peter's Basilica (1498-99)

In the same year, the Medici were expelled from Florence as the result of the rise of Savonarola. Michelangelo left the city before the end of the political upheaval, moving to Venice and then to Bologna.<sup>[19]</sup> In Bologna, he was commissioned to carve several of the last small figures for the completion of the Shrine of St. Dominic, in the church dedicated to that saint. At this time Michelangelo studied the robust reliefs carved by Jacopo della Quercia around main portal of the Basilica of St Petronius, including the panel of *The Creation of Eve* the composition of which was to reappear on the Sistine Chapel ceiling.<sup>[21]</sup> Towards the end of 1494, the political situation in Florence was calmer. The city, previously under threat from the French, was no longer in danger as Charles VIII had suffered defeats. Michelangelo returned to Florence but received no commissions from the new city government under Savonarola. He returned to the employment of the Medici.<sup>[22]</sup> During the half year he spent in Florence, he worked on two small statues, a child *St. John the Baptist* and a sleeping *Cupid*. According to Condivi, Lorenzo di Pierfrancesco de'

Medici, for whom Michelangelo had sculpted *St. John the Baptist*, asked that Michelangelo "fix it so that it looked as if it had been buried" so he could "send it to Rome...pass [it off as] an ancient work and...sell it much better." Both Lorenzo and Michelangelo were unwittingly cheated out of the real value of the piece by a middleman. Cardinal Raffaele Riario, to whom Lorenzo had sold it, discovered that it was a fraud, but was so impressed by the quality of the sculpture that he invited the artist to Rome.<sup>[23]</sup> <sup>[d]</sup> This apparent success in selling his sculpture abroad as well as the conservative Florentine situation may have encouraged Michelangelo to accept the prelate's invitation.<sup>[22]</sup>

Michelangelo arrived in Rome 25 June 1496<sup>[24]</sup> at the age of 21. On 4 July of the same year, he began work on a commission for Cardinal Raffaele Riario, an over-life-size statue of the Roman wine god *Bacchus*. Upon completion, the work was rejected by the cardinal, and subsequently entered the collection of the banker Jacopo Galli, for his garden.



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

In November 1497, the French ambassador to the Holy See, Cardinal Jean de Bilhères-Lagraulas, commissioned him to carve a *Pietà*, a sculpture showing the Virgin Mary grieving over the body of Jesus. The subject, which is not part of the Biblical narrative of the Crucifixion, was common in religious sculpture of Medieval Northern Europe and would have been very familiar to the Cardinal.<sup>[25]</sup> The contract was agreed upon in August of the following year. Michelangelo was 24 at the time of its completion.<sup>[25]</sup> It was soon to be regarded as one of the world's great masterpieces of sculpture, "a revelation of all the potentialities and force of the art of sculpture". Contemporary opinion was summarized by Vasari: "It is certainly a miracle that a formless block of stone could ever have been reduced to a perfection that nature is scarcely able to create in the flesh."<sup>[26]</sup> It is now located in St Peter's Basilica.

### Florence, 1499-1505

Michelangelo returned to Florence in 1499. The republic was changing after the fall of anti-Renaissance Priest and leader of Florence, Girolamo Savonarola, (executed in 1498) and the rise of the *gonfaloniere* Piero Soderini. He 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.<sup>[27]</sup> 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.<sup>[28]</sup>

With the completion of the David came another commission. In early 1504 Leonardo da Vinci had been commissioned in the council chamber of the Palazzo Vecchio depicting the *Battle of Angiari* between the forces of Florence and Milan in 1434. Michelangelo was then commissioned to paint the *Battle of Cascina*. The two paintings are very different, Leonardo's depicting soldiers fighting on horseback, and Michelangelo's showing soldiers being ambushed as they bathe in the river. Neither work was completed and both were lost 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.<sup>[29]</sup>

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.<sup>[30][31]</sup> 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, United Kingdom.<sup>[32]</sup>

## Sistine Chapel ceiling, 1505-12

In 1505, Michelangelo was invited back to Rome by the newly elected Pope Julius II. He was commissioned to build the Pope's tomb, which was to include forty statues and be finished in five years.<sup>[33]</sup>

Under the patronage of the Pope, Michelangelo experienced constant interruptions to his work on the tomb in order to accomplish numerous other tasks. Although Michelangelo worked on the tomb for 40 years, it was never finished to his satisfaction.<sup>[33]</sup> It is located in the Church of S. Pietro in Vincoli in Rome and is most famous for the central figure of Moses, completed in 1516.<sup>[34]</sup> Of the other statues intended for the tomb, two known as *the Heroic Captive* and *the Dying Captive*, are now in the Louvre.<sup>[33]</sup>



Michelangelo painted the ceiling of the Sistine Chapel; the work took approximately four years to complete (1508–1512)

During the same period, Michelangelo painted the ceiling of the Sistine Chapel, which took approximately four years to complete (1508–1512).<sup>[34]</sup> According to Condivi's account, Bramante, who was working on the building of St Peter's Basilica, resented Michelangelo's commission for the Pope's tomb and convinced the Pope to commission him in a medium with which he was unfamiliar, in order that he might fail at the task.<sup>[35]</sup>

Michelangelo was originally commissioned to paint the Twelve Apostles on the triangular pendentives that supported the ceiling, and cover the central part of the ceiling with ornament.<sup>[36]</sup> Michelangelo persuaded Pope Julius to give him a free hand and proposed a different and more complex scheme, representing the Creation, the Fall of Man, the Promise of Salvation through the prophets, and the genealogy of Christ. The work is part of a larger scheme of decoration within the chapel which represents much of the doctrine of the Catholic Church.<sup>[36]</sup>

The composition stretches over 500 square metres of ceiling,<sup>[37]</sup> and contains over 300 figures.<sup>[36]</sup> At its centre are nine episodes from the Book of Genesis, divided into three groups: God's Creation of the Earth; God's Creation of Humankind and their fall from God's grace; and lastly, the state of Humanity as represented by Noah and his family. On the pendentives supporting the ceiling are painted twelve men and women who prophesied the coming of the Jesus. They are seven prophets of Israel and five Sibyls, prophetic women of the Classical world.<sup>[36]</sup> Among the most famous paintings on the ceiling are *The Creation of Adam*, *Adam and Eve in the Garden of Eden*, *the Deluge*, *the Prophet Jeremiah* and *the Cumaean Sibyl*.



Moses for the tomb of Pope Julius II

### Florence under Medici popes, 1513-early 1534

In 1513, Pope Julius II died and was succeeded by Pope Leo X, the second son of Lorenzo dei Medici.<sup>[34]</sup> Pope Leo commissioned Michelangelo to reconstruct the façade of the Basilica of San Lorenzo in Florence and to adorn it with sculptures. He agreed reluctantly and spent three years creating drawings and models for the façade, as well as attempting to open a new marble quarry at Pietrasanta specifically for the project. In 1520 the work was abruptly cancelled by his financially strapped patrons before any real progress had been made. The basilica lacks a façade to this day.<sup>[38]</sup>

In 1520 the Medici came back to Michelangelo with another grand proposal, this time for a family funerary chapel in the Basilica of San Lorenzo.<sup>[34]</sup> Fortunately for posterity, this project, occupying the artist for much of the 1520s and 1530s, was more fully realized. Michelangelo used his own discretion to create its composition of the Medici Chapel. It houses the large tombs of two of the younger members of the Medici family, Giuliano, Duke of Nemours, and

Lorenzo, his nephew, but it also serves to commemorate their more famous predecessors, Lorenzo the Magnificent and his brother Giuliano who are buried nearby. The tombs display statues of the two Medici and allegorical figures representing Night and Day, and Dusk and Dawn. The chapel also contains Michelangelo's *Medici Madonna*.<sup>[39]</sup> In 1976 a concealed corridor was discovered with drawings on the walls that related to the chapel itself.<sup>[40][41]</sup>

Pope Leo X died in 1521, to be succeeded briefly by the austere Adrian VI, then his cousin Giulio Medici as Pope Clement VII.<sup>[42]</sup> In 1524 Michelangelo received an architectural commission from the Medici pope for the Laurentian Library at San Lorenzo's Church.<sup>[34]</sup> He designed both the interior of the library itself and its vestibule, a building which utilises architectural forms with such dynamic effect that it is seen as the forerunner of Baroque architecture. It was left to assistants to interpret his plans and carry out instruction. The library was not opened until 1571 and the vestibule remained incomplete until 1904.<sup>[43]</sup>

In 1527, the Florentine citizens, encouraged by the sack of Rome, threw out the Medici and restored the republic. A siege of the city ensued, and Michelangelo went to the aid of his beloved Florence by working on the city's fortifications from 1528 to 1529. The city fell in 1530 and the Medici were restored to power.<sup>[34]</sup> Michelangelo fell out of favour with the young Alessandro Medici who had been installed as the first Duke of Florence, and fearing for his life, he fled to Rome, leaving assistants to complete the Medici chapel and the Laurentian Library. Despite Michelangelo's support of the republic and resistance to the Medici rule, he was welcomed by Pope Clement who reinstated an allowance that he had previously made the artist and made a new contract with him over the tomb of Pope Julius.<sup>[44]</sup>

## Rome, 1534-46

In Rome, Michelangelo lived near the church of Santa Maria di Loreto. It was at this time that he met the poet, Vittoria Colonna, marchioness of Pescara, who was to become one of his closest friends until her death in 1547.<sup>[45]</sup>

Shortly before his death in 1534 Pope Clement VII commissioned Michelangelo to paint a fresco of *The Last Judgment* on the altar wall of the Sistine Chapel. His successor, Paul III was instrumental in seeing that Michelangelo began and completed the project. Michelangelo labored on the project from 1534 to October 1541.<sup>[34]</sup> The fresco depicts the Second Coming of Christ and his Judgement of the souls. Michelangelo ignored the usual artistic conventions in portraying Jesus, and showed him a massive, muscular figure, youthful, beardless and naked. He is surrounded by saints, among which Saint Bartholomew holds a drooping flayed skin, bearing the likeness of Michelangelo. The dead rise from their graves, to be consigned either to Heaven or to Hell.



*The Last Judgment* (1534-41)

Once completed, the depiction of Christ and the Virgin Mary naked was considered sacrilegious, and Cardinal Carafa and Monsignor Sernini (Mantua's ambassador) campaigned to have the fresco removed or censored, but the Pope resisted. At the Council of Trent, shortly before Michelangelo's death in 1564, it was decided to obscure the genitals and Daniele da Volterra, an apprentice of Michelangelo, was commissioned to make the alterations. An uncensored copy of the original, by Marcello Venusti, is in the Capodimonte Museum of Naples.<sup>[citation needed]</sup>

Michelangelo worked on a number of architectural projects at this time. They included a design for the Capitoline Hill with its trapezoid piazza displaying the ancient bronze statue of Marcus Aurelius. He designed the upper floor of the Palazzo Farnese, and the interior of the Church of Santa Maria degli Angeli, in which he transformed the vaulted interior of an Ancient Roman bathhouse. Other architectural works include San Giovanni dei Fiorentini, the Sforza Chapel (Capella Sforza) in the Basilica di Santa Maria Maggiore and the Porta Pia.<sup>[citation needed]</sup>



The dome of St Peter's Basilica

## St Peter's Basilica, 1546-64

While still working on the *Last Judgement*, Michelangelo received yet another commission for the Vatican. This was for the painting of two large frescos in the Cappella Paolina depicting significant events in the lives of the two most important saints of Rome, the *Conversion of Saint Paul* and the *Crucifixion of Saint Peter*. Like the *Last Judgement*, these two works are complex compositions containing a great number of figures. They were completed in 1550. In the same year, Giorgio Vasari published his *Vita*, including a biography of Michelangelo.<sup>[citation needed]</sup>

In 1546, Michelangelo was appointed architect of St. Peter's Basilica, Rome.<sup>[34]</sup> The process of replacing the Constantinian basilica of the 4th century had been underway for fifty years and in 1506 foundations had been laid to the plans of Bramante. Successive architects had worked on it, but little progress had been made. Michelangelo was persuaded to take over the project. He returned to the concepts of

Bramante, and developed his ideas with for a centrally planned church, strengthening the structure both physically and visually. His great achievement was in the designing of the dome.<sup>[citation needed]</sup>

As construction was progressing on St Peter's, there was concern that Michelangelo would pass away before the dome was finished. However, once building commenced on the lower part of the dome, the supporting ring, the completion of the design was inevitable. Michelangelo died in Rome in 1564, at the age of 88 (three weeks before his 89th birthday). His body was taken from Rome for interment at the Basilica of Santa Croce, fulfilling the maestro's last request to be buried in his beloved Florence.<sup>[citation needed]</sup>

On 7 December 2007, a red chalk sketch for the dome of St Peter's Basilica, possibly the last made by Michelangelo before his death, was discovered in the Vatican archives. It is extremely rare, since he destroyed his designs later in life. The sketch is a partial plan for one of the radial columns of the cupola drum of Saint Peter's.<sup>[46]</sup>

## Personal life

In his personal life, Michelangelo was abstemious. He told his apprentice, Ascanio Condivi: "However rich I may have been, I have always lived like a poor man."<sup>[47]</sup> Condivi said he was indifferent to food and drink, eating "more out of necessity than of pleasure"<sup>[47]</sup> and that he "often slept in his clothes and ... boots."<sup>[47]</sup> His biographer Paolo Giovio says, "His nature was so rough and uncouth that his domestic habits were incredibly squalid, and deprived posterity of any pupils who might have followed him."<sup>[48]</sup> He may not have minded, since he was by nature a solitary and melancholy person, *bizarro e fantastico*, a man who "withdrew himself from the company of men."<sup>[49]</sup>

It is impossible to know for certain whether Michelangelo had physical relationships (Condivi ascribed to him a "monk-like chastity"),<sup>[50]</sup> but the nature of his sexuality is made apparent in his poetry.<sup>[51]</sup> He wrote over three hundred sonnets and madrigals. The longest sequence was written to Tommaso dei Cavalieri (c. 1509–1587), who was 23 years old when Michelangelo met him in 1532, at the age of 57. These make up the first large sequence of poems in any modern tongue addressed by one man to another, predating Shakespeare's sonnets to the fair youth by fifty years:

I feel as lit by fire a cold countenance  
That burns me from afar and keeps itself ice-chill;  
A strength I feel two shapely arms to fill  
Which without motion moves every balance.  
— (Michael Sullivan, translation)

Cavalieri replied: "I swear to return your love. Never have I loved a man more than I love you, never have I wished for a friendship more than I wish for yours." Cavalieri remained devoted to Michelangelo until his death.<sup>[52]</sup>

In 1542 Michelangelo met Cecchino dei Bracci who died only a year later, inspiring Michelangelo to write forty-eight funeral epigrams. Some of the objects of Michelangelo's affections, and subjects of his poetry, took advantage of him: the model Febo di Poggio asked for money in response to a love-poem, and a second model, Gherardo Perini, stole from him shamelessly.<sup>[52]</sup>

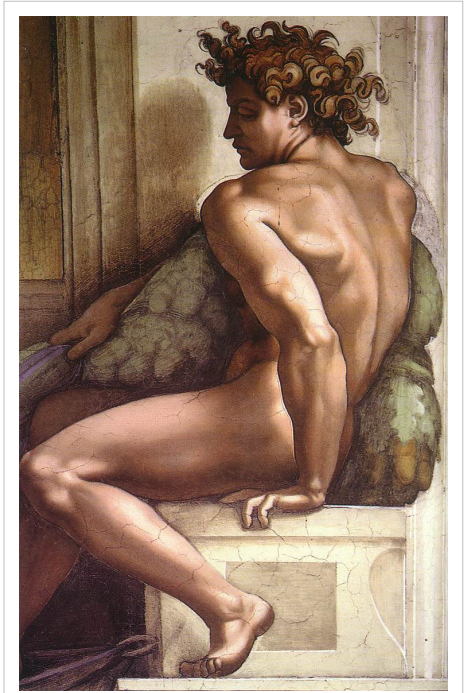
The openly homoerotic nature of the poetry was a source of discomfort to later generations. Michelangelo's grandnephew, Michelangelo the Younger, published the poems in 1623 with the gender of pronouns changed,<sup>[53]</sup> and it was not until John Addington Symonds translated them into English in 1893 that the original genders were restored. Even in modern times some scholars continue to insist that, despite the restoration of the pronouns, they represent "an emotionless and elegant re-imagining of Platonic dialogue, whereby erotic poetry was seen as an expression of refined sensibilities".<sup>[52]</sup>

Late in life, Michelangelo nurtured a great love for the poet and noble widow Vittoria Colonna, whom he met in Rome in 1536 or 1538 and who was in her late forties at the time. They wrote sonnets for each other and were in regular contact until she died. Condivi recalls Michelangelo's saying that his sole regret in life was that he did not kiss the widow's face in the same manner that he had her hand.<sup>[45]</sup>

## Artworks

### Madonna and Child

The *Madonna of the Steps* is Michelangelo's earliest known work. It is carved in shallow relief, a technique often employed by the master-sculptor of the early 15th-century, Donatello and others such as Desiderio da Settignano. While the Madonna is in profile, the easiest aspect for a shallow relief, the child displays a twisting motion that was to become characteristic of Michelangelo's work. The *Taddeo Tondo* of 1502, shows the Christ Child frightened by a Bullfinch, a symbol of the Crucifixion. The lively form of the child was later adapted by Raphael in the *Bridgewater Madonna*. The *Bruges Madonna* was at the time of its creation, unlike other such statues which show the Virgin proudly presenting her son. Here, the Christ Child, restrained by his mother's clasping hand, is about to step off into the world.<sup>[54]</sup> The *Doni Tondo*, depicting the Holy Family, has elements of all three previous works: the frieze of

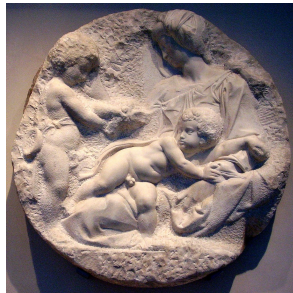


Ignudo from the Sistine Chapel ceiling

figures in the background has the appearance of a low-relief, while the circular shape and dynamic forms echo the Taddeo Tondo. The twisting motion present in the Bruges Madonna is accentuated in the painting. The painting heralds the forms, movement and colour that Michelangelo was to employ on the ceiling of the Sistine Chapel.<sup>[55]</sup>



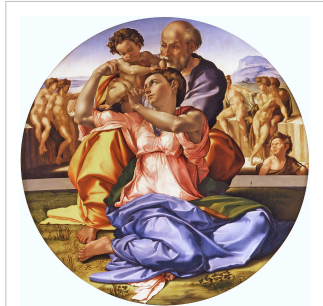
The *Madonna of the Steps* (1490–1492)



The *Taddei Tondo* (1502)



*Madonna and Child*. Brügge, Belgium, (1504)



The *Doni Tondo* (1504–06)

## Male figure

The kneeling angel is an early work, one of several that Michelangelo created as part of a large decorative scheme for the Arca of St Dominic in the church dedicated to that saint in Bologna. Several other artists had worked on the scheme, beginning with Nicola Pisano in the 13th-century. In the late 15th-century, the project was managed by Niccolò dell'Arca. One angel holding a candlestick was already in place, perhaps by Niccolò, but usually considered the work of Antonio Rossellino. There is a great contrast between the two works, the one depicting a gentle child with flowing hair, and Michelangelo's depicting a robust and muscular youth with eagle's wings. Everything about Michelangelo's angel is dynamic where the earlier one is passive. Michelangelo's Bacchus was a commission with a specified subject, the youthful God of Wine. The sculpture has all the traditional attributes, a vine wreath, a cup of wine and a fawn, but Michelangelo ingested an air of reality into the subject, depicting him with bleary eyes, a swollen bladder and a stance that suggests he is unsteady on his feet. The work was rejected by the client. In the *Dying Slave*, Michelangelo has moved away from the use of attributes, but again has utilised the figure to suggest a particular human state. It is one of two such earlier figures for the Tomb of Pope Julius that have reached a finished state. The *Bound Slave* is one of the later figures for Pope Julius' tomb. The works, known collectively as *The Captives*, all show the figure struggling to free itself, as if from the bonds of the rock in which it is lodged. It is not known whether Michelangelo had any intention of bringing these figures to a finished state. It has been suggested that were they to be finished, (released from the rock) then the struggle that each represents would be pointless. If this is the case, then they represent a response towards the sculptural medium that is new in Western Art.



Angel by Michelangelo, early work (1494–95)



Bacchus by Michelangelo, early work (1496–97)



Dying slave Louvre (1513)



Bound slave, known as Atlas (1530–34)

## Sistine Chapel Ceiling

The Sistine Chapel ceiling was painted between 1508 and 1512. The ceiling itself is a flattened barrel vault supported on twelve triangular pendentives that rise from between the windows of the chapel. Michelangelo was initially commissioned with the task of adorning the pendentives with figures of the twelve apostles. Michelangelo, who was reluctant to take the job, persuaded Pope Julius to give him a free hand in the composition. The resultant scheme of decoration awed his contemporaries and has inspired other artists ever since. The scheme is of nine panels illustrating episodes from the Book of Genesis, set in an architectonic frame. On the pendentives, Michelangelo replaced the proposed Apostles with Prophets and Sibyls who heralded the coming of the Messiah.



*The Sistine Chapel Ceiling, (1508–12)*

Michelangelo began painting with the later episodes in the narrative, the pictures including locational details and groups of figures, the *Drunkenness of Noah* being the first of this group. In the later compositions, painted after the initial scaffolding had been removed, Michelangelo made the figures larger. One of the central images, *The Creation of Adam* is one

of the best known and most reproduced works in the history of art. The final panel, showing *God dividing Light from Darkness* is the broadest in style and was painted in a single day. As the model for the Creator, Michelangelo has depicted himself in the action of painting the ceiling.



*The Drunkenness of Noah*



*The Deluge (detail)*



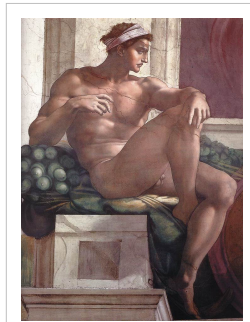
*The Creation of Adam (1510)*



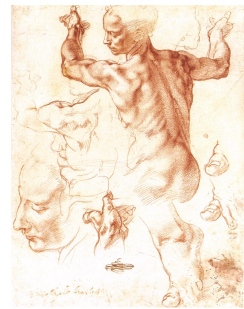
*The First day of Creation*

As supporters to the smaller scenes, Michelangelo painted twenty youths (*ignudi*) who have variously been interpreted as angels, as muses, or simply as decoration. The figure reproduced may be seen in context in the above

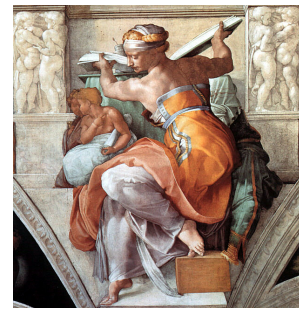
image of *God dividing Light from Darkness*. In the process of painting the ceiling, Michelangelo made studies for different figures, of which some, such as that for *The Libyan Sibyl* have survived, demonstrating the care taken by Michelangelo in details such as the hands and feet. The Prophet Jeremiah, contemplating the downfall of Jerusalem, is an image of the artist himself.



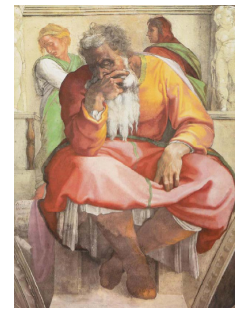
Ignudo (1511)



Studies for *The Libyan Sibyl*



*The Libyan Sibyl* (1511)



*The Prophet Jeremiah* (1511)

### Figure compositions

Michelangelo's relief of the *Battle of the Centaurs*, created while he was still a youth associated with the Medici Academy, is an unusually complex relief in that it shows a great number of figures involved in a vigorous struggle. Such a complex disarray of figures was rare in Florentine art, where it would usually only be found in images showing either the Massacre of the Innocents or the Torments of Hell. The relief treatment, in which some of the figures are boldly projecting, may indicate Michelangelo's familiarity with Roman sarcophagus reliefs from the collection of Lorenzo Medici, and similar marble panels created by Giovanni and Giovanni Pisano, and with the figurative compositions on Ghiberti's Baptistery Doors.

The composition of the *Battle of Cascina*, is known in its entirety only from copies, as the original cartoon, according to Vasari, was so admired that it deteriorated and was eventually in pieces. It reflects the earlier relief in the energy and diversity of the figures, with many different postures, and many being viewed from the back, as they turn toward the approaching enemy and prepare for battle.

In *The Last Judgement* it is said that Michelangelo drew inspiration a fresco by Melozzo da Forli in the Church of the Holy Apostles, Rome. While the work is very different in character to Michelangelo's, Melozzo had depicting figures from different angles, as if they were floating in the Heaven and seen from below. Melozzo's majestic figure of Christ, with windblown cloak, demonstrates a degree of foreshortening of the figure that had also been employed by Mantegna, but was not usual in the frescos of Florentine painters. In *The Last Judgement* Michelangelo had the opportunity to depict, on an unprecedented scale, figures in the action of either rising heavenward or falling and being dragged down.

In the two frescos of the Pauline Chapel, the *Crucifixion of Peter* and the *Conversion of Paul*, Michelangelo has used the various groups of figures to convey a complex narrative. In the *Crucifixion of Peter* soldiers busy themselves about their assigned duty of digging a post hole and raising the cross while various people look on and discuss the events. A group of horrified women cluster in the foreground, while another group of Christian are led by a tall man to witness the events. In the right foreground, Michelangelo walks out of the painting with an expression of disillusionment.



The Battle of the Centaurs (1492)



Copy of the lost *Battle of Cascina* by Bastiano da Sangallo



*The Last Judgement*, detail of the Redeemed. (see whole image above)



*Crucifixion of St Peter*

## Death

In his old age, Michelangelo created a number of *Pietas* in which he apparently reflects upon mortality. They are heralded by the *Victory*, perhaps created for the tomb of Pope Julius II but left unfinished. In this group, the youthful victor overcomes an older hooded figure, with the features of Michelangelo.

The *Pieta of Vittoria Colonna* is a chalk drawing of a type described as "presentation drawings", as they might be given as a gift by an artist, and were not necessarily studies towards a painted work. In this image, Mary's upraised arms and upraised hands are indicative of her prophetic role. The frontal aspect is reminiscent of Massaccio's fresco of the Holy Trinity in Santa Maria Novella, Florence.

In the *Florentine Pieta*, Michelangelo again depicts himself, this time as the aged Nicodemus lowering the body of Jesus from the cross into the arms of Mary his mother and Mary Magdalene. Michelangelo smashed the left arm and leg of the figure of Jesus. His pupil Tiberio Calcagni repaired the arm and drilled a hole in which to fix a replacement leg. He also worked on the figure of Mary Magdalene.

Probably Michelangelo's last sculpture, the *Rondanini Pieta* could never be completed because Michelangelo carved it away until there was insufficient stone. The legs and a detached arm remain from a previous stage of the work. As it remains, the sculpture has an abstracted quality, in keeping with 20th-century concepts of sculpture.



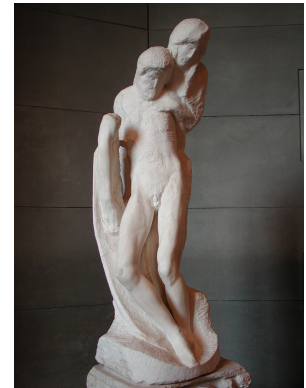
Statue of Victory (1534), Palazzo Vecchio, Florence



The *Pieta* of Vittoria Colonna (c. 1540)



Michelangelo and Tiberio Calcagni, *Pieta Firenze* (c. 1550-61)



The *Rondanini Pieta* (1552-64)

## Michelangelo's legacy

Michelangelo, with Leonardo da Vinci and Raphael, is one of the three giants of the Florentine High Renaissance. Although their names are often cited together, Michelangelo was younger than Leonardo by 23 years, and older than Raphael by eight. Because of his reclusive nature, he had little to do with either artist and outlived both of them by more than forty years. Michelangelo took few sculpture students. He employed Francesco Granacci, who was his fellow pupil at the Medici Academy, and became one of several assistants on the Sistine Chapel ceiling.<sup>[36]</sup> Michelangelo appears to have used assistants mainly for the more manual tasks of preparing surfaces and grinding colours. Despite this, his works were to have a great influence on painters, sculptors and architects for many generations to come.

While Michelangelo's *David* is the most famous male nude of all time and destined to be reproduced in order to grace cities around the world, some of his other works have had perhaps even greater impact on the course of art. The twisting forms and tensions of the *Victory*, the *Bruges Madonna* and the *Medici Madonna* make them the heralds of the Mannerist art. The unfinished giants for the tomb of Pope Julius II had profound effect on late 19th and 20th-century sculptors such as Rodin and Henry Moore.

Michelangelo's foyer of the Laurentian Library was one of the earliest buildings to utilise Classical forms in a plastic and expressive manner. This dynamic quality was later to find its major expression in Michelangelo's centrally planned St Peter's, with its giant order, its rippling cornice and its upward-launching pointed dome. The dome of St Peter's was to influence the building of churches for many centuries, including Sant'Andrea della Valle in Rome and St Paul's Cathedral, London, as well as the civic domes of many public buildings and the state capitals across America.

Artists who were directly influenced by Michelangelo include Raphael, who shamelessly imitated Michelangelo's prophets in two of his works, including his depiction of the great master himself in the School of Athens. Other artists such as Parmigianino and Pontormo drew on the writhing forms of the *Last Judgement* and the frescos of the Capella Paolina.

The Sistine Chapel ceiling was a work of unprecedented grandeur, both for its architectonic forms, to be imitated by many Baroque ceiling painters, and also for the wealth of its inventiveness in the study of figures. Vasari wrote:

The work has proved a veritable beacon to our art, of inestimable benefit to all painters, restoring light to a world that for centuries had been plunged into darkness. Indeed, painters no longer need to seek for new inventions, novel attitudes, clothed figures, fresh ways of expression, different arrangements, or sublime subjects, for this work contains every perfection possible under those headings.<sup>[56]</sup>



Michelangelo's tomb in the Basilica of Santa Croce, Florence

## Footnotes

- a. ^ Michelangelo's father marks the date as 6 March 1474 in the Florentine manner *ab Incarnatione*. However, in the Roman manner, *ab Nativitate*, it is 1475.
- b. ^ Sources disagree as to how old Michelangelo was when he departed for school. De Tolnay writes that it was at ten years old while Sedgwick notes in her translation of *Condivi* that Michelangelo was seven.
- c. ^ The Strozzi family acquired the sculpture *Hercules*. Filippo Strozzi sold it to Francis I in 1529. In 1594, Henry IV installed it in the Jardin d'Estang at Fontainebleau where it disappeared in 1713 when the Jardin d'Estang was destroyed.
- d. ^ Vasari makes no mention of this episode and Paolo Giovio's *Life of Michelangelo* indicates that Michelangelo tried to pass the statue off as an antique himself.

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- [19] J. de Tolnay, *The Youth of Michelangelo*, 20–21
- [20] A. Condivi, *The Life of Michelangelo*, 17
- [21] Bartz and König, p. 54
- [22] J. de Tolnay, *The Youth of Michelangelo*, 24–25
- [23] A. Condivi, *The Life of Michelangelo*, 19–20
- [24] J. de Tolnay, *The Youth of Michelangelo*, 26–28
- [25] Hirst and Dunkerton pp. 47-55
- [26] Vasari, *Lives of the painters: Michelangelo*
- [27] Paoletti and Radke, pp.387-89
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- [29] Paoletti and Radke, pp. 392-3
- [30] Goldscheider, p. 11
- [31] Hirst and Dunkerton, p. 127
- [32] Hirst and Dunkerton, pp.336-46; 83-105
- [33] Goldscheider, pp. 14-16
- [34] Bartz and König, p. 134
- [35] Coughlan, p. 112
- [36] Goldscheider, pp. 12-14
- [37] Bartz and König, p 43
- [38] Coughlan, pp. 135-6
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## External links

- Works by Michelangelo Buonarroti (<http://www.gutenberg.org/author/Michelangelo+Buonarroti>) at Project Gutenberg
  - The Digital Michelangelo Project (<http://graphics.stanford.edu/projects/mich/>)
  - The BP Special Exhibition Michelangelo Drawings – closer to the master ([http://www.britishmuseum.org/explore/online\\_tours/europe/michelangelos\\_drawings/michelangelos\\_drawings.aspx](http://www.britishmuseum.org/explore/online_tours/europe/michelangelos_drawings/michelangelos_drawings.aspx))
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# Cosimo de' Medici

Cosimo di Giovanni de' Medici	
	
Portrait by Bronzino	
<b>Spouse(s)</b>	Contessina de' Bardi
<b>Issue</b>	Piero the Gouty Giovanni de' Medici Carlo di Cosimo de' Medici (illegitimate)
<b>Full name</b>	Còsimo di Giovanni degli Mèdici
<b>Noble family</b>	Medici
<b>Father</b>	Giovanni di Bicci de' Medici
<b>Mother</b>	Piccarda Bueri
<b>Born</b>	27 September 1389 Florence, Republic of Florence
<b>Died</b>	1 August 1464 (aged 74) Careggi, Republic of Florence

**Cosimo di Giovanni de' Medici** (27 September 1389 – 1 August 1464) was the first of the Medici political dynasty, *de facto* rulers of Florence during much of the Italian Renaissance; also known as "Cosimo 'the Elder'" ("il Vecchio") and "Cosimo *Pater Patriae*" (Latin: 'father of the nation').

## Family Life and Business

Born in Florence, Cosimo inherited both his wealth and his expertise in business from his father, Giovanni di Bicci de' Medici. In 1415, he accompanied the Antipope John XXIII at the Council of Constance, and in the same year he was named "Priore of the Republic." Later he acted frequently as ambassador, showing a prudence for which he became renowned.

Cosimo married Contessina de' Bardi (the daughter of Giovanni, count of Vernio, and Emilia Pannocchieschi). They had two sons: Piero the Gouty and Giovanni de' Medici. Cosimo also had an illegitimate son, Carlo de' Medici (1430-1492) by a Circassian slave who became a prelate.

On his death in 1464 at Careggi, Cosimo was succeeded by his son Piero "the Gouty", father of Lorenzo the Magnificent or Il Magnifico. After his death the Signoria awarded him the title *Pater Patriae*, "Father of his Country", an honor once awarded to Cicero, and had it carved upon his tomb in the Church of San Lorenzo.

## Patronage

Cosimo de' Medici used his vast fortune of an estimated 150 000 gold florins (almost 30 million USD or 22 million Euro today) to control the Florentine political system and sponsor a series of artistic accomplishments.<sup>[1]</sup>



The floor tomb of Cosimo de' Medici in San Lorenzo, Florence.

## Political

His power over Florence stemmed from his wealth, which he used to control votes. As Florence was proud of its 'democracy', he pretended to have little political ambition, and did not often hold public office. Aeneas Sylvius, Bishop of Siena and later Pope Pius II, said of him:

Political questions are settled in [Cosimo's] house. The man he chooses holds office...He it is who decides peace and war...He is king in all but name.<sup>[2]</sup>

In 1433 Cosimo's power over Florence, which he exerted without occupying public office, began to look like a menace to the anti-Medici party, led by figures such as Palla Strozzi and Rinaldo degli Albizzi: in September of that year he was imprisoned, accused for the failure of the conquest of Lucca, but he managed to turn the jail term into one of exile. He went to Padua and then to Venice, taking his bank along with him. Prompted by his influence and his money, others followed him: within a year, the flight of capital from Florence was so great that the ban of exile had to be lifted. Cosimo returned a year later in 1434, to greatly influence the government of Florence (especially through the Pitti and Soderini families) and to lead by example for the rest of his long life.



Portrait by Jacopo Pontormo; the laurel branch (*il Broncone*) was a symbol used also by his heirs<sup>[3]</sup>

Cosimo's time in exile instilled in him the need to squash the factionalism that resulted in his exile in the first place. In order to do this, Cosimo, with the help of favourable priors in the Signoria, instigated a series of constitutional changes to secure his power through influence.

In terms of foreign policy, Cosimo worked to create peace in Northern Italy through the creation of a balance of power between Florence, Naples, Venice and Milan during the wars in Lombardy, and discouraging outside powers (notably the French and the Holy Roman Empire) from interfering. In 1439 he was also instrumental in convincing pope Eugene IV to move the Ecumenical council of Ferrara to Florence. The arrival of notable Byzantine figures from the Empire in the East, including Emperor John VIII Palaiologos himself, started the boom of culture and arts in the city.

## Arts

Cosimo was also noted for his patronage of culture and the arts during the Renaissance, liberally spending the family fortune (which his astute business sense considerably increased) to enrich Florence. According to Salviati's *Zibaldone*, Cosimo stated: "All those things have given me the greatest satisfaction and contentment because they are not only for the honor of God but are likewise for my own remembrance. For fifty years, I have done nothing else but earn money and spend money; and it became clear that spending money gives me greater pleasure than earning it."<sup>[4]</sup> Additionally, his patronage of the arts both recognized and proclaimed the humanistic responsibility of the civic duty that came with wealth.<sup>[5]</sup>

He hired the young Michelozzo Michelozzi to create what is today perhaps the prototypical Florentine palazzo, the austere and magnificent Palazzo Medici. He was a patron and confidante of Fra Angelico, Fra Filippo Lippi, and Donatello, whose famed *David and Judith Slaying Holofernes* were Medici commissions. Cosimo's patronage enabled the eccentric and bankrupt architect Brunelleschi to complete the dome of Santa Maria del Fiore (the "Duomo") which was perhaps his crowning achievement as sponsor.



Cosimo *Pater patriae*, Uffizi Gallery, Florence

## Philosophy

In the realm of philosophy, Cosimo, influenced by the lectures of Gemistus Plethon, supported Marsilio Ficino and his attempts at reviving Neo-Platonism. Cosimo commissioned Ficino's Latin translation of the complete works of Plato (the first ever complete translation) and collected a vast library which he shared with intellectuals such as Niccolò Niccoli and Leonardo Bruni.<sup>[6]</sup> He provided his grandson, Lorenzo il Magnifico, with an education in the *studia humanitatis*. Cosimo had an inestimable influence on Renaissance intellectual life.

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- PBS Medici: Godfathers of the Renaissance (<http://www.pbs.org/empires/medici/index.html>)
- Cosimo de' Medici (1899) : Biography by K. Dorothea Ewart Vernon, on the Internet Archive (<http://www.archive.org/details/cosimodemedici00vernuoft>)
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# Hans Holbein the Younger

Hans Holbein the Younger	
	
<b>Born</b>	c. 1497 Augsburg, Duchy of Bavaria, Holy Roman Empire
<b>Died</b>	between 7 October and 29 November 1543 (aged 45) London, England
<b>Movement</b>	Northern Renaissance

**Hans Holbein the Younger** (c. 1497<sup>[1]</sup> – between 7 October and 29 November 1543) was a German artist and printmaker who worked in a Northern Renaissance style. He is best known as one of the greatest portraitists of the 16th century.<sup>[2]</sup> He also produced religious art, satire, and Reformation propaganda, and made a significant contribution to the history of book design. He is called "the Younger" to distinguish him from his father, Hans Holbein the Elder, an accomplished painter of the Late Gothic school.

Born in Augsburg, Holbein worked mainly in Basel as a young artist. At first he painted murals and religious works and designed for stained glass windows and printed books. He also painted the occasional portrait, making his international mark with portraits of the humanist Desiderius Erasmus of Rotterdam. When the Reformation reached Basel, Holbein worked for reformist clients while continuing to serve traditional religious patrons. His Late Gothic style was enriched by artistic trends in Italy, France, and the Netherlands, as well as by Renaissance Humanism. The result was a combined aesthetic uniquely his own.

Holbein travelled to England in 1526 in search of work, with a recommendation from Erasmus. He was welcomed into the humanist circle of Thomas More, where he quickly built a high reputation. After returning to Basel for four years, he resumed his career in England in 1532. This time he worked under the patronage of Anne Boleyn and Thomas Cromwell. By 1535, he was King's Painter to King Henry VIII. In this role, he produced not only portraits and festive decorations but designs for jewellery, plate, and other precious objects. His portraits of the royal family and nobles are a record of the court in the years when Henry was asserting his supremacy over the English church.

Holbein's art was prized from early in his career. The French poet and reformer Nicholas Bourbon dubbed him "the Apelles of our time," a typical contemporary accolade.<sup>[3]</sup> Holbein has also been described as a great "one-off" of art history, since he founded no school.<sup>[4]</sup> After his death, some of his work was lost, but much was collected, and by the 19th century, Holbein was recognised among the great portrait masters. Recent exhibitions have also highlighted his

versatility. He turned his fluid line to designs ranging from intricate jewellery to monumental frescoes. Holbein's art has sometimes been called realist, since he drew and painted with a rare precision. His portraits were renowned in their time for their likeness; and it is through Holbein's eyes that many famous figures of his day, such as Erasmus and More, are now "seen". Holbein was never content, however, with outward appearance. He embedded layers of symbolism, allusion, and paradox in his art, to the lasting fascination of scholars. In the view of art historian Ellis Waterhouse, his portraiture "remains unsurpassed for sureness and economy of statement, penetration into character, and a combined richness and purity of style".<sup>[5]</sup>

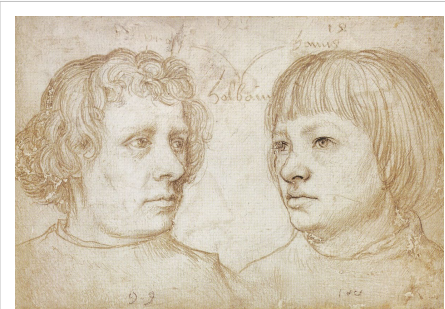
## Biography

### Early career

Holbein was born in the free imperial city of Augsburg during the winter of 1497–98.<sup>[6]</sup> He was a son of the painter and draughtsman Hans Holbein the Elder, whose trade he and his older brother, Ambrosius, followed. Holbein the Elder ran a large and busy workshop in Augsburg, sometimes assisted by his brother Sigmund, also a painter.<sup>[7]</sup>

By 1515, Hans and Ambrosius had moved as journeymen painters to the city of Basel, a centre of learning and the printing trade.<sup>[8]</sup> There they were apprenticed to Hans Herbster, Basel's leading painter.<sup>[9]</sup> The brothers found work in Basel as designers of woodcuts and metalcuts for printers.<sup>[10]</sup> In 1515, the preacher and theologian Oswald Myconius invited them to add pen drawings to the margin of a copy of *The Praise of Folly* by the humanist scholar Desiderius Erasmus of Rotterdam.<sup>[11]</sup> The sketches provide early evidence of Holbein's wit and humanistic leaning. His other early works, including the double portrait of Basel's mayor Jakob Meyer zum Hasen and his wife Dorothea, follow his father's style.<sup>[12]</sup>

In 1517, father and son began a project in Lucerne (Luzern), painting internal and external murals for the merchant Jakob von Hertenstein.<sup>[13]</sup> While in Lucerne Holbein also designed cartoons for stained glass.<sup>[14]</sup> The city's records show that on 10 December 1517, he was fined five livres for fighting in the street with a goldsmith called Caspar, who was fined the same amount.<sup>[15]</sup> That winter, Holbein probably visited northern Italy, though no record of the trip survives. Many scholars believe he studied the work of Italian masters of fresco, such as Andrea Mantegna, before returning to Lucerne.<sup>[16]</sup> He filled two series of panels at Hertenstein's house with copies of works by Mantegna, including *The Triumphs of Caesar*.<sup>[17]</sup>



Hans (right) and Ambrosius Holbein, by Hans Holbein the Elder, 1511. Silverpoint on white-coated paper, Berlin State Museums

In 1519, Holbein moved back to Basel. His brother fades from the record at about this time, and it is usually presumed that he died.<sup>[18]</sup> Holbein re-established himself rapidly in the city, running a busy workshop. He joined the painters' guild and took out Basel citizenship. He married Elsbeth Schmid, a widow a few years older than he was, who had an infant son, Franz, and was running her late husband's tanning business. She bore Holbein a son of his own, Philipp, in their first year of marriage.<sup>[19]</sup>

Holbein was prolific during this period in Basel, which coincided with the arrival of Lutheranism in the city.<sup>[20]</sup> He undertook a number of major projects, such as external murals for *The House of the Dance* and internal murals for the Council Chamber of the Town Hall. The former are known from preparatory drawings.<sup>[21]</sup> The Council Chamber murals survive in a few poorly preserved fragments.<sup>[22]</sup> Holbein also produced a series of religious paintings and designed cartoons for stained glass windows.<sup>[23]</sup>

In a period of revolution in book design, he illustrated for the publisher Johann Froben. His woodcut designs included those for the *Dance of Death*,<sup>[24]</sup> the *Icones* (illustrations of the Old Testament),<sup>[25]</sup> and the title page of Martin Luther's bible.<sup>[26]</sup> Through the woodcut medium, Holbein refined his grasp of expressive and spatial effects.<sup>[27]</sup>

Holbein also painted the occasional portrait in Basel, among them the double portrait of Jakob and Dorothea Meyer, and, in 1519, that of the young academic Boniface Amerbach. According to art historian Paul Ganz, the portrait of Amerbach marks an advance in his style, notably in the use of unbroken colours.<sup>[28]</sup> For Meyer, he painted an altarpiece of the Madonna which included portraits of the donor, his wife, and his daughter.<sup>[29]</sup> In 1523, Holbein painted his first portraits of the great Renaissance scholar Erasmus, who required likenesses to send to his friends and admirers throughout Europe.<sup>[30]</sup> These paintings made Holbein an international artist. Holbein visited France in 1524, probably to seek work at the court of Francis I.<sup>[31]</sup> When Holbein decided to seek employment in England in 1526, Erasmus recommended him to his friend the statesman and scholar Thomas More.<sup>[32]</sup> "The arts are freezing in this part of the world," he wrote, "and he is on the way to England to pick up some angels".<sup>[33]</sup>



Portrait of Erasmus of Rotterdam, 1523. Oil and tempera on wood, National Gallery, London, on loan from Longford Castle



Portrait of Sir Thomas More, 1527. Oil and tempera on oak, Frick Collection, New York City

### England, 1526–1528

Holbein broke his journey at Antwerp, where he bought some oak panels and may have met the painter Quentin Matsys.<sup>[34]</sup> Sir Thomas More welcomed him to England and found him a series of commissions. "Your painter, my dearest Erasmus," he wrote, "is a wonderful artist".<sup>[35]</sup> Holbein painted a famous portrait of More and another of More with his family. The group portrait, original in conception, is known only from a preparatory sketch and copies by other hands.<sup>[36]</sup> According to art historian Andreas Beyer, it "offered a prelude of a genre that would only truly gain acceptance in Dutch painting of the seventeenth century".<sup>[37]</sup> Seven fine related studies of More family members also survive.<sup>[38]</sup>

During this first stay in England, Holbein worked largely for a humanist circle with ties to Erasmus. Among his commissions was the portrait of William Warham, Archbishop of Canterbury, who owned a Holbein portrait of Erasmus.<sup>[39]</sup> Holbein also painted the Bavarian astronomer and mathematician Nicholas Kratzer, a tutor of the More family whose notes appear on Holbein's sketch for their group portrait.<sup>[40]</sup> Although Holbein did not work for the king during this visit, he painted the portraits of courtiers such as Sir Henry Guildford and his wife Lady Mary,<sup>[41]</sup> and of Anne Lovell, recently identified as the subject of *Lady with a Squirrel and a Starling*.<sup>[42]</sup> In May 1527,

"Master Hans" also painted a panorama of the siege of Th rouanne for the visit of French Ambassadors. With Kratzer, he devised a ceiling covered in planetary signs, under which the visitors dined.<sup>[43]</sup> The chronicler Edward Hall described the spectacle as showing "the whole Earth, environed with the sea, like a very map or cart".<sup>[44]</sup>

### Basel, 1528–1532

On 29 August 1528, Holbein bought a house in Basel, in St Johans-Vorstadt. He presumably returned home to preserve his citizenship, since he had been granted only a two-year leave of absence.<sup>[45]</sup> Enriched by his success in England, Holbein bought a second house in the city in 1531.



*The Artist's Family*, c. 1528. Oil and tempera on paper, cut out and mounted on wood. Kunstmuseum Basel.

During this period in Basel, he painted *The Artist's Family*, showing Elsbeth, with the couple's two eldest children, Philipp and Katherina, evoking images of the Virgin and Child with St John the Baptist.<sup>[46]</sup> Art historian John Rowlands sees this work as "one of the most moving portraits in art, from an artist, too, who always characterized his sitters with a guarded restraint".<sup>[47]</sup>

Basel had become a turbulent city in Holbein's absence. Reformers, swayed by the ideas of Zwingli, carried out acts of iconoclasm and banned imagery in churches. In April 1529, the free-thinking Erasmus felt obliged to leave his former haven for Freiburg im Breisgau.<sup>[48]</sup> The iconoclasts probably destroyed some of Holbein's religious artwork, but details are unknown.<sup>[49]</sup> Evidence for Holbein's religious views is fragmentary and inconclusive. "The religious side of his paintings had always been ambiguous," suggests art historian John North, "and so it remained".<sup>[50]</sup> According to a register compiled to ensure that all major citizens subscribed to the new doctrines: "Master Hans Holbein, the painter, says that we must be better informed about the [holy] table before approaching it".<sup>[51]</sup>

In 1530, the authorities called Holbein to account for failing to attend the reformed communion.<sup>[52]</sup> Shortly afterwards, however, he was listed among those "who have no serious objections and wish to go along with other Christians".<sup>[53]</sup>

Holbein evidently retained favour under the new order. The reformist council paid him a retaining fee of 50 florins and commissioned him to resume work on the Council Chamber frescoes. They now chose themes from the Old Testament instead of the previous stories from classical history and allegory. Holbein's frescoes of Rehoboam and of the meeting between Saul and Samuel were more simply designed than their predecessors.<sup>[54]</sup> Holbein worked for traditional clients at the same time. His old patron Jakob Meyer paid him to add figures and details to the family altarpiece he had painted in 1526. Holbein's last commission in this period was the decoration of two clock faces on the city gate in 1531.<sup>[47]</sup> The reduced levels of patronage in Basel may have prompted his decision to return to England early in 1532.<sup>[55]</sup>

## England, 1532–1540

Holbein returned to an England where the political and religious environment was changing radically.<sup>[56]</sup> In 1532, Henry VIII was preparing to repudiate Catherine of Aragon and marry Anne Boleyn, in defiance of the pope.<sup>[57]</sup> Among those who opposed Henry's actions was Holbein's former host and patron Sir Thomas More, who resigned as Lord Chancellor in May 1532. Holbein seems to have distanced himself from More's humanist milieu on this visit, and, according to Erasmus, "he deceived those to whom he was recommended".<sup>[58]</sup> The artist found favour instead within the radical new power circles of the Boleyn family and Thomas Cromwell. Cromwell became the king's secretary in 1534, controlling all aspects of government, including artistic propaganda.<sup>[59]</sup> More was executed in 1535, along with John Fisher, whose portrait Holbein had also drawn.<sup>[60]</sup>

Holbein's commissions in the early stages of his second English period included portraits of Lutheran merchants of the Hanseatic League. The merchants lived and plied their trade at the Steelyard, a complex of warehouses, offices, and dwellings on the north bank of the Thames. Holbein rented a house in Maiden Lane nearby. He portrayed his clients in a range of styles. His portrait of Georg Gisze of Danzig shows the merchant surrounded with exquisitely painted symbols of his trade. His portrait of Derich Berck of Cologne, on the other hand, is classically simple, possibly influenced by Titian.<sup>[61]</sup> For the guildhall of the Steelyard Holbein painted two monumental allegories, "The Triumph of Wealth" and "The Triumph of Poverty", both now lost. The merchants commissioned from Holbein a street tableau of Mount Parnassus for Anne Boleyn's coronation eve procession of 31 May 1533.<sup>[62]</sup>

Holbein also portrayed various courtiers, landowners, and visitors during this time. His most famous, and perhaps greatest, painting of the period was *The Ambassadors*. This life-sized panel portrays Jean de Dinteville, an ambassador of Francis I of France in 1533, and Georges de Selve, Bishop of Lavaur, who visited London the same year.<sup>[63]</sup> The work incorporates symbols and paradoxes, including an anamorphic (distorted) skull. According to scholars, these encode enigmatic references to learning, religion, mortality, and illusion in the tradition of the Northern Renaissance.<sup>[64]</sup> Art historians Oskar Bätschmann and Pascal Griener suggest that in *The Ambassadors* "Sciences and arts, objects of luxury and glory, are measured against the grandeur of Death".<sup>[65]</sup>



*Double Portrait of Jean de Dinteville and Georges de Selve ("The Ambassadors")*, 1533. Oil and tempera on oak, National Gallery, London.



*Portrait of Henry VIII, c. 1536. Oil and tempera on oak, Thyssen-Bornemisza Museum, Madrid.*

No certain portraits of Anne Boleyn by Holbein survive, perhaps because her memory was purged following her execution for treason, incest, and adultery in 1536.<sup>[66]</sup> That Holbein worked directly for Anne and her circle is, however, clear.<sup>[67]</sup> He designed a cup engraved with her device of a falcon standing on roses, as well as jewellery and books connected to her. He also sketched several women attached to her entourage, including Jane Parker, Anne's sister-in-law.<sup>[68]</sup> At the same time, Holbein worked for Thomas Cromwell as he masterminded Henry VIII's reformation. Cromwell commissioned Holbein to produce reformist and royalist images, including anti-clerical woodcuts and the title page to Myles Coverdale's English translation of the bible. Henry VIII had embarked on a grandiose programme of artistic patronage. His efforts to glorify his new status as Supreme Head of the Church culminated in the building of Nonsuch Palace, started in 1538.<sup>[69]</sup>

By 1536, Holbein was employed as the King's Painter on an annual salary of 30 pounds, though he was never the highest-paid artist on the royal payroll.<sup>[70]</sup> The royal "pictor maker", Lucas Horenbout, earned more, and other continental artists worked for the king.<sup>[71]</sup> In 1537, Holbein painted what has become perhaps his most famous image: Henry VIII standing in a heroic pose with his feet planted apart.<sup>[72]</sup> The left section of Holbein's cartoon for a life-sized wall painting at Whitehall Palace has survived, showing the king in this pose, with his father behind him. The mural itself, which also depicted Jane Seymour and Elizabeth of York, was destroyed by fire in 1698. It is known from engravings and from a 1667 copy by Remigius van Leemput.<sup>[73]</sup> An earlier half-length portrait shows Henry in a similar pose,<sup>[74]</sup> but all the full-length portraits of him based on the Whitehall pattern are copies.<sup>[75]</sup> The figure of Jane Seymour in the mural is related to Holbein's sketch and painting of her.<sup>[76]</sup>

Jane died in October 1537, shortly after bearing Henry's only son, the future Edward VI. About two years later, Holbein painted a portrait of the prince, clutching a sceptre-like gold rattle.<sup>[77]</sup> Holbein's final portrait of Henry, dating from 1543 and perhaps completed by others, depicts the king with a group of barber surgeons.<sup>[78]</sup>

Holbein's portrait style altered after he entered Henry's service. He focused more intensely on the sitters' faces and clothing, largely omitting props and three-dimensional settings.<sup>[79]</sup> Holbein applied this clean, craftsmanlike technique both to miniature portraits, such as that of Jane Small, and to grand portraits, such as that of Christina of Denmark. Holbein travelled with Philip Hoby to Brussels and sketched Christina in 1538 for the king, who was appraising the young widow as a prospective bride.<sup>[80]</sup> John Hutton, the English ambassador in Brussels, reported another artist's drawing of Christina as "sloberid" (slobbered) compared to Holbein's.<sup>[81]</sup> In Wilson's view, Holbein's subsequent oil portrait is "the loveliest painting of a woman that he ever executed, which is to say that it is one of the finest female portraits ever painted".<sup>[82]</sup> The same year, Holbein, again escorted by the diplomat Hoby, went to France to paint Louise of Guise and Anne of Lorraine for Henry VIII. Neither portrait of these cousins has survived.<sup>[83]</sup> Holbein found time to visit Basel, where he was fêted by the authorities and granted a pension.<sup>[84]</sup> On the way back to England, he apprenticed his son Philipp to the Basel-born goldsmith Jacob David in Paris.<sup>[85]</sup>



*Portrait of Edward VI as a Child, c. 1538. Oil and tempera on oak, National Gallery of Art, Washington D. C.*

Holbein painted Anne of Cleves, Henry's eventual choice of wife, at Düren in summer 1539, posing her square-on and in elaborate finery.<sup>[86]</sup> "Hans Holbein," reported the English envoy Nicholas Wotton, "hath taken the effigies of my Lady Anne and the lady Amelia [Anne's sister] and hath expressed their images very lively".<sup>[87]</sup> Henry was disillusioned with Anne in the flesh, however, and he divorced her after a brief, unconsummated marriage. The tradition that Holbein's portrait flattered Anne derives from the testimony of Sir Anthony Browne. He said that he was dismayed by her appearance at Rochester having seen her pictures and heard advertisements of her beauty, so much that his face fell.<sup>[88]</sup> No one other than Henry ever described Anne as repugnant.<sup>[89]</sup>

### Last years and death, 1540–1543

Holbein had deftly survived the downfall of his first two great patrons, Thomas More and Anne Boleyn, but Cromwell's sudden arrest and execution on trumped-up charges of heresy and treason in 1540 undoubtedly damaged his career.<sup>[90]</sup> Though Holbein retained his position as King's Painter, Cromwell's death left a gap no other patron could fill.

Apart from routine official duties, Holbein now occupied himself with private commissions, turning again to portraits of Steelyard merchants. He also painted some of his finest miniatures, including those of Henry Brandon and Charles Brandon, sons of Henry VIII's friend Charles Brandon, 1st Duke of Suffolk, and his fourth wife, Catherine Willoughby. Holbein managed to secure commissions among those courtiers who now jockeyed for power, in particular from Anthony Denny, one of the two chief gentlemen of the bedchamber. He became close enough to Denny to borrow money from him.<sup>[92]</sup> He painted Denny's portrait in 1541 and two years later designed a clock-salt for him. Denny was part of a circle that gained influence in 1542 after the failure of Henry's marriage to Catherine Howard. The king's marriage in July 1543 to the reformist Catherine Parr, whose brother Holbein had painted in 1541, established Denny's party in power.

Holbein may have visited his wife and children in late 1540, when his leave-of-absence from Basel expired. None of his work dates from this period, and the Basel authorities paid him six months salary in advance.<sup>[93]</sup> The state of Holbein's marriage has intrigued scholars, who base their speculations on fragmentary evidence. Apart from one brief visit, Holbein had lived apart from Elsbeth since 1532. His will reveals that he had two infant children in England, of whom nothing is known except that they were in the care of a nurse.<sup>[94]</sup>

Holbein's unfaithfulness to Elsbeth may not have been new. Some scholars believe that Magdalena Offenburg, the model for the *Darmstadt Madonna* and for two portraits painted in Basel, was for a time Holbein's mistress.<sup>[95]</sup> Others dismiss the idea.<sup>[96]</sup> One of the portraits was of Lais of Corinth, mistress of Apelles, the famous artist of Greek antiquity after whom Holbein was named in humanist circles.<sup>[97]</sup> Whatever the case, it is likely that Holbein always supported his wife and children.<sup>[98]</sup> When Elsbeth died in 1549, she was well off and still owned many of Holbein's fine clothes; on the other hand, she had sold his portrait of her before his death.<sup>[99]</sup>

Hans Holbein died between 7 October and 29 November 1543 at the age of 45. Karel van Mander stated in the early 17th century that he died of the plague. Wilson regards the story with caution, since Holbein's friends attended his bedside; and Peter Claussen suggests that he died of an infection.<sup>[100]</sup> Describing himself as "servant to the king's majesty", Holbein had made his will on 7 October at his home in Aldgate. The goldsmith John of Antwerp and a few German neighbours signed as witnesses.<sup>[101]</sup> Holbein may have been in a hurry, because the will was not witnessed by a lawyer. On 29 November, John of Antwerp, the subject of several of Holbein's portraits, legally undertook the



*Design for Anthony Denny's Clocksalt, 1543. Pen and black ink on paper with grey wash, and red wash on the compass. British Museum, London.*<sup>[91]</sup>

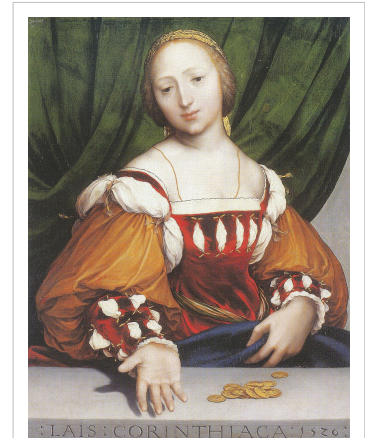
administration of the artist's last wishes. He presumably settled Holbein's debts, arranged for the care of his two children, and sold and dispersed his effects, including many designs and preliminary drawings that have survived.<sup>[102]</sup> The site of Holbein's grave is unknown and may never have been marked.<sup>[103]</sup>

## Art

### Influences

The first influence on Holbein was his father. Hans Holbein the Elder, an accomplished religious artist and portraitist,<sup>[104]</sup> passed on his techniques as a religious artist and his gifts as a portraitist to his son.<sup>[105]</sup> The young Holbein learned his craft in his father's workshop in Augsburg, a city with a thriving book trade, where woodcut and engraving flourished. Augsburg also acted as one of the chief "ports of entry" into Germany for the ideas of the Italian Renaissance.<sup>[106]</sup> By the time Holbein began his apprenticeship under Hans Herbster in Basel, he was already steeped in the late Gothic style, with its unsparing realism and emphasis on line, which influenced him throughout his life.<sup>[107]</sup> In Basel, he was favoured by humanist patrons, whose ideas helped form his vision as a mature artist.<sup>[108]</sup>

During his Swiss years, when he may have visited Italy, Holbein added an Italian element to his stylistic vocabulary. Scholars note the influence of Leonardo da Vinci's "sfumato" (smoky) technique on his work, for example in his *Venus and Amor* and *Lais of Corinth*.<sup>[109]</sup> From the Italians, Holbein learned the art of single-point perspective and the use of antique motifs and architectural forms. In this, he may have been influenced by Andrea Mantegna.<sup>[110]</sup> The decorative detail recedes in his late portraits, though the calculated precision remains. Despite assimilating Italian techniques and Reformation theology, Holbein's art in many ways extended the Gothic tradition. His portrait style, for example, remained distinct from the more sensuous technique of Titian, and from the Mannerism of William Scrots, Holbein's successor as King's Painter.<sup>[111]</sup> Holbein's portraiture, particularly his drawings, had more in common with that of Jean Clouet, which he may have seen during his visit to France in 1524.<sup>[112]</sup> He adopted Clouet's method of drawing with coloured chalks on a plain ground, as well as his care over preliminary portraits for their own sake.<sup>[113]</sup> During his second stay in England, Holbein learned the technique of limning, as practised by Lucas Horenbout. In his last years, he raised the art of the portrait miniature to its first peak of brilliance.<sup>[114]</sup>



Holbein's *Lais of Corinth*, 1526, reveals the influence of Leonardo. Oil and tempera on limewood, Kunstmuseum Basel.

## Religious works

Holbein followed in the footsteps of Augsburg artists like his father and Hans Burgkmair, who largely made their living from religious commissions. Despite calls for reform, the church in the late 15th century was medieval in tradition. It maintained an allegiance to Rome and a faith in pieties such as pilgrimages, veneration of relics, and prayer for dead souls. Holbein's early work reflects this culture. The growing reform movement, led by humanists such as Erasmus and Thomas More, began, however, to change religious attitudes. Basel, where Martin Luther's major works were published, became the main centre for the transmission of Reformation ideas.<sup>[115]</sup>

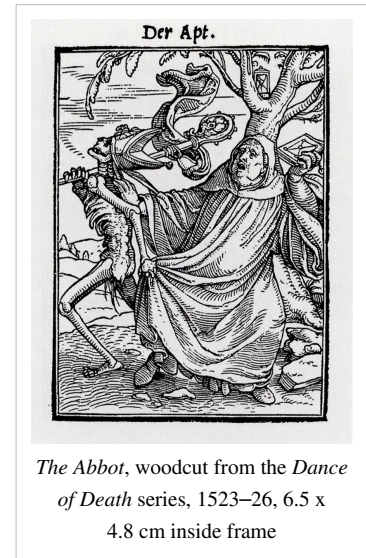
The gradual shift from traditional to reformed religion can be charted in Holbein's work. His *Body of the Dead Christ in the Tomb* of 1522 expresses a humanist view of Christ in tune with the reformist climate in Basel at the time.<sup>[116]</sup> The *Dance of Death* (1523–26) refashions the late-medieval allegory of the *Danse Macabre* as a reformist satire.<sup>[117]</sup> Holbein's series of woodcuts shows the figure of "Death" in many disguises, confronting individuals from all walks of life. None escape Death's skeleton clutches, even the pious.<sup>[118]</sup>

In addition to the *Dance of Death* Holbein completed *Icones* or *Series of the Old Gospel* (It contains two works: *The images of the stories of the Old Gospel* and *Portraits or printing boards of the story of the Old Gospel*). These works were arranged by Holbein with Melchior & Gaspar Trechsel near 1526, later printed and edited in Latin by Jean & Francois Frelon with 92 woodcuts. These two works also share the first four figures with the *Dance of Death*.

It appears that the Trechsel brothers initially intended to hire Holbein for illustrating bibles.<sup>[119]</sup> In fact, some of Holbein's *Icones* woodcuts appear in the recently discovered *Biblia cum Glossis*<sup>[120]</sup> by Michel De Villeneuve (Michael Servetus). Holbein woodcuts appear in several other works by Michel De Villeneuve: his Spanish translation of *The images of the stories of the Old Gospel*,<sup>[121]</sup> printed by Juan Stelsio in Antwerp in 1540 (92 woodcuts), and also of his Spanish versification of the associated work *Portraits or printing boards of the story of the Old Gospel*, printed by Francois and Jean Frelon in 1542 (same 92 woodcuts plus 2 more), as it was demonstrated in the International Society for the History of Medicine, by the expert researcher in Servetus, González Echeverría, who also proved the existence of the other work of Holbein & De Villeneuve, *Biblia cum Glossis* or "Lost Bible".<sup>[122][123]</sup>

Holbein painted many large religious works between 1520 and 1526, including the *Oberried Altarpiece*, the *Solothurn Madonna*, and the *Passion*. Only when Basel's reformers turned to iconoclasm in the later 1520s did his freedom and income as a religious artist suffer.<sup>[124]</sup>

Holbein continued to produce religious art, but on a much smaller scale. He designed satirical religious woodcuts in England. His small painting for private devotion, *Noli Me Tangere*,<sup>[125]</sup> has been taken as an expression of his personal religion. Depicting the moment when the risen Christ tells Mary Magdalene not to touch him, Holbein adheres to the details of the bible story.<sup>[126]</sup> The 17th-century diarist John Evelyn wrote that he "never saw so much reverence and kind of heavenly astonishment expressed in a picture".<sup>[127]</sup>



*The Abbot*, woodcut from the *Dance of Death* series, 1523–26, 6.5 x 4.8 cm inside frame



*Darmstadt Madonna*, with donor portraits, on a Holbein carpet. 1525–26 and 1528. Oil and tempera on limewood, Würth Collection, Schwäbisch Hall.

Holbein has been described as "the supreme representative of German Reformation art".<sup>[50]</sup> The Reformation was a varied movement, however, and his position was often ambiguous. Despite his ties with Erasmus and More, he signed up to the revolution begun by Martin Luther, which called for a return to the bible and the overthrow of the papacy. In his woodcuts *Christ as the Light of the World* and *The Selling of Indulgences*, Holbein illustrated attacks by Luther against Rome.<sup>[128]</sup> At the same time, he continued to work for Erasmians and known traditionalists. After his return from England to a reformed Basel in 1528, he resumed work both on Jakob Mayer's Madonna and on the murals for the Council Chamber of the Town Hall. The Madonna was an icon of traditional piety, while the Old Testament murals illustrated a reformist agenda.

Holbein returned to England in 1532 as Thomas Cromwell was about to transform religious institutions there. He was soon at work for Cromwell's propaganda machine, creating images in support of the royal supremacy.<sup>[129]</sup> During the period of the Dissolution of the Monasteries, he produced a series of small woodcuts in which biblical villains were dressed as monks.<sup>[130]</sup> His reformist painting *The Old and the New Law*<sup>[131]</sup> identified the Old Testament with the "Old

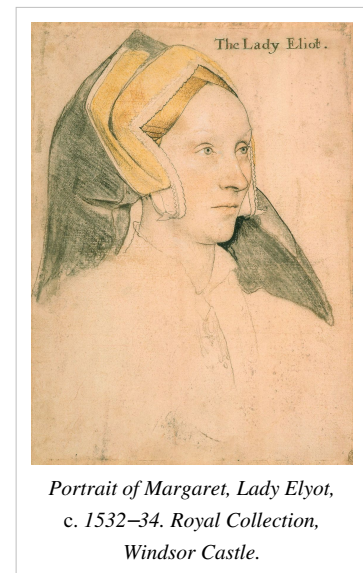
Religion".<sup>[132]</sup> Scholars have detected subtler religious references in his portraits. In *The Ambassadors*, for example, details such as the Lutheran hymn book and the crucifix behind the curtain allude to the context of the French mission.<sup>[133]</sup> Holbein painted few religious images in the later part of his career.<sup>[134]</sup> He focussed on secular designs for decorative objects, and on portraits stripped of inessentials.

## Portraits

For Holbein, "everything began with a drawing".<sup>[135]</sup> A gifted draughtsman, he was heir to a German tradition of line drawing and precise preparatory design. Holbein's chalk and ink portraits demonstrate his mastery of outline. He always made preparatory portraits of his sitters, though many drawings survive for which no painted version is known, suggesting that some were drawn for their own sake.<sup>[136]</sup> Holbein produced relatively few portraits during his years in Basel. Among these were his 1516 studies of Jakob and Dorothea Meyer, sketched, like many of his father's portrait drawings, in silverpoint and chalk.<sup>[137]</sup>

Holbein painted most of his portraits during his two periods in England. In the first, between 1526 and 1528, he used the technique of Jean Clouet for his preliminary studies, combining black and coloured chalks on unprimed paper. In the second, from 1532 to his death, he drew on smaller sheets of pink-primed paper, adding pen and brushwork in ink to the chalk.<sup>[138]</sup> Judging by the three-hour sitting given to him by Christina of Denmark, Holbein could produce such portrait studies quickly.<sup>[135]</sup> Some scholars believe that he used a mechanical device to help him trace the contours of his subjects' faces.<sup>[139]</sup>

Holbein paid less attention to facial tones in his later drawings, making fewer and



*Portrait of Margaret, Lady Elyot*, c. 1532–34. Royal Collection, Windsor Castle.

more emphatic strokes, but they are never formulaic.<sup>[140]</sup> His grasp of spatial relationships ensures that each portrait, however sparsely drawn, conveys the sitter's presence.<sup>[141]</sup>

Holbein's painted portraits were closely founded on drawing. Holbein transferred each drawn portrait study to the panel with the aid of geometrical instruments.<sup>[142]</sup> He then built up the painted surface in tempera and oil, recording the tiniest detail, down to each stitch or fastening of costume. In the view of art historian Paul Ganz, "The deep glaze and the enamel-like lustre of the colouring were achieved by means of the metallic, highly polished crayon groundwork, which admitted of few corrections and, like the preliminary sketch, remained visible through the thin layer of colour".<sup>[142]</sup>



*Portrait of Sir Thomas Elyot,*  
c. 1532–34. Royal Collection,  
Windsor Castle.



*Portrait of the Merchant Georg Gisze,* 1532. Oil  
and tempera on oak, Berlin State Museums.

The result is a brilliant portrait style in which the sitters appear, in Foister's words, as "recognisably individual and even contemporary-seeming" people, dressed in minutely rendered clothing that provides an unsurpassed source for the history of Tudor costume.<sup>[143]</sup> Holbein's humanist clients valued individuality highly.<sup>[144]</sup> According to Strong, his portrait subjects underwent "a new experience, one which was a profound visual expression of humanist ideals".<sup>[145]</sup>

Commentators differ in their response to Holbein's precision and objectivity as a portraitist. What some see as an expression of spiritual depth in his sitters, others have called mournful, aloof, or even vacant. "Perhaps an underlying coolness suffuses their countenances," wrote Holbein's 19th-century biographer Alfred Woltmann, "but behind this outward placidness lies hidden a breadth and depth of inner life".<sup>[146]</sup>

Some critics see the iconic and pared-down style of Holbein's later portraits as a regression. Kenyon Cox, for example, believes that his methods grew more primitive, reducing painting "almost to the condition of medieval illumination".<sup>[147]</sup> Erna Auerbach relates the "decorative formal flatness" of Holbein's late art to the style of illuminated documents, citing the group portrait of Henry VIII and the Barber Surgeons' Company.<sup>[148]</sup> Other analysts detect no loss of powers in Holbein's last phase.<sup>[149]</sup>

Until the later 1530s, Holbein often placed his sitters in a three-dimensional setting. At times, he included classical and biblical references and inscriptions, as well as drapery, architecture, and symbolic props. Such portraits allowed Holbein to demonstrate his virtuosity and powers of allusion and metaphor, as well as to hint at the private world of his subjects. His 1532 portrait of Sir Brian Tuke, for example, alludes to the sitter's poor health, comparing his sufferings to those of Job. The depiction of the Five wounds of Christ and the inscription "INRI" on Tuke's crucifix are, according to scholars Bäschmann and Griener, "intended to protect its owner against ill-health".<sup>[150]</sup> Holbein portrays the merchant Georg Gisze among elaborate symbols of science and wealth that evoke the sitter's personal iconography. However, some of Holbein's other portraits of Steelyard merchants, for example that of Derich Born, concentrate on the naturalness of the face. They prefigure the simpler style that Holbein favoured in the later part of his career.<sup>[151]</sup>

Study of Holbein's later portraits has been complicated by the number of copies and derivative works attributed to him. Scholars now seek to distinguish the true Holbeins by the refinement and quality of the work.<sup>[152]</sup> The hallmark of Holbein's art is a searching and perfectionist approach discernible in his alterations to his portraits. In the words of art historian John Rowlands:

This striving for perfection is very evident in his portrait drawings, where he searches with his brush for just the right line for the sitter's profile. The critical faculty in making this choice and his perception of its potency in communicating decisively the sitter's character is a true measure of Holbein's supreme greatness as a portrait painter. Nobody has ever surpassed the revealing profile and stance in his portraits: through their telling use, Holbein still conveys across the centuries the character and likeness of his sitters with an unrivalled mastery.<sup>[153]</sup>



*Jane Small*, portrait miniature, c. 1540. Bodycolour on vellum, Victoria and Albert Museum, London.

## Miniatures

During his last decade, Holbein painted a number of miniatures; small portraits worn as a kind of jewel. His miniature technique derived from the medieval art of manuscript illumination. His small panel portrait of Henry VIII shows an inter-penetration between his panel and miniature painting.<sup>[154]</sup> Holbein's large pictures had always contained a miniature-like precision. He now adapted this skill to the smaller form, somehow retaining a monumental effect.<sup>[155]</sup> The twelve or so certain miniatures by Holbein that survive reveal his mastery of "limning", as the technique was called.<sup>[156]</sup> His miniature portrait of Jane Small, with its rich blue background, crisp outlines, and absence of shading, is considered a masterpiece of the genre. According to art historian Graham Reynolds, Holbein "portrays a young woman whose plainness is scarcely relieved by her simple costume of black-and-white materials, and yet there can

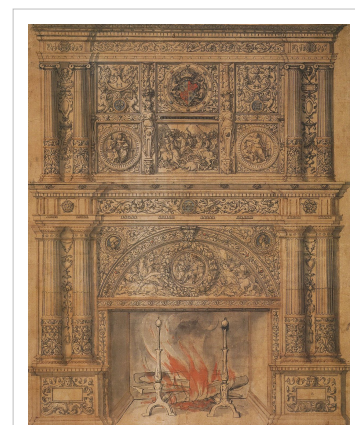
be no doubt that this is one of the great portraits of the world. With remarkable objectivity Holbein has not added anything of himself or subtracted from his sitter's image; he has seen her as she appeared in a solemn mood in the cold light of his painting-room".<sup>[157]</sup>

## Designs

Throughout his life, Holbein designed for both large-scale decorative works such as murals and smaller objects, including plate and jewellery. In many cases, his designs, or copies of them, are the sole evidence for such works. For example, his murals for the Hertenstein House in Lucerne and for the House of the Dance in Basel are known only through his designs. As his career progressed, he added Italian Renaissance motifs to his Gothic vocabulary.

Many of the intricate designs etched into suits of Greenwich armor, including King Henry's own personal tournament harnesses, were based on designs by Holbein. His style continued to influence the unique form of English armor for nearly half a century after his death.

Holbein's cartoon for part of the dynastic Tudor wall painting at Whitehall reveals how he prepared for a large mural. It was made of 25 pieces of paper, each figure cut out and pasted onto the background.<sup>[158]</sup> Many of Holbein's designs for glass painting, metalwork, jewellery, and weapons also survive. All



Design for a chimney-piece, c. 1538–40. Pen and black ink with grey, blue, and red wash on paper, British Museum, London.

demonstrate the precision and fluidity of his draughtsmanship. In the view of art historian Susan Foister, "These qualities so animate his decorative designs, whether individual motifs, such as his favoured serpentine mermen and women, or the larger shapes of cups, frames, and fountains, that they scintillate on paper even before their transformation into precious metal and stone".<sup>[141]</sup>

Holbein's way of designing objects was to sketch preliminary ideas and then draw successive versions with increasing precision. His final draft was a presentation version. He often used traditional patterns for ornamental details such as foliage and branches. When designing precious objects, Holbein worked closely with craftsmen such as goldsmiths. His design work, suggests art historian John North, "gave him an unparalleled feel for the textures of materials of all kinds, and it also gave him the habit of relating physical accessories to face and personality in his portraiture".<sup>[159]</sup> Although little is known of Holbein's workshop, scholars assume that his drawings were partly intended as sources for his assistants.

## Legacy and reputation

Holbein's fame owes something to that of his sitters. Several of his portraits have become cultural icons.<sup>[160]</sup> He created the standard image of Henry VIII.<sup>[161]</sup> In painting Henry as an iconic hero, however, he also subtly conveyed the tyranny of his character.<sup>[162]</sup> Holbein's portraits of other historical figures, such as Erasmus, Thomas More, and Thomas Cromwell, have fixed their images for posterity. The same is true for the array of English lords and ladies whose appearance is often known only through his art. For this reason, John North calls Holbein "the cameraman of Tudor history".<sup>[163]</sup> In Germany, on the other hand, Holbein is regarded as an artist of the Reformation, and in Europe of humanism.<sup>[164]</sup>



Study for the Family Portrait of Thomas More, c. 1527. Pen and brush in black on chalk sketch, Kunstmuseum Basel.

In Basel, Holbein's legacy was secured by his friend Amerbach and by Amerbach's son Basilius, who collected his work. The Amerbach-Kabinett later formed the core of the Holbein collection at the Kunstmuseum Basel.<sup>[165]</sup> Although Holbein's art was also valued in England, few 16th-century English documents mention him. Archbishop Matthew Parker (1504–75) observed that his portraits were "dilineated and expressed to the resemblance of life".<sup>[166]</sup> At the end of the 16th century, the miniature portraitist Nicholas Hilliard spoke in his treatise *Arte of Limning* of his debt to Holbein: "Holbein's manner have I ever imitated, and hold it for the best".<sup>[167]</sup> No account of Holbein's life was written until Karel van Mander's often inaccurate "Schilder-Boeck" (Painter-Book) of 1604.<sup>[168]</sup>

Holbein's followers produced copies and versions of his work, but he does not seem to have founded a school.<sup>[169]</sup> Biographer Derek Wilson calls him one of the great "one-offs" of art history.<sup>[4]</sup> The only artist who appears to have adopted his techniques was John Bettes the Elder, whose *Man in a Black Cap* (1545) is close in style to Holbein.<sup>[170]</sup> Scholars differ about Holbein's influence on English art. In Foister's view: "Holbein had no real successors and few imitators in England. The disparity between his subtle, interrogatory portraits of men and women whose gazes follow us, and the stylised portraits of Elizabeth I and her courtiers can seem extreme, the more so as it is difficult to trace a proper stylistic succession to Holbein's work to bridge the middle of the century".<sup>[141]</sup> Nevertheless, "modern" painting in England may be said to have begun with Holbein.<sup>[171]</sup> That later artists were aware of his work

is evident in their own, sometimes explicitly. Hans Eworth, for example, painted two full-length copies in the 1560s of Holbein's Henry VIII derived from the Whitehall pattern and included a Holbein in the background of his *Mary Neville, Lady Dacre*.<sup>[172]</sup> The influence of Holbein's "monumentality and attention to texture" has been detected in Eworths' work.<sup>[173]</sup> According to art historian Erna Auerbach: "Holbein's influence on the style of English portraiture was undoubtedly immense. Thanks to his genius, a portrait type was created which both served the requirements of the sitter and raised portraiture in England to a European level. It became the prototype of the English Court portrait of the Renaissance period".<sup>[174]</sup>



*Man in a Black Cap*, by John Bettes the Elder, 1545. Oil on oak, Tate Britain, London.

The fashion for Old Masters in England after the 1620s created a demand for Holbein, led by the connoisseur Thomas Howard, Earl of Arundel. The Flemish artists Anthony van Dyck and Peter Paul Rubens discovered Holbein through Arundel.<sup>[175]</sup> Arundel commissioned engravings of his Holbeins from the Czech Wenceslaus Hollar, some of works now lost. From this time, Holbein's art was also prized in the Netherlands, where the picture dealer Michel Le Blon became a Holbein connoisseur.<sup>[176]</sup> The first *catalogue raisonné* of Holbein's work was produced by the Frenchman Charles Patin and the Swiss Sebastian Faesch in 1656. They published it with Erasmus's *Encomium moriae* (*The Praise of Folly*) and an inaccurate biography that portrayed Holbein as dissolute.

In the 18th century, Holbein found favour in Europe with those who saw his precise art as an antidote to the Baroque. In England, the connoisseur and antiquarian Horace Walpole (1717–97) praised him as a master of the Gothic.<sup>[177]</sup> Walpole hung his neo-Gothic house at Strawberry Hill with copies of Holbeins and kept a Holbein room. From around 1780, a re-evaluation of Holbein set in, and he was enshrined among the canonical masters.<sup>[178]</sup> A new cult of the sacral art masterpiece arose, endorsed by the German Romantics. This view suffered a setback during the famous controversy known as the "*Holbein-Streit*" (Holbein dispute) in the 1870s. It emerged that the revered Meyer *Madonna* at Dresden was a copy, and that the little-known version at Darmstadt was the Holbein original.<sup>[179]</sup> Since then, scholars have gradually removed the attribution to Holbein from many copies and derivative works. The current scholarly view of Holbein's art stresses his versatility, not only as a painter but as a draughtsman, printmaker, and designer.<sup>[180]</sup> Art historian Erika Michael believes that "the breadth of his artistic legacy has been a significant factor in the sustained reception of his oeuvre".<sup>[181]</sup>

## Gallery



*Portrait of Bonifacius Amerbach*, 1519. Oil and tempera on pine, Kunstmuseum Basel.



*The Body of the Dead Christ in the Tomb*, and a detail, 1521–22. Oil and tempera on limewood, Kunstmuseum Basel.



*Portrait of a Lady with a Squirrel and a Starling*, c. 1527–28. Oil and tempera on oak, National Gallery, London.



*Noli me tangere*, possibly 1524–26. Oil and tempera on oak, Royal Collection.



*Portrait of Jane Seymour*, c. 1537. Oil and tempera on oak, Kunsthistorisches Museum, Vienna.



*Henry VIII and Henry VII*, part of cartoon for wall-painting at Whitehall, 1537. Pen in black, with grey, brown, black, and red wash on paper mounted on canvas, National Portrait Gallery, London.



*Portrait of Christina of Denmark, Duchess of Milan*, c. 1538. Oil and tempera on oak, National Gallery, London.



*Portrait of Anne of Cleves*, c. 1539. Oil and tempera on parchment mounted on canvas, Louvre, Paris.



Henry Brandon, 2nd Duke of Suffolk, portrait miniature, 1541. Watercolour on vellum, Royal Collection, Windsor Castle.



Charles Brandon, 3rd Duke of Suffolk

## Notes

- [1] Alastair Armstrong, "Henry VIII: Authority, Nation and Religion 1509–1540"
- [2] Zwingenberger, 9.
- [3] Wilson, 213; Buck, 50, 112. Apelles was a legendary artist of antiquity, whose imitation of nature was thought peerless.
- [4] Wilson, 281.
- [5] Waterhouse, 17.
- [6] Ganz, 1; Wilson, 3. The date is deduced from the age noted by Holbein's father on the portrait of his sons.
- [7] Müller, *et al*, 6.
- [8] Bätschmann & Griener, 104. Basel had allied itself in 1501 with the Swiss Confederates, a group of cantons that had broken free of imperial rule. Many Basel citizens, however, remained proud of their imperial connections: the Madonna that Holbein painted for Jakob Meyer, for example, wears the imperial crown.
- [9] North, 13–14; Bätschmann and Griener, 11; Claussen, 47. Hans Holbein the Elder and his brother Sigmund also moved away from Augsburg at about this time, but the reasons for the Holbein family's disappointment in the city is not known.
- [10] Sander, 14.
- [11] Zwingenberger, 13; Wilson, 30, 37–42. For example: *A Scholar Treads on a Basket of Eggs* and *Folly Steps Down from the Pulpit*.
- [12] Sander, 15. See: *Portrait of Jakob Meyer* and *Portrait of Dorothea Meyer*.
- [13] See *Leana Before the Judges*, a design for a Hertenstein mural.
- [14] Bätschmann and Griener, 11; North, 13. For example: *Design for a Stained Glass Window with the Coronation of the Virgin*.
- [15] Rowlands, 25; North, 13. On another occasion, Holbein was fined for his involvement in a knife fight.
- [16] Wilson, 53–60; Buck, 20; Bätschmann and Griener, 148; Claussen, 48, 50. Doubt has been cast on the tradition that Holbein visited Italy, since artists' biographer Karel van Mander (1548–1606) stated that Holbein never went there. It has been argued by Peter Claussen, for example, that Italian motifs in Holbein's work might have derived from engravings, sculptures, and art works seen in Augsburg. On the other hand, Bätschmann and Griener quote a document of 1538 in which the Basel authorities gave Holbein permission to sell his work in "France, England, Milan or in the Netherlands" as support for the view that he had travelled to Milan, since he is known to have travelled to the other three places named.
- [17] Bätschmann & Griener, 68. Holbein worked from prints, but Bätschmann & Griener argue that Hertenstein, who presumably requested these copies, might have sent the artist to Italy to view the originals himself.
- [18] Müller, *et al*, 11, 47; Wilson, 69–70. Wilson cautions against too readily accepting that Ambrosius died, since other explanations for his disappearance from the record are possible. However, only Hans Holbein claimed their father's estate when he died in 1524.
- [19] Wilson, 70.
- [20] North, 17. Lutheran Protestantism was introduced in Basel in 1522. After 1529, the ideas of Huldrych Zwingli (1484–1531) became widely accepted there, through the preaching of Johannes Oecolampadius (1482–1531).
- [21] For example: *Design for façade painting for the House of the Dance*
- [22] Rowlands, 53–54; Bätschmann & Griener, 64. See: *Samuel Cursing Saul*, and *The Humiliation of Emperor Valentinian by Shapur, King of Persia* (designs for the Council Chamber murals), and *Rehoboam*, a fragment of the Council Chamber murals.
- [23] For example: *Stained Glass Window Designs for the Passion of Christ*.
- [24] *Dance of Death* woodcuts ([http://commons.wikimedia.org/wiki/Category:Danse\\_Macabre\\_\(Holbein\)](http://commons.wikimedia.org/wiki/Category:Danse_Macabre_(Holbein))).
- [25] Six of the *Icones* woodcuts.
- [26] Strong, 3; Wilson, 114–15; Müller, *et al*, 442–45. *Title Sheet of Adam Petri's Reprint of Luther's Translation of the New Testament*.
- [27] Bätschmann & Griener, 63.
- [28] Ganz, 9.
- [29] Ganz, 9. He later added the portrait of Meyer's first wife, after he returned from his first visit to London, by which time the demand for devotional art had largely dried up.
- [30] Strong, 3; Rowlands, 56–59. Many copies of Holbein's portraits of Erasmus exist, but it is not always certain whether they were produced by the artist or by his studio.
- [31] Bätschmann and Griener, 11; Müller, *et al*, 12, 16, 48–49, 66.
- [32] "For a generation or more popular and establishment piety had led to the adornment and embellishment of churches, chapels, and cathedrals. Now there were different religious priorities and the overswelled ranks of the artists' guilds were feeling the pinch." Wilson, 116.
- [33] Letter to Pieter Gillis (Petrus Aegidius), August 1526. Quoted by Wilson, 120. An angel was an English coin.
- [34] Bätschmann & Griener, 158.
- [35] Bätschmann & Griener, 160. Letter of 18 December 1526.
- [36] Strong, 4; Wilson, 157–58. Strong suggests, with others, that More sent the sketch, which is now in Basel, to Erasmus as a gift; Wilson casts doubt on this, deducing from remarks by Erasmus that the gift was a finished version of the group portrait, since lost.
- [37] Beyer, 68.
- [38] For example: *Portrait Study of John More* and *Portrait Study of Elizabeth Dauncey*. "This group of drawings ranks among the supreme masterpieces of portraiture and surpasses in quality the more schematic and rapidly executed drawings of Holbein's later years." Waterhouse, 18.
- [39] *Portrait of William Warham, Archbishop of Canterbury*.

- [40] Strong, 4. *Portrait of Nicholas Kratzer*.
- [41] *Portrait of Sir Henry Guildford and Portrait of Mary, Lady Guildford*.
- [42] Wilson, 140; Foister, 30; King, 43–49. Anne Lovell's husband was Sir Francis Lovell, an esquire of the body to Henry VIII.
- [43] Strong, 4; Claussen, 50.
- [44] North, 21.
- [45] Strong, 4.
- [46] Bätschmann & Griener, 177.
- [47] Rowlands, 76.
- [48] Wilson, 156–57.
- [49] Buck, 38–41; Bätschmann & Griener, 105–107; North, 25. The only known damage to a Holbein work was to *The Last Supper*, part of an altarpiece. The outer boards were lost during iconoclastic riots and the surviving section, on which only nine of the apostles can be seen, was later clumsily repaired.
- [50] North, 24.
- [51] Doctrinal issues concerning the communion were at the heart of Reformation theological controversy.
- [52] Buck, 134.
- [53] Wilson, 163; North, 23.
- [54] Ganz, 7. See: *Rehoboam*, a fragment from a Council Chamber mural, and *Samuel Cursing Saul*, a design for a Council Chamber mural.
- [55] Strong, 4; Buck, 6. According to a letter written by the Basel student Rudolf Gwalther to the Swiss reformer Heinrich Bullinger in 1538, Holbein "considered conditions in that realm to be happy".
- [56] Rowlands, 81. Holbein was in England by September 1532, the date of a letter from the Basel authorities asking him to return.
- [57] North, 26.
- [58] Letter to Boniface Amerbach, quoted by Wilson, 178–79; Strong, 4.
- [59] Wilson, 213.
- [60] Wilson, 224–25; Foister, 120.
- [61] Wilson, 184.
- [62] Wilson, 183–86; Starkey, 496. According to historian David Starkey: "If the pageant as executed followed Holbein's surviving preparatory drawing at all faithfully, it was the most sophisticated piece of Renaissance theatrical design that London would see till the spectacular masque settings of Inigo Jones almost a century later".
- [63] Buck, 98; North, 7. North calls the identification of the figure on the right as Dinteville's brother, the Bishop of Auxerre, in an inventory of 1589, a mistake; the bulk of scholarship follows M. F. S. Hervey (1900), who first identified the bishop as de Selve. See also Foister *et al*, 21–29.
- [64] Buck, 103–104; Wilson, 193–97; Roskill, "Introduction", Roskill & Hand, 11–12. For a detailed online analysis of the painting's symbolism and iconography, see Mark Calderwood, "The Holbein Codes" (<http://web.archive.org/web/20060423155438/http://www.newcastle.edu.au/school/fine-art/arttheoryessaywritingguide/analysisofhansholbeinstheambassadors.html>). Retrieved 29 November 2008.
- [65] Bätschmann & Griener, 184.
- [66] Parker, 53–54; Wilson, 209–10; Ives, 43. A drawing at Windsor inscribed "Anna Bollein Queen" has been discounted by K. T. Parker and other scholars, citing heraldic sketches on the reverse, as incorrectly labelled. Anne's biographer Eric Ives believes there is "little to reinstate" that drawing, or another at the British Museum inscribed "Anne Bullen Regina Angliæ ... decollata fuit Londini 19 May 1536", though he speculates that a 17th-century copy by John Hoskins "from an ancient original" may be based on a lost Holbein portrait of Anne. Derek Wilson, however, follows some recent scholarship (Starkey/Rowlands) in arguing that the Windsor drawing *is* of Anne. He doubts that John Cheke, who made the attribution in 1542, was mistaken, since Cheke knew many who had seen Anne.
- [67] Rowlands, 88, 91.
- [68] Wilson, 208–209.
- [69] Strong, 5.
- [70] Müller, *et al*, 13, 52; Buck, 112. The precise date of Holbein's appointment is unknown; but in 1536, he was referred to as the "king's painter" in a letter from the French poet Nicholas Bourbon, whom Holbein painted in 1535.
- [71] Strong, 6; Rowlands, 96; Bätschmann & Griener, 189.
- [72] Strong, 5. Strong calls it "arguably the most famous royal portrait of all time, encapsulating in this gargantuan image all the pretensions of a man who cast himself as 'the only Supreme Head in earth of the Church of England'".
- [73] Buck, 115.
- [74] Buck, 119; Strong, 6. This is the small portrait now in the Thyssen-Bornemisza Museum, Madrid.
- [75] Rowlands, 118, 224–26.
- [76] Buck, 117.
- [77] Buck, 120; Bätschmann & Griener, 189.
- [78] Buck, 128–29; Wilson, 273–74; Rowlands, 118; Foister, 117. A preparatory drawing for this composition also survives, painted in by a later hand.
- [79] Strong, 7; Waterhouse, 19.
- [80] Wilson, 251. The likeness met with Henry's approval, but Christina declined the offer of marriage: "If I had two heads," she said, "I would happily put one at the disposal of the King of England".

- [81] Auerbach, 49; Wilson, 250.
- [82] Wilson, 250.
- [83] Wilson, 251–52.
- [84] Wilson, 252–53.
- [85] Müller, *et al*, 13; Buck, 126.
- [86] Wilson, 260.
- [87] Starkey, 620.
- [88] Strype, John, *Ecclesiastical Memorials*, vol 1 part 2, Oxford (1822) ([http://books.google.co.uk/books?id=eyYwAAAAAYAAJ&source=gbs\\_navlinks\\_s](http://books.google.co.uk/books?id=eyYwAAAAAYAAJ&source=gbs_navlinks_s)), 456–457, "altered his outward countenance, to see the Lady so far unlike."
- [89] Schofield, 236–41; Scarisbrick, 484–85.
- [90] Wilson, 265; Schofield, 260–64. Cromwell's reluctance to arrange a divorce for Henry lay naked behind his fall, though the matter was not mentioned in the bill of attainder.
- [91] Foister, 76–77. A clock salt was a complex instrument, including a clock, hourglass, sundial, and compass.
- [92] Wilson, 273, 276; North, 31. Holbein asked in his will for "Mr Anthony, the king's servant of Greenwich", to be repaid; scholars have usually presumed this to be Denny.
- [93] Wilson, 267. Also, his uncle, the painter Sigmund Holbein, had died that autumn in Bern, leaving him substantial moneys and effects.
- [94] Wilson, 245, 269; North, 31.
- [95] North, 26; Wilson, 112–13.
- [96] Claussen, 50. Claussen dismisses the theory as "pure nonsense".
- [97] Wilson, 112–13.
- [98] Müller, *et al*, 13; Wilson, 253, 268. Franz Schmid, Elsbeth's son by her first husband, travelled to Berne to take possession of Sigmund Holbein's estate in 1540. This implies that Hans Holbein's finances were still shared with his wife. Franz Schmid succeeded to the estate in Berne on 4 January 1541.
- [99] Wilson, 253–54, 268, 278. Philipp and Jakob Holbein later became goldsmiths, the first moving to Augsburg, the second to London, where he died in 1552. The two daughters married merchants in Basel.
- [100] Wilson, 277; Claussen, 53.
- [101] Wilson, 276.
- [102] Wilson, 278.
- [103] Wilson, 277; Foister, 168; Bätschmann and Griener, 10. From the location of his house, scholars deduce that Holbein was buried in either the church of St Katherine Cree or in that of St Andrew Undershaft.
- [104] Ganz, 5–6.
- [105] Müller, *et al*, 29–30.
- [106] Wilson, 16; North, 12.
- [107] Strong, 9.
- [108] Bätschmann & Griener, 11.
- [109] Buck, 41–43; Bätschmann and Griener, 135; Ganz, 4; Claussen, 50. *Venus and Amor* is sometimes considered a workshop portrait. Holbein also painted his own, very different, version of *The Last Supper*, based on Leonardo's *The Last Supper* in Milan.
- [110] Strong, 9–10; North, 14; Sander, 17–18. The influence of Andrea del Sarto and Andrea Solari has also been detected in Holbein's work, as well as that of the Venetian Giovanni Bellini.
- [111] Strong, 7, 10.
- [112] Bätschmann and Griener, 134. His two drawings, done in France, of statues of Duc Jean de Berry (1340–1416) and his wife Jeanne de Boulogne (d. 1438) "suggest that Holbein learned the new technique in France".
- [113] Strong, 8–10; Bätschmann and Griener, 134–35; Müller, *et al*, 30, 317. Bätschmann and Griener are not convinced that Holbein learned this directly from Clouet; they suggest he learned it from a mixture of French and Italian models. And Müller points out that, in any case, the technique was not unknown in Augsburg and Switzerland.
- [114] Strong, 7; North, 30; Rowlands, 88–90. Karel van Mander wrote in the early 17th century that "Lucas" taught Holbein illumination, but John Rowlands downplays Horenbout's influence on Holbein's miniatures, which he believes follow the techniques of Jean Clouet and the French school.
- [115] Bätschmann & Griener, 95.
- [116] Buck, 32–33; Wilson, 88, 111; Ganz, 8; Bätschmann & Griener, 88–90. Holbein knew Grünewald's *Lamentation and Burial of Christ* at Issenheim, not far from Basel, where his father had worked in 1509 and between 1516 and 1517.
- [117] Wilson, 96–103. The prints were not published until 1538, perhaps because they were thought too subversive at a time of peasants' revolts. The series was left incomplete by the death of the blockcutter Hans Lützelburger in 1526, and was eventually published with 41 woodcuts by his heirs without mention of Holbein. The ten further designs were added in later editions.
- [118] Bätschmann & Griener, 56–58, and Landau & Parshall, 216.
- [119] 9 September, Francisco González Echeverría VI International Meeting for the History of Medicine, (S-11: Biographies in History of Medicine (I)), Barcelona. New Discoveries on the biography of Michael de Villeneuve (Michael Servetus) & New discoveries on the work of Michael De Villeneuve (Michael Servetus) VI Meeting of the International Society for the History of Medicine (<http://ishmbarcelona2011.org/>)

- [120] 2011 "The love for truth. Life and work of Michael Servetus", (El amor a la verdad. Vida y obra de Miguel Servet.), printed by Navarro y Navarro, Zaragoza, collaboration with the Government of Navarre, Department of Institutional Relations and Education of the Government of Navarre, 607pp, 64 of them illustrations, p 215-228 & 62nd illustration (XLVII)
- [121] 2000– "Find of new editions of Bibles and of two 'lost' grammatical works of Michael Servetus" and "The doctor Michael Servetus was descendant of jews", González Echeverría, Francisco Javier. Abstracts, 37th International Congress on the History of Medicine, 10–15 September 2000, Galveston, Texas, U.S.A., pp. 22–23.
- [122] 2001– "Portraits or graphical boards of the stories of the Old Gospel. Spanish Summary", González Echeverría, Francisco Javier. Government of Navarra, Pamplona 2001. Double edition : facsimile(1543) and critical edition. Prologue by Julio Segura Moneo.
- [123] Michael Servetus Research (<http://www.michaelservetusresearch.com/ENGLISH/works.html>) Website with a study on the three works by Servetus with woodcuts by Hans Holbein
- [124] Bächtmann & Griener, 97.
- [125] Wilson, 129; Foister, 127; Strong, 60; Rowlands, 130; Claussen, 49. Scholars are unsure of the exact date of *Noli Me Tangere*, usually given as between 1524 and 1526, or whether it was painted in England, Basel, or even France. The traditional view that Henry VIII owned the painting is discounted by Strong and Rowlands.
- [126] Wilson, 129–30. Wilson contrasts Holbein's treatment with the earlier, freer, interpretation by Titian.
- [127] Quoted by Wilson, 130.
- [128] Bächtmann & Griener, 116; Wilson, 68.
- [129] Strong, 5; Rowlands, 91.
- [130] Foister, 140–41; Strong, 5.
- [131] <http://www.christianmind.org/illus/Holbein/>
- [132] Rowlands, 92–93.
- [133] North, 94–95; Bächtmann & Griener, 188.
- [134] North, 25.
- [135] Strong, 7.
- [136] Strong, 8; Rowlands, 118–19.
- [137] Buck, 16–17.
- [138] Parker, 24–29; Foister, 103. Many of these studies have been coloured in or outlined in ink by later hands ("made worse by mending"), obstructing the analysis of Holbein's technique.
- [139] Ganz, 11; Foister, 103. Foister, however, is doubtful, owing to "the inconsistency in the sizes of the drawn heads".
- [140] Parker, 28; Rowlands, 118–20.
- [141] Foister, 15.
- [142] Ganz, 5.
- [143] Strong, 5, 8; Foister, 15.
- [144] North, 20.
- [145] Strong, 6.
- [146] Quoted by Michael, 237.
- [147] Quoted by Michael, 239–40.
- [148] Auerbach, 69–71.
- [149] Wilson, 265.
- [150] Bächtmann & Griener, 177–81.
- [151] Bächtmann & Griener, 181.
- [152] Rowlands, 118–20.
- [153] Rowlands, 122.
- [154] Auerbach, 69.
- [155] Reynolds, 6–7.
- [156] Strong, 7; Gaunt, 25.
- [157] Reynolds, 7.
- [158] Foister, 95; Rowlands, 113.
- [159] North, 31.
- [160] Michael, 240.
- [161] North, 29; Waterhouse, 21.
- [162] North, 29; Ackroyd, 191; Brooke, 9.
- [163] North, 33.
- [164] Waterhouse, 16–17.
- [165] Müller, *et al*, 32–33.
- [166] Bächtmann & Griener, 194.
- [167] Bächtmann & Griener, 195.
- [168] North, 33–34; Bächtmann & Griener, 146, 199–201. Among Van Mander's dubious anecdotes is the story that Holbein angrily threw a nobleman downstairs for pestering him.

- [169] Wilson, 280–81; Gaunt, 27.
- [170] Hearn, 46–47.
- [171] Waterhouse, 13.
- [172] Bätschmann & Griener, 194–95; Brooke, 52–56.
- [173] Brooke, 53.
- [174] Auerbach, 71.
- [175] Bätschmann & Griener, 202. Philip Fruytiers depicted Howard and his family with Holbein's portraits of his ancestors Thomas Howard, 3rd Duke of Norfolk, and Henry Howard, Earl of Surrey, in the background.
- [176] Bätschmann & Griener, 203.
- [177] Bätschmann & Griener, 208.
- [178] Bätschmann & Griener, 208–209; Borchert, 191. Borchert terms this process the "Romantic sacralization of the arts".
- [179] Borchert, 187–88. The copy at Dresden was made by Bartholomäus Sarburgh in about 1637.
- [180] Roskill, "Introduction", in Roskill & Hand, 9.
- [181] Michael, 227.

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## Further reading

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## External links

- A list of museums featuring the artist ([http://www.artcyclopedia.com/artists/holbein\\_the\\_younger\\_hans.html](http://www.artcyclopedia.com/artists/holbein_the_younger_hans.html))
- 2006 exhibition on Holbein in England at Tate Britain (<http://www.tate.org.uk/britain/exhibitions/holbein/>)
- Hans-Holbein.org (<http://www.hans-holbein.org>) 145 works by Hans Holbein the Younger
- Hans Holbein the Younger Gallery at MuseumSyndicate (<http://www.museumsyndicate.com/artist.php?artist=410>)
- Michael Servetus Research (<http://www.michaelservetusresearch.com/ENGLISH/works.html>) Website with a graphical study on the three biblical works by Servetus with woodcuts of Hans Holbein, *Icones*.
- Fifteenth- to eighteenth-century European paintings: France, Central Europe, the Netherlands, Spain, and Great Britain (<http://libmma.contentdm.oclc.org/cdm/compoundobject/collection/p15324coll10/id/74278/rec/1>), a collection catalog fully available online as a PDF, which contains material on Holbein the Younger (cat. no. 11)

# Jan van Eyck

**Jan van Eyck** (or **Johannes de Eyck**) (Dutch: [ˈjɑn vɑn ˈɛjk]; before c. 1390 – before c. 9 July 1441) was a Flemish painter active in Bruges and is generally considered one of the most significant Northern European painters of the 15th century. The few surviving records indicate that he was born around 1390, most likely in Maaseik. Outside of works completed with his brother Hubert van Eyck and those ascribed to Hand G —believed to be Jan— of the Turin-Milan Hours illuminated manuscript, only about 23 surviving works are confidently attributed to him, of which ten, including the Ghent altarpiece, are signed and dated.

Little is known of his early life, but his emergence as a collectable painter generally follows his appointment to the court of Philip the Good c. 1425, and from this point his activity in the court is comparatively well documented. Van Eyck had previously served John of Bavaria-Straubing, then ruler of Holland, Hainault and Zeeland. By this time van Eyck had assembled a workshop and was involved in redecorating the Binnenhof palace in The Hague. After John's death in 1425 he moved to Bruges and came to the attention of Philip the

Good. He served as both court artist and diplomat and became a senior member of the Tournai painters' guild, where he enjoyed the company of similarly esteemed artists such as Robert Campin and Rogier van der Weyden. Over the following decade van Eyck's reputation and technical ability grew, mostly from his innovative approaches towards the handling and manipulating of oil paint. His revolutionary approach to oil was such that a myth, perpetuated by Giorgio Vasari, arose that he had invented oil painting.<sup>[1][2]</sup>

It is known from historical record that van Eyck was considered a revolutionary master across northern Europe within his lifetime; his designs and methods were heavily copied and reproduced. His motto, one of the first and still most distinctive signatures in art history, *ALS IK KAN* ("AS I CAN") first appeared in 1433 on *Portrait of a Man in a Turban*, which can be seen as indicative of his emerging self-confidence at the time. The years between 1434 and 1436 are generally considered his high point when he produced works including the *Madonna of Chancellor Rolin*, *Lucca Madonna* and *Virgin and Child with Canon van der Paele*. He married the much younger *Margaret* around 1432 at about the same time he bought a home in Bruges. Records from 1437 on suggest that he was held in high esteem by the upper ranks of Burgundian nobility while also accepting many foreign commissions. He died young in July 1441, leaving behind many unfinished works to be completed by workshop journeymen; works that are nevertheless today considered major examples of Early Flemish painting.<sup>[3]</sup> His local and international reputation was aided by his ties to the then political and cultural influence of the Burgundian court.



*Portrait of a Man in a Turban* (actually a *chaperon*), most likely a self-portrait, 1433.

## Life and career

### Early life

Neither the date nor place of Jan van Eyck's birth is documented. The first extant record of his life comes from the court of John of Bavaria at The Hague, where payments were made to *Meyster Jan den malre* (Master Jan the painter) between 1422 and 1424 who was then a court painter with the rank of valet de chambre, with at first one and then two assistants.<sup>[4]</sup> This suggests a date of birth of 1395 at the latest. However, his apparent age in the London probable self-portrait of 1433 suggests to most scholars a date closer to 1380.<sup>[5]</sup> He was identified in the late 1500s<sup>[6]</sup> as having been born in Maesheyck, diocese of Liège. This claim still considered credible on etymological grounds, considering his surname translates as "of Eyck". The claim is supported by the fact that his daughter Lievine was in a nunnery in Maaseyck after her father's death.<sup>[7]</sup> It is not known where he was educated, but his use of Greek and Hebrew alphabets in many of the inscriptions in his works indicate that he had been schooled in the classics. From the coats of arms on his tombstone, it is believed he came from the gentry class.<sup>[5]</sup>

Jan van Eyck has often been linked as brother to painter and peer Hubert van Eyck, because both have been thought to originate from the same town in Belgium. One of Jan's most famous works, the Ghent Altarpiece, is believed to be a collaboration between the two, begun c. 1420 by Hubert and completed by Jan in 1432. Today it is difficult to decide which of the music-making angels and saints, pilgrims and praying figures are by Jan and which by Hubert. Another brother, Lambert, is mentioned in Burgundian court documents, and there is a conjecture that he too was a painter, and that he may have overseen the closing of Jan van Eyck's Bruges workshop.<sup>[8]</sup> Another significant, and rather younger, painter who worked in Southern France, Barthélemy van Eyck, is presumed to be a relation.

Van Eyck is often thought to be the anonymous artist known as Hand G of the Turin-Milan Hours.<sup>[9]</sup> If this is correct, the Turin illustrations are the only known works from his early period. Most of these miniatures were destroyed by fire in 1904 and survive only in photographs and copies.

### Maturity and success

Following the death of John of Bavaria in 1425, van Eyck entered the service of the powerful and influential Valois prince, Duke Philip the Good of Burgundy.<sup>[10]</sup> He resided in Lille for a year and then moved to Bruges, where he lived until his death in 1441. A number of documents published in the 20th century record his activities in Philip's service. He was sent on several diplomatic missions on behalf of the Duke, and worked on several projects which likely entailed more than painting, such as his difficult journey to faraway Lisbon along with a group which was intended to prepare the ground for the Duke's wedding to Isabella of Portugal. Van Eyck's task was to paint the bride, so that the Duke would be able to form a picture of Isabella before the marriage. With the exception of two portraits of Isabella of Portugal, which van Eyck painted at Philip's behest as a member of the 1428-9 delegation to seek her hand, the precise nature of these works is obscure.<sup>[11]</sup> The princess was probably not particularly attractive, and that is exactly how Van Eyck painted her. He showed his sitters as dignified but did not hide their imperfections.



*Virgin and Child with Canon van der Paele*,  
1434; Groeningemuseum, Bruges.

As court painter and "valet de chambre" to the Duke, van Eyck was exceptionally well paid.<sup>[10]</sup> His annual salary was quite high when he was first engaged, but it doubled twice in the first few years, and was often supplemented by special bonuses. His salary alone makes Jan van Eyck an exceptional figure among early Netherlandish painters, since most of them depended on individual commissions for their livelihoods. An indication that van Eyck's art and person were held in extraordinarily high regard is a document from 1435 in which the Duke scolded his treasurers for not paying the painter his salary, arguing that van Eyck would leave and that he would nowhere be able to find his equal in his "art and science." The Duke also served as godfather to one of van Eyck's children, supported his widow upon the painter's death, and years later helped one of his daughters with the funds required to enter a convent.



*The Arnolfini Portrait*, 1434; National Gallery, London.

## Work

Jan van Eyck produced paintings for private clients in addition to his work at the court. Foremost among these is the *Ghent Altarpiece* painted for Jodocus Vijds and his wife Elisabeth Borluut. Started sometime before 1426 and completed, at least partially, by 1432, this polyptych has been seen to represent "the final conquest of reality in the North", differing from the great works of the Early Renaissance in Italy by virtue of its willingness to forgo classical idealization in favor of the faithful observation of nature.<sup>[12]</sup>

Exceptionally for his time, van Eyck often signed and dated his frames, then considered an integral part of the work (the two were often painted together, and while the frames were constructed by a body of craftsmen separate to the master's workshop, their work was often considered as equal in skill to that of the painters). His signature "ALS IK KAN" ("As I Can") is taken from the Flemish saying "As I can, not as I would". It is because of his habit of signing his work that his reputation has survived and that attribution has not been as difficult and uncertain as with other first generation artists of the early Netherlandish school.<sup>[13]</sup>

## Reputation and legacy

In the earliest significant source on van Eyck, a 1454 biography in Genoese humanist Bartolomeo Facio's *De viris illustribus*, Jan van Eyck is named "the leading painter" of his day. Facio places him among the best artists of the early 15th century, along with Rogier van der Weyden,



*Annunciation*, 1434-1436; National Gallery of Art, Washington.

Gentile da Fabriano, and Pisanello. It is particularly interesting that Facio shows as much enthusiasm for Netherlandish painters as he does for Italian painters. This text sheds light on aspects of Jan van Eyck's production now lost, citing a bathing scene owned by a prominent Italian, but mistakenly attributing to van Eyck a world map painted by another.<sup>[14]</sup> Facio records that van Eyck was a learned man, and that he was versed in the classics, particularly Pliny the Elder's work on painting. This is supported by records of an inscription from Ovid's *Ars Amatoria*, which was on the now-lost original frame of the Arnolfini Portrait, and by the many Latin inscriptions in van Eyck paintings, using the Roman alphabet, then reserved for educated men. Jan van Eyck likely had some knowledge of Latin for his many missions abroad on behalf of the Duke.

Jan van Eyck died in Bruges in 1441 and was buried in the Church of St Donatian, which was later destroyed during the French Revolution.

## Notes

- [1] The myth was propagated by Karel van Mander. In fact oil painting as a technique for painting wood statues and other objects is much older and Theophilus (Roger of Helmarshausen?) clearly gives instructions in his 1125 treatise, *On Divers Arts*. It is accepted that the van Eyck brothers were among the earliest Early Netherlandish painters to employ it for detailed panel paintings and that they achieved new and unforeseen effects through the use of glazes, wet-on-wet and other techniques. See Gombrich, E.H., *The Story of Art*, pp 236-9. Phaidon, 1995. ISBN 0-7148-3355-X
- [2] Borchert, 92-94
- [3] Borchert, 94
- [4] Châtelet, Albert, *Early Dutch Painting, Painting in the northern Netherlands in the fifteenth century*. 27-8, 1980, Montreux, Lausanne, ISBN 2-88260-009-7
- [5] Campbell (2008), 174
- [6] By the Ghent humanist Marcus van Vaernewyck and Lucas de Heer of Ghent
- [7] Borchert (2008), 8
- [8] Jan van Eyck (ca. 1380/90–1441) ([http://www.metmuseum.org/toah/hd/eyck/hd\\_eyck.htm](http://www.metmuseum.org/toah/hd/eyck/hd_eyck.htm)). Metropolitan Museum of Art. Retrieved 17 March 2012.
- [9] It's also possible that Hand G was merely a follower of Van Eyck's. See Campbell, 174
- [10] Chilvers, 246
- [11] Macfall, Haldane. "A History of Painting: The Renaissance in the North and the Flemish Genius Part Four". Whitefish, Montana: Kessinger Publishing, 2004. 15. ISBN 1-4179-4509-5
- [12] Gombrich, E.H., *The Story of Art*, pages 236-9. Phaidon, 1995.
- [13] Macfall, 17
- [14] *Renaissance Art Reconsidered*, ed. Richardson, Carol M., Kim W. Woods, and Michael W. Franklin, pg 187



*Saint Jerome in His Study*, 1442; Detroit Institute of Arts, Detroit.

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## External links

- A Closer Look at Jan van Eyck's Virgin and Child with Chancellor Rolin (Louvre museum) ([http://www.louvre.fr/llv/dossiers/detail\\_oal.jsp?CONTENT<>cnt\\_id=10134198674055871&CURRENT\\_LLVOAL<>cnt\\_id=10134198674055871&FOLDER<>folder\\_id=9852723696500955&bmLocale=en](http://www.louvre.fr/llv/dossiers/detail_oal.jsp?CONTENT<>cnt_id=10134198674055871&CURRENT_LLVOAL<>cnt_id=10134198674055871&FOLDER<>folder_id=9852723696500955&bmLocale=en))
- Jan van Eyck Gallery at MuseumSyndicate (<http://www.museumsyndicate.com/artist.php?artist=9>)
- Flemish Art Collection: Madonna with Canon Joris van der Paele, a masterpiece by van Eyck ([http://www.vlaamsekunstcollectie.be/de/die\\_madonna\\_des\\_kanonikus.aspx](http://www.vlaamsekunstcollectie.be/de/die_madonna_des_kanonikus.aspx))
- Closer to Van Eyck (The Ghent Altarpiece in 100 billion pixels) (<http://clostertovaneyck.kikirpa.be>)
- *Petrus Christus: Renaissance master of Bruges* (<http://libmma.contentdm.oclc.org/cdm/compoundobject/collection/p15324coll10/id/91807/rec/320>), a full text exhibition catalog from The Metropolitan Museum of Art, which contains lengthy discussions of Jan van Eyck, as well as many reproductions of his work

# Dante Alighieri

<b>Dante Alighieri</b>	
	
Profile portrait of Dante, by Sandro Botticelli	
<b>Born</b>	Mid-May to mid-June, c. 1265 Florence
<b>Died</b>	September 9, 1321 (aged about 56) Ravenna
<b>Occupation</b>	Statesman, poet, language theorist
<b>Nationality</b>	Italian
<b>Literary movement</b>	<i>Dolce Stil Novo</i>

**Durante degli Alighieri**, simply referred to as **Dante** (UK /ˈdænti/, US /ˈdɑːnteɪ/; Italian: [ˈdante]; c. 1265–1321), was a major Italian poet of the Middle Ages. His *Divine Comedy*, originally called *La Comedia* and later called *Divina* by Boccaccio, is widely considered the greatest literary work composed in the Italian language and a masterpiece of world literature.<sup>[1]</sup>

In Italy he is known as *il Sommo Poeta* ("the Supreme Poet") or just *il Poeta*. He, Petrarch and Boccaccio are also known as "the three fountains" or "the three crowns". Dante is also called the "Father of the Italian language".

## Life

Dante was born in Florence, Italy. The exact date of birth is unknown, although it is generally believed to be around 1265. This can be deduced from autobiographic allusions in *La Divina Commedia*. Its first section, the *Inferno*, begins "*Nel mezzo del cammin di nostra vita*" ("Halfway through the journey of our life"), implying that Dante was around 35 years old, since the average lifespan according to the Bible (Psalms 89:10, Vulgate) is 70 years; and since his imaginary travel to the nether world took place in 1300, he must have been born around 1265. Some verses of the *Paradiso* section of the *Divine Comedy* also provide a possible clue that he was born under the sign of Gemini: "As I revolved with the eternal twins, I saw revealed, from hills to river outlets, the threshing-floor that makes us so ferocious" (XXII 151–154). In 1265, the sun was in Gemini between approximately May 11 and June 11.<sup>[2]</sup>



Portrait of Dante, from a fresco in the Palazzo dei Giudici, Florence

Dante claimed that his family descended from the ancient Romans (*Inferno*, XV, 76), but the earliest relative he could mention by name was Cacciaguیدا degli Elisei (*Paradiso*, XV, 135), born no earlier than about 1100. Dante's father, Alaghiero<sup>□</sup> or Alighiero di Bellincione, was a White Guelph who suffered no reprisals after the Ghibellines won the Battle of Montaperti in the middle of the 13th century. This suggests that Alighiero or his family enjoyed some protective prestige and status, although some suggest that the politically inactive Alighiero was of such low standing that he was not considered worth exiling.<sup>[citation needed]</sup>

Dante's family had loyalties to the Guelphs, a political alliance that supported the Papacy and which was involved in complex opposition to the Ghibellines, who were backed by the Holy Roman Emperor. The poet's mother was Bella, likely a member of the Abati family.<sup>□</sup> She died when Dante was not yet ten years old, and Alighiero soon married again, to Lapa di Chiarissimo Cialuffi. It is uncertain whether he really married her, since widowers were socially limited in such matters, but this woman definitely bore him two children, Dante's half-brother Francesco and half-sister Tana (Gaetana). When Dante was 12, he was promised in marriage to Gemma di Manetto Donati, daughter of Manetto Donati, member of the powerful Donati family.<sup>□</sup> Contracting marriages at this early age was quite common and involved a formal ceremony, including contracts signed before a notary. But Dante by this time had fallen in love with another, Beatrice Portinari (known also as Bice), whom he first met when he was only nine. Years after his marriage to Gemma he claims to have met Beatrice again; he wrote several sonnets to Beatrice but never mentioned Gemma in any of his poems. The exact date of his marriage is not known: the only certain information is that, before his exile in 1301, he had three children (Pietro, Jacopo and Antonia).<sup>□</sup>

Dante fought with the Guelph cavalry at the Battle of Campaldino (June 11, 1289). This victory brought about a reformation of the Florentine constitution. To take any part in public life one had to enroll in one of the city's many commercial or artisan guilds, so Dante entered the physicians' and apothecaries' guild. In the following years, his name is occasionally recorded as speaking or voting in the various councils of the republic. A substantial portion of minutes from such meetings in the years 1298–1300 was lost during World War II, however, so the true extent of Dante's participation in the city's councils is uncertain.

Gemma bore Dante several children. Although several others subsequently claimed to be his offspring; it is likely that only Jacopo, Pietro, Giovanni and Antonia were his actual children. Antonia later became a nun, taking the name Sister Beatrice.

## Education and poetry

Not much is known about Dante's education; he presumably studied at home or in a chapter school attached to a church or monastery in Florence. It is known that he studied Tuscan poetry at a time when the Sicilian school (*Scuola poetica Siciliana*), a cultural group from Sicily, was becoming known in Tuscany. His interests brought him to discover the Provençal poetry of the troubadours, such as Arnaut Daniel, and the Latin writers of classical antiquity, including Cicero, Ovid and especially Virgil.



Dante said he first met Beatrice Portinari, daughter of Folco Portinari, at age nine, and claimed to have fallen in love with her "at first sight", apparently without even talking with her. He saw her frequently after age 18, often exchanging greetings in the street, but never knew her well. In effect, he set an example of so-called courtly love, a phenomenon developed in French and Provençal poetry of prior centuries. Dante's experience of such love was typical, but his expression of it was unique. It was in the name of this love that Dante left his imprint on the *dolce stil novo* (*sweet new style*, a term which Dante himself coined), and he would join other contemporary poets and writers in exploring never-before-emphasized aspects of love (*Amore*). Love for Beatrice (as Petrarch would show for Laura somewhat differently) would be his reason for poetry and for living, together with political passions. In many of his poems, she is depicted as semi-divine, watching over him constantly and providing spiritual instruction, sometimes harshly. When Beatrice died in 1290, Dante sought refuge in Latin literature. The *Convivio* chronicles his having read Boethius's *De consolatione philosophiae* and Cicero's *De Amicitia*. He then dedicated himself to philosophical studies at religious schools like the Dominican one in Santa Maria Novella. He took part in the disputes that the two principal mendicant orders, the

(Franciscan and the Dominican), publicly or indirectly held in Florence, the former explaining the doctrines of the mystics and of St. Bonaventure, the latter expounding on St. Thomas Aquinas' theories.

At 18, Dante met Guido Cavalcanti, Lapo Gianni, Cino da Pistoia and soon after Brunetto Latini; together they became the leaders of the *dolce stil novo*. Brunetto later received special mention in the *Divine Comedy* (*Inferno*, XV, 28) for what he had taught Dante: *Nor speaking less on that account I go With Ser Brunetto, and I ask who are his most known and most eminent companions*. Some fifty poetical commentaries by Dante are known (the so-called *Rime*, rhymes), others being included in the later *Vita Nuova* and *Convivio*. Other studies are reported, or deduced from *Vita Nuova* or the *Comedy*, regarding painting and music.

### **Florence and politics**

Dante, like most Florentines of his day, was embroiled in the Guelph–Ghibelline conflict. He fought in the Battle of Campaldino (June 11, 1289), with the Florentine Guelphs against Arezzo Ghibellines; then in 1294 he was among the escorts of Charles Martel of Anjou (grandson of Charles I of Naples, more commonly called Charles of Anjou) while he was in Florence. To further his political career, he became a pharmacist. He did not intend to practice as one, but a law issued in 1295 required nobles aspiring to public office to be enrolled in one of the *Corporazioni delle Arti e dei Mestieri*, so Dante obtained admission to the apothecaries' guild. This profession was not inappropriate, since at that time books were sold from apothecaries' shops. As a politician he accomplished little, but held various offices over some years in a city rife with political unrest.

After defeating the Ghibellines, the Guelphs divided into two factions: the White Guelphs (*Guelfi Bianchi*)—Dante's party, led by Vieri dei Cerchi—and the Black Guelphs (*Guelfi Neri*), led by Corso Donati. Although the split was along family lines at first, ideological differences arose based on opposing views of the papal role in Florentine affairs, with the Blacks supporting the Pope and the Whites wanting more freedom from Rome. The Whites took power first and expelled the Blacks. In response, Pope Boniface VIII planned a military occupation of Florence. In 1301, Charles of Valois, brother of King Philip IV of France, was expected to visit Florence because the Pope had appointed him peacemaker for Tuscany. But the city's government had treated the Pope's ambassadors badly a few weeks before, seeking independence from papal influence. It was believed that Charles had received other unofficial instructions, so the council sent a delegation to Rome to ascertain the Pope's intentions. Dante was one of the delegates.



Dante Alighieri, detail from Luca Signorelli's fresco, Chapel of San Brizio, Orvieto Cathedral

## Exile and death

Pope Boniface quickly dismissed the other delegates and asked Dante alone to remain in Rome. At the same time (November 1, 1301), Charles of Valois entered Florence with the Black Guelphs, who in the next six days destroyed much of the city and killed many of their enemies. A new Black Guelph government was installed, and Cante de' Gabrielli da Gubbio was appointed *podestà* of the city. Dante was condemned to exile for two years and ordered to pay a large fine. The poet was still in Rome where the Pope had "suggested" he stay, and was therefore considered an absconder. He did not pay the fine in part because he believed he was not guilty and in part because all his assets in Florence had been seized by the Black Guelphs. He was condemned to perpetual exile, and if he returned to Florence without paying the fine, he could be burned at the stake. (The city council of Florence finally passed a motion rescinding Dante's sentence in June 2008.)<sup>[3]</sup>



A recreated death mask of Dante Alighieri in Palazzo Vecchio, Florence

He took part in several attempts by the White Guelphs to regain power, but these failed due to treachery. Dante, bitter at the treatment he received from his enemies, also grew disgusted with the infighting and ineffectiveness of his erstwhile allies and vowed to become a party of one. He went to Verona as a guest of Bartolomeo I della Scala, then moved to Sarzana in Liguria. Later he is supposed to have lived in Lucca with a woman called Gentucca, who made his stay comfortable (and was later gratefully mentioned in *Purgatorio*, XXIV, 37). Some speculative sources claim he visited Paris between 1308 & 1310 and others, even less trustworthy, took him to Oxford: these claims, first occurring in Boccaccio's book on Dante several decades after his death, seem inspired by readers being impressed with the poet's wide learning and erudition. Evidently Dante's command of philosophy and his literary interests deepened in exile, when he was no longer busy with the day-to-day business of Florentine domestic politics, and this is evidenced in his prose writings in this period, but there is no real indication that he ever left Italy. Dante's *Immensa Dei dilectione testante* to Henry VII of Luxembourg confirms his residence "beneath

the springs of Arno, near Tuscany" in March 1311.

In 1310, Holy Roman Emperor Henry VII of Luxembourg marched into Italy at the head of 5,000 troops. Dante saw in him a new Charlemagne who would restore the office of the Holy Roman Emperor to its former glory and also retake Florence from the Black Guelphs. He wrote to Henry and several Italian princes, demanding that they destroy the Black Guelphs. Mixing religion and private concerns, he invoked the worst anger of God against his city and suggested several particular targets that were also his personal enemies. It was during this time that he wrote *De Monarchia*, proposing a universal monarchy under Henry VII.

At some point during his exile, he conceived of the *Comedy*, but the date is uncertain. The work is much more assured and on a larger scale than anything he had produced in Florence; it is likely that he would have undertaken such a work only after he realized that his political ambitions, which had been central to him up to his banishment, had been halted for some time, possibly forever. It is also noticeable that Beatrice has returned to his imagination with renewed force and with a wider meaning than in the *Vita Nuova*; in *Convivio* (written c.1304–07) he had declared that the memory of this youthful romance belonged to the past.

An early outside indication that the poem was underway is a notice by Francesco da Barberino, tucked into his *Documenti d'Amore* (Lessons of Love), written probably in 1314 or early 1315; speaking of Virgil, Francesco notes in appreciative words that Dante followed the Roman classic in a poem called "Comedy" and that the setting of this poem (or part of it) was the underworld; i.e., hell.<sup>[4]</sup> The brief note gives no incontestable indication that he himself had seen or read even the

*Inferno* or that this part had been published at the time, but it indicates that composition was well underway and that the sketching of the poem may likely have begun some years before. (It has been suggested that a knowledge of Dante's work also underlies some of the illuminations in Francesco da Barberino's earlier *Officiolum* [c. 1305–08], a manuscript that came to light only in 2003.<sup>[5]</sup>) We know that the *Inferno* had been published by 1317; this is established by quoted lines interspersed in the margins of contemporary dated records from Bologna, but there is no certainty whether the three parts of the poem were each published in full or a few cantos at a time. *Paradiso* seems to have been published posthumously.

In Florence, Baldo d'Aguglione pardoned most of the White Guelphs in exile and allowed them to return; however, Dante had gone too far in his violent letters to *Arrigo* (Henry VII) and his sentence was not revoked.

In 1312 Henry assaulted Florence and defeated the Black Guelphs, but there is no evidence that Dante was involved. Some say he refused to participate in the assault on his city by a foreigner; others suggest that he had become unpopular with the White Guelphs too, and that any trace of his passage had carefully been removed. Henry VII died (from a fever) in 1313, and with him any hope for Dante to see Florence again. He returned to Verona, where Cangrande I della Scala allowed him to live in certain security and, presumably, in a fair degree of prosperity. Cangrande was admitted to Dante's *Paradise* (*Paradiso*, XVII, 76).

In 1315, Florence was forced by Ugucione della Faggiuola (the military officer controlling the town) to grant an amnesty to those in exile, including Dante. But for this, Florence required public penance in addition to a heavy fine. Dante refused, preferring to remain in exile. When Ugucione defeated Florence, Dante's death sentence was commuted to house arrest on condition that he go to Florence to swear he would never enter the town again. He refused to go, and his death sentence was confirmed and extended to his sons. He still hoped late in life that he might be invited back to Florence on honorable terms. For Dante exile was nearly a form of death, stripping him of much of his identity and his heritage. He addressed the pain of exile in *Paradiso*, XVII (55–60), where Cacciaguida, his great-great-grandfather, warns him what to expect:



Statue of Dante in the Piazza di Santa Croce in Florence



<i>... Tu lascerai ogne cosa diletta</i>	... You shall leave everything you love most:
<i>più caramente; e questo è quello strale</i>	this is the arrow that the bow of exile
<i>che l'arco de lo essilio pria saetta.</i>	shoots first. You are to know the bitter taste
<i>Tu proverai sì come sa di sale</i>	of others' bread, how salty it is, and know
<i>lo pane altrui, e come è duro calle</i>	how hard a path it is for one who goes
<i>lo scendere e 'l salir per l'altrui scale ...</i>	ascending and descending others' stairs ...

As for the hope of returning to Florence, he describes it as if he had already accepted its impossibility (in *Paradiso*, XXV, 1–9):

<i>Se mai continga che 'l poema sacro</i>	If it ever come to pass that the sacred poem
<i>al quale ha posto mano e cielo e terra,</i>	to which both heaven and earth have set their hand
<i>sì che m'ha fatto per molti anni macro,</i>	so as to have made me lean for many years
<i>vinca la crudeltà che fuor mi serra</i>	should overcome the cruelty that bars me
<i>del bello ovile ov'io dormi' agnello,</i>	from the fair sheepfold where I slept as a lamb,
<i>nimico ai lupi che li danno guerra;</i>	an enemy to the wolves that make war on it,
<i>con altra voce omai, con altro vello</i>	with another voice now and other fleece
<i>ritornerò poeta, e in sul fonte</i>	I shall return a poet and at the font
<i>del mio battesimo prenderò 'l cappello ...</i>	of my baptism take the laurel crown ...

Prince Guido Novello da Polenta invited him to Ravenna in 1318, and he accepted. He finished *Paradiso*, and died in 1321 (aged 56) while returning to Ravenna from a diplomatic mission to Venice, possibly of malaria contracted there. He was buried in Ravenna at the Church of San Pier Maggiore (later called San Francesco). Bernardo Bembo, praetor of Venice, erected a tomb for him in 1483.

On the grave, some verses of Bernardo Canaccio, a friend of Dante, dedicated to Florence:

*parvi Florentia mater amoris*

"Florence, mother of little love"

The first formal biography of Dante was the *Vita di Dante* (also known as *Trattatello in laude di Dante*) written after 1348 by Giovanni Boccaccio;<sup>[6]</sup> Although several statements and episodes of it have been deemed unreliable on the basis of modern research, an earlier account of Dante's life and works had been included in the *Nuova Cronica* of the Florentine chronicler Giovanni Villani.<sup>[7]</sup>

Florence eventually came to regret Dante's exile, and the city made repeated requests for the return of his remains. The custodians of the body in Ravenna refused, at one point going so far as to conceal the bones in a false wall of the monastery. Nonetheless, a tomb was built for him in Florence in 1829, in the basilica of Santa Croce. That tomb has been empty ever since, with Dante's body remaining in Ravenna, far from the land he had loved so dearly. The front of his tomb in Florence reads *Onorate l'altissimo poeta*—which roughly translates as "Honor the most exalted poet". The phrase is a quote from the fourth canto of the *Inferno*, depicting Virgil's welcome as he returns among the great ancient poets spending eternity in limbo. The ensuing line, *L'ombra sua torna, ch'era dipartita* ("his spirit, which had left us, returns"), is poignantly absent from the empty tomb.

In 2007, a reconstruction of Dante's face was undertaken in a collaborative project. Artists from Pisa University and engineers at the University of Bologna at Forlì constructed the model, portraying Dante's features as somewhat different from what was once thought.<sup>[8]</sup>

## Works

*See also Works by Dante Alighieri*

The *Divine Comedy* describes Dante's journey through Hell (*Inferno*), Purgatory (*Purgatorio*), and Paradise (*Paradiso*), guided first by the Roman poet Virgil and then by Beatrice, the subject of his love and of another of his works, *La Vita Nuova*. While the vision of Hell, the *Inferno*, is vivid for modern readers, the theological niceties presented in the other books require a certain amount of patience and knowledge to appreciate. *Purgatorio*, the most lyrical and human of the three, also has the most poets in it; *Paradiso*, the most heavily theological, has the most beautiful and ecstatic mystic passages in which Dante tries to describe what he confesses he is unable to convey (e.g., when Dante looks into the face of God: "all'alta fantasia qui mancò possa" — "at this high moment, ability failed my capacity to describe," *Paradiso*, XXXIII, 142).



Dante's tomb in Ravenna, built in 1780



Cenotaph in Basilica of Santa Croce, Florence



Dante, poised between the mountain of purgatory and the city of Florence, displays the incipit *Nel mezzo del cammin di nostra vita* in a detail of Domenico di Michelino's painting, Florence, 1465.

With its seriousness of purpose, its literary stature and the range — both stylistically and subjectwise—of its content, the *Comedy* soon became a cornerstone in the evolution of Italian as an established literary language. Dante was more aware than most earlier Italian writers of the variety of Italian dialects and of the need to create a literature, and a unified literary language, beyond the limits of Latin writing at the time; in that sense he is a forerunner of the Renaissance, with its effort to create vernacular literature in competition with earlier classical writers. Dante's in-depth knowledge (within the limits of his time) of Roman antiquity, and his evident admiration for some aspects of pagan Rome, also point forward to the 15th century. Ironically, while he was widely honored in the centuries after his death, the *Comedy* slipped out of fashion among men of letters: too medieval, too

rough and tragic, and not stylistically refined in the respects that the high and late Renaissance came to demand of literature.

He wrote the *Comedy* in a language he called "Italian", in some sense an amalgamated literary language mostly based on the regional dialect of Tuscany, but with some elements of Latin and other regional dialects. He deliberately aimed to reach a readership throughout Italy including laymen, clergymen and other poets. By creating a poem of epic structure and philosophic purpose, he established that the Italian language was suitable for the highest sort of expression. In French, Italian is sometimes nicknamed *la langue de Dante*. Publishing in the vernacular language marked Dante as one of the first (among others such as Geoffrey Chaucer and Giovanni Boccaccio) to break free from standards of publishing in only Latin (the language of liturgy, history and scholarship in general but often also of lyric poetry). This break set a precedent and allowed more literature to be published for a wider audience, setting the stage for greater levels of literacy in the future. However, unlike Boccaccio, Milton or Ariosto, Dante did not really become an author read all over Europe until the Romantic era. To the Romantics, Dante, like Homer and Shakespeare, was a prime example of the "original genius" who sets his own rules, creates persons of overpowering stature and depth and goes far beyond any imitation of the patterns of earlier masters and who, in turn, cannot really be imitated. Throughout the 19th century, Dante's reputation grew and solidified, and by the time of the 1865 jubilee, he had become solidly established as one of the greatest literary icons of the Western world.

Readers often cannot understand how such a serious work may be called a "comedy". In Dante's time, all serious scholarly works were written in Latin, a tradition that would persist for several hundred years more until the waning years of the Enlightenment, and works written in any other language were assumed to be more trivial in nature. Furthermore, the word "comedy" in the classical sense refers to works which reflect belief in an ordered universe, in which events tended toward not only a happy or amusing ending but one influenced by a Providential will that orders all things to an ultimate good. By this meaning of the word, as Dante himself wrote in a letter to Cangrande I della Scala, the progression of the pilgrimage from Hell to Paradise is the paradigmatic expression of comedy since the work begins with the pilgrim's moral confusion and ends with the vision of God.



Dante Alighieri, attributed to Giotto, in the chapel of the Bargello palace in Florence. This oldest picture of Dante was painted just prior to his exile and has since been heavily restored.



Statue of Dante Alighieri in Verona

Dante's other works include *Convivio* ("The Banquet"),<sup>[9]</sup> a collection of his longest poems with an (unfinished) allegorical commentary; *Monarchia*,<sup>[10]</sup> a summary treatise of political philosophy in Latin which was condemned and burned after Dante's death<sup>[11][12]</sup> by the Papal Legate Bertrando del Poggetto, which argues for the necessity of a universal or global monarchy in order to establish universal peace in this life, and this monarchy's relationship to the Roman Catholic Church as guide to eternal peace; *De vulgari eloquentia* ("On the Eloquence of Vernacular"),<sup>[13]</sup> on vernacular literature, partly inspired by the *Razos de trobar* of Raimon Vidal de Bezaudun; and, *La Vita Nuova* ("The New Life"),<sup>[14]</sup> the story of his love for Beatrice

Portinari, who also served as the ultimate symbol of salvation in the *Comedy*. The *Vita Nuova* contains many of Dante's love poems in Tuscan, which was not unprecedented; the vernacular had been regularly used for lyric works before, during all the thirteenth century. However, Dante's commentary on his own work is also in the vernacular—both in the *Vita Nuova* and in the *Convivio*—instead of the Latin that was almost universally used. References to *Divina Commedia* are in the format (book, canto, verse), e.g., (*Inferno*, XV, 76).

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- [2] His birth date is listed as "probably in the end of May" by Robert Hollander in "Dante" in *Dictionary of the Middle Ages*, volume 4. According to Boccaccio, the poet himself said he was born in May. See "ALIGHIERI, Dante" in the *Dizionario Biografico degli Italiani*.
- [3] Malcolm Moore "Dante's infernal crimes forgiven", (<http://www.telegraph.co.uk/news/newstopics/howaboutthat/2145378/Dante-s-infernal-crimes-forgiven.html>) *Daily Telegraph*, June 17, 2008. Retrieved on June 18, 2008.
- [4] See Bookrags.com (<http://www.bookrags.com/tandf/francesco-daccorso-tf/>) and Tigerstedt, E.N. 1967, *Dante; Tiden Mannen Verket (Dante; The Age, the Man, the Work)*, Bonniers, Stockholm, 1967.
- [7] ;
- [8] Benazzi S. (2009). "The Face of the Poet Dante Alighieri, Reconstructed by Virtual Modelling and Forensic Anthropology Techniques". *Journal of Archaeological Science* 36 (2): 278–283.
- [11] Anthony K. Cassell The Monarchia Controversy (<http://cuapress.cua.edu/BOOKS/viewbook.cfm?Book=CAMC>). The Monarchia stayed on the Index Librorum Prohibitorum from its inception until 1881.
- [12] Giuseppe Cappelli, La divina commedia di Dante Alighieri ([http://books.google.it/books?id=\\_ssFAAAAQAAJ&pg=RA1-PA28&lpg=RA1-PA28&dq=dante+de+monarchia+bertrando&source=web&ots=NCqp5oQsQq&sig=47buQld-37Cg8XgjLAmlMvm2Bl&hl=it](http://books.google.it/books?id=_ssFAAAAQAAJ&pg=RA1-PA28&lpg=RA1-PA28&dq=dante+de+monarchia+bertrando&source=web&ots=NCqp5oQsQq&sig=47buQld-37Cg8XgjLAmlMvm2Bl&hl=it)), in Italian.


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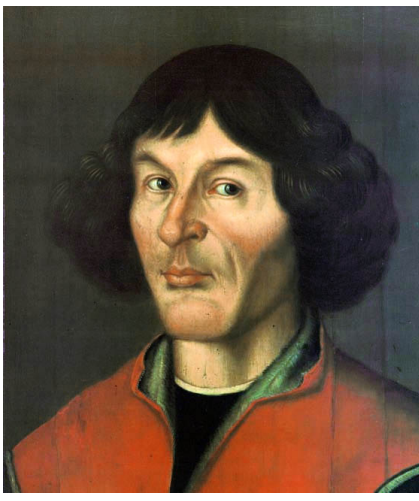
## Further reading

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## External links

- Dante Alighieri (<http://plato.stanford.edu/entries/dante>) entry by Winthrop Wetherbee in the *Stanford Encyclopedia of Philosophy*
- The World of Dante (<http://www.worldofdante.org/>) multimedia, texts, maps, gallery, searchable database, music, teacher resources, timeline
- The Princeton Dante Project (<http://etcweb.princeton.edu/dante/index.html>) texts and multimedia
- The Dartmouth Dante Project (<http://dante.dartmouth.edu/>) searchable database of commentary
- Società Dantesca Italiana (bilingual site) ([http://www.danteonline.it/english/home\\_ita.asp](http://www.danteonline.it/english/home_ita.asp)) manuscripts of works, images and text transcripts
- "Digital Dante" (<http://dante.ilt.columbia.edu/>) – Divine Comedy with commentary, other works, scholars on Dante
- Yale Course on Dante (<http://oyc.yale.edu/italian-language-and-literature/ital-310>)
- Works (<http://www.intratext.com/catalogo/Autori/Aut11.htm>) Italian and Latin texts, concordances and frequency lists
- Works by or about Dante Alighieri (<http://worldcat.org/identities/lccn-n78-95495>) in libraries (WorldCat catalog)
- Works by Dante Alighieri (<http://www.gutenberg.org/author/Dante+Alighieri>) at Project Gutenberg
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# Nicolaus Copernicus

<b>Nicolaus Copernicus</b>	
	
Portrait, 1580, Toruń Old Town City Hall	
<b>Born</b>	19 February 1473 Toruń (Thorn), Royal Prussia, Kingdom of Poland
<b>Died</b>	24 May 1543 (aged 70) Frombork (Frauenburg), Prince-Bishopric of Warmia, Royal Prussia, Kingdom of Poland
<b>Fields</b>	Mathematics, astronomy, canon law, medicine, economics
<b>Alma mater</b>	University of Kraków University of Bologna University of Padua University of Ferrara
<b>Known for</b>	Heliocentrism Copernicus' Law
<b>Signature</b>	

**Nicolaus Copernicus** (German: *Nikolaus Kopernikus*; Polish:  <sup>ⓘ</sup> *Mikołaj Kopernik* *Wikipedia:Media helpFile:Pl-Mikołaj Kopernik.ogg*; 19 February 1473 – 24 May 1543) was a Renaissance mathematician and astronomer who formulated a heliocentric model of the universe which placed the Sun, rather than the Earth, at the center.<sup>[1]</sup>

The publication of Copernicus' book, *De revolutionibus orbium coelestium* (*On the Revolutions of the Celestial Spheres*), just before his death in 1543, is considered a major event in the history of science. It began the Copernican Revolution and contributed importantly to the scientific revolution.

Copernicus was born and died in Royal Prussia, a region of the Kingdom of Poland since 1466. Copernicus had a doctorate in canon law and, though without degrees, was a physician, polyglot, classics scholar, translator, governor, diplomat, and economist who in 1517 set down a quantity theory of money, a principal concept in economics to the present day, and formulated a version of Gresham's law in the year 1519, before Gresham.<sup>[2]</sup>

## Life

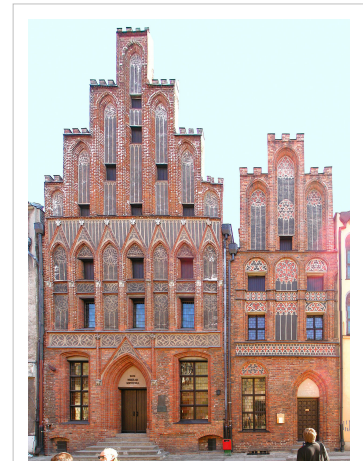
Nicolaus Copernicus was born on 19 February 1473 in the city of Toruń (Thorn), in the province of Royal Prussia, in the Crown of the Kingdom of Poland.<sup>[[]]</sup> His father was a merchant from Kraków and his mother was the daughter of a wealthy Toruń merchant.<sup>[3]</sup> Nicolaus was the youngest of four children. His brother Andreas (Andrew) became an Augustinian canon at Frombork (Frauenburg).<sup>[3]</sup> His sister Barbara, named after her mother, became a Benedictine nun and, in her final years, prioress of a convent in Chełmno (Kulm); she died after 1517.<sup>[3]</sup> His sister Katharina married the businessman and Toruń city councilor Barthel Gertner and left five children, whom Copernicus looked after to the end of his life.<sup>[3]</sup> Copernicus never married or had children.<sup>[citation needed]</sup>

## Father's family

The father's family can be traced to a village in Silesia near Nysa (Neiße). The village's name has been variously spelled Kopernik,<sup>[4]</sup> Copernik, Copernic, Kopernic, Copirnik, and today Koperniki.<sup>[5]</sup> In the 14th century, members of the family began moving to various other Silesian cities, to the Polish capital, Kraków (1367), and to Toruń (1400).<sup>[5]</sup> The father, Mikołaj the Elder, likely the son of Jan, came from the Kraków line.<sup>[5]</sup>

Nicolaus was named after his father, who appears in records for the first time as a well-to-do merchant who dealt in copper, selling it mostly in Danzig (Gdańsk).<sup>[6][7]</sup> He moved from Kraków to Toruń around 1458.<sup>[8]</sup> Toruń, situated on the Vistula River, was at that time embroiled in the Thirteen Years' War (1454–66), in which the Kingdom of Poland and the Prussian Confederation, an alliance of Prussian cities, gentry and clergy, fought the Teutonic Order over control of the region. In this war, Hanseatic cities like Danzig and Toruń, Nicolaus Copernicus' hometown, chose to support the Polish King, Casimir IV Jagiellon, who promised to respect the cities' traditional vast independence, which the Teutonic Order had challenged. Nicolaus' father was actively engaged in the politics of the day and supported Poland and the cities against the Teutonic Order.<sup>[9]</sup> In 1454 he mediated negotiations between Poland's Cardinal Zbigniew Oleśnicki and the Prussian cities for repayment of war loans.<sup>[5]</sup> In the Second Peace of Thorn (1466), the Teutonic Order formally relinquished all claims to its western provinces, which as Royal Prussia remained a region of Poland for the next 300 years.

Copernicus' father married Barbara Watzenrode, the astronomer's mother, between 1461 and 1464.<sup>[5]</sup> He died about 1483.<sup>[3]</sup>



Toruń birthplace (ul. Kopernika 15, left). Together with the house at no. 17 (right), it forms the *Muzeum Mikołaja Kopernika*.

## Mother's family



Copernicus' maternal uncle, Lucas Watzenrode the Younger

Nicolaus' mother, Barbara Watzenrode, was the daughter of a wealthy Toruń patrician and city councillor, Lucas Watzenrode the Elder (deceased 1462), and Katarzyna (widow of Jan Peckau), mentioned in other sources as Katarzyna "Rüdiger gente Modlibog" (deceased 1476).<sup>[3]</sup> The Watzenrode family, like the Kopernik family, had come from Silesia from near Świdnica (Schweidnitz), and after 1360 had settled in Toruń. They soon became one of the wealthiest and most influential patrician families.<sup>[3]</sup> Through the Watzenrodes' extensive family relationships by marriage, Copernicus was related to wealthy families of Toruń, Danzig and Elbląg (Elbing), and to prominent noble families of Prussia: the Czapskis, Działyńskis, Konopackis and Kościeleckis.<sup>[3]</sup> The Modlibóg's (the Polish name means "Pray God") were a prominent Polish family who had been well known in Poland's history since 1271.<sup>[10]</sup> Lucas and Katherine had three children: Lucas Watzenrode the Younger (1447-1512), who would become

Bishop of Warmia and Copernicus' patron; Barbara, the astronomer's mother (deceased after 1495); and Christina (deceased before 1502), who in 1459 married the Toruń merchant and mayor, Tiedeman von Allen.<sup>[3]</sup>

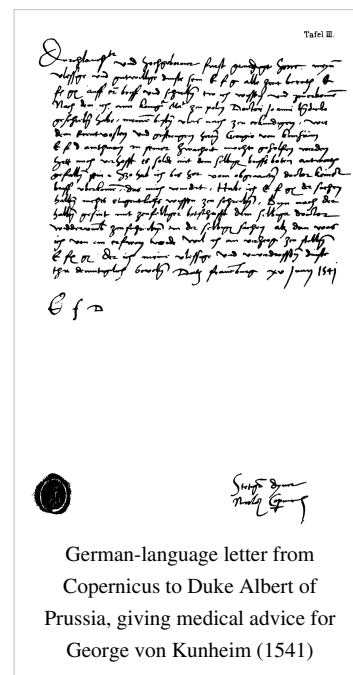
Lucas Watzenrode the Elder, a wealthy merchant and owner of the village of Sławkowo, and in 1439-62 president of the judicial bench, was a decided opponent of the Teutonic Knights.<sup>[3]</sup> In 1453 he was the delegate from Toruń at the Grudziądz (Graudenz) conference that planned the uprising against the Teutonic Knights.<sup>[3]</sup> During the ensuing Thirteen Years' War (1454–66), he actively supported the Prussian cities' war effort with substantial monetary subsidies (only part of which he later re-claimed), with political activity in Toruń and Danzig, and by personally fighting in battles at Łasin (Lessen) and Malbork (Marienburg).<sup>[3]</sup> He died in 1462.<sup>[3]</sup>

Lucas Watzenrode the Younger, the astronomer's maternal uncle and patron, was educated at the University of Kraków (now Jagiellonian University) and at the universities of Cologne and Bologna. He was a bitter opponent of the Teutonic Order,<sup>[11][12]</sup> and its Grand Master once referred to him as "the devil incarnate".<sup>[13]</sup> In 1489 Watzenrode was elected Bishop of Warmia (Ermeland, Ermland) against the preference of King Casimir IV, who had hoped to install his own son in that seat. As a result, Watzenrode quarreled with the king until Casimir IV's death three years later.<sup>[1]</sup> Watzenrode was then able to form close relations with three successive Polish monarchs: John I Albert, Alexander Jagiellon, and Sigismund I the Old. He was a friend and key advisor to each ruler, and his influence greatly strengthened the ties between Warmia and Poland proper.<sup>[13][14]</sup> Watzenrode came to be considered the most powerful man in Warmia, and his wealth, connections and influence allowed him to secure Copernicus' education and career as a canon at Frombork Cathedral.<sup>[15][16]</sup>

## Languages

Copernicus is postulated to have spoken Latin, German, and Polish with equal fluency. He also spoke Greek and Italian.<sup>[17][18][19][20]</sup> The vast majority of Copernicus' surviving works are in Latin, which in his lifetime was the language of academia in Europe.<sup>[citation needed]</sup> Latin was also the official language of the Roman Catholic Church and of Poland's royal court, and thus all of Copernicus' correspondence with the Church and with Polish leaders was in Latin.<sup>[citation needed]</sup>

There survive a few documents written by Copernicus in German. The German philosophy professor Martin Carrier mentions this as a reason to consider Copernicus' native language to have been German.<sup>[21]</sup> Other arguments for German being Copernicus' native tongue are that he was born in a predominantly German-speaking city and that, while studying canon law at Bologna in 1496, he signed into the German *natio* (*Natio Germanorum*)—a student organization which, according to its 1497 by-laws, was open to students of all kingdoms and states whose mother-tongue ("Muttersprache") was German.<sup>[22]</sup> However, according to French philosopher Alexandre Koyré, Copernicus' registration with the *Natio Germanorum* does not in itself imply that Copernicus considered himself German, since students from Prussia and Silesia were routinely so categorized, which carried certain privileges that made it a natural choice for German-speaking students, regardless of their ethnicity or self-identification.<sup>[23][24][25][26]</sup>



## Name

In Copernicus' time, people were often called after the places where they lived. Like the Silesian village that inspired it, Copernicus' surname has been spelled variously. The surname likely had something to do with the local Silesian copper-mining industry,<sup>[1]</sup> though some scholars assert that it may have been inspired by the dill plant (in Polish, "*koperek*" or "*kopernik*") that grows wild in Silesia.<sup>[27]</sup>

As was to be the case with William Shakespeare a century later,<sup>[28]</sup> numerous spelling variants of the name are documented for the astronomer and his relatives. The name first appeared as a place name in Silesia in the 13th century, where it was spelled variously in Latin documents. Copernicus "was rather indifferent about orthography".<sup>[29]</sup> During his childhood, about 1480, the name of his father (and thus of the future astronomer) was recorded in Thorn as *Niclas Koppernigk*.<sup>[30]</sup> At Kraków he signed himself, in Latin, *Nicolaus Nicolai de Torunia* (Nicolaus, son of Nicolaus, of Toruń).<sup>[31]</sup> At Bologna, in 1496, he registered in the *Matricula Nobilissimi Germanorum Collegii, resp. Annales Clarissimae Nacionis Germanorum*, of the *Natio Germanica Bononiae*, as *Dominus Nicolaus Kopperlingk de Thorn – IX grosseti*.<sup>[32][33]</sup> At Padua he signed himself "Nicolaus Copernik", later "Coppernicus".<sup>[29]</sup> The astronomer thus Latinized his name to *Copernicus*, generally with two "p"s (in 23 of 31 documents studied),<sup>[34]</sup> but later in life he used a single "p". On the title page of *De revolutionibus*, Rheticus published the name as (in the genitive, or possessive, case) "*Nicolai Copernici*".<sup>[citation needed]</sup>

## Education

### In Poland

Upon the father's death, young Nicolaus' maternal uncle, Lucas Watzenrode the Younger (1447–1512), took the boy under his wing and saw to his education and career.<sup>[3]</sup> Watzenrode maintained contacts with leading intellectual figures in Poland and was a friend of the influential Italian-born humanist and Kraków courtier, Filippo Buonaccorsi.<sup>[35]</sup> There are no surviving primary documents on the early years of Copernicus' childhood and education.<sup>[3]</sup> Copernicus biographers assume that Watzenrode first sent young Copernicus to St. John's School, at Toruń, where he himself had been a master.<sup>[3]</sup> Later, according to Armitage,<sup>[36]</sup> the boy attended the Cathedral School at Włocławek, up the Vistula River from Toruń, which prepared pupils for entrance to the University of Kraków, Watzenrode's alma mater in Poland's capital.<sup>[37]</sup>

In the winter semester of 1491–92 Copernicus, as "Nicolaus Nicolai de Thuronia", matriculated together with his brother Andrew at the University of Kraków (now Jagiellonian University).<sup>[3]</sup> Copernicus began his studies in the Department of Arts (from the fall of 1491, presumably until the summer or fall of 1495) in the heyday of the Kraków astronomical-mathematical school, acquiring the foundations for his subsequent mathematical achievements.<sup>[3]</sup> According to a later but credible tradition (Jan Brożek), Copernicus was a pupil of Albert Brudzewski, who by then (from 1491) was a professor of Aristotelian philosophy but taught astronomy privately outside the university; Copernicus became familiar with Brudzewski's widely read commentary to Georg von Peurbach's *Theoricæ novæ planetarum* and almost certainly attended the lectures of Bernard of Biskupie and Wojciech Krypa of Szamotuły, and probably other astronomical lectures by Jan of Głogów, Michał of Wrocław (Breslau), Wojciech of Pniewy, and Marcin Bylica of Olkusz.<sup>[38]</sup>

Copernicus' Kraków studies gave him a thorough grounding in the mathematical-astronomical knowledge taught at the university (arithmetic, geometry, geometric optics, cosmography, theoretical and computational astronomy), a good knowledge of the philosophical and natural-science writings of Aristotle (*De coelo*, *Metaphysics*), stimulated his interest in learning, and made him conversant with humanistic culture.<sup>[15]</sup> Copernicus broadened the knowledge that he took from the university lecture halls with independent reading of books that he acquired during his Kraków years (Euclid, Haly Abenragel, the *Alfonsine Tables*, Johannes Regiomontanus' *Tabulae directionum*); to this period, probably, also date his earliest scientific notes, now preserved partly at Uppsala University.<sup>[15]</sup> At Kraków Copernicus began collecting a large library on astronomy; it would later be carried off as war booty by the Swedes during the Deluge in 1650s and is now at the Uppsala University Library.<sup>[citation needed]</sup>

Copernicus' four years at Kraków played an important role in the development of his critical faculties and initiated his analysis of the logical contradictions in the two most popular systems of astronomy—Aristotle's theory of homocentric spheres, and Ptolemy's mechanism of eccentrics and epicycles—the surmounting and discarding of which constituted the first step toward the creation of Copernicus' own doctrine of the structure of the universe.<sup>[15]</sup>



Collegium Maius, Kraków



Nicolaus Copernicus Monument in Kraków

Without taking a degree, probably in the fall of 1495, Copernicus left Kraków for the court of his uncle Watzenrode, who in 1489 had been elevated to Prince-Bishop of Warmia and soon (before November 1495) sought to place his nephew in the Warmia canonry vacated by the 26 August 1495 death of its previous tenant, Jan Czanow. For unclear reasons—probably due to opposition from part of the chapter, who appealed to Rome—Copernicus' installation was delayed, inclining Watzenrode to send both his nephews to study canon law in Italy, seemingly with a view to furthering their ecclesiastic careers and thereby also strengthening his own influence in the Warmia chapter.<sup>[15]</sup>

Leaving Warmia in mid-1496—possibly with the retinue of the chapter's chancellor, Jerzy Pranghe, who was going to Italy—in the fall (October?) of that year Copernicus arrived in Bologna and a few months later (after 6 January 1497) signed himself into the register of the Bologna University of Jurists' "German nation", which also included young Poles from Silesia, Prussia and Pomerania, as well as students of other nationalities.<sup>[15]</sup>

### In Italy

It was only on 20 October 1497 that Copernicus, by proxy, formally succeeded to the Warmia canonry which had been granted to him two years earlier. To this, by a document dated 10 January 1503 at Padua, he would add a sinecure at the Collegiate Church of the Holy Cross in Wrocław, Silesia, Bohemia. Despite having been granted a papal indult on 29 November 1508 to receive further benefices, through his ecclesiastic career Copernicus not only did not acquire further prebends and higher stations (prelacies) at the chapter, but in 1538 he relinquished the Wrocław sinecure. It is uncertain whether he was ordained a priest; he may only have taken minor orders, which sufficed for assuming a chapter canonry.<sup>[15]</sup>



Via Galliera 65, Bologna, site of house of Domenico Maria Novara. Plaque on portico commemorates Copernicus.

During his three-year stay at Bologna, between fall 1496 and spring 1501, Copernicus seems to have devoted himself less keenly to studying canon law (he received his doctorate in law only after seven years, following a second return to Italy in 1503) than to studying the humanities—probably attending lectures by Filippo Beroaldo, Antonio Urceo, called Codro, Giovanni Garzoni, and Alessandro Achillini—and to studying astronomy. He met the famous astronomer Domenico Maria Novara da Ferrara and became his disciple and assistant. Copernicus was developing new ideas inspired by reading the "Epitome of the Almagest" (*Epitome in Almagestum Ptolemei*) by George von Peurbach and Johannes Regiomontanus (Venice, 1496). He verified its observations about certain peculiarities in Ptolemy's theory of the Moon's motion, by conducting on 9 March 1497 at Bologna a memorable observation of Aldebaran, the brightest star in the Taurus constellation, whose results reinforced his doubts as to the geocentric system. Copernicus the humanist sought

confirmation for his growing doubts through close reading of Greek and Latin authors (Pythagoras, Aristarchos of Samos, Cleomedes, Cicero, Pliny the Elder, Plutarch, Philolaus, Heraclides, Ecphantos, Plato), gathering, especially while at Padua, fragmentary historic information about ancient astronomical, cosmological and calendar systems.<sup>[39]</sup>

Copernicus spent the jubilee year 1500 in Rome, where he arrived with his brother Andrew that spring, doubtless to perform an apprenticeship at the Papal Curia. Here, too, however, he continued his astronomical work begun at Bologna, observing, for example, a lunar eclipse on the night of 5–6 November 1500. According to a later

account by Rheticus, Copernicus also—probably privately, rather than at the Roman *Sapienza*—as a "*Professor Mathematicum*" (professor of astronomy) delivered, "to numerous... students and... leading masters of the science", public lectures devoted probably to a critique of the mathematical solutions of contemporary astronomy.<sup>[40]</sup>

On his return journey doubtless stopping briefly at Bologna, in mid-1501 Copernicus arrived back in Warmia. After on 28 July receiving from the chapter a two-year extension of leave in order to study medicine (since "he may in future be a useful medical advisor to our Reverend Superior [Bishop Lucas Watzenrode] and the gentlemen of the chapter"), in late summer or in the fall he returned again to Italy, probably accompanied by his brother Andrew and by Canon B. Sculteti. This time he studied at the University of Padua, famous as a seat of medical learning, and—except for a brief visit to Ferrara in May–June 1503 to pass examinations for, and receive, his doctorate in canon law—he remained at Padua from fall 1501 to summer 1503.<sup>[40]</sup>

Copernicus studied medicine probably under the direction of leading Padua professors—Bartolomeo da Montagnana, Girolamo Fracastoro, Gabriele Zerbi, Alessandro Benedetti—and read medical treatises that he acquired at this time, by Valescus de Taranta, Jan Mesue, Hugo Senensis, Jan Ketham, Arnold de Villa Nova, and Michele Savonarola, which would form the embryo of his later medical library.<sup>[40]</sup>

One of the subjects that Copernicus must have studied was astrology, since it was considered an important part of a medical education.<sup>[41]</sup> However, unlike most other prominent Renaissance astronomers, he appears never to have practiced or expressed any interest in astrology.<sup>[42]</sup>

As at Bologna, Copernicus did not limit himself to his official studies. It was probably the Padua years that saw the beginning of his Hellenistic interests. He familiarized himself with Greek language and culture with the aid of Theodorus Gaza's grammar (1495) and J.B. Chrestonius' dictionary (1499), expanding his studies of antiquity, begun at Bologna, to the writings of Basilii Bessarion, Lorenzo Valla and others. There also seems to be evidence that it was during his Padua stay that the idea finally crystallized, of basing a new system of the world on the movement of the Earth.<sup>[40]</sup>

As the time approached for Copernicus to return home, in spring 1503 he journeyed to Ferrara where, on 31 May 1503, having passed the obligatory examinations, he was granted the degree of doctor of canon law. No doubt it was soon after (at latest, in fall 1503) that he left Italy for good to return to Warmia.<sup>[40]</sup>



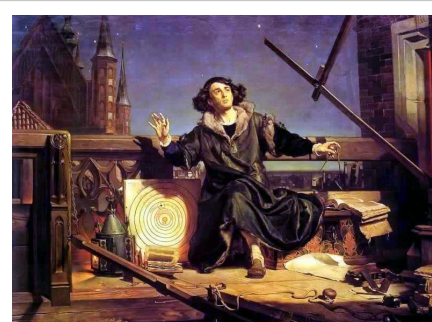
"Here, where stood the house of Domenico Maria Novara, professor of the ancient Studium of Bologna, NICOLAUS COPERNICUS, the Polish mathematician and astronomer who would revolutionize concepts of the universe, conducted brilliant celestial observations with his teacher in 1497–1500. Placed on the 5th centenary of [Copernicus'] birth by the City, the University, the Academy of Sciences of the Institute of Bologna, the Polish Academy of Sciences. 1473 [—] 1973."

## Work

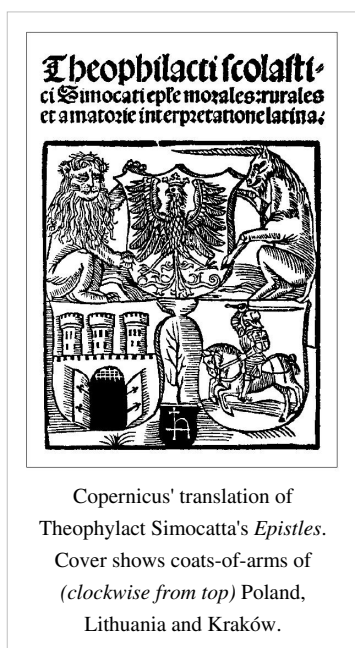
Having completed all his studies in Italy, 30-year-old Copernicus returned to Warmia, where he would live out the remaining 40 years of his life, apart from brief journeys to Kraków and to nearby Prussian cities: Toruń (Thorn), Gdańsk (Danzig), Elbląg (Elbing), Grudziądz (Graudenz), Malbork (Marienburg), Königsberg (Królewiec).<sup>[40]</sup>

The Prince-Bishopric of Warmia enjoyed substantial autonomy, with its own diet (parliament) and monetary unit (the same as in the other parts of Royal Prussia) and treasury.<sup>[43]</sup>

Copernicus was his uncle's secretary and physician from 1503 to 1510 (or perhaps till his uncle's death on 29 March 1512) and resided in the Bishop's castle at Lidzbark (Heilsberg), where he began work on his heliocentric theory. In his official capacity, he took part in nearly all his uncle's political, ecclesiastic and administrative-economic duties. From the beginning of 1504, Copernicus accompanied Watzenrode to sessions of the Royal Prussian diet held at Malbork and Elbląg and, write Dobrzycki and Hajdukiewicz, "participated... in all the more important events in the complex diplomatic game that ambitious politician and statesman played in defense of the particular interests of Prussia and Warmia, between hostility to the [Teutonic] Order and loyalty to the Polish Crown."<sup>[40]</sup>



*Astronomer Copernicus, or Conversations with God*, by Matejko. In background: Frombork Cathedral.



Copernicus' translation of Theophylact Simocatta's *Epistles*. Cover shows coats-of-arms of (clockwise from top) Poland, Lithuania and Kraków.

In 1504–12 Copernicus made numerous journeys as part of his uncle's retinue—in 1504, to Toruń and Gdańsk, to a session of the Royal Prussian Council in the presence of Poland's King Alexander Jagiellon; to sessions of the Prussian diet at Malbork (1506), Elbląg (1507) and Sztum (Stuhm) (1512); and he may have attended a Poznań (Posen) session (1510) and the coronation of Poland's King Sigismund I the Old in Kraków (1507). Watzenrode's itinerary suggests that in spring 1509 Copernicus may have attended the Kraków sejm.<sup>[40]</sup>

It was probably on the latter occasion, in Kraków, that Copernicus submitted for printing at Jan Haller's press his translation, from Greek to Latin, of a collection, by the 7th-century Byzantine historian Theophylact Simocatta, of 85 brief poems called Epistles, or letters, supposed to have passed between various characters in a Greek story. They are of three kinds—"moral," offering advice on how people should live; "pastoral", giving little pictures of shepherd life; and "amorous", comprising love poems. They are arranged to follow one another in a regular rotation of subjects. Copernicus had translated the Greek verses into Latin prose, and he now published his version as *Theophilacti scolastici Simocati epistolae morales, rurales et amatoriae interpretatione latina*, which he dedicated to his

uncle in gratitude for all the benefits he had received from him. With this translation, Copernicus declared himself on the side of the humanists in the struggle over the question whether Greek literature should be revived.<sup>[44]</sup> Copernicus' first poetic work was a Greek epigram, composed probably during a visit to Kraków, for Johannes Dantiscus' epithalamium for Barbara Zapolya's 1512 wedding to King Zygmunt I the Old.<sup>[45]</sup>

Some time before 1514, Copernicus wrote an initial outline of his heliocentric theory known only from later transcripts, by the title (perhaps given to it by a copyist), *Nicolai Copernici de hypothesibus motuum coelestium a se constitutis commentariolus*—commonly referred to as the *Commentariolus*. It was a succinct theoretical description of the world's heliocentric mechanism, without mathematical apparatus, and differed in some important details of geometric construction from *De revolutionibus*; but it was already based on the same assumptions regarding Earth's triple motions. The *Commentariolus*, which Copernicus consciously saw as merely a first sketch for his planned

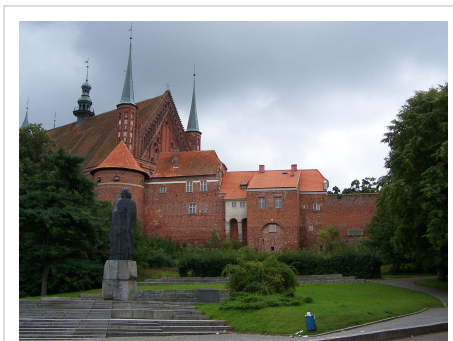
book, was not intended for printed distribution. He made only a very few manuscript copies available to his closest acquaintances, including, it seems, several Kraków astronomers with whom he collaborated in 1515–30 in observing eclipses. Tycho Brahe would include a fragment from the *Commentariolus* in his own treatise, *Astronomiae instauratae progymnasmata*, published in Prague in 1602, based on a manuscript that he had received from the Bohemian physician and astronomer Tadeáš Hájek, a friend of Rheticus. The *Commentariolus* would appear complete in print for the first time only in 1878.<sup>[45]</sup>

In 1510 or 1512 Copernicus moved to Frombork, a town to the northwest at the Vistula Lagoon on the Baltic Sea coast. There, in April 1512, he participated in the election of Fabian of Lossainen as Prince-Bishop of Warmia. It was only in early June 1512 that the chapter gave Copernicus an "external curia"—a house outside the defensive walls of the cathedral mount. In 1514 he purchased the northwestern tower within the walls of the Frombork stronghold. He would maintain both these residences to the end of his life, despite the devastation of the chapter's buildings by a raid against Frauenburg carried out by the Teutonic Order in January 1520, during which Copernicus' astronomical instruments were probably destroyed. Copernicus conducted astronomical observations in 1513–16 presumably from his external curia; and in 1522–43, from an unidentified "small tower" (*turricula*), using primitive instruments modeled on ancient ones—the quadrant, triquetrum, armillary sphere. At Frombork Copernicus conducted over half of his more than 60 registered astronomical observations.<sup>[45]</sup>



Copernicus' tower at Frombork, where he lived and worked; rebuilt recently

Having settled permanently at Frombork, where he would reside to the end of his life, with interruptions in 1516–19 and 1520–21, Copernicus found himself at the Warmia chapter's economic and administrative center, which was also one of Warmia's two chief centers of political life. In the difficult, politically complex situation of Warmia, threatened externally by the Teutonic Order's aggressions (attacks by Teutonic bands; the Polish-Teutonic War of 1519–21; Albert's plans to annex Warmia), internally subject to strong separatist pressures (the selection of the prince-bishops of Warmia; currency reform), he, together with part of the chapter, represented a program of strict cooperation with the Polish Crown and demonstrated in all his public activities (the defense of his country against the Order's plans of conquest; proposals to unify its monetary system with the Polish Crown's; support for Poland's interests in the Warmia dominion's ecclesiastic administration) that he was consciously a citizen of the Polish-Lithuanian Republic. Soon after the death of uncle Bishop Watzenrode, he participated in the signing of the Second Treaty of Piotrków Trybunalski (7 December 1512), governing the appointment of the Bishop of Warmia, declaring, despite opposition from part of the chapter, for loyal cooperation with the Polish Crown.<sup>[45]</sup>



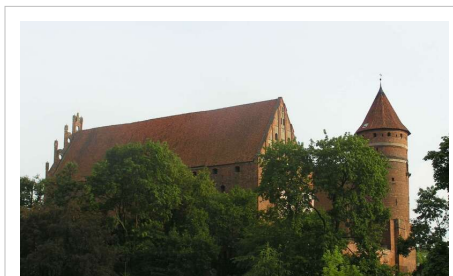
Frombork Cathedral mount and fortifications. In foreground: statue of Copernicus

That same year (before 8 November 1512) Copernicus assumed responsibility, as *magister pistoriae*, for administering the chapter's economic enterprises (he would hold this office again in 1530), having already since 1511 fulfilled the duties of chancellor and visitor of the chapter's estates.<sup>[45]</sup>

His administrative and economic duties did not distract Copernicus, in 1512–15, from intensive observational activity. The results of his observations of Mars and Saturn in this period, and especially a series of four observations of the Sun made in 1515, led to discovery of the variability of Earth's eccentricity and of the movement of the solar

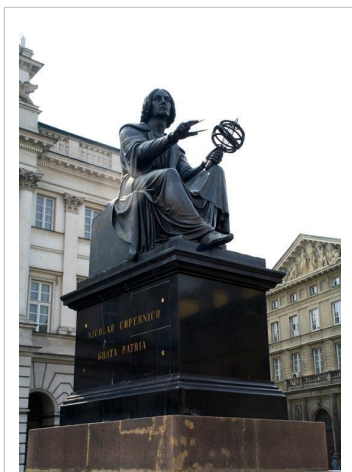
apogee in relation to the fixed stars, which in 1515–19 prompted his first revisions of certain assumptions of his system. Some of the observations that he made in this period may have had a connection with a proposed reform of the Julian calendar made in the first half of 1513 at the request of the Bishop of Fossombrone, Paul of Middelburg. Their contacts in this matter in the period of the Fifth Lateran Council were later memorialized in a complimentary mention in Copernicus' dedicatory epistle in *De revolutionibus orbium coelestium* and in a treatise by Paul of Middelburg, *Secundum compendium correctionis Calendarii* (1516), which mentions Copernicus among the learned men who had sent the Council proposals for the calendar's emendation.<sup>[46]</sup>

During 1516–21, Copernicus resided at Olsztyn (Allenstein) Castle as economic administrator of Warmia, including Olsztyn (Allenstein) and Pieniężno (Mehlsack). While there, he wrote a manuscript, *Locationes mansorum desertorum* (*Locations of Deserted Fiefs*), with a view to populating those fiefs with industrious farmers and so bolstering the economy of Warmia. When Olsztyn was besieged by the Teutonic Knights during the Polish–Teutonic War (1519–21), Copernicus directed the defense of Olsztyn and Warmia by Royal Polish forces. He also represented the Polish side in the ensuing peace negotiations.<sup>[47]</sup>



Olsztyn Castle

Copernicus for years advised the Royal Prussian sejmik on monetary reform, particularly in the 1520s when that was a major question in regional Prussian politics.<sup>[48]</sup> In 1526 he wrote a study on the value of money, *Monetae cudendae ratio*. In it he formulated an early iteration of the theory, now called Gresham's law, that "bad" (debased) coinage drives "good" (un-debased) coinage out of circulation—several decades before Thomas Gresham. He also, in 1517, set down a quantity theory of money, a principal concept in economics to the present day. Copernicus' recommendations on monetary reform were widely read by leaders of both Prussia and Poland in their attempts to stabilize currency.<sup>[1]</sup>

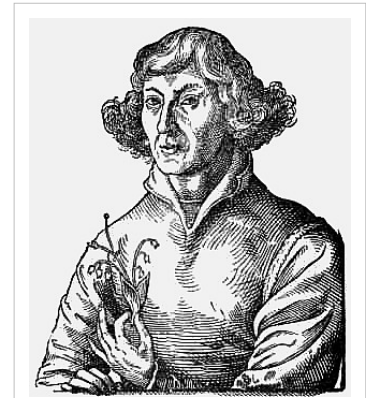
Thorvaldsen's Copernicus Monument  
in Warsaw

In 1533, Johann Widmanstetter, secretary to Pope Clement VII, explained Copernicus' heliocentric system to the Pope and two cardinals. The Pope was so pleased that he gave Widmanstetter a valuable gift.<sup>[49]</sup> In 1535 Bernard Wapowski wrote a letter to a gentleman in Vienna, urging him to publish an enclosed almanac, which he claimed had been written by Copernicus. This is the only mention of a Copernicus almanac in the historical records. The "almanac" was likely Copernicus' tables of planetary positions. Wapowski's letter mentions Copernicus' theory about the motions of the earth. Nothing came of Wapowski's request, because he died a couple of weeks later.<sup>[49]</sup>

Following the death of Prince-Bishop of Warmia Mauritius Ferber (1 July 1537), Copernicus participated in the election of his successor, Johannes Dantiscus (20 September 1537). Copernicus was one of four candidates for the post, written in at the initiative of Tiedemann Giese; but his candidacy was actually *pro forma*, since Dantiscus had earlier been named coadjutor bishop to Ferber.<sup>[50]</sup> At first

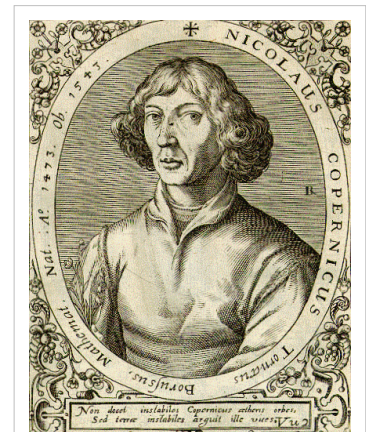
Copernicus maintained friendly relations with the new Prince-Bishop, assisting him medically in spring 1538 and accompanying him that summer on an inspection tour of Chapter holdings. But that autumn, their friendship was strained by suspicions over Copernicus' housekeeper, Anna Schilling, whom Dantiscus removed from Frombork in 1539.<sup>[50]</sup>

In his younger days, Copernicus the physician had treated his uncle, brother and other chapter members. In later years he was called upon to attend the elderly bishops who in turn occupied the see of Warmia—Mauritius Ferber and Johannes Dantiscus — and, in 1539, his old friend Tiedemann Giese, Bishop of Chełmno (Kulm). In treating such important patients, he sometimes sought consultations from other physicians, including the physician to Duke Albert and, by letter, the Polish Royal Physician.<sup>[51]</sup>



Copernicus with medicinal plant

In the spring of 1541, Duke Albert summoned Copernicus to Königsberg to attend the Duke's counselor, George von Kunheim, who had fallen seriously ill, and for whom the Prussian doctors seemed unable to do anything. Copernicus went willingly; he had met von Kunheim during negotiations over reform of the coinage. And Copernicus had come to feel that Albert himself was not such a bad person; the two had many intellectual interests in common. The Chapter readily gave Copernicus permission to go, as it wished to remain on good terms with the Duke, despite his Lutheran faith. In about a month the patient recovered, and Copernicus returned to Frombork. For a time, he continued to receive reports on von Kunheim's condition, and to send him medical advice by letter.<sup>[52]</sup> Throughout this period of his life, Copernicus continued making astronomical observations and calculations, but only as his other responsibilities permitted and never in a professional capacity.<sup>[citation needed]</sup>



"Nicolaus Copernicus Tornæus Borussus Mathemat.", 1597

Some of Copernicus' close friends turned Protestant, but Copernicus never showed a tendency in that direction. The first attacks on him came from Protestants. Wilhelm Gnapheus, a Dutch refugee settled in Elbląg, wrote a comedy in Latin, *Morosophus* (The Foolish Sage), and staged it at the Latin school that he had established there. In the play, Copernicus was caricatured as a haughty, cold, aloof man who dabbled in astrology, considered himself inspired by God, and was rumored to have written a large work that was moldering in a chest.<sup>[35]</sup>

Elsewhere Protestants were the first to react to news of Copernicus' theory. Melanchthon wrote:

Some people believe that it is excellent and correct to work out a thing as absurd as did that Sarmatian [i.e., Polish] astronomer who moves the earth and stops the sun. Indeed, wise rulers should have curbed such light-mindedness.<sup>[35]</sup>

Nevertheless, in 1551, eight years after Copernicus' death, astronomer Erasmus Reinhold published, under the sponsorship of Copernicus' former military adversary, the Protestant Duke Albert, the *Prussian Tables*, a set of astronomical tables based on Copernicus' work. Astronomers and astrologers quickly adopted it in place of its predecessors.<sup>[53]</sup>

## Heliocentrism

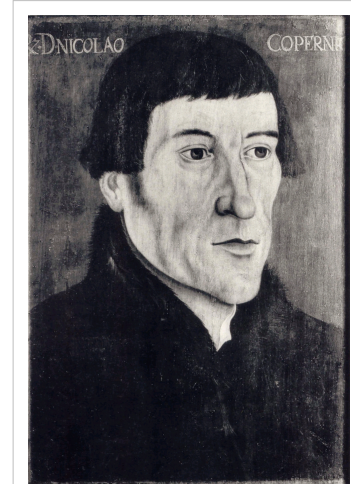
Some time before 1514 Copernicus made available to friends his "Commentariolus" ("Little Commentary"), a forty-page manuscript describing his ideas about the heliocentric hypothesis.<sup>[54]</sup> It contained seven basic assumptions (detailed below).<sup>[55]</sup> Thereafter he continued gathering data for a more detailed work.

About 1532 Copernicus had basically completed his work on the manuscript of *De revolutionibus orbium coelestium*; but despite urging by his closest friends, he resisted openly publishing his views, not wishing—as he confessed—to risk the scorn "to which he would expose himself on account of the novelty and incomprehensibility of his theses."<sup>[50]</sup>

In 1533, Johann Albrecht Widmannstetter delivered a series of lectures in Rome outlining Copernicus' theory. Pope Clement VII and several Catholic cardinals heard the lectures and were interested in the theory. On 1 November 1536, Cardinal Nikolaus von Schönberg, Archbishop of Capua, wrote to Copernicus from Rome:

Some years ago word reached me concerning your proficiency, of which everybody constantly spoke. At that time I began to have a very high regard for you... For I had learned that you had not merely mastered the discoveries of the ancient astronomers uncommonly well but had also formulated a new cosmology. In it you maintain that the earth moves; that the sun occupies the lowest, and thus the central, place in the universe... Therefore with the utmost earnestness I entreat you, most learned sir, unless I inconvenience you, to communicate this discovery of yours to scholars, and at the earliest possible moment to send me your writings on the sphere of the universe together with the tables and whatever else you have that is relevant to this subject ...<sup>[1]</sup>

By then Copernicus' work was nearing its definitive form, and rumors about his theory had reached educated people all over Europe. Despite urgings from many quarters, Copernicus delayed publication of his book, perhaps from fear of criticism—a fear delicately expressed in the subsequent dedication of his masterpiece to Pope Paul III. Scholars disagree on whether Copernicus' concern was limited to possible astronomical and philosophical objections, or whether he was also concerned about religious objections.<sup>[56]</sup>



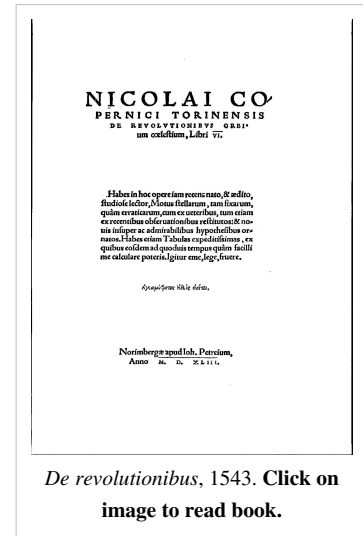
Mid-16th-century portrait.  
Photograph of a portrait of Copernicus by an unknown painter. The original was looted—possibly destroyed—by the Germans in World War II.

## The book

Copernicus was still working on *De revolutionibus orbium coelestium* (even if not certain that he wanted to publish it) when in 1539 Georg Joachim Rheticus, a Wittenberg mathematician, arrived in Frombork. Philipp Melanchthon, a close theological ally of Martin Luther, had arranged for Rheticus to visit several astronomers and study with them. Rheticus became Copernicus' pupil, staying with him for two years and writing a book, *Narratio prima* (First Account), outlining the essence of Copernicus' theory. In 1542 Rheticus published a treatise on trigonometry by Copernicus (later included in the second book of *De revolutionibus*).<sup>[citation needed]</sup>

Under strong pressure from Rheticus, and having seen the favorable first general reception of his work, Copernicus finally agreed to give *De revolutionibus* to his close friend, Tiedemann Giese, bishop of Chełmno (Kulm), to be delivered to Rheticus for printing by the German printer Johannes Petreius at Nuremberg (*Nürnberg*), Germany. While Rheticus initially supervised the printing, he had to leave Nuremberg before it was completed, and he handed over the task of supervising the rest of the printing to a Lutheran theologian, Andreas Osiander.<sup>[57]</sup>

Osiander added an unauthorised and unsigned preface, defending the work against those who might be offended by the novel hypotheses. He explained that astronomers may find different causes for observed motions, and choose whatever is easier to grasp. As long as a hypothesis allows reliable computation, it does not have to match what a philosopher might seek as the truth.<sup>[citation needed]</sup>



*De revolutionibus*, 1543. [Click on image to read book.](#)

## Death



1735 epitaph, Frombork Cathedral. A 1580 epitaph had been destroyed.

Toward the close of 1542, Copernicus was seized with apoplexy and paralysis, and he died at age 70 on 24 May 1543. Legend has it that he was presented with an advance copy of his *De revolutionibus orbium coelestium* on the very day that he died, allowing him to take farewell of his life's work. He is reputed to have awoken from a stroke-induced coma, looked at his book, and then died peacefully.<sup>[citation needed]</sup>

Copernicus was reportedly buried in Frombork Cathedral, where archaeologists for over two centuries searched in vain for his remains. Efforts to locate the remains in 1802, 1909, 1939 and 2004 had come to nought. In August 2005, however, a team led by Jerzy Gąssowski, head of an archaeology and anthropology institute in Pułtusk, after scanning beneath the cathedral floor, discovered what they believed to be Copernicus' remains.<sup>[1]</sup>

The find came after a year of searching, and the discovery was announced only after further research, on 3 November 2008. Gąssowski said he was "almost 100 percent sure it is Copernicus".<sup>[1]</sup> Forensic expert Capt. Dariusz Zajdel of the Polish Police Central Forensic Laboratory used the skull to reconstruct a face that closely resembled the features—including a broken nose and a scar above the left eye—on a Copernicus self-portrait.<sup>[1]</sup> The expert also determined that the skull belonged to a man who had died around age 70—Copernicus' age at the time of his death.<sup>[1]</sup>

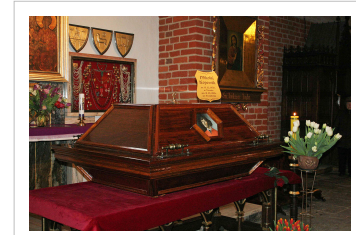
The grave was in poor condition, and not all the remains of the skeleton were found; missing, among other things, was the lower jaw.<sup>[1]</sup> The DNA from the bones found in the grave matched hair samples taken from a book owned by Copernicus which was kept at the library of the University of Uppsala in Sweden.<sup>[1][2]</sup>

On 22 May 2010 Copernicus was given a second funeral in a Mass led by Józef Kowalczyk, the former papal nuncio to Poland and newly named Primate of Poland. Copernicus' remains were reburied in the same spot in Frombork Cathedral where part of his skull and other bones had been found. A black granite tombstone now identifies him as the founder of the heliocentric theory and also a church canon. The tombstone bears a representation of Copernicus' model of the solar system—a golden sun encircled by six of the planets.<sup>[1]</sup>

## Copernican system

### Predecessors

Philolaus (c. 480–385 BCE) described an astronomical system in which a Central Fire (different from the Sun) occupied the centre of the universe, and a counter-Earth, the Earth, Moon, the Sun itself, planets, and stars all revolved around it, in that order outward from the centre.<sup>[58]</sup> Heraclides Ponticus (387–312 BCE) proposed that the Earth rotates on its axis.<sup>[59]</sup> Aristarchus of Samos (310 BCE – c. 230 BCE) identified the "central fire" with the Sun, around which he had the Earth orbiting.<sup>[60]</sup> Some technical details of Copernicus's systemTemplate:Efjn closely resembled those developed earlier by the Islamic astronomers Naṣīr al-Dīn al-Ṭūsī and Ibn al-Shāṭir, both of whom retained a geocentric model. Aryabhata (476–550), in his magnum opus *Aryabhatiya* (499), propounded a planetary model in which the Earth was taken to be spinning on its axis and the periods of the planets were given with respect to the Sun. He accurately calculated many astronomical constants, such as the periods of the planets, times of the solar and lunar eclipses, and the instantaneous motion of the Moon.<sup>[citation needed]</sup>



Casket with Copernicus' remains, St. James' Cathedral Basilica, Allenstein, March 2010

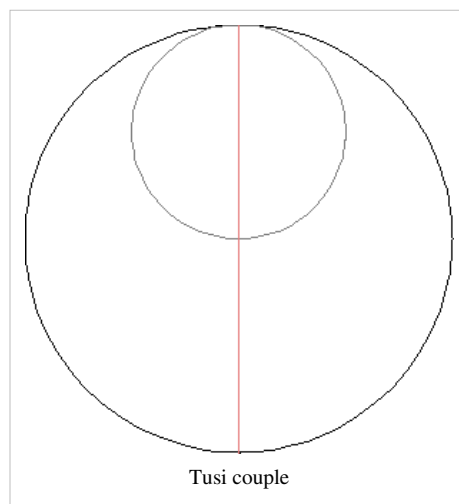


Frombork Cathedral



Copernicus' 2010 grave, Frombork Cathedral

At the Maragha observatory, Najm al-Dīn al-Qazwīnī al-Kātibī (d. 1277), in his *Hikmat al-'Ain*, wrote an argument for a heliocentric model, but later abandoned the model. Qutb al-Din Shirazi (b. 1236) also discussed the possibility of heliocentrism, but rejected it.[41] Ibn al-Shatir (b. 1304) developed a geocentric system that employed mathematical techniques, such as the Tusi couple and Urdi lemma, that were almost identical to those Nicolaus Copernicus later employed in his heliocentric system, implying that its mathematical model was influenced by the Maragha school.<sup>[61]</sup>



Nilakantha Somayaji (1444–1544), in his *Aryabhatiyabhasya*, a commentary on Aryabhata's *Aryabhatiya*, developed a computational system for a partially heliocentric planetary model, in which the planets orbit the Sun, which in turn orbits the Earth, similar to the Tychonic system later proposed by Tycho Brahe in the late 16th century. In the *Tantrasangraha* (1500), he further revised his planetary system, which was mathematically more accurate at predicting the heliocentric orbits of the interior planets than both the Tychonic and Copernican models.<sup>[citation needed]</sup>

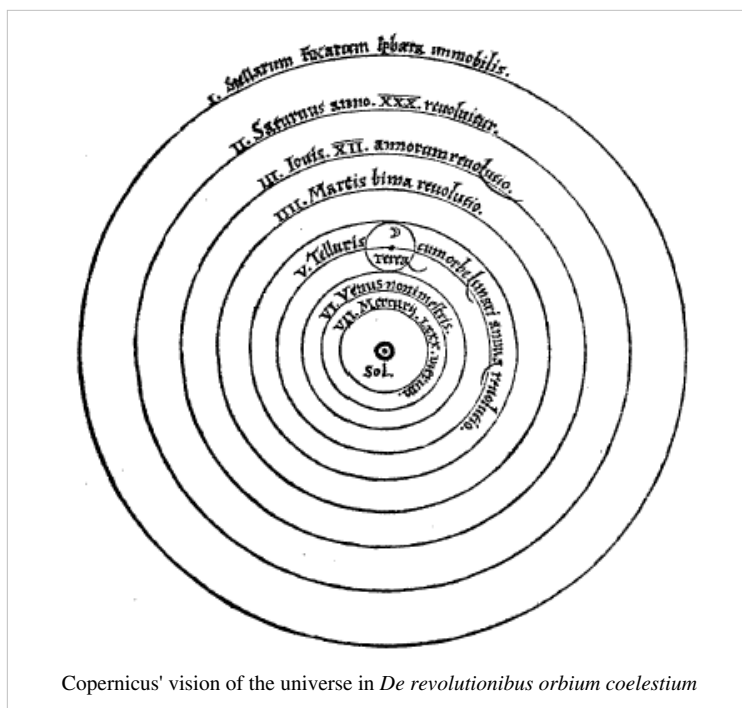
The prevailing theory in Europe during Copernicus' lifetime was the one that Ptolemy published in his *Almagest* circa 150 CE; the Earth was the stationary center of the universe. Stars were embedded in a large outer sphere which rotated rapidly, approximately daily, while each of the planets, the Sun, and the Moon were embedded in their own, smaller spheres. Ptolemy's system employed devices, including epicycles, deferents and equants, to account for observations that the paths of these bodies differed from simple, circular orbits centered on the Earth.<sup>[citation needed]</sup>

## Copernicus

Copernicus' major theory was published in *De revolutionibus orbium coelestium* (*On the Revolutions of the Celestial Spheres*), in the year of his death, 1543, though he had formulated the theory several decades earlier.<sup>[citation needed]</sup>

Copernicus' "Commentariolus" summarized his heliocentric theory. It listed the "assumptions" upon which the theory was based as follows:<sup>[citation needed]</sup>

1. There is no one center of all the celestial circles or spheres.
2. The center of the earth is not the center of the universe, but only of gravity and of the lunar sphere.
3. All the spheres revolve about the sun as their mid-point, and therefore the sun is the center of the universe.
4. The ratio of the earth's distance from the sun to the height of the firmament (outermost celestial sphere containing the stars) is so much smaller than the ratio of the earth's radius to its distance from the sun that the distance from the earth to the sun is imperceptible in comparison with the height of the



firmament.

5. Whatever motion appears in the firmament arises not from any motion of the firmament, but from the earth's motion. The earth together with its circumjacent elements performs a complete rotation on its fixed poles in a daily motion, while the firmament and highest heaven abide unchanged.

6. What appear to us as motions of the sun arise not from its motion but from the motion of the earth and our sphere, with which we revolve about the sun like any other planet. The earth has, then, more than one motion.

7. The apparent retrograde and direct motion of the planets arises not from their motion but from the earth's. The motion of the earth alone, therefore, suffices to explain so many apparent inequalities in the heavens."<sup>[62]</sup>

*De revolutionibus* itself was divided into six parts, called "books":<sup>[citation needed]</sup>

1. General vision of the heliocentric theory, and a summarized exposition of his idea of the World
2. Mainly theoretical, presents the principles of spherical astronomy and a list of stars (as a basis for the arguments developed in the subsequent books)
3. Mainly dedicated to the apparent motions of the Sun and to related phenomena
4. Description of the Moon and its orbital motions
5. Exposition of the motions in longitude of the non-terrestrial planets
6. Exposition of the motions in latitude of the non-terrestrial planets

## Successors

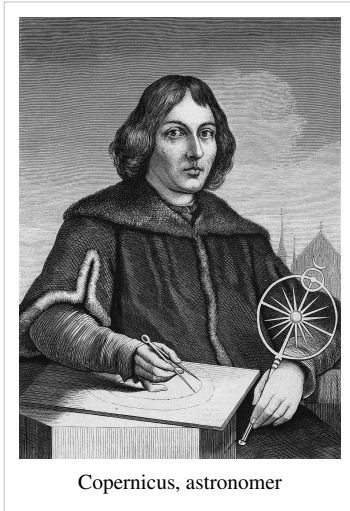
Georg Joachim Rheticus could have been Copernicus' successor, but did not rise to the occasion.<sup>[49]</sup> Erasmus Reinhold could have been his successor, but died prematurely.<sup>[49]</sup> The first of the great successors was Tycho Brahe<sup>[49]</sup> (though he did not think the earth orbited the sun), followed by Johannes Kepler,<sup>[49]</sup> who had worked as Tycho's assistant in Prague.<sup>[citation needed]</sup>

Despite the near universal acceptance today of the basic heliocentric idea (though not the epicycles or the circular orbits), Copernicus' theory was originally slow to catch on. Scholars hold that sixty years after the publication of *The Revolutions* there were only around 15 astronomers espousing Copernicanism in all of Europe: "Thomas Digges and Thomas Harriot in England; Giordano Bruno and Galileo Galilei in Italy; Diego Zuniga in Spain; Simon Stevin in the Low Countries; and in Germany, the largest group – Georg Joachim Rheticus, Michael Maestlin, Christoph Rothmann (who may have later recanted),<sup>[63]</sup> and Johannes Kepler."<sup>[63]</sup> Additional possibilities are Englishman William Gilbert, along with Achilles Gasser, Georg Vogelin, Valentin Otto, and Tiedemann Giese.<sup>[63]</sup>

Arthur Koestler, in his popular book *The Sleepwalkers*, asserted that Copernicus' book had not been widely read on its first publication.<sup>[64]</sup> This claim was trenchantly criticised by Edward Rosen,<sup>[65]</sup> and has been decisively disproved by Owen Gingerich, who examined every surviving copy of the first two editions and found copious marginal notes by their owners throughout many of them. Gingerich published his conclusions in 2004 in *The Book Nobody Read*.<sup>□</sup>

The intellectual climate of the time "remained dominated by Aristotelian philosophy and the corresponding Ptolemaic astronomy. At that time there was no reason to accept the Copernican theory, except for its mathematical simplicity [by avoiding using the equant in determining planetary positions]."<sup>□</sup> Tycho Brahe's system ("that the earth is stationary, the sun revolves about the earth, and the other planets revolve about the sun")<sup>□</sup> also directly competed with Copernicus'. It was only a half century later with the work of Kepler and Galileo that any substantial evidence defending Copernicanism appeared, starting "from the time when Galileo formulated the principle of inertia...[which] helped to explain why everything would not fall off the earth if it were in motion."<sup>□</sup> It was not until "after Isaac Newton formulated the universal law of gravitation and the laws of mechanics [in his 1687 *Principia*], which unified terrestrial and celestial mechanics, was the heliocentric view generally accepted."<sup>□</sup>

## Controversy



Copernicus, astronomer

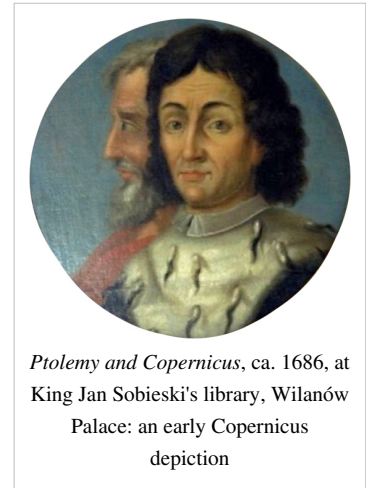
Only mild controversy (and no fierce sermons) was the immediate result of the publication of Copernicus' book. At the Council of Trent neither Copernicus' theory nor calendar reform (which would later use tables deduced from Copernicus' calculations) were discussed.<sup>[citation needed]</sup>

The first notable to move against Copernicanism was the Magister of the Holy Palace (i.e., the Catholic Church's chief censor), Dominican Bartolomeo Spina, who "expressed a desire to stamp out the Copernican doctrine".<sup>[[66]</sup> But with Spina's death in 1546, his cause fell to his friend, the well known theologian-astronomer, the Dominican Giovanni Maria Tolosani of the Convent of St. Mark in Florence. Tolosani had written a treatise on reforming the calendar (in which astronomy would play a large role), and had attended the Fifth Lateran Council to discuss the matter. He had obtained a copy of *De Revolutionibus* in 1544. His denouncement of Copernicanism appeared in an appendix to his work entitled *On the Truth of Sacred Scripture*.<sup>[67]</sup>

Emulating the rationalistic style of Thomas Aquinas, Tolosani sought to refute Copernicanism on philosophical arguments. While still invoking Christian Scripture and Tradition, Tolosani strove to show Copernicanism was absurd because it was unproven and unfounded on three main points. First Copernicus had assumed the motion of the Earth but offered no physical theory whereby one would deduce this motion. (No one realized that the investigation into Copernicanism would result in a rethinking of the entire field of physics.) Second Tolosani charged that Copernicus' thought process was backwards. He held that Copernicus had come up with his idea and then sought phenomena that would support it, rather than observing phenomena and deducing from that the idea of what caused it. In this Tolosani was linking Copernicus' mathematical equations with the practices of the Pythagoreans (whom Aristotle had made arguments against, which were later picked up by Thomas Aquinas). It was argued that mathematical numbers were a mere product of the intellect without any physical reality, and as such "numbers could not provide physical causes in the investigation of nature."<sup>[[</sup> (This was basically a denial of the possibility of mathematical physics.)<sup>[citation needed]</sup>

Some astronomical hypotheses at the time (such as epicycles and eccentrics) were seen as mere mathematical devices to adjust calculations of where the heavenly bodies would appear, rather than an explanation of the cause of those motions. (As Copernicus still maintained the idea of perfectly spherical orbits he relied on epicycles). This "saving the phenomena" was seen as proof that astronomy and mathematics could not be taken as a serious means to determine physical causes. Holding this view, Tolosani invoked it in his final critique of Copernicus, saying his biggest error was that he started with "inferior" fields of science to make pronouncements about "superior" fields. Copernicus had used Mathematics and Astronomy to postulate about Physics and Cosmology, rather than beginning with the accepted principles of Physics and Cosmology to determine things about Astronomy and Math. In this way Copernicus seemed to be undermining the whole system of the philosophy of science at the time. Tolosani held that Copernicus had just fallen into philosophical error because he hadn't been versed in physics and logic - anyone without such knowledge would make a poor astronomer and be unable to distinguish truth from falsehood. Because it had not meet the criteria for scientific truth set out by Thomas Aquinas, Tolosani held that Copernicanism could only be viewed as a wild unproven theory.<sup>[citation needed]</sup>

Tolosani recognized that the *Ad Lectorem* preface to Copernicus' book wasn't actually by him. Its thesis that astronomy as a whole would never be able to make truth claims was rejected by Tolosani, (though he still held that Copernicus' attempt to describe physical reality had been faulty), he found it ridiculous that *Ad Lectorem* had been included in the book (unaware that Copernicus hadn't authorized its inclusion). Tolosani wrote "By means of these words [of the *Ad Lectorem*], the foolishness of this book's author is rebuked. For by a foolish effort he [Copernicus] tried to revive the weak Pythagorean opinion [that the element of fire was at the center of the Universe], long ago deservedly destroyed, since it is expressly contrary to human reason and also opposes holy writ. From this situation, there could easily arise disagreements between Catholic expositors of holy scripture and those who might wish to adhere obstinately to this false opinion. We have written this little work for the purpose of avoiding this scandal."<sup>[1]</sup> Tolosani declared "Nicolaus Copernicus neither read nor understood the arguments of Aristotle the philosopher and Ptolemy the astronomer."<sup>[2]</sup> He wrote that Copernicus "is very deficient in the sciences of physics and logic. Moreover, it appears that he is unskilled with regard to [the interpretation of] holy scripture, since he contradicts several of its principles, not without danger of infidelity to himself and the readers of his book. ...his arguments have no force and can very easily be taken apart. For it is stupid to contradict an opinion accepted by everyone over a very long time for the strongest reasons, unless the impugner uses more powerful and insoluble demonstrations and completely dissolves the opposed reasons. But he does not do this in the least."<sup>[3]</sup> He declared that he had written against Copernicus "for the purpose of preserving the truth to the common advantage of the Holy Church."<sup>[4]</sup> Despite the efforts Tolosani put into his work it remained unpublished and it "was likely shelved in the library of the Dominican order at San Marco in Florence, awaiting its use by some new prosecutor" (it is believed that Dominican Tommaso Caccini read it before delivering a sermon against Galileo in December 1613).<sup>[5]</sup>



*Ptolemy and Copernicus*, ca. 1686, at King Jan Sobieski's library, Wilanów Palace: an early Copernicus depiction

It has been much debated why it was not until six decades after the publication of *De revolutionibus* that the Catholic Church took any official action against it, even the efforts of Tolosani had gone unheeded. Proposed reasons have included the personality of Galileo Galilei and the availability of evidence such as telescope observations.<sup>[citation needed]</sup>

How entwined the pre-Copernican theory was in theological circles can be seen in a sample of the works of John Calvin. In his *Commentary on Genesis* he said that "We indeed are not ignorant that the circuit of the heavens is finite, and that the earth, like a little globe, is placed in the centre."<sup>[1]</sup> Commenting on Job 26:7 Calvin wrote "It is true that Job specifically says 'the north,' and yet he is speaking about the whole heaven. And that is because the sky turns around upon the pole that is there. For, just as in the wheels of a chariot there is an axle that runs through the middle of them, and the wheels turn around the axle by reason of the holes that are in the middle of them, even so is it in the skies. This is manifestly seen; that is to say, those who are well acquainted with the course of the firmament see that the sky so turns."<sup>[2]</sup> Calvin's commentaries on the Psalms also show a reliance on the pre-Copernican theory; for Psalms 93:1 "The heavens revolve daily, and, immense as is their fabric and inconceivable the rapidity of their revolutions, we experience no concussion – no disturbance in the harmony of their motion. The sun, though varying its course every diurnal revolution, returns annually to the same point. The planets, in all their wanderings, maintain their respective positions. How could the earth hang suspended in the air were it not upheld by God's hand? By what means could it maintain itself unmoved, while the heavens above are in constant rapid motion, did not its Divine Maker fix and establish it."<sup>[3]</sup> Commenting on Psalms 19:4 Calvin says "the firmament, by its own revolution draws with it all the fixed stars".<sup>[4]</sup> There is no evidence that Calvin was aware of Copernicus, and claims that after quoting Psalm 93:1 he went on to say "Who will venture to place the authority of Copernicus above the Holy Spirit", have been discredited and shown to originate with Frederic William Farrar's *Bampton Lecture* in 1885.<sup>[5]</sup> Unlike Calvin many theologians did become aware of Copernicus' theory which became increasingly controversial.<sup>[citation needed]</sup>

The sharpest point of conflict between Copernicus' theory and the Bible concerned the story of the Battle of Gibeon in the Book of Joshua where the Hebrew forces were winning but whose opponents were likely to escape once night fell. This is averted by Joshua's prayers causing the sun and the moon to stand still. Martin Luther once made a remark about Copernicus, although without mentioning his name. According to Anthony Lauterbach, while eating with Martin Luther the topic of Copernicus arose during dinner on 4 June 1539 (in the same year as professor George Joachim Rheticus of the local University had been granted leave to visit him). Luther is said to have remarked "So it goes now. Whoever wants to be clever must agree with nothing others esteem. He must do something of his own. This is what *that fellow* does who wishes to turn the whole of astronomy upside down. Even in these things that are thrown into disorder I believe the Holy Scriptures, for Joshua commanded the sun to stand still and not the earth."<sup>[1]</sup> These remarks were made four years before the publication of *On the Revolutions of the Heavenly Spheres* and a year before Rheticus' *Narratio Prima*. In John Aurifaber's account of the conversation Luther calls Copernicus "that fool" rather than "that fellow", this version is viewed by historians as less reliably sourced.<sup>[1]</sup>

Luther's collaborator Philipp Melanchthon also took issue with Copernicanism. After receiving the first pages of *Narratio Prima* from Rheticus himself, Melanchthon wrote to Mithobius (physician and mathematician Burkard Mithob of Feldkirch) on 16 October 1541 condemning the theory and calling for it to be repressed by governmental force, writing "certain people believe it is a marvelous achievement to extol so crazy a thing, like that Polish astronomer who makes the earth move and the sun stand still. Really, wise governments ought to repress impudence of mind."<sup>[68]</sup> It had appeared to Rheticus that Melanchthon would understand the theory and would be open to it. This was because Melanchthon had taught Ptolemaic astronomy and had even recommended his friend Rheticus to an appointment to the Deanship of the Faculty of Arts & Sciences at the University of Wittenberg after he had returned from studying with Copernicus.<sup>[citation needed]</sup>

Rheticus' hopes were dashed when six years after the publication of *De Revolutionibus* Melanchthon published his *Initia Doctrinae Physicae* presenting three grounds to reject Copernicanism, these were "the evidence of the senses, the thousand-year consensus of men of science, and the authority of the Bible".<sup>[1]</sup> Blasting the new theory Melanchthon wrote "Out of love for novelty or in order to make a show of their cleverness, some people have argued that the earth moves. They maintain that neither the eighth sphere nor the sun moves, whereas they attribute motion to the other celestial spheres, and also place the earth among the heavenly bodies. Nor were these jokes invented recently. There is still extant Archimedes' book on *The sand-reckoner*; in which he reports that Aristarchus of Samos propounded the paradox that the sun stands still and the earth revolves around the sun. Even though subtle experts institute many investigations for the sake of exercising their ingenuity, nevertheless public proclamation of absurd opinions is indecent and sets a harmful example."<sup>[68]</sup> Melanchthon went on to cite Bible passages and then declare "Encouraged by this divine evidence, let us cherish the truth and let us not permit ourselves to be alienated from it by the tricks of those who deem it an intellectual honor to introduce confusion into the arts."<sup>[68]</sup> In the first edition of *Initia Doctrinae Physicae*, Melanchthon even questioned Copernicus' character claiming his motivation was "either from love of novelty or from desire to appear clever", these more personal attacks were largely removed by the second edition in 1550.<sup>[1]</sup>

Another Protestant theologian who took issue with Copernicus was John Owen who declared that "the late hypothesis, fixing the sun as in the centre of the world' was 'built on fallible phenomena, and advanced by many arbitrary presumptions against evident testimonies of Scripture."<sup>[69]</sup>

In Roman Catholic circles, German Jesuit Nicolaus Serarius was one of the first to write against Copernicus' theory as heretical, citing the Joshua passage, in a work published in 1609–1610, and again in a book in 1612.<sup>[citation needed]</sup>

In his 12 April 1615 letter to a Catholic defender of Copernicus, Paolo Antonio Foscarini, Catholic Cardinal Robert Bellarmine condemned Copernican theory, writing "...not only the Holy Fathers, but also the modern commentaries on Genesis, the Psalms, Ecclesiastes, and Joshua, you will find all agreeing in the literal interpretation that the sun is in heaven and turns around the earth with great speed, and that the earth is very far from heaven and sits motionless

at the center of the world...Nor can one answer that this is not a matter of faith, since if it is not a matter of faith 'as regards the topic,' it is a matter of faith 'as regards the speaker': and so it would be heretical to say that Abraham did not have two children and Jacob twelve, as well as to say that Christ was not born of a virgin, because both are said by the Holy Spirit through the mouth of prophets and apostles."<sup>[1]</sup>

Perhaps the strongest opponent to Copernican theory was Francesco Ingoli, a Catholic priest. Ingoli wrote a January 1616 essay condemning Copernicanism as "philosophically untenable and theologically heretical."<sup>[1]</sup> Though "it is not certain, it is probable that he was commissioned by the Inquisition to write an expert opinion on the controversy",<sup>[1]</sup> (after the Congregation of the Index's decree against Copernicanism on 5 March 1616 Ingoli was officially appointed its consultant). Two of Ingoli's theological issues with Copernicus' theory were "common Catholic beliefs not directly traceable to Scripture: the doctrine that hell is located at the center of Earth and is most distant from heaven; and the explicit assertion that Earth is motionless in a hymn sung on Tuesdays as part of the Liturgy of the Hours of the Divine Office prayers regularly recited by priests."<sup>[1]</sup> Ingoli also cited Genesis 1:14 where YHWH places "lights in the firmament of the heavens to divide the day from the night."<sup>[1]</sup> Like previous commentators Ingoli pointed to the passages about the Battle of Gibeon and dismissed arguments that they should be taken metaphorically, saying "Replies which assert that Scripture speaks according to our mode of understanding are not satisfactory: both because in explaining the Sacred Writings the rule is always to preserve the literal sense, when it is possible, as it is in this case; and also because all the [Church] Fathers unanimously take this passage to mean that the sun which was truly moving stopped at Joshua's request. An interpretation which is contrary to the unanimous consent of the Fathers is condemned by the Council of Trent, Session IV, in the decree on the edition and use of the Sacred Books. Furthermore, although the Council speaks about matters of faith and morals, nevertheless it cannot be denied that the Holy Fathers would be displeased with an interpretation of Sacred Scriptures which is contrary to their common agreement."<sup>[1]</sup>

In March 1616, in connection with the Galileo affair, the Roman Catholic Church's Congregation of the Index issued a decree suspending *De revolutionibus* until it could be "corrected", on the grounds that the supposedly Pythagorean doctrine that the Earth moves and the Sun does not was "false and altogether opposed to Holy Scripture".<sup>[70]</sup> The same decree also prohibited any work that defended the mobility of the Earth or the immobility of the Sun, or that attempted to reconcile these assertions with scripture.<sup>[citation needed]</sup>

On the orders of Pope Paul V, Cardinal Robert Bellarmine gave Galileo prior notice that the decree was about to be issued, and warned him that he could not "hold or defend" the Copernican doctrine.<sup>[71]</sup> The corrections to *De revolutionibus*, which omitted or altered nine sentences, were issued four years later, in 1620.<sup>[72]</sup>

In 1633 Galileo Galilei was convicted of grave suspicion of heresy for "following the position of Copernicus, which is contrary to the true sense and authority of Holy Scripture",<sup>[73]</sup> and was placed under house arrest for the rest of his life.<sup>[citation needed]</sup>

At the instance of Roger Boscovich, the Catholic Church's 1758 *Index of Prohibited Books* omitted the general prohibition of works defending heliocentrism,<sup>[74]</sup> but retained the specific prohibitions of the original uncensored versions of *De revolutionibus* and Galileo's *Dialogue Concerning the Two Chief World Systems*. Those prohibitions were finally dropped from the 1835 *Index*.<sup>[75]</sup>

## Nationality

There has been discussion of Copernicus' nationality and of whether, in fact, it is meaningful to ascribe to him a nationality in the modern sense.

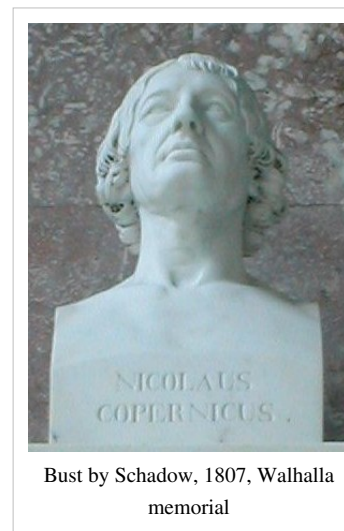
Historian Michael Burleigh describes the nationality debate as a "totally insignificant battle" between German and Polish scholars during the interwar period.<sup>[1]</sup> Polish astronomer Konrad Rudnicki calls the discussion a "fierce scholarly quarrel in ... times of nationalism" and describes Copernicus as an inhabitant of a German-speaking territory that belonged to Poland, himself being of mixed Polish-German extraction.<sup>[2]</sup>

Poet Czesław Miłosz describes the debate as an "absurd" projection of a modern understanding of nationality onto Renaissance people, who identified with their home territories rather than with a nation.<sup>[3]</sup>

Similarly, historian Norman Davies writes that Copernicus, as was common in his era, was "largely indifferent" to nationality, being a local patriot who considered himself "Prussian".<sup>[4]</sup>

Miłosz and Davies both write that Copernicus had a German-language cultural background, while his working language was Latin in accord with the usage of the time.<sup>[5][6]</sup> Additionally, according to Davies, "there is ample evidence that he knew the Polish language".<sup>[7]</sup> Davies concludes: "Taking everything into consideration, there is good reason to regard him both as a German and as a Pole: and yet, in the sense that modern nationalists understand it, he was neither."<sup>[8]</sup>

Sheila Rabin, writing in the *Stanford Encyclopedia of Philosophy*, describes Copernicus as a "child of a German family [who] was a subject of the Polish crown",<sup>[9]</sup> while Martin Weissenbacher writes that Copernicus' father was a Germanized Pole.<sup>[76]</sup> *Encyclopædia Britannica*,<sup>[1]</sup> *Encyclopedia Americana*,<sup>[77]</sup> *The Columbia Encyclopedia*<sup>[78]</sup> *The Oxford World Encyclopedia*,<sup>[79]</sup> and *World Book Encyclopedia*<sup>[1]</sup> refer to Copernicus as a "Polish astronomer".



Bust by Schadow, 1807, Walhalla memorial

## Commemoration

### Copernicium

On 14 July 2009, the discoverers, from the Gesellschaft für Schwerionenforschung in Darmstadt, Germany, of chemical element 112 (temporarily named ununbium) proposed to the International Union of Pure and Applied Chemistry that its permanent name be "copernicium" (symbol Cn). "After we had named elements after our city and our state, we wanted to make a statement with a name that was known to everyone," said Hofmann. "We didn't want to select someone who was a German. We were looking world-wide."<sup>[1]</sup> On the 537th anniversary of his birthday the official naming was released to the public.<sup>[1]</sup>



1973 Federal Republic of Germany 5-mark silver coin commemorating 500th anniversary of Copernicus' birth

## Veneration

Copernicus is honored, together with Johannes Kepler, in the liturgical calendar of the Episcopal Church (USA), with a feast day on 23 May.<sup>[1]</sup>

## Notes

- [1] Linton (2004, pp. 39, 119). Copernicus was not the first to propose a heliocentric system. A Greek mathematician and astronomer, Aristarchus of Samos, had done so as early as the third century BCE; but there is little evidence that Aristarchus developed his ideas beyond a very basic outline (Dreyer, 1953, pp. 135–48) (<http://www.archive.org/stream/historyofplaneta00dreyuoft#page/134/mode/2up>).
- [2] "Copernicus seems to have drawn up some notes [on the displacement of good coin from circulation by debased coin] while he was at Olsztyn in 1519. He made them the basis of a report on the matter, written in German, which he presented to the Prussian Diet held in 1522 at Grudziądz... He later drew up a revised and enlarged version of his little treatise, this time in Latin, and setting forth a general theory of money, for presentation to the Diet of 1528." Angus Armitage, *The World of Copernicus*, 1951, p. 91.
- [3] Dobrzycki and Hajdukiewicz (1969), p. 4.
- [4] "The name of the village, not unlike that of the astronomer's family, has been variously spelled. A large German atlas of Silesia, published by Wieland in Nuremberg in 1731, spells it Kopernik." Mizwa, p. 36.
- [5] Dobrzycki and Hajdukiewicz (1969), p. 3.
- [6] Bieńkowska (1973), p. 15
- [7] Rybka (1973), p. 23.
- [8] Sakolsky (2005), p. 8.
- [9] Biskup (1973), p. 16
- [10] Mizwa, 1943, p. 38.
- [11] "In 1512, Bishop Watzenrode died suddenly after attending King Sigismund's wedding feast in Kraków. Rumors abounded that the bishop had been poisoned by agents of his long-time foe, the Teutonic Knights." Hirshfeld, p. 38.
- [12] "The Watzelrodes—or Watzenrodes—in spite of their rather Germanic name seemed to have been good Poles (enemies of the Teutonic Order)." Koyre, p. 38.
- [13] "[Watzenrode] was also firm, and the Teutonic Knights, who remained a constant menace, did not like him at all; the Grand Master of the order once described him as 'the devil incarnate'. [Watzenrode] was the trusted friend and advisor of three [Polish] kings in succession: John Albert, Alexander (not to be confused with the poisoning pope), and Sigismund; and his influence greatly strengthened the ties between Warmia and Poland proper." Moore (1994), pp. 52, 62.
- [14] "Lucas was on more friendly terms with his successors, Johann Albert (Jan Olbracht) (from 1492 to 1501), and later Alexander (Aleksander) (from 1501 to 1506), and Sigismund (Zygmunt) I (from 1506)." Gassendi & Thill, p. 22.
- [15] Dobrzycki and Hajdukiewicz (1969), p. 5.
- [16] "To obtain for his nephews [Nicolaus and Andreas] the necessary support [for their studies in Italy], the bishop [Lucas Watzenrode the Younger] procured their election as canons by the chapter of Frauenburg (1497-1498)." "Nicolaus Copernicus (<http://www.newadvent.org/cathen/04352b.htm>)", *New Advent* (online version of the 1913 *Catholic Encyclopedia*). Retrieved 9 June 2013.
- [17] "He spoke German, Polish and Latin with equal fluency as well as Italian." Stone, p. 101.
- [18] "He spoke Polish, Latin and Greek." Somerville, p. 10.
- [19] "He was a linguist with a command of Polish, German and Latin, and he possessed also a knowledge of Greek rare at that period in northeastern Europe and probably had some acquaintance with Italian and Hebrew." Angus Armitage, *Copernicus, the founder of modern astronomy*, p. 62.
- [20] He used Latin and German, knew enough Greek to translate the 7th-century Byzantine poet Theophylact Simocatta's verses into Latin prose Linton (2004, pp. 39, 119). Copernicus was not the first to propose a heliocentric system. A Greek mathematician and astronomer, Aristarchus of Samos, had done so as early as the third century BCE; but there is little evidence that Aristarchus developed his ideas beyond a very basic outline (Dreyer, 1953, pp. 135–48) (<http://www.archive.org/stream/historyofplaneta00dreyuoft#page/134/mode/2up>). and "there is ample evidence that he knew the Polish language". During his several years' studies in Italy, Copernicus presumably would also have learned some Italian. Professor Stefan Melkowski of Nicolaus Copernicus University in Toruń likewise asserts that Copernicus spoke both German and Polish.
- [21] "*Deutsch war für Kopernikus Muttersprache und Alltagssprache, wenn auch der schriftliche Umgang fast ausschließlich auf Lateinisch erfolgte.*" Carrier, p. 192.
- [22] Rosen (1995, p. 127 ([http://books.google.com/books?id=C\\_a1kTvuZ1MC&pg=PA127#v=onepage&f=false](http://books.google.com/books?id=C_a1kTvuZ1MC&pg=PA127#v=onepage&f=false))).
- [23] "Although great importance has frequently been ascribed to this fact, it does not imply that Copernicus considered himself to be a German. The 'nationes' of a medieval university had nothing in common with nations in the modern sense of the word. Students who were natives of Prussia and Silesia were automatically described as belonging to the Natio Germanorum. Furthermore, at Bologna, this was the 'privileged' nation; consequently, Copernicus had very good reason for inscribing himself on its register." Koyre, p. 21
- [24] "It is important to recognize, however, that the medieval Latin concept of *natio*, or "nation", referred to the community of feudal lords both in Germany and elsewhere, not to 'the people' in the nineteenth-century democratic or nationalistic sense of the word." Johnson, p. 23.
- [25] Koestler, 1968, p. 129.

- [26] Gassendi & Thill (2002), p. 37.
- [27] "Kopernik, Koperek, Kopr and Koprnik in Polish—also similarly in other Slavonic languages—means simply dill such as is used in dill pickling. Be it as it may, although the present writer is more inclined towards the occupational interpretation, it is interesting to note ..." Mizwa, p. 37.
- [28] Angus Armitage, *The World of Copernicus*, p. 51.
- [29] Gingerich (2004), p. 143.
- [30] Biskup (1973), p. 32
- [31] "In the [enrollment] documents still in existence we find the entry: *Nicolaus Nicolai de Torunia*." Moore (1994), p. 50.
- [32] Biskup (1973), pp. 38, 82
- [33] Malagola (1878), p. 562–65
- [34] Maximilian Curtze, *Ueber die Orthographie des Namens Copernicus*, 1879 ([http://de.wikisource.org/wiki/Nicolaus\\_Copernicus\\_aus\\_Thorn\\_Ä¼ber\\_die\\_Kreisbewegungen\\_der\\_WeltkÄ¼rper/Vorwort#Orthographie](http://de.wikisource.org/wiki/Nicolaus_Copernicus_aus_Thorn_Ä¼ber_die_Kreisbewegungen_der_WeltkÄ¼rper/Vorwort#Orthographie))
- [35] Czesław Miłosz, *The History of Polish Literature*, p. 38.
- [36] Dobrzycki and Hajdukiewicz (1969) describe Copernicus' having attended school at Włocławek as unlikely.
- [37] Angus Armitage, *The World of Copernicus*, p. 55.
- [38] Dobrzycki and Hajdukiewicz (1969), pp. 4–5.
- [39] Dobrzycki and Hajdukiewicz (1969), pp. 5–6.
- [40] Dobrzycki and Hajdukiewicz (1969), p. 6.
- [41] Rabin (2005).
- [42] Gingerich (2004, pp. 187–89, 201); Koyré (1973, p. 94); Kuhn (1957, p. 93); Rosen (2004, p. 123); Rabin (2005). Robbins (1964, p.x), however, includes Copernicus among a list of Renaissance astronomers who "either practiced astrology themselves or countenanced its practice".
- [43] Sedlar (1994).
- [44] Angus Armitage, *The World of Copernicus*, pp. 75–77.
- [45] Dobrzycki and Hajdukiewicz (1969), p. 7.
- [46] Dobrzycki and Hajdukiewicz (1969), pp. 7–8.
- [47] Repcheck (2007), p. 66.
- [48] Dobrzycki and Hajdukiewicz (1969), p. 9.
- [49] Repcheck (2007), pp. 79, 78, 184, 186.
- [50] Dobrzycki and Hajdukiewicz (1969), p. 11.
- [51] Angus Armitage, *The World of Copernicus*, pp. 97–98.
- [52] Angus Armitage, *The World of Copernicus*, p. 98.
- [53] Kuhn, 1957, pp. 187–88.
- [54] A reference to the "Commentariolus" is contained in a library catalogue, dated 1 May 1514, of a 16th-century historian, Matthew of Miechów, so it must have begun circulating before that date (Koyré, 1973, p. 85; Gingerich, 2004, p. 32). Thoren (1990 p. 99) gives the length of the manuscript as 40 pages.
- [55] Goddu (2010: 245–6)
- [56] Koyré (1973, pp. 27, 90) and Rosen (1995, pp. 64, 184) take the view that Copernicus was indeed concerned about possible objections from theologians, while Lindberg and Numbers (1986) argue against it. Koestler (1963) also denies it. Indirect evidence that Copernicus was concerned about objections from theologians comes from a letter written to him by Andreas Osiander in 1541, in which Osiander advises Copernicus to adopt a proposal by which he says "you will be able to appease the Peripatetics and theologians whose opposition you fear". (Koyré, 1973, pp. 35, 90)
- [57] Dreyer (1953, p. 319) (<http://www.archive.org/stream/historyofplaneta00dreyuoft#page/319/mode/1up>).
- [58] Dreyer (1953), pp. 40–52 (<http://www.archive.org/stream/historyofplaneta00dreyuoft#page/40/mode/2up>); Linton (2004, p. 20).
- [59] Dreyer (1953), pp. 123–35 (<http://www.archive.org/stream/historyofplaneta00dreyuoft#page/122/mode/2up>); Linton (2004, p. 24).
- [60] Dreyer (1953, pp. 135–48 (<http://www.archive.org/stream/historyofplaneta00dreyuoft#page/134/mode/2up>)); Heath (1913), pp. 301–8 (<http://www.archive.org/stream/aristarchusofsam00heatuoft#page/301/mode/2up>)
- [61] George Saliba, 'Revisiting the Astronomical Contacts Between the World of Islam and Renaissance Europe: The Byzantine Connection', 'The occult sciences in Byzantium (<http://books.google.com/books?id=muGVUiKEYccC&lpq=PA368&pg=PA368#v=onepage&q&f=false>)', 2006, p.368
- [62] Rosen (2004), pp. 58–59 (<http://books.google.com/books?id=ceSnipu4MykC&pg=PA58>)
- [63] Danielson (2006)
- [64] Koestler (1959, p. 191).
- [65] Rosen (1995, pp. 187–92), originally published in 1967 in *Saggi su Galileo Galilei*. Rosen is particularly scathing about this and other statements in *The Sleepwalkers*, which he criticizes as inaccurate.
- [66] Rosen (1995, p. 158).
- [67] Rosen (1995, pp. 151–59).
- [68] Rosen (1995)

- [69] *Exercitations concerning the Name, Original, Nature, Use, and Continuance of a Day of Sacred Rest*, Exercitation II = An Exposition of the Epistle to the Hebrews, Exercitation XXXVI, section 16 (*Works*, London, 1850–1855; re-issued, Edinburgh, 1862, XIX, 310).
- [70] Decree of the General Congregation of the Index, 5 March 1616, translated from the Latin by Finocchiaro (1989, pp. 148–149). An on-line copy (<http://web.archive.org/web/20070930013053/http://astro.wcupa.edu/mgagne/ess362/resources/finocchiaro.html#indexdecree>) of Finocchiaro's translation has been made available by Gagné (2005).
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## External links

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- Portraits of Nicolaus Copernicus (<http://www.frombork.art.pl/Ang10.htm>)

#### About *De Revolutionibus*

- The Copernican Universe from the *De Revolutionibus* ([http://galileo.rice.edu/sci/theories/copernican\\_system.html](http://galileo.rice.edu/sci/theories/copernican_system.html))
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#### Prizes

- Nicolaus Copernicus Prize, founded by the City of Kraków (<http://pau.krakow.pl/index.php/en/2008031765/Prizes-by-PAU/Page-2.html>), awarded since 1995

#### German-Polish cooperation

- **(English) (German) (Polish)** German-Polish "Copernicus Prize" awarded to German and Polish scientists ( DFG website ([http://www.dfg.de/en/funded\\_projects/prizewinners/copernicus\\_award/index.html](http://www.dfg.de/en/funded_projects/prizewinners/copernicus_award/index.html)))
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