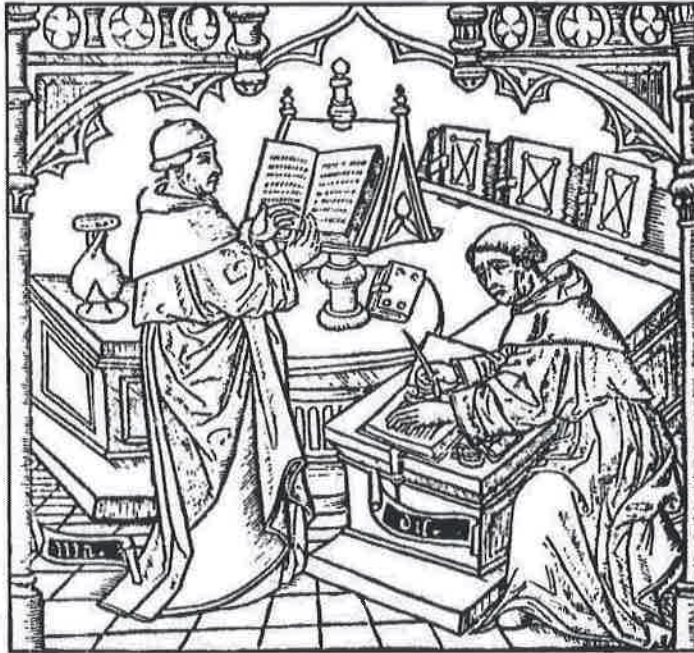


# Transition from Script to Print Culture

## Document 1

**Source:** *Top visual:* Advertisement for J. Badius' firm in William of Ockham, *Dialogus*, (Lyons: J. Trechsel, c. 1494)  
*Bottom visual:* 16th century French manuscript, *Un atelier typographique*, Bibliothèque Nationale.



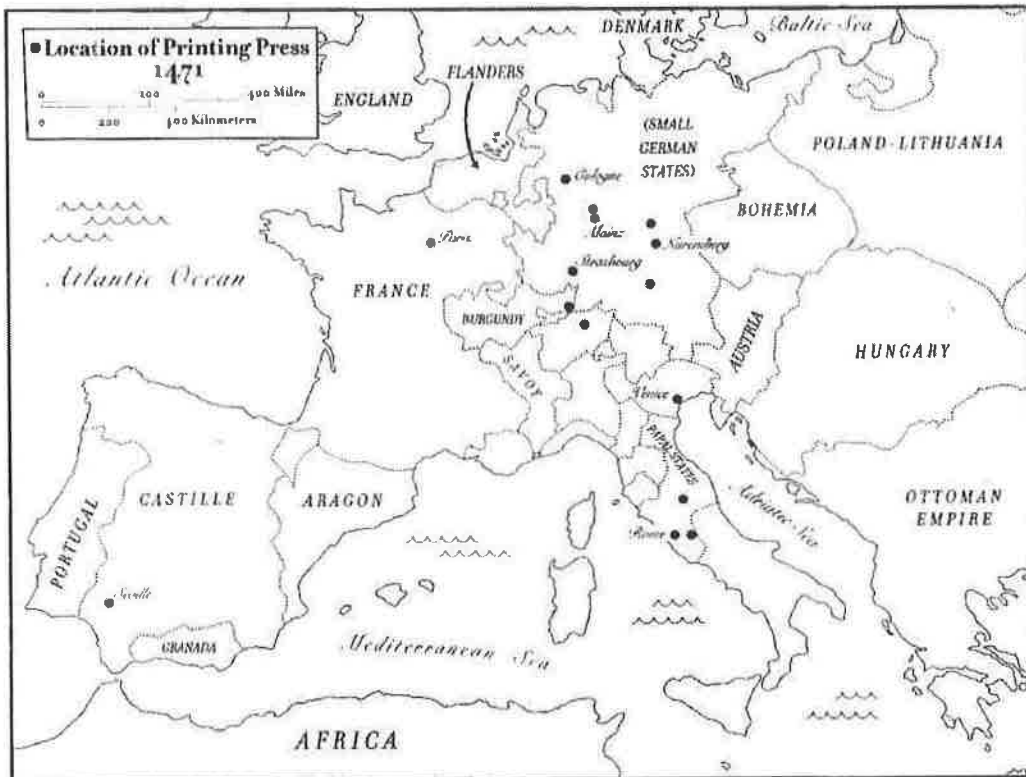
SV

**Note:** The two images portray the significantly different methods used to produce books before and after Gutenberg's invention of the printing press. The woodcut image above is a scribe writing a book by hand from the dictation of a scholar; the woodcut below shows a print shop in the mid-1500s.

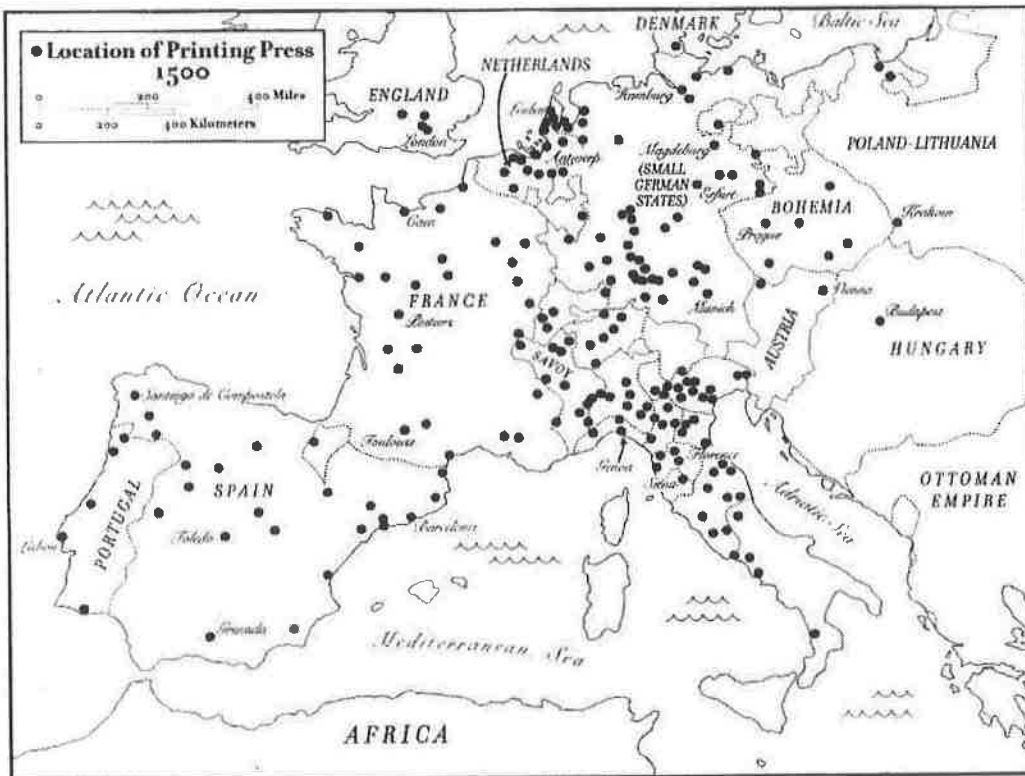


Document 2

Source: The Spread of Printing. Maps created from various sources.



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## Document 3



Source: Excerpts from Luther's 95 Theses, 1517.

20. Thus those indulgence preachers are in error who say that a man is absolved from every penalty and saved by papal indulgences.
27. They preach only human doctrines who say that as soon as the money clinks into the money chest, the soul flies out of purgatory.
32. Those who believe that they can be certain of their salvation because they have indulgence letters will be eternally damned, together with their teachers.
45. Christians are to be taught that he who sees a needy man and passes him by, yet gives his money for indulgences, does not buy papal indulgences but God's wrath.

**Note:** Martin Luther allegedly posted his 95 Theses on the door of the Castle Church in Wittenberg, Germany, on October 31, 1517. His goal was to stir debate among theologians primarily around the issue of **indulgences**—payments to the Roman Catholic Church in return for official pardons for one's sins and grants of salvation in the afterlife. Because of the printing press, the 95 Theses were known throughout Germany in a fortnight and throughout Europe in a month.

Source: John Man, *Gutenberg: How One Man Remade the World with Words*, 2002.

As Rome prepared the heavy artillery, Luther fired off more salvos, with the help of the press. His sermons, tracts and polemics, all in German ... streamed from presses by the hundreds of thousands. ... According to one estimate, a third of all books printed in Germany between 1518 and 1525 were by him. Pause to consider that figure. Of course, printing was in its infancy, but Germany at the time was turning out about a million books a year, of which a third – 300,000 – were by Luther. No comparison with the modern world stands up, but it would be the equivalent of one author selling almost 300 million books in Britain (which prints some 800 million a year), or 700 million in the US, every year, for seven years running.

**Document 4**

*Arise, O Lord, and judge Thy cause. A wild boar has invaded Thy vineyard.... Arise all ye saints, and the whole universal Church, whose interpretations of Scripture has been assailed.*

Papal Bull of Pope Leo X, 1520

*If we punish thieves with the gallows, robbers with the sword, and heretics with fire, why do we not all the more fling ourselves with all our weapons upon these masters of perdition, these cardinals, these popes, and all this stink of Roman sodomy that ceaselessly corrupts the church of God and wash our hands in their blood so that we may free ourselves and all who belong to us from this most dangerous fire?*

Martin Luther, 1521

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Source: Lucas Cranach the Elder, "Passional Christi und Antichristi." Woodcut, 1521.

**Passional Christi und**



**Antichristi.**

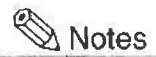


The woodcut is from a Lutheran booklet. Jesus (on the left) is driving the money-changers out of the temple, in contrast to the Pope, who is writing and collecting on indulgences. Cranach was a close friend of Luther.

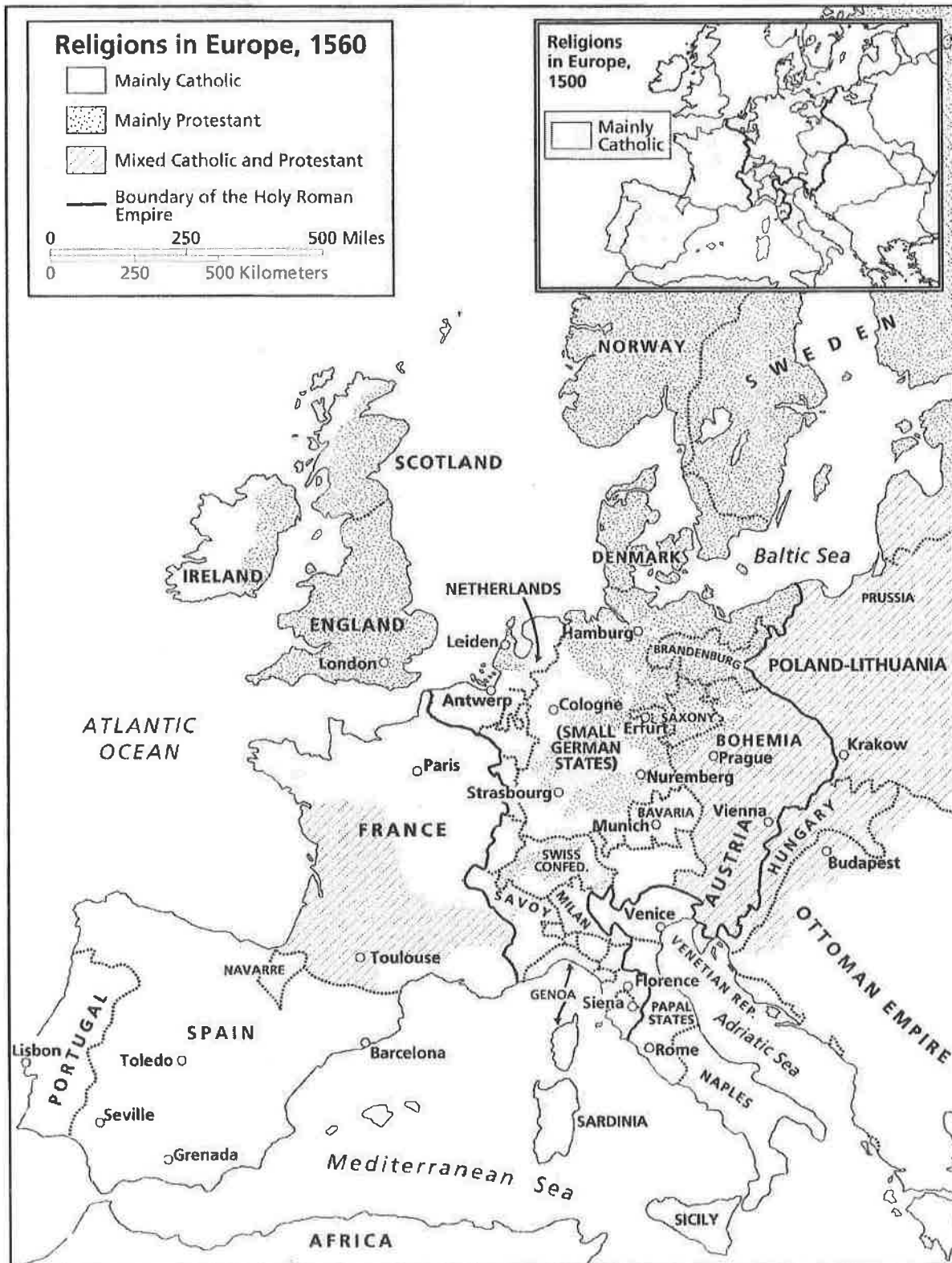
Source: Elizabeth Eisenstein, *The Printing Revolution in Early Modern Europe*, Cambridge: Cambridge University Press, 1983, p. 158.

There is considerable irony about the enthusiastic reception accorded to printing by the church. Heralded on all sides as a "peaceful art," Gutenberg's invention probably contributed more to destroying Christian concord and inflaming religious warfare than any of the so-called arts of war ever did.

Document 5



Source: Map created from various sources.



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Source: Christopher Columbus' Letter, *Concerning the Islands Recently Discovered in the Indian Sea*, 1493.

### Excerpt from Columbus' 15-page Letter to the King of Spain

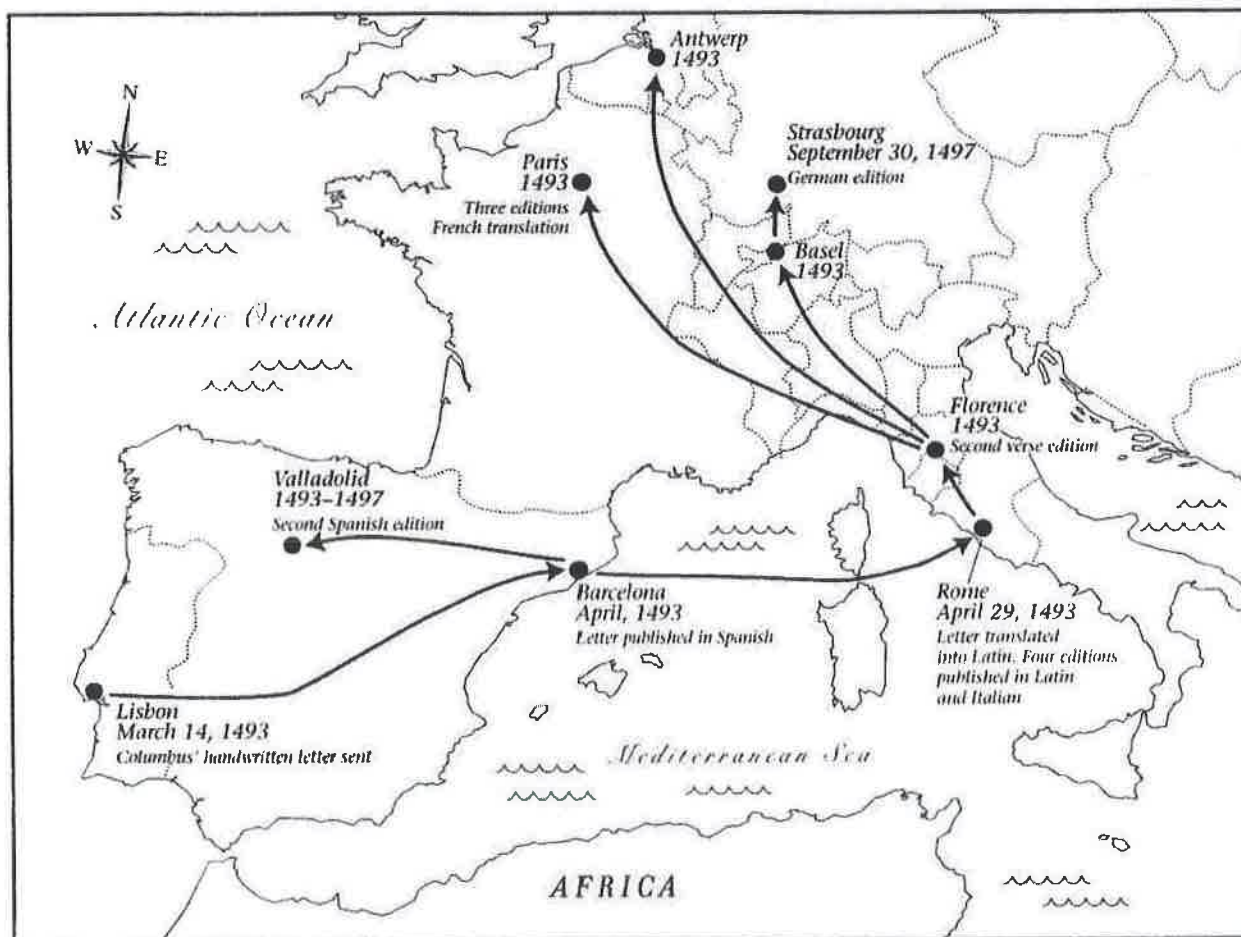
Because my undertakings have attained success, I know that it will be pleasing to you: these I have determined to relate, so that you may be made acquainted with everything done and discovered in this our voyage. On the thirty-third day after I departed from Cadiz, I came to the Indian sea, where I found many islands inhabited by men without number, of all which I took possession for our most fortunate king, with proclaiming heralds and flying standards, no one objecting.

**Note:** Columbus is believed to have written much of the letter on his return voyage from the Americas.

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Source: Map created from various sources.

### Dissemination of Columbus' Letter

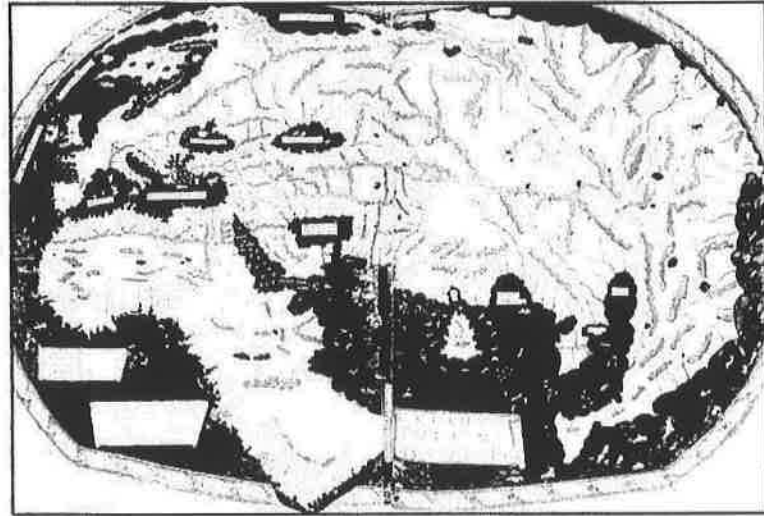


Document 7

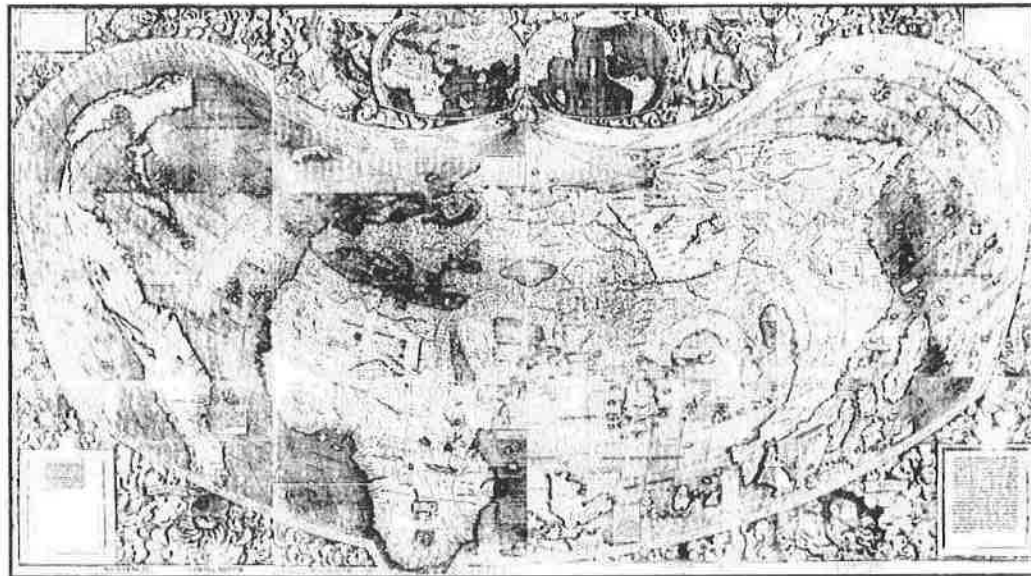
**Expanding Knowledge  
of the Globe**  
(3 Printed World Maps)

SV

**Source:**  
Henricus Martellus'  
World Map, 1489,  
courtesy British  
Library.



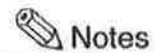
**Source:**  
Martin  
Waldseemuller's  
World Map, 1507,  
Prints and  
Photographs,  
Library of  
Congress, G3200  
ct000725C.



**Source:**  
Abraham Ortelius'  
1570 World Map,  
in *Theatrum  
Orbis Terrarum*  
Prints and  
Photographs,  
Library of  
Congress, G7270  
mf00002.



## Document 8



Source: John Carter and Percy H. Muir, editors, *Printing and the Mind of Man: A Descriptive Catalogue Illustrating the Impact of Print on the Evolution of Western Civilization During Five Centuries*, London: Cassell and Company, 1967.

**Ten Important Works of Classical and Medieval Authors\***

(Date represents first printing)

Homer, *Iliad and Odyssey*, Florence, 1488/89.

Plato, *Dialogues*, Florence, 1484.

Aristotle, *Works*, Venice, 1495-8.

Ptolemy, *The Cosmographia*, Bologna, Italy, 1477.

Herodotus, *Histories*, Venice, 1502.

Virgil, *Aeneid*, Venice, 1491.

Saint Augustine, *The City of God*, Subiaco, Italy, 1467; and  
*The Confessions*, Strasbourg, Germany, 1470.

Thomas Aquinas, *Summa Theologica*, Basel, Switzerland, 1485.

Dante, *Divine Comedy*, Foligno, Italy 1471.

Thomas à Kempis, *The Imitation of Christ*, Augsburg, Germany 1473.

**Note:** In the 50 years following Gutenberg's invention, three-fourths of the 20 million newly printed books were classical or medieval works. These books had existed already in scribal manuscript form, but now for the first time were widely available to all who could read. Moreover, as Latin and Greek texts became more well known, publishers began to print the same works in the vernacular (native language), thus expanding the reach of these ancient ideas even further.

\**Classical* authors dated back to the time of Ancient Greece and Rome. *Medieval* authors wrote during the several centuries before the invention of the printing press but after the fall of Rome.

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## Document 9

Source: John Carter and Percy H. Muir, editors, *Printing and the Mind of Man: A Descriptive Catalogue Illustrating the Impact of Print on the Evolution of Western Civilization During Five Centuries*, London: Cassell and Company, 1967.

**Ten Important Works of Early Modern Authors**

*(Date represents first printing)*

Desiderius Erasmus, *The Praise of Folly*, Paris, 1511.

Thomas More, *Utopia*, Louvain, Belgium, 1516.

Baldassare Castiglione, *The Courtier*, Venice, 1528.

Niccolo Machiavelli, *The Prince*, Rome, 1532.

Francois Rabelais, *Gargantua and Pantagruel*, Lyons, five volumes between 1532 and 1552.

Georgio Vasari, *The Lives of the Most Excellent Painters, Sculptors and Architects*, Florence, 1568.

Michael de Montaigne, *Essays*, Bordeaux, France, 1580.

Miguel de Cervantes, *Don Quixote*, Madrid, 1605.

*The King James Bible*, or the Authorized Version, London, 1611.

*The Complete Works of Shakespeare*, London, 1623.

**Note:** During the first half of the 16th century many works by contemporary writers began to reach a very wide public. For example, historians estimate that several hundred thousand of Erasmus' works, *Adages and Colloquies*, were available to the general public within decades of their first printing. Modern and current ideas could then spread more quickly and on a grand scale.

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## Document 10



**Source:** Derek T. Whiteside, editor, *The Mathematical Papers of Isaac Newton I: 1664-1666*, cited by I.B. Cohen book review, *The Scientific American*, January, 1968.

... at the beginning of Newton's final year as an undergraduate (1664) ... he gave up an exclusive diet of reading the ancients ... and plunged into the moderns.... He read and made notes on Galileo's *Dialogues* ... and Descartes' *Principles of Philosophy*.... As we turn the pages of his notebooks we can see his mind leap from summaries of his reading to his own new principles and results.... He began to think of gravity as a force extending as far as the moon.... In those two years a mathematician was born.

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### Isaac Newton's Bookshelf

**Source:** Charles Coulston Gillespie, editor, *Dictionary of Scientific Biography*, New York: Charles Scribner's Sons, 1974.

**Isaac Newton, the father of the Scientific Revolution, was admitted at the age of 19 to Trinity College, Cambridge, England, on June 5th, 1661. Among the books that he read at Trinity were the following:**

***Dialogo* by Galileo (1564-1642) Italian scientist and philosopher**

In this work, Galileo challenges the idea that the earth is the center of the universe and argues that falling bodies fall toward the center of the earth, not the center of the universe.

***Dioptrice* by Johannes Kepler (1571-1630) German astronomer, physicist, mathematician**

In this work Kepler describes how lenses work and applies his ideas to a new kind of astronomical telescope with two convex lenses.

***Micrographia* by Robert Hooke (1635-1702) English chemist, physicist**

Hooke describes his observations through a microscope, and for the first time, accompanies them with illustrations. This was the first great work devoted to this subject.

***Geometrie and Principles of Philosophy* by Rene Descartes (1596-1650) French philosopher**

Descartes spells out the foundations of analytical geometry. He is credited with the discovery of this branch of mathematics.

***Organon* by Aristotle (384-322 BCE) Greek philosopher and student of Plato**

This book along with several other Greek classics including Aristotle's *Ethics* provides evidence that Newton was well-grounded in Greek rhetoric and logic.

***Elements* by Euclid (3rd century BCE) Greek mathematician**

In this classical work Euclid creates the first systematic geometry based on clarification of such previously undefined concepts as point, line, and plane. Our young scholar Newton is said to have found Euclid "trifling" and put him back in the shelf in favor of a Latin edition of Descartes' *Geometrie*.