

Topic 1.4: The Printing Press

OVERVIEW

Prior to 1450, the only way to reproduce and circulate texts was by producing hand-copied **manuscripts** (literally, “to write by hand”). The invention of the printing press allowed books and pamphlets to be circulated in mass quantities for the first time. This resulted in an **increase in literacy rates** in Europe, the development of national literary cultures, and the rapid spread of new ideas during the Renaissance, the Reformation, and the Scientific Revolution.

WHEN DID IT HAPPEN?

The printing press, invented by **Johannes Gutenberg**, was introduced in Europe in the 1440s. By 1500, printing presses were widespread in Europe, with millions of pages circulating among an increasingly literate population.

KEY TERMS

Movable Type

Gutenberg’s press used a system of pre-cut letters that could be quickly arranged into page format for efficient printing in large quantities.

Mass Communication

The printing press was the first form of technology that enabled the transmission of mass quantities of information to many people at once across long distances. It was the beginning of a new era of mass communication.

Vernacular Language

The wider availability of printed books increased the demand for texts written in vernacular languages that were spoken in their regions, such as French, Spanish, and English. This contributed to the development of **national cultures** based on shared literary traditions. Many scholarly texts, however, continued to be published in Latin.

CONNECTING ACROSS PERIODS

The printing press was the first of several advancements in **mass communication** in modern European history.

In the 1840s, the **electric telegraph** made it possible to rapidly send text messages across long distances without a person needing to carry them. By 1858, the **transatlantic telegraph** enabled Europeans to send messages to North America that would be received *within minutes*.

In the contemporary era, **the Internet** and **video communication** have made it possible for people to communicate across continents and to share published content *in real time*.

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“Earlier generations. . . permitted the fruit of other minds, and the writings that their ancestors had produced by toil and application, to perish through insufferable neglect. . . They robbed posterity of its ancestral heritage.” -- Petrarch

Petrarch, the father of Renaissance humanism, vented his anger at the monks of the “Dark Ages” for allowing several important classical texts from ancient Greece and Rome to disappear from existence. In his anger, he neglected to give these hard-working monks the credit that they deserved for preserving as many classical texts as they had, given that they had no other way to preserve texts other than to copy them by hand.

This all changed with Gutenberg’s invention of the printing press, which enabled the mass production of texts that did not have to be copied by hand. With the help of the printing press, Petrarch’s works would be widely circulated throughout Italy, along with the works of Dante and Boccaccio, creating a body of literature that would form the basis for a standard Italian language. This shared language would lead to the growth of a **national culture** in Italy (and Italian Unification centuries later).

THE SPREAD OF RENAISSANCE HUMANISM

Because of the printing press, Renaissance humanism spread from Italy to Northern Europe, resulting in the literary and artistic achievements of the **Northern Renaissance**. Northern Renaissance artists, such as Albrecht Dürer, designed **woodcut engravings** that could be copied many times by pressing the engraved woodblock against paper. **Printmaking** continues to be a popular way to reproduce art even today.



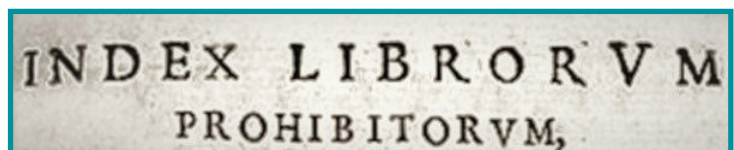
A freshly-pressed print of a woodcut engraving created with a Renaissance-era printing press

THE LOSS OF CONTROL OVER INFORMATION

The printing press made it more difficult for religious and secular authorities to control the spread of information, resulting in new intellectual movements that challenged traditional ways of thinking, such as the **Protestant Reformation** and the **Scientific Revolution**.

While the story of **Martin Luther** nailing his *Ninety-five Theses* to the church door in Wittenberg sounds very intense and dramatic, it was not nearly as significant as the distribution of the *Ninety-five Theses* across Europe with the help of new printing technology. Because of the printing press, a lone German monk’s grievances against the Catholic Church became the subject of fierce debate from London to Vienna.

In 1543, the Polish astronomer, **Copernicus**, published *On the Revolution of the Heavenly Spheres*, in which he challenged the long-established idea of **geocentrism** (the belief that the earth is at the center of the universe). Copernicus’ writings were printed and distributed widely, reaching the hands of **Galileo**, an Italian astronomer who used his telescope to provide evidence in support of Copernicus’ sun-centered theory of **heliocentrism**.



The Vatican’s **Index of Prohibited Books** was an attempt to retain the Catholic Church’s control over the spread of information by publishing a list of books that printers in Catholic regions were forbidden to print.