

2.1 Gutenberg and the Printing Press

Gutenberg was the son of a merchant and grew up on a large agricultural estate. From his childhood he had seen wine and olive presses. Subsequently, he learnt the art of polishing stones, became a master goldsmith, and also acquired the expertise to create lead moulds used for making trinkets. Drawing on this knowledge, Gutenberg adapted existing technology to design his innovation. The olive press provided the model for the printing press, and moulds were used for casting the metal types for the letters of the alphabet. By 1448, Gutenberg perfected the system. The first book he printed was the Bible. About 180 copies were printed and it took three years to produce them. By the standards of the time this was fast production.

The new technology did not entirely displace the existing art of producing books by hand.

In fact, printed books at first closely resembled the written manuscripts in appearance and layout. The metal letters imitated the ornamental handwritten styles. Borders were illuminated by hand with foliage and other patterns, and illustrations were painted. In the books printed for the rich, space for decoration was kept blank on the printed page. Each purchaser could choose the design and decide on the painting school that would do the illustrations.

In the hundred years between 1450 and 1550, printing presses were set up in most countries of Europe. Printers from Germany travelled to other countries, seeking work and helping start new presses. As the number of printing presses grew, book production boomed. The second half of the fifteenth century saw 20 million copies of printed books flooding the markets in Europe. The number went up in the sixteenth century to about 200 million copies.

This shift from hand printing to mechanical printing led to the print revolution.



Fig. 5 – A Portrait of Johann Gutenberg, 1584.

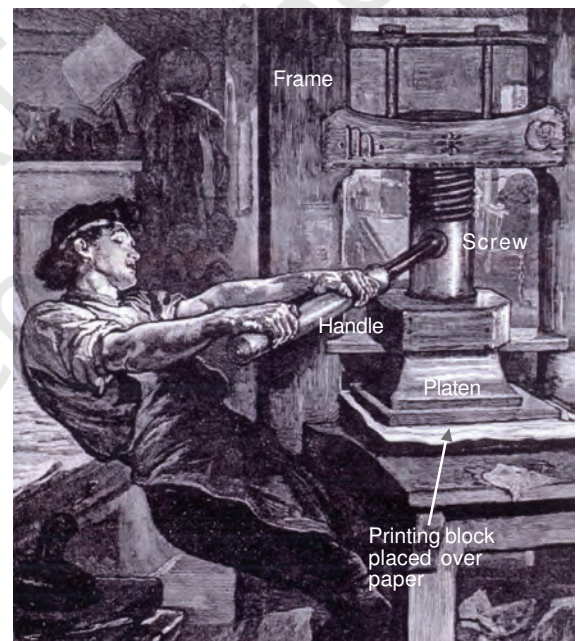


Fig. 6 – Gutenberg Printing Press.

Notice the long handle attached to the screw. This handle was used to turn the screw and press down the **platen** over the printing block that was placed on top of a sheet of damp paper. Gutenberg developed metal types for each of the 26 characters of the Roman alphabet and devised a way of moving them around so as to compose different words of the text. This came to be known as the moveable type printing machine, and it remained the basic print technology over the next 300 years. Books could now be produced much faster than was possible when each print block was prepared by carving a piece of wood by hand. The Gutenberg press could print 250 sheets on one side per hour.

New words

Platen – In letterpress printing, platen is a board which is pressed onto the back of the paper to get the impression from the type. At one time it used to be a wooden board; later it was made of steel



Fig. 7 – Pages of Gutenberg's Bible, the first printed book in Europe.

Gutenberg printed about 180 copies, of which no more than 50 have survived.

Look at these pages of Gutenberg's Bible carefully. They were not just products of new technology. The text was printed in the new Gutenberg press with metal type, but the borders were carefully designed, painted and illuminated by hand by artists. No two copies were the same. Every page of each copy was different. Even when two copies look similar, a careful comparison will reveal differences. Elites everywhere preferred this lack of uniformity: what they possessed then could be claimed as unique, for no one else owned a copy that was exactly the same.

In the text you will notice the use of colour within the letters in various places. This had two functions: it added colour to the page, and highlighted all the holy words to emphasise their significance. But the colour on every page of the text was added by hand. Gutenberg printed the text in black, leaving spaces where the colour could be filled in later.



Fig. 8 – A printer's workshop, sixteenth century.

This picture depicts what a printer's shop looked like in the sixteenth century. All the activities are going on under one roof. In the foreground on the right, **compositors** are at work, while on the left **galley**s are being prepared and ink is being applied on the metal types; in the background, the printers are turning the screws of the press, and near them proofreaders are at work. Right in front is the final product – the double-page printed sheets, stacked in neat piles, waiting to be bound.

New words

Compositor – The person who composes the text for printing

Galley – Metal frame in which types are laid and the text composed

3 The Print Revolution and Its Impact

What was the print revolution? It was not just a development, a new way of producing books; it transformed the lives of people, changing their relationship to information and knowledge, and with institutions and authorities. It influenced popular perceptions and opened up new ways of looking at things.

Let us explore some of these changes.

3.1 A New Reading Public

With the printing press, a new reading public emerged. Printing reduced the cost of books. The time and labour required to produce each book came down, and multiple copies could be produced with greater ease. Books flooded the market, reaching out to an ever-growing readership.

Access to books created a new culture of reading. Earlier, reading was restricted to the elites. Common people lived in a world of oral culture. They heard sacred texts read out, **ballads** recited, and folk tales narrated. Knowledge was transferred orally. People collectively heard a story, or saw a performance. As you will see in Chapter 8, they did not read a book individually and silently. Before the age of print, books were not only expensive but they could not be produced in sufficient numbers. Now books could reach out to wider sections of people. If earlier there was a hearing public, now a reading public came into being.

But the transition was not so simple. Books could be read only by the literate, and the rates of literacy in most European countries were very low till the twentieth century. How, then, could publishers persuade the common people to welcome the printed book? To do this, they had to keep in mind the wider reach of the printed work: even those who did not read could certainly enjoy listening to books being read out. So printers began publishing popular ballads and folk tales, and such books would be profusely illustrated with pictures. These were then sung and recited at gatherings in villages and in **taverns** in towns.

Oral culture thus entered print and printed material was orally transmitted. The line that separated the oral and reading cultures became blurred. And the hearing public and reading public became intermingled.

Activity

You are a bookseller advertising the availability of new cheap printed books. Design a poster for your shop window.

New words

Ballad – A historical account or folk tale in verse, usually sung or recited

Taverns – Places where people gathered to drink alcohol, to be served food, and to meet friends and exchange news