Germany's Role in Changing World History

And the Word Became... Print

by Lucy Gordan

"The invention of printing is the greatest event in history, the mother of all revolutions" (*Victor Hugo*)

The year 2005 will always be memorable for Germany and the history of the Church. Bavarian Joseph Cardinal Ratzinger was elected the 265th heir to St. Peter's throne, and the 20th World Youth Day was celebrated in Cologne, with the new pontiff and over a million young people in attendance. Also worthy of note, although he was not a man-of-the-cloth and did not attract crowds, is another German who changed the course of Church history and world culture more than 500 years — half a millennium — ago. His name was Johannes Gutenberg.

In his two workshops in Mainz, between 1452 and 1455, using mobile and reusable letters, cast in metal and set in adjustable hand-moulds, this patrician-born businessman printed the first printed book in the Western World and created between 180 and 200 copies of the Bible. Each Gutenberg Bible is made up of two books, the Old and the New Testament.

Of these, it is assumed that about 150 were printed on paper, while the remaining 30 or so were printed on parchment. Forty-eight (36 on paper) still survive in Europe and American libraries; of these, one and a half are owned by the Gutenberg Museum in Mainz.

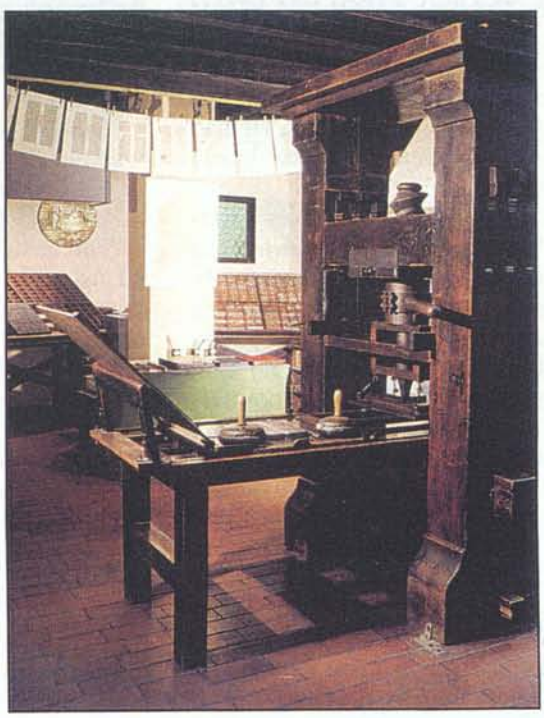
Concerning the significance of Gutenberg's invention, Martin Luther (1483-1546) not so long afterwards remarked:

"The great benefits of book printing cannot be expressed in words. By means of this invention, the Holy Scriptures are open to all tongues and languages and can be spread everywhere; all arts and sciences can be preserved, increased and passed on to our descendants."

Thus it did not really come as a surprise that, in the year 2000, an international panel of scientists selected Johannes Gutenberg, as "the most outstanding personality of the millennium" or that the American magazine *Life* described the first book ever printed as "the most remarkable event of the millennium."

Who was Gutenberg? His Biography

In spite of Gutenberg's importance, much of his life remains a mystery; documents about him are scarce and his name does not appear on any of the works attributed to him. Although celebrated as occurring in 1400, even the year of Gutenberg's birth is unknown. Our sources do not reveal more than that his birth must have occurred between the years 1394 and 1404.



As the youngest son of the family, he is mentioned in his earliest documents as Henne or Henchen (*i.e.*, Johannes) zur Laden or as Henne Gensfleisch. At this time, surnames were not passed on from father to son and grandson. The patricians of Mainz were usually called after their houses and if they had several, they could carry several names. Contrary to this

custom, it seems that Gensfleisch was one of his patrician father's surnames, while Gutenberg was probably his mother's maiden name, or the name of her birthplace, or of land that belonged to her. The first document to mention Johannes Gutenberg as "Henchin zu Gudenberg" dates to 1430.

Most details of Gutenberg's biography can only be surmised. For example, we know very little about his childhood, youth and education. Maybe he attended one of the seminaries or convent schools in Mainz, as did most patrician children, and later (1419/20) the university of Erfurt, since it was the *alma mater* of the Mainz diocese. We can only assume that he would not have been able to complete his later achievement without a comprehensive education and a sound knowledge of Latin.

To Strasbourg

A surviving letter written by Gutenberg in March 1434 reveals that he is residing up the Rhine in Strasbourg and we know he remained a resident there for the following eleven years.

At the time, Strasbourg with its 25,000 inhabitants was one of the biggest communities in Germany, a lively and wealthy city of trade three times the size of Mainz. It certainly offered numerous possibilities to anyone with a mind for business. Gutenberg also had a personal advantage; there is evidence that he had relatives in this city from his mother's side. Moreover, a year earlier, his mother had died leaving him a handsome sum of money.

A copy of Gutenberg's Bible

In addition to his wealthy mother's nest-egg, Gutenberg undoubtedly had inherited a keen business sense from his father and his maternal grandfather, who had been a shopkeeper in Mainz. From about 1437, Gutenberg, who resided in Strasbourg's suburb of St. Argobast, instructed a wealthy citizen named Andreas Dritzehn in the polishing and cutting of precious stones and began to experiment in metallurgy. With several partners he formed a "manufacturing co-operative" for the mass production of souvenir "holy" mirrors, made of a tin alloy.

The city of Aachen planned to exhibit its religious relics. Thousands of pilgrims were expected to visit. These so-called "pilgrim-mirrors" were to be produced as inexpensively as possible. Their purpose: pilgrims pinned them to their hats to catch the benign rays that were thought to radiate from the relics and to take them home where they would benefit relatives as well.

This planned pilgrimage, however, did not take place until 1440, so the "co-operative's" invested capital did not reap immediate profit. Therefore it is widely believed that in 1436 or 1437 Gutenberg and his partners had to be already working on a new investment project they called "the secret arts": the invention of movable type. Although the existing documents about this are fragmentary and ambiguous, they refer to a press, forms, tools, and lead.

In actual fact, the art of printing was not unknown: woodblock printing, xylography and even printing by separate metal signs had long been practiced in the Orient, especially in China, for at least five hundred years. Thus it's not 100% correct to call Gutenberg the inventor of movable characters. However, unaware of his Chinese predecessors, he was certainly the first European "to invent" and produce his own types (290 different characters) and the first European printer to use them. His other pioneer inventions were the hand-mould for casting type and the wooden screw-printing-press, probably modeled on the wine or oil press.

Back to Mainz

No known book can be dated to before 1460 in Strasbourg and all preserved early prints indicate Mainz as their printing site. However, it's possible that Gutenberg could have started printing in Strasbourg because he remained there until 1444. Then there is a gap of four years (probably spent in Frankfurt) until he once again re-established himself in his hometown of Mainz. Here he quickly found skilled co-workers, including Peter Schoeffer, and in 1449 convinced Johannes Fust, a wealthy merchant, probably also a goldsmith and moneylender, to lend him 800 florins, for the preparation of printing equipment. With this huge sum, Gutenberg seems to have organized two workshops, one for quick sales, ie. indulgences — a small slip of paper offering sinners some remission from time spent in Purgatory before entering heaven, usually in return for a small sum of money — the other to carry out his long-term Bible project.

In the years 1452 and 1453 Fust loaned Gutenberg another 800 florins specifically for the production of books. With this capital investment the type setting and printing of the Bible could begin. While the Bible was being printed between 1453 and 1454, Gutenberg continued to support himself by printing the so-called letters of indulgence. The revenue from these was used by the Church to finance a war against the Turks who were threatening the Kingdom of Cyprus.

Gutenberg also introduced an additional title: a student's Latin grammar by Donatus.

Both these projects were highly profitable and provided the Church with considerable income, showing already at this early phase in the history of printing

the tremendous commercial possibilities of this invention.

For Gutenberg, the year 1455 was both the best and the worst of times. Although he completed the printing of his 643-page Bible in Latin, each page with 2 columns of 42 lines, and "sold" all the copies in Frankfurt, his clients (mostly clerics who could read) didn't pay up, so Gutenberg was forced to default on his loan from Fust. He subsequently lost the lawsuit Fust brought against him and consequently lost his printing presses and his unpaid-for Bibles. Worse still, the "secret arts" that he'd perfected were made public.

About Gutenberg's later career some scholars have speculated that he was involved in producing a Bible in Bamberg around 1460. He also may have collaborated with other printers in Mainz and Eltville, where his family had owned a wine estate. In any case, in spite of his setback with Fust and subsequent growing number of new competitors, his reputation remained sound.

In January 1465, Adolph II, the Archbishop of Mainz and Elector of Nassau, granted him the title "Hofmann" (i.e., gentleman of the court). This honor gave him many privileges: a pension, a new suit of clothes every year, and 2,180 liters of grain and 2,000 liters of wine tax-free every year. Three years after this honor, Gutenberg died, on February 3, 1468. He was buried in the church of Saint Francis in Mainz but his grave was lost when the church was razed in 1742.

Other Early Printers

Fust and his now son-in-law Peter Schoeffer continued Gutenberg's business, printing in 1470 the first type-specimen sheet and the first book catalog, for up to Gutenberg's multiple copies there had been no necessity: each book, handwritten and illustrated by a scribe, had been unique.

Other German apprentices in Gutenberg's workshops carried the torch of printing, known now as the "German art," throughout Europe. Before 1500, 10 million books would be printed, printing would spread to 60 German towns, and German printers would take the technology to England, France, Holland, Italy and Spain.

The first to venture abroad were Conrad Sweynheym and Arnold Pannartz. In 1464 they left Schoeffer's press and brought printing to Italy, first to the Benedictine monastery of Santa Scholastica in Subiaco and then to Rome, using type that was based on the letter shapes of ancient Roman inscriptions.

Their printing press in Rome was in the courtyard of the Palazzo Massimo alle Colonne on today's Corso Vittorio Emanuele II, not far from Piazza Navona. A plaque marks the spot. Sweynheym and Pannartz had met the Massimo family, merchants of parchment and paper, while working in Subiaco, and after a falling-out with the monks there, accepted their invitation to come to Rome.

Printing Museums Worldwide

Five world-famous museums document the history of printing: (1) the Gutenberg Museum in Mainz; (2) the Plantin-Moretus Museum in Antwerp, named for both French-born Christophe Plantin (1514-1589), who established the "Golden Compass," the largest printing office in Europe, with 160 employees manning 20 presses, and for his son-in-law, Jan I Moretus (1543-1610), whose descendants kept it in the forefront for almost 300 years; (3) the Printing and Banking Museum in Lyons; (4) the Bodoni Museum in Parma, named for Napoleon's favorite printer, Giambattista Bodoni (1740-1813), with all his many typefaces and copies of all the masterpieces he printed on display; and, most recently, (5) The Toppan Printing Ltd museum in Tokyo.

The Gutenberg Museum in Mainz

In the heart of old Mainz, appropriately opposite the impressive cathedral, begun in the 10th century, is the Gutenberg Museum (Liebfrauenplatz 5, D-55116 Mainz, tel. 011-49-(0)6131-122640, Fax 011-49-(0)-6131123488, e-mail: gutenberg-museum@stadt.mainz.de; entrance fee: 3.50 euros, guide book in English 4 euros. Hours: Tuesday-Saturday: 9 AM-5 PM; Sunday 11 AM-3PM; Closed Monday). Founded in 1900, 500 years after Gutenberg's birth, the museum is somewhat of a misnomer because it covers the history of printing worldwide from ancient times to the present, and not just Mainz's most famous citizen.

Concerning Gutenberg: there's a section on the second floor about his life. On display are mementoes including a cornerstone from his father's house, a few original letters, drawings and models of monuments dedicated to him, several portraits, posters celebrating his anniversaries, and even dress-alike teddy bears. Very interesting is a model of Mainz as it was during his life time showing where he lived, worked, and prayed. According to its catalog, Mainz's "is the only museum which gives visitors the chance to see two Gutenberg Bibles and to compare them (the

Solms-Laubach Bible and the Shuckburgh Bible). A replica of the Gutenberg press has been rebuilt according to 15th- and 16th-century woodcuts in the basement, and demonstrations of how it worked are given several times a day.

Aside from his "two" Bibles and letters, the Museum guide also tells us "other important prints from his workshop include a unique fragment of the *Weltgericht* (*Last Judgement*) poem, possibly the oldest example of typographic printing in existence, a fragment from a Latin textbook (*Donatus*), and one of the Cypriot Letters of Indulgence he printed for the prince-bishop of Mainz."

Among the non-Gutenberg early printed treasures on display on the first of the Museum's four floors are two editions of the Mainz Psalter (printed by Fust and Schoeffer in 1457 and 1459) as well as several of their other works; several Bibles printed in German before Luther's translation ("the 3rd German Bible by Jodocus Pflanzmann, Augsburg, c. 1475; the 5th by Johann Sensenschmidt, Nuremberg, c. 1473; the 8th by Anton Sorg, Augsburg, 1480; and the 10th in two volumes by Johann Grüninger in Strasbourg from 1485"); the writings of Pope Gregory IX printed by Schoeffer in Mainz in 1473; Ralph Higden's *Polychronicum*, a world history of the Middle Ages, printed by William Caxton, England's first printer, in 1482; the *Reise in Heilige Land*, Bernard von Breydenbach's account of his pilgrimage to Jerusalem, printed in Mainz in 1486; Hartmann Schedel's famous *Weltchronik* with its 645 woodcuts, printed by Anton Koberger in Nuremberg in 1493 which chronicles the history of the world from its creation — according to the Bible — to Schedel's day and age; and Francesco Colonna's *Hypnerotomachia Poliphilis* ("Poliphilius's Dream"), the first illustrated printed book (1492, a year before Schedel's) and without exception one of the most beautiful books of the 15th century.

Other slightly later treasures on display nearby include: Sebastian Brant's *Narrenschiff* ("Ship of Fools", 1506) with woodcuts probably executed in part by a young Albrecht Dürer; the first edition of Sir Thomas More's *Utopia* printed in Basel in 1518; and a polyglot Bible printed in Antwerp by Christophe Plantin in 1570.

Also on the first floor are early maps and newspapers, travel, pull-out, music, law, alphabet, anatomy, botanical, astronomy, accounting books, how-to-make-books books and more. This section includes the Museum's greatest oddity: a "pilgrim's book."

In a pouch with a ring to attach it to the owner's belt, such a volume was extremely prestigious to own, not only for its cost, but to show off the pilgrim's literacy.

Aside from the section on Gutenberg and the "treasure room," the second floor is devoted to book production before printing: for example, how parchment was made and manuscripts were illustrated by scribes, as well as the book arts of China, Korea, and Japan.

Centuries-old papermaking and printing techniques belong to China's so-called "Four Great Inventions." After Tsai ài Lun discovered papermaking in China in the early 2nd century using plant fibers, it took some 1,000 years for the secret to reach Europe via Arab traders. The first European paper mill was probably set up in Fabriano, a small town in Central Italy's Marches region in the late 13th century.

As for printing, carved wooden blocks had been widely used for many centuries in China. By the 11th century the alchemist Pi Sheng first created moveable type when he baked a clay and glue mixture. The reusable clay type, however, was not durable. It was the Koreans who developed the first metal moveable type in 1403. Unlike papermaking, there is no evidence that moveable type techniques were transmitted from Asia to Europe.

The third floor is about the processes involved in making a modern book with sections about illustrated books (William Morris — the Museum owns a copy of every book printed at the Kelmscott Press — Kate Greenway, Burne-Jones, William Blake, Arthur Rackham, Beardsley, and Maurice Sendak, to name a selection) books with unusual formats, and pop-up books.

The top or fourth floor concerns the history of paper and paper production, and of book-binding, with a splendid display of artistic binding and its necessary tools, and of dust-jackets.

In addition to its splendid displays of books, sadly often too darkly lit (so as not to damage the books) and with explanations only in German, the Gutenberg Museum is home to the largest collection of ex-libris bookplates in Europe and to a remarkable selection of Tibetan prayer wheels, which relieve the person turning the wheel from actually having to recite the prayer.

"With the recent acquisition of a number of rare manuscripts from India, Burma, and Sri Lanka", explains Eva Hanebutt-Benz in the catalog, "there is hardly a region in the world whose ideas on how to notate the spoken word are not included in the Museum."

And so, as the world this August turns its eyes toward Germany and the German Pope, the effects of the revolution Gutenberg helped launch continue to ripple outward from Mainz to the entire world. ●

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