

阅读空间 · 英汉双语主题阅读

古登堡与印刷术

Johann Gutenberg
and Printing

中国教育学会
外语教学
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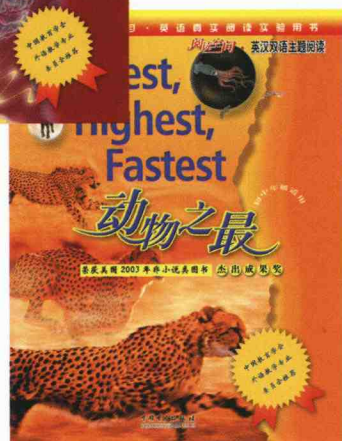
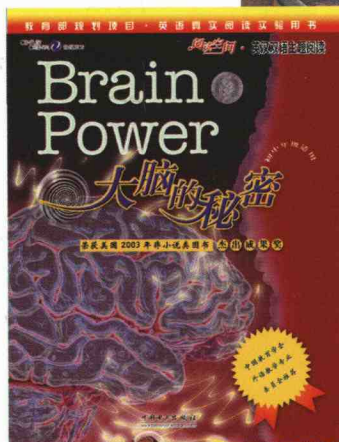
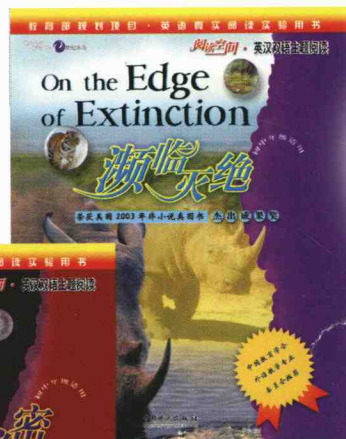
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Nothing is invented and perfected at the same time.

—— An old proverb

没有两全其美之事。

—— 一则谚语

进入21世纪之初，一项民意测验显示，对于“上个1000年中最具影响的人物”这一问题的回答，约翰·古登堡这个名字排列在很前面。

的确，印刷术的发展使得世界发生了显著的变化。文明的进程与印刷业发展结合得越来越紧密。

那么，古登堡是谁？他都做过些什么？翻开本书，让那些对古登堡进行了几十年研究的学者专家们来告诉你吧。

看完本书后，你再来回答上面的问题，是否古登堡也同样列在你的名单之先？



BOOKS BEFORE PRINTING

by Paul Needham

印刷术发明之前
的书

Today, when we think of a book, we automatically picture a printed book, of which there can be hundreds, thousands, or even millions (think of *Harry Potter and the Goblet of Fire*) of basically identical copies. But if you had asked a reader in 1450 or 1460 how a book was made, the answer would have been, “It’s written, of course!” Today, we call such books “manuscripts,” a combination of the Latin words *manu* (“by hand”) and *scriptus* (“written”). From ancient Greek and Roman times down to the age of Johann Gutenberg’s invention—more than 2,000 years—this is how all books were made. But at the time, no one would ever have thought of calling them manuscripts. They had no need for a special word to explain how they were made: They were just books.

Suppose now that you lived in England in the middle of the 15th century (1400s). You had heard about the *Canterbury Tales*, which Geoffrey Chaucer had written 50 years earlier, and wished to have your own copy so you could read it any time you wanted. If you knew that a friend or neighbor had a copy, in manuscript, of course, perhaps you could borrow it. Then you would be able to copy it yourself with pen and ink, on sheets of paper or **vellum**. Or, if you had enough money, you might go to a bookseller, who would, for a fee, hire a professional scribe to make you a copy—almost certainly, in better handwriting than you could produce yourself. You would also have to pay for the paper or the more costly vellum the text was written on, and for any special decoration that was added to it. Finally, you would have to pay for a binding to hold the leaves (pages) of the book together.

Looking back, we can see how slow, laborious, and inefficient this process of making books was. For countless generations, however, such hand-copying

今天，当我们想到书的时候，自然而然出现在脑海中的是一本印制的书，同一个版本可能有成百上千册一模一样的书，甚至有几百万本（想一下《哈利·波特与火焰杯》）。但是，如果你问1450年或者1460年的一位读者一本书是怎样产生的，答案可能就会是：“当然是抄的！”今天，我们称这种书为“手抄本”（manuscripts），这个词是由拉丁词*manu*（意思是“用手”）和*scriptus*（意思是“抄写的”）合成的。从古希腊和罗马时期开始，一直到古登堡发明印刷术的时候——其间是两千多年——所有的书就是这样产生的。但是在当时，没有人会把这些书称为手抄本。他们不需要一个特殊的词来表示它们产生的方式：它们就是书。

现在假设你生活在15世纪中期的英国，你想必听说过《坎特伯雷故事集》，这是杰弗里·乔叟50多年前写的作品，你自己想拥有一本，以便随时可以阅读。如果你知道一位朋友或者邻居手里有一本（当然是手抄本）的话，也许你可以借来。然后你可以自己用笔和墨，将整本书抄下来，写在纸上或者犊皮纸上。或者，如果你有足够的钱，可以找一个书商，他可以收取一定的费用，雇佣一名专职的抄写员为你抄一本——有一点几乎可以肯定，那就是他写的字要比你自己写的好。你还需要花钱买抄写用的纸，或者价格更加昂贵的犊皮纸，以及额外的装饰。最后，你还得花钱把书页装订起来。

Vellum
is a fine kind of parchment prepared from calfskin, lambskin, or kidskin, used as a writing material or for binding books.

现在，当我们回过头看这一过程的时候，我们可以看到做书是个多么缓慢、费力、低效的过程。但是，对于多少代人来说，似乎所有的读者都认为这样的手抄本没有

seemed to work well for all readers. There seems to be no record of an early book-user writing anything like: "This book-making business is way too slow; we need something faster and better."

We really cannot say why a new form of book-making—the use of individual letter-types to print multiple copies—was invented in 15th-century Europe and not, say, in the 13th, when all the specific technologies Gutenberg used were already widely known to European craftsmen. Even if we cannot explain the timing of the invention, certain factors suggest why, when the invention was made, the readers of Europe were quick to accept it.

Shortly before 1350, the super-deadly Black Death, a bacterium carried by fleas, arrived in Italy, probably via rats on a trading ship from the eastern Mediterranean or Black seas. Within a few years, it had spread across most of Europe, reaching even as far as Greenland. It is estimated that as much as 30 percent of the European

什么问题。似乎没有任何记录表明早期的读者曾经写下诸如此类的话：“这种做书的过程太慢了；我们需要更快更好的东西。”

既然在13世纪，工匠们已经普遍了解古登堡所使用的技术，那么，为什么一种新型的制造书的方法——使用单独的字母字体来印刷大量的版本——却是发明于15世纪的欧洲，而不是在13世纪，其中的原因我们确实说不清楚。尽管我们无法解释这一发明的时间问题，但是，有一些因素表明，当这一发明出现的时候，它为什么很容易被欧洲的读者所接受。

临近1350年的时候，一种跳蚤携带的极端厉害的致命性疾病——黑死病——在意大利出现，携带者可能是来自东地中

population died during the first plague cycle of 1347–51. Further cycles occurred periodically for more than 300 years.

Yet, there are indications that, during that same period, the number of readers increased. We might say that despite the population decline, the value of literacy became more widely accepted. New universities were founded in Prague, Vienna, Heidelberg, Cologne, Erfurt, Leipzig, and Louvain. In the decades after Gutenberg's inventions, all these towns became homes to printing shops.

Another strong hint of increasing readership in the 1400s comes from dated manuscripts. A recent survey of nearly 9,000 dated manuscripts shows a steady increase, from 1400 to 1450, in the number of surviving dated manuscripts. It was at this point that the printed book, produced in multiple copies of 100 to 300 or more, was introduced to Europe.

海或者黑海的一艘商船上的老鼠。几年之内,这种疾病在欧洲的大部分地区蔓延开来,甚至远达格陵兰岛。据估计,在黑死病的第一次发作期内,也就是1347—1351年间,欧洲丧失了高达30%的人口。在后来的300年间,黑死病又定期发作了几次。

但是,也有迹象表明,就在同一时期,读书的人数增加了。我们可以说,尽管人口在减少,文化的价值却越来越为人们所接受。布拉格、维也纳、海德堡、科隆、埃尔福特、莱比锡、鲁汶等地建立了新的大学。在古登堡发明印刷术以后的几十年内,这些地方涌现出很多的印书作坊。

15世纪读者数量增加的另外一个有力证据来自于上面标有日期的手抄本。最近,一项针对近9000本已知制作日期从1400年到1450年间的手抄本的调查表明,这些手抄本在数量上呈现了一个稳步的增加。也就是在这个时候,一次印刷100到300册甚至更多的印刷书籍被引入了欧洲。



Keep It:

Secret

by Janet Ing Freeman

保守
秘密

Although Johann Gutenberg is widely celebrated as the first person in Europe to develop a method of printing with movable or reusable metal type, we know very little about either the events surrounding his invention or the man himself. What we do know comes almost entirely from legal and financial documents. While these records are often unexciting, they do hold clues to his family background and circumstances, his movements from his native Mainz in Germany to Strassburg and back again, and his business operations in both cities.

The records of a lawsuit brought against Gutenberg in 1439, while he was living in Strassburg, are among the most intriguing. In the testimony of the various witnesses we can catch a glimpse of his remarkable technical abilities.

Yet, it is only a glimpse. Those who knew the details of Gutenberg's business were careful not to reveal more than was necessary. In an age when *patents* and *copyrights* were unknown, such secrecy was essential if an inventor wished to benefit from his invention, or if someone wanted to make money by teaching others a potentially profitable craft. So, although there are tantalizing hints in the

尽管人们普遍盛赞约翰·古登堡，认为他是欧洲第一个发明了一种印刷术的人——他使用了活动的或者可再次使用的金属字模，然而，对于这项发明前前后后的事情，我们知之甚少，对于他本人也没有什么了解。我们确实掌握的东西都完全来自于法律的或者财务的文件。尽管这些文件读起来经常索然无味，但关于他的家庭背景和生活环境，这些文件确实能提供一些线索，他从故乡德国的美因茨搬到斯特拉斯堡，后来又搬了回去，以及他在两座城市之间的生意往来。

Patents and copyrights refer to the exclusive right to produce something

其中最为有趣的是1439年有人控告古登堡的一桩诉讼案，当时他生活在斯特拉斯堡。通过各种各样的证人的证词，我们对他非同寻常的技术可见一斑。

但是，这仅仅是一个端倪。了解古登堡生意细节的人非常小心，不会多说一句话。那是个还没有专利和版权的时代，如果发明家想从自己的创造发明中获得益处，或者如果有人想通过教会其他人一个有潜在收益的技能来赚钱的话，这样的保密工作必不可少。因此，尽管1439年的证词中有一些让人干着急的线索，其中涉及一台木质印刷机、购买金属，还有一个令人迷惑



1439 testimony regarding a wooden press, the purchase of metal, and a puzzling device made up of four parts, we cannot say for sure that these were in any way connected with experiments in casting type or printing. Further, not one of the earliest pieces of printing in Europe can be dated to before 1454. There is no evidence that any of them were printed in Strassburg. In fact, surviving pieces all point to Mainz.

We do know that while Gutenberg was in Strassburg, he was involved in the practice of one or more mechanical crafts, such as gemcutting, and had found partners who were willing to invest substantial sums of money if he would share his secrets with them. A five-year contract had been drawn up sometime in 1438, but one of the men died suddenly before he could sign it. It was this death that led to the lawsuit against Gutenberg. The dead man's brothers hoped either to recover his investment or to take his place in the partnership. Unfortunately for them, the court decided that Gutenberg owed them only a small sum. Fortunately for historians, the records of the case survived in the city archives. Rediscovered by two local scholars in the 1740s, they were first published in 1760. This again was a fortunate occurrence because, by 1870, all of the originals had perished in fires caused by revolution and war.

的设备，它由四部分组成，但是，我们还不能确切地说，这些东西和铸造字模或者印刷实验有什么联系。而且，欧洲最早的印刷品出现的年代都晚于1454年。也没有证据表明这些印刷品中的哪个是在斯特拉斯堡印刷而成的。实际上，现存的印刷品都出自美因茨。

我们的确知道的是，当古登堡在斯特拉斯堡的时候，他参与了一项或者多项机械手艺，例如宝石切割，并且找到了愿意大量投资的合伙人，前提是他和他们分享秘密。在1438年的某个时候，他们起草了一份为期五年的合同，但是其中一个人还没来得及签字就去世了。正是他的死使得古登堡惹上了这场官司。死去的合伙人的兄弟们希望要么收回死者的投资，要么取代死者成为合伙人。那些人运气不好，因为法庭判决，古登堡只欠他们数目很小的一笔钱。历史学家则非常幸运，因为案卷在斯特拉斯堡市的档案中得以保存下来。当地的两位学者在18世纪40年代再次发现了这些案卷，并于1760年将它们公布于众。这又成为一件幸事，因为在1870年，案卷的原件在起义与战乱的大火中被毁于一炬。

At Odds with Mainz

by Janet Ing Freeman



与

美因茨

不和



No records remain—if indeed they ever existed—that shed light on Johann Gutenberg's education or training. Nor are there any documents that suggest how and why he turned his attention to such mechanical pursuits as gemcutting and the casting of type. Born around the year 1400, he spent his early years in Mainz, Germany, then one of the richest and most important cities of the **Holy Roman Empire**. His father, Friele, was a member of the elite patrician class that was made up of merchants and officials from the court of the **archbishop** of Mainz.

Like many of his fellow patricians, Friele also had connections to the Mainz mint. Although there is no evidence that he was involved in the actual production of coins, it is possible that through him the young Johann came into contact with men skilled in the working of gold and other metals.

Gutenberg's merchant father might have intended that his son join him in his business or pursue a career in the church. In either case, he would have sent Johann to a local church school to study Latin and arithmetic and acquire a good knowledge of the Bible.

Gutenberg's family was prosperous, but the political situation in Mainz was unsettled. The authority of the patricians was repeatedly challenged by organized guilds of craftsmen, such as weavers and metalworkers, who wanted a larger say in the government of the city. In 1411, this unrest forced Gutenberg's father to leave Mainz for several months, possibly taking his entire family with him. Such turmoil continued throughout Gutenberg's teenage years, and gradually, the guilds gained the upper hand. In 1428, the patricians' civil rights

关于约翰·古登堡所接受的教育和培训，即使的确存在某种记录能提供一些线索的话，这些记录也没有能够流传下来。没有任何文件表明，他通过何种途径，又是出于什么原因，将自己的注意力转向追求诸如宝石切割、铸造字模之类的技术上。古登堡大约生于1400年，早年在德国的美因茨度过，美因茨是当时神圣罗马帝国最为富有、最重要的城市之一。其父弗里利是精英贵族阶层的成员，这些人都是美因茨大主教宫廷中的商人和官员。

像很多其他贵族一样，弗里利也和美因茨的铸币厂有一些联系。尽管没有证据表明他参与了制造钱币，但很有可能，正是通过父亲，年轻的约翰结识了那些具有熟练的黄金和其他金属制造技艺的人。

古登堡的商人父亲也许原本希望自己的儿子也经商，或者在教会中谋求一份职业。不管是哪种情况，他都会把约翰送到本地的一所教会学校去学习拉丁语和算术，同时对圣经也会有一个很好的了解。

古登堡的家族繁荣昌盛，但是美因茨的政局则动荡不安。手艺人组成的行会一再地挑战贵族的权威地位，例如，纺织工人和金属技工想要在市政府中拥有更大的发言权。

1411年，动荡的局势迫使古登堡的父亲离开美因茨几个月，可能走的时候带走了全家人。在古登堡的青少年时期，局势一直动荡不安，行会逐渐占了上风。1428年，贵族们的特权

Holy Roman Empire

refers to an empire in west-central Europe that comprised the German-speaking countries and North Italy. The first Holy Roman Emperor was Charlemagne, crowned in A.D. 800. The last was Francis II, who resigned the title in 1806.

Archbishop

is one of the highest ranking clergy members in the Christian church.



were repealed. It may have been then that Gutenberg—now almost 30 years old—left Mainz for Strassburg.

Today, Strassburg is in France, but at that time it was a thoroughly German city, where Gutenberg would have felt completely at home. He continued to receive some income from Mainz, but also entered into business contracts from which he could profit, using his special talents. He seems to have developed closer ties to the guilds as well.

In a list from early 1444 of men eligible for military service, Gutenberg is named among those connected with, though not members of, the guild of master goldsmiths, painters, saddlers, and glaziers. He seems to have been a man of two worlds: a wealthy patrician by birth but, by inclination, a skilled craftsman.



被取消。也许就在此时，古登堡离开了美因茨，搬到了斯特拉斯堡，此时他已经几乎到而立之年了。

现在的斯特拉斯堡属于法国，当时则完全是一座德国的城市，古登堡完全没有身在异乡的感觉。他继续从美因茨那里得到一些收入，但是也开始运用自己的特殊才能，从事一些能够获益的合伙生意。他也似乎和行会保持了一种更加紧密的关系。

在1444年初的一份合格服役人员的名单中，古登堡的名字和另外一些人的名字写在一起，尽管这些人不是行会的成员，却和金匠、油漆工、马鞍匠及玻璃工师傅行会有

着联系。他似乎是一个身处两个世界的人：生下来是一位富有的贵族，按照自己的喜好却是一名熟练的手艺人。