

Printing in Isaiah Thomas's Time

Printing in Isaiah Thomas' time had changed very little since Johannes Gutenberg first printed his Bible in 1455. The press that Isaiah first learned to use was essentially the same type of press used for centuries. It was made of wood and called a block or blaeu style press. It was operated by hand and took an enormous amount of strength to pull the handle or bar that turned a large metal screw that in turn pressed a square block of stone down on the type to make an impression. Printers would develop the muscles on the side of their body with which they pulled on the press. This overdevelopment of these muscles made them walk and move with what was called a printer's gait. It was possible for printers to recognize another printer by the way he moved down the street.¹

The printing process started by setting type. Every character, including all letters, punctuation marks, and even blank spaces, were made out of individual pieces of metal. These pieces of type were often called **faces**, which was short for **typefaces**. These pieces of type would be placed in wooden boxes divided into little partitions for each letter, punctuation mark, or space. Much like a contemporary computer keyboard, these type cases were arranged for easy and quick access to those partitions containing the letters that were used most frequently. Printers were careful to make sure the individual characters were separated and in their proper partitions. Type that was all mixed up was called a **printer's pie**. Each piece of type would be placed upside down and backwards in a metal or wooden tray called a **composing stick**. The type had to be placed this way so that it would appear correctly on the page when it was printed. A composing stick held only a few lines of type. Once the composing stick was filled with type, it was transferred to a larger wooden or metal frame called a **galley**. Generally, this galley would be placed in a press and printed to produce a **galley proof**, which would then be carefully examined for any mistakes. A good printer could set one book page per hour. This was the equivalent of setting 1,200 to 1,500 characters per hour. Once corrected, the

¹ Will Contatina, interview by author, December 23, 1998, Old Sturbridge Village, Sturbridge, MA.

type would then be transferred to a larger metal frame called a **chase**. The type would then be locked in place using wooden wedges called **quoins** (pronounced “coins”). A chase, when fully loaded with type, could weigh up to 100 pounds!

The chase was then placed on the bed of the wooden press that was sometimes called the **coffin**. A piece of paper would be set upon the **tympan** and secured by a **frisket**, which was generally a piece of canvas cut around the printing area. The frisket would then be folded over the tympan and both would be placed upon the inked type. The bed would then be moved under a large stone weight called a **platen**. A large screw served to press this stone weight down when the wooden handle, called the **bar**, was pulled. For large sheets of paper, the type might be moved so that it fit squarely under the platen and the bar pulled for each section of the paper to be printed.

Ink was applied to the type using two **ink balls**. These ink balls were pieces of wood with a handle on one end and a leather cover stuffed with rags on the other. The leather side would be dipped in ink, then each ball would be rubbed and beaten, one against the other, to spread the ink evenly on both surfaces. They would be tapped or beaten on the type sitting on the press. It was important that the ink was evenly distributed over the surface of the type in order to make a uniform impression. If you had too much ink, it was called a **monk** and too little was called a **friar**. This referred to the clothing worn by the clergy in the middle ages – monks wore black robes while friars wore white ones.²

The ink was made from a combination of linseed oil and lamp black, the soot that would collect on the glass chimneys of candle or oil burning lamps. This ink resembled the varnish of today. It was very durable and thick. Although ink could be made in America, most of the ink used in Isaiah Thomas’ time came from Europe. Most of the best paper used was imported from England or Holland.

Generally two people worked at the press, one **beating** (inking) the type and the other **pulling** (or operating the press). An apprentice was usually employed to take the freshly printed pages and hang them on racks to dry. Working in this way, skilled printers could produce an astonishing 240 impressions an hour, or on average, 1,920

2. Stan Nelson, interview by author, January 7, 1999, at Smithsonian Institution, Washington, D.C.

sheets printed on one side per day.³

Paper in Colonial America

The paper used in colonial times was generally made from the fibers of cotton or linen rags. It was printed while wet so that the fibers would be pliable. One of the jobs of an apprentice was to hang the wet paper to dry on racks suspended from the ceiling of the print shop.

Paper was always in short supply in colonial America. The scarcity of rags caused a great deal of problems for the manufacturing of paper during the Revolution. In fact, papermaking was regarded as such an essential occupation that skilled papermakers were able to secure exemption from military service during the war.⁴ Many newspapers, including Thomas', frequently carried ads for rags that could be delivered to the printer's office where they would be collected for shipment to the nearest paper mill. Thomas, in his *History of Printing in America*, states that the first American paper mill was constructed in Germantown, a community of German-speaking people just outside of Philadelphia, Pennsylvania. It is believed that the first American papermaker was Nicholas Rittenhouse (1666-1734). After his death, the papermaking business was carried on by his descendents.⁵ Thomas further stated that there were several paper mills in New England and two or three in New York before the Revolution. After 1775, paper mills increased rapidly in all parts of the union. Thomas estimated, in 1810, that there were a total of 195 throughout the states and territories.⁶

A paper mill was established in Sutton, Massachusetts, during the Revolution and Thomas himself, in order to secure a good steady supply of high quality paper to his own presses, established a mill at Quinsigamond (now a section of Worcester), Massachusetts, in 1793. This mill turned out approximately 1,400 pounds of paper per week. It employed eleven girls and ten men, one of whom was Zenas Crane, who would later found the famous Crane Paper Company in Dalton, Massachusetts.⁷ This company is

3. Lawrence C. Wroth, *The Colonial Printer*, (Southworth-Anthoesen Press, 1938), 80.

4. *Ibid.*, p. 144.

5. Isaiah Thomas, *The History of Printing in America*, (Weathervane Books, 1970), 21.

6. *Ibid.*, 27.

7. Clifford K. Shipton, *Isaiah Thomas: Printer, Patriot, and Philanthropist, 1749-1831* (The Printing House of Leo Hart, 1948), 63.

still flourishing as one of the finest manufacturers of paper in the world.

The Business of Printing

Printers during Isaiah Thomas' lifetime generally earned their living by producing all kinds of materials, including newspapers, almanacs, pamphlets, books, and broadsides. Many printers attempted to balance their workload and ledger books by working for the government, printing official proclamations, legislative records, laws, and blank forms. Printers also produced a great variety of "job work", which included everything from advertisements, diplomas to forms.⁸

Many printers also became postmaster, making their printing shops centers of information. Benjamin Franklin became the deputy postmaster at Philadelphia from 1737 to 1753, and, with William Hunter, was made joint postmaster general for all the colonies from 1753 to 1774. He became the first American postmaster general by act of the Continental Congress in 1775.⁹ Franklin appointed Isaiah Thomas postmaster at Worcester in 1775. Thomas held this post until 1802, when he was removed by the Jefferson administration and replaced with an ardent Jeffersonian.

Throughout Isaiah Thomas' life, printers and all trades people were paid in barter as well as in currency. Thus, after completing a book or broadside printing job, Thomas might easily have been paid with a live hen, a load of firewood, or perhaps some hand-woven cloth. Printers in particular would often trade books, bound or still in sheets, in exchange for work. They would often print books for other printers and again might accept payment in other books that they could sell in their shops.

Colonial Printers and the American Revolution

Colonial printers played a particularly important role in the American Revolution. The Stamp Act, one of the earliest British taxes to be imposed on America, was particularly harmful to printers. It affected every aspect of the printing business by

8. A good source on the life of Colonial printers and in particular how their business practices influenced their politics is the essay "Printers and the American Revolution" by Stephen Botein found in the *The Press and the American Revolution* edited by Bernard Bailyn and John B. Hench (Northeastern University Press, 1981).

9 Richard B. Morris, *Encyclopedia of American History*, (New York: Harper & Brothers, 1953), 661.

placing taxes on newspapers, pamphlets, almanacs, advertisements, and legal documents, including apprentice indentures. These taxes ranged from a halfpenny for a “half-a-sheet” to six pounds on long legal documents.¹⁰

The Stamp Act enraged the people who controlled the media. Printers throughout the colonies were soon denouncing the tax in their newspapers, pamphlets, and broadsides. Isaiah Thomas created a sensation when, as a young printer in Nova Scotia, he printed articles against the tax, made the official stamp appear upside down, and added a devil attacking the stamp in the *Halifax Gazette*.

Colonial printers frequently exchanged products with other printers throughout the colonies. In this way, the protest against the Stamp Act helped to unify people throughout the colonies in opposition to British authority. Thomas received much inspiration for his own Stamp Act protest from other printers. He even reprinted in the *Halifax Gazette* how the *Pennsylvania Journal* looked when it was draped in black mourning bars to symbolize its own death on the day the Stamp Act was to take effect.

As the conflict with England grew into war, colonial printers continued to play an important role in communicating the strategies of protesters and the actions of colonial governments. Once the war began, printers communicated the war news, which inspired soldier and civilian alike to continue the fight.

Early American Newspapers

Early American newspapers were typically published on folio or crown sheets, that is, they had four pages, each measuring approximately 10” x 15”. They were filled with densely packed small type in three or four columns. Newspapers of this era had few, if any, illustrations. Frequently the title, or masthead, of the paper might include an allegorical or symbolic figure and some decorative type. Advertisements would often include a standard woodcut of a ship, a house symbolizing real estate for sale and perhaps a black person with a bundle on a stick to depict a runaway slave. Newspapers were generally printed once a week with an occasional “Supplement”, “Postscript”, or “Extraordinary” edition published in between the regular issue date. Headlines like those

10 Arthur M. Schlesinger, *Prelude to Independence*, (New York: Alfred A. Knopf, 1958), 68.

of today were rare. Most stories were headed only by the place and date from which they originated.¹¹

Printer did, however, use typography in interesting ways to enliven and emphasize their stories. Frequently printers would set the first letter of a work in the upper case or use *italics*, SMALL CAPITALS, and LARGE CAPITALS to add emphasis or meaning to words and phrases.¹²

The printer generally also served as editor, reporter, publisher, and sales manager. Much of the news he received from visitors to his print shop, post riders, ship captains, and other newspapers. Colonial newspapers generally sent each other copies of their newspapers free of charge, and it was customary for printers to reprint with or without attributing the news they found in them. Very little of the news in colonial newspapers was local. As most cities were small, it was generally assumed that people knew what was happening in their own communities. Thus only extraordinary local occurrences, including natural disasters, strange accidents, deaths, and the execution of criminals made it into the paper. The contents were dominated by foreign and international news, including that of England, and by a large amount of essays on a wide range of subjects. Generally, news from abroad would take two months to reach America.

Broadsides

Broadsides – sheets of paper printed only on one side – were frequently displayed or posted in public areas - inside taverns, outside meetinghouses, around municipal buildings, or on the broad side of barns, from which their name derives. All kinds of texts were printed on broadsides, including poems, government proclamations, songs, and advertisements. Frequently they contained graphic images and a variety of typefaces and symbols. Although often printed on large pieces of paper, they could be of any size. A broadside may be compared to a poster or handbill advertisement of today. Sometimes

11 For a comprehensive examination of the news found in newspapers in each period of American history, see Frank Luther Mott's *American Journalism A History: 1690-1960*, (Macmillan, 1962).

12 Schlesinger, *Prelude to Independence*, 59.

the first thing a printer printed was a broadside advertising his business and his intention to print a newspaper.

Almanacs

Another important product of many early-American printing houses was the almanac. These were very similar to the *Old Farmer's Almanac* still published today. Although almanacs were published only once a year, virtually every member of society consulted them daily. They were generally very inexpensive, only a few pennies each. Their most important function was to predict the weather, but they also contained medical remedies, anecdotes, recipes, public documents, poetry, passages from literature and history, and a wide range of other practical information.

Isaiah Thomas' almanacs were extremely popular and lucrative publications. He began publishing a yearly almanac in 1771 and continued until 1801.