The birth of the modern newspaper

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The modern newspaper may be said to have been born on November 29, 1814, when The Times became the first newspaper to be printed by steam. The replacement of hand presses by the new technology meant that for the first time it became possible to produce newspapers on a scale that could meet public demand.

The hand presses were highly labour intensive and could print only 300 sheets an hour. In 1814 The Times’s circulation was around 4,500 – the limit of its printing capacity. Any increase would require more presses and more labour – an investment that was simply not worth the cost.

John Walter II, proprietor of The Times and son of the newspaper’s founder, had long been aware of the need for a technological solution to reduce production costs, which in 1805 represented £3,500 per annum, nearly £110,000 at today’s prices. On May 9, 1804, he had contracted to subsidize Thomas Martyn, a printer from Golden Lane in the City of London, to produce a printing press “by which manual labour in printing will be rendered nearly unnecessary”. Martyn, for his part, would not make machines for other customers without Walter’s consent. By the time it became obvious that the experiment was a failure, it had cost Walter £1,482.

In August 1809 Walter was approached by Thomas Bensley, a well-known London printer, with another proposition but, more cautious this time, declined to offer financial support. Bensley’s partner was a German printer, Friedrich Gottlob Koenig (1774-1833). Born in Saxony, the son of a small farmer, Koenig was apprenticed as a printer and typesetter in Leipzig in 1790. He developed an interest in mathematics and mechanics and in 1802 established a bookshop and letterpress printing establishment. Initially financed by his partner, Riedel, he had developed his first printing machine by 1804 in Suhl in eastern Germany. When Riedel’s funding dried up, he looked for support in Vienna, Dresden, Hamburg, St Petersburg and finally, in 1806, in London. After prolonged demonstrations and negotiations, he entered into an agreement with Bensley on March 31, 1807. The main point was as follows:

Mr. Koenig, having discovered an entire new Method of Printing by Machinery, agrees to communicate the same to Mr. Bensley under the following conditions:- That if Mr. Bensley shall be satisfied the invention will answer all the purposes Mr. Koenig has stated in the Particulars he has delivered to Mr. Bensley, signed with his name, he shall enter into a legal Engagement to purchase the Secret from Mr. Koenig; or enter into such agreement as may be deemed mutually beneficial to both parties; or should Mr. Bensley wish to decline having any concern in the said invention, then he engages not to make any use of any part of the Machinery, or communicate the Secret to any person whatsoever, until it is proved that the Invention is made use of by anyone without the restriction of Patent, or other particular engagement on the part of Mr. Koenig, under the penalty of £6,000.

The construction of the first mechanical parts took the whole of 1808. The invention had not yet been patented, but by this stage Koenig had spent an estimated £1,060 and Bensley had advanced £500.

Failing with John Walter II, Bensley and Koenig sought partners elsewhere. On September 29, 1809, George Woodfall and Richard Taylor, both printers, joined the syndicate, each contributing £250. Another new member was Andreas Friedrich Bauer (1783-1860). Bauer was born in Stuttgart, where his father held positions at court, and studied optics and precision engineering before continuing his education in mathematics and natural science at the University of Tubingen. In 1805 he moved to London. It is not known when he met Koenig, but by 1809 the two were firm friends.

Their mechanical press was patented in London in March 1810. The first working trial was in April 1811, when a sheet of the Annual Register was printed in a run of 3,000 - the first sheet of a book ever printed on a mechanical press.

Koenig’s further improvements were patented on October 30, 1812, and July 20, 1813. He retained a keen desire to interest the newspaper trade and invited Perry of the Morning Chronicle and John Walter II of The Times to see the machine in operation at his workshop in Whitecross Street. Perry declined on the ground that the machine was far too expensive. Walter remained sceptical, but was persuaded to inspect it by the acting editor, Peter Fraser.

The Koenig press was built of iron with a flat bed that travelled backward and forward under a cylinder delivering the impression on the paper; in trade parlance, a cylinder-reciprocating machine. It had a novel sheet-feeding mechanism and an automatic inking system. Although, like all previous machines, it remained capable of printing only one side of a sheet at a time, the new steam-powered press could print around 1,100 sheets an hour - representing a significant saving in labour costs.

As soon as he saw the machine in action, Walter was convinced. In an agreement with Koenig, dated March 30, 1813, he ordered two double versions of the steam-powered machines at £1,100 each (the equivalent of almost £28,000 at today’s prices), two £250 two-horsepower steam engines to work them, and the necessary connecting mechanism at £100. Koenig agreed to deliver the machines within 12 months and not to

Lend, sell or in any manner dispose of any of the said machines…to any person or persons whomsoever for the purposes of newspaper printing to be used within ten miles of the City of London, nor work, use or employ or permit or suffer to be worked, used or employed any machines that any or either of them may now hereafter have in use or operation in the printing of any newspapers or newspaper…on more beneficial or advantageous terms…than they have hereby contracted and agreed to sell…to the said John Walter.

The faster production with the Koenig machines meant that, when necessary, printing could be delayed to accommodate more up-to-date news. The newspaper could also go on sale on the streets at an earlier hour. Radical developments in mechanisation were not unique to the printing trade at this time but the reduction in manpower came at a cost in terms of jobs. The Times had been affected by industrial unrest four years earlier when compositors and pressmen gave notice that they would leave if a wage increase was not forthcoming. The withdrawal of labour lasted five months with violence by the striking workers against those brought in to replace them. Walter prosecuted the strikers under the anti-Combination laws and 19 were sent to prison, where one died; 28 men left Printing House Square.

Walter was determined that this time there should be no opportunity for disruption or machine breaking. Secrecy was a prime concern. The machines were built at Koenig’s workshop in Whitecross Street. Bauer, now Koenig’s manager and chief mechanic, required each of his workmen to be bound by a fidelity-bond of £100 not to divulge any description of the machines, their parts, or names of the persons to whom deliveries were to be made. During 1812 and 1813, Koenig, with Bauer’s assistance, conveyed the parts, as they were completed, from their workshop to Walter’s private shop, set apart for the purpose in Printing House Square.

By the evening of November 28, 1814, the machines were in place. Potential dissenters among the workforce were told that printing was being delayed to await news from the Continent. Walter himself organised the printing of the paper and before six o’clock in the morning of November 29 went into the press room to announce to the assembled workmen that “The Times is already printed – by steam”. He promised a continuance of wages to every compositor until suitable employment could be found, but pointed out that if any violence was attempted there was a force ready to suppress it.

In production costs the new presses represented an immediate saving of 250 guineas a year and in circulation a prompt increase of almost 50 per cent. The great typographer and printing historian Stanley Morison claimed that their introduction was the greatest revolution in printing since Gutenberg - when medieval methods of printing moved into the industrial age. Unfortunately work practices within the printing trade did not keep pace with developments in print technology and remained embedded in the pre-industrial age until the trauma of the Wapping dispute in 1986 – a development with which The Times was also directly associated.

Koenig and Bauer returned to Germany in 1817 and began building their printing presses in a disused monastery in Oberzell near Wurzburg. The company they established is still operating and is now the third largest manufacturer of printing presses in the world.

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