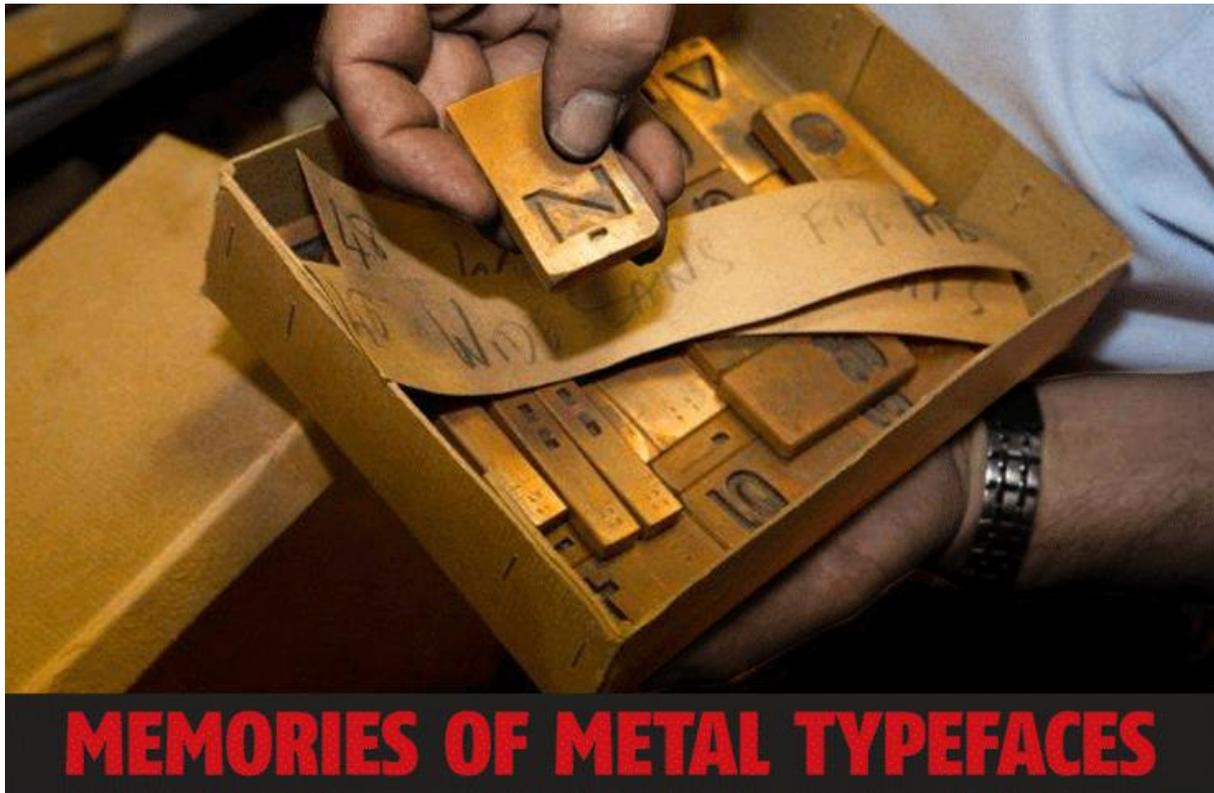


The Tale of Typesetting

Noel D'Cunha



The first time, printing interns at PrintWeek saw an old newspaper, they were stupefied. It was so difficult to imagine typesetting, one by one, by hand, every tiny letter of metal in complex lockups so tight. It required mechanical engineering. Also skillful dexterity. You had to pick each alphabet without ruining the structure. Or else you had to start all over again the next morning.

*The Sunday Column looks at the world of types - and why it remains important.
First appeared in PrintWeek, February 14, 2021.*

We recall a conversation with master printer Sameer Gupte in Thane. He said, “My father established Kirti Printers in 1964. He worked with Lokmanya, Phadke and Thane’s Sanghamitra, before starting Kirti Printers. In 1975, he had to close down the press due to various reasons but opened operations again after two months. I was 11 years old and have been a printer since then. I began to realise that while composing Devnagari, the type used to exhaust just after printing two pages. Sometimes, we used to run out of the *poornaviram* or *maatra*, after which the only two options were Mumbai or Pune. Back then, I took up Pune’s Bharat Type Foundry and Prakash Type Foundry’s agency and began a Mudran Sahitya Vikreta

business in Thane. We used to supply types to most printers in Thane. Thus, we began expanding the whole Mudran Sahitya part of the business.”

This was a decade ago.

In the early nineties, we recall a session with Arun Mehta of Vakil & Sons. In his cabin, he showed us how printing of books was rendered by letterpress, with a metal type that was set by hand from individual letters and numbers. Errors could creep in at several stages — the distribution of the type into type cases; the picking of type by the compositor, the missing of errors by proof readers; and loose letters being pulled out on the press and replaced in the wrong places.

Mehta spoke about Charles Stanhope, 3rd Earl Stanhope, a scientist, inventor and politician. In 1800, he developed the first book press made completely from metal. Others soon followed. Cast iron, a material of the industrial revolution of the 1700s, gave a far more rigid frame than the wooden Common Press. It was still hand-pulled, but levers increased the force. This allowed much larger multi-page section sheets to be printed for books, and also broadsheet newspapers. Stanhope and similar designs (such as the Columbian) bridged the gap between wooden and later powered presses. Stanhope’s design could put out around 480 pages per hour, twice what was possible on a Common Press.

Mehta said, “In those days, proofreading was very important because there was no way to guarantee error-free output all the way to the printing press. Today, in 2020, we call this, ‘maintaining data integrity’.”

Print nostalgia

In 1886, German-American inventor Ottmar Mergenthaler, sometimes referred to as the second Gutenberg, perfected the first mechanical typesetting machine for the *New York Tribune*. The output lines of ‘hot metal’ type alloy (called slugs) lent itself to the name of its manufacturer — Mergenthaler Linotype Company. Ten years later, the Monotype company patented a system to cast separate type characters that allowed corrections. Other major mechanical hot metal typesetting companies followed: Intertype was a Linotype copy, while Ludlow made hot metal display typesetters. Together with Linotype, these machines revolutionised typesetting and lasted until being overtaken by lithography and computerised phototypesetting in the late 1970s and early 1980s.

Vimal Parmar, a marketing consultant, Digital Print Media at TechNova Imaging Systems says that letterpress and typesetting remind him of the Letraset pages.

Speaking to *PrintWeek*, he adds, “When I was at Agfa Gevaert India, I was involved in conducting a survey of phototypesetting units in Mumbai and Delhi. We visited almost all the setups from about 1985 to 1992, and then from 1992 to 1995 in Bengaluru. We carried out an in-depth survey and marketed Agfa products (which were imported) and the Sterling brand that was manufactured at New India Industries in Mumbai.”

Later, Agfa Gevaert India changed its name to Allied Photographics India. “Those guys were real artists,” he says, adding, “DTP took away everything. The text started looking monotonous. The pages lost character. I am talking about the early days.”

Suhas Kulkarni, general manager, Asia Pacific BU TEC at DKSH, says, “My first practicals at PVG College of Engineering & Technology were at the galley filling up the block, with the trays of alphabets staring at you. And the lead residue on the fingers after a whole shift.”

When asked if the work was onerous, Kulkarni explains, “It was tough work. I did phototypesetting of artworks for bread, rusk, biscuits and the like with my uncle who was a ‘freelance’ artist. The smell of rubber glue is still fresh in my mind.”

He describes his routine: “I used to make PS plates part-time in the night at the *Indian Express* press at Khadki (near Pune), and return to the city centre with the delivery van. At 4 am, I would disembark at Appa Balwant Chowk and then cycle to my room at Sahakar Nagar, have fresh upma at Kalpana and attend my college at 8 am.” Sounds impossible these days.

Prof Raja Mohanty of the Industrial Design Centre (IIT, Powai) says, “Letterpress reminds me of RK Joshi, teacher and an intense calligrapher, who took us to the letterpress section and got us to understand the em space.”

Later, Mohanty and his batch of students studying visual communication graduated to composing text using a single line display electronic machine. The columns of text on bromide prints would have to be cut and pasted using rubber solution.

What was the toughest part of the process? “People say hot lead or the weight of the types, but I would say the micro millimetre of misalignment. It meant repeating the process,” Mohanty chuckles. “In all this, RK Joshi turned his stammer into an advantage by making us wait for those pearls of charged wisdom.”

Playwright and author Rajeev Naik concurs. RK Joshi took a complete year to do the cover design of Devnagari Mudra-Akshar Lekhankala (देवनागरी मुद्राक्षरलेखनकला), and insisted on a reverse spine!

RK, as he was fondly called by his students, was every bit a theatre-wallah, whose dramatic utterances could breathe life into letters, type and typography.

The lost art of typesetting

PrintWeek visited the *Daily Desh Darpan* office in Kolkata a few years ago.

The *Daily Desh Darpan* spark was ignited in 1930 by Netaji Subhash Chandra Bose, when he pushed freedom fighter and poet Sardar Niranjan Singh Talib to publish a newspaper in Punjabi from Calcutta, as a means to reach out to the faithful Sikhs and Punjabis and other like-minded

people. Thus, was born the first and only nationalist Punjabi daily published from Eastern India, ‘the heart of Punjab beating in Bengal,’ the *Daily Desh Darpan*.

Millennials today, used to the latest digital pre-press and offset printing technology, would be hard-pressed to imagine the situation in the 1930s where hand-cast Gurmukhi types were set by compositors in steel galleys and were mounted onto the letterpress printing machine, which would then print copies at a speed of around 1,500 per hour, first one side and then the next.

As we spoke to the old timers about the good old inky days, we wondered what other genius ideas may be headed for the scrapheap of poor decision-making —both corporate and governmental.

This is not utopia. Today, Vakil & Sons does a lot of typesetting for overseas pharma companies. Mehta says, “They insist on 100% accuracy because even a comma out of place could become a million-dollar legal issue.”

He adds, “Today’s generation of young computer-savvy freelance designers pay little attention to typesetting in their design. When we get a printready file, it is carefully read by our proof readers and we invariably find mistakes. As a printer, we would be blamed for the mistake. And so, proofreading is the most important element in printing.”

Mehta feels with the advent of auto correction in computer software, the fundamentals of typesetting plus proofreading have become very important. He concludes, “Errors can be disastrous for sensitive information or data. Therefore, we re-check before we press the send button.”

Kiran Prayagi and stone litho

Kiran Prayagi spoke to *PrintWeek* about stone lithography when paper was printed via calcium stone. It is the method of printing originally based on the immiscibility of oil and water.

In 1798, in Munich, in what was then Königreich Bayern, Alois Senefelder, an actor and playwright, invented the process of lithography by accident when trying to develop an acid-etched relief printing block made of limestone. He claimed that when his mother asked him to write a laundry list, he grabbed the nearest thing to hand – a lump of black wax – and wrote it on a flat stone.

After a couple of years of experimenting, he found that dampening the stone meant that ink only stuck to the wax, and the ink would then transfer to a sheet of paper pressed on top.

He teamed up with Johann André, a composer and music publisher, and gradually perfected the new technology, improving both the chemical processes and the special form of printing press required for using the stones. He called it ‘stone printing’ or ‘chemical printing’, but the French name ‘lithography’ became more widely adopted.

Over the next two centuries, lithography progressed from being a fine art process to the dominant print process worldwide by the 1970s and 1980s.

Print guru, Prayagi has an emotional history attached to stone lithography. In 1879, Prayagi family (Kiran's great grandfather) started a printing press by the name of Subodh Sindhu Press in Burhanpur in Madhya Pradesh and soon thereafter, shifted to Khandwa. This press deployed stone lithography for the production of a weekly newspaper, named *Subodh Sindhu*. Writers and artists used to sketch directly on the stones for printing in Marathi. Later the press was expanded to print commercial work, bank cheques, books and publications, etc. using the then modern letterpress printing machines. A second press was also established in Nagpur at the invitation of the Nagpur University.

Prayagi says, "In typesetting those days, Intertype (later became a part of Linotype), Monotype, Monotype Super Caster, were what we would call modern. These were installed at Subodh Sindhu Press. Special Urdu typefaces were also available at the press, which was mostly handwritten at that time by other printing presses."

A special adaptation of Devnagari type on Intertype linecasting machine scheme was worked out by Kiran's grandfather that was recommended for adoption at Intertype head office in Brooklyn, USA. Recently, Kiran Prayagi got lucky and traced the 1882 original prints of his family newspaper at the Mass Communication Department at the Pune University.