

*Linotype: The Film* relayed the history of the Linotype machine as well as the art and history of the people who contributed and still contribute to its legacy. The Linotype revolutionized printing for the masses, which has implications on nearly every industry. Education, the arts, religion, business, and government were all impacted by the ability to quickly and accurately print and disseminate information. Previously books and manuscripts were made by hand, where they fell apart nearly as fast as they could be made. Hand transcribing was a long and tedious process, and limited the size and scale of production. While the linotype machine is now obsolete, replaced by phototypesetting and later computers, it transformed the world and spurred us into the modern world.

The linotype machine was not the first attempt to create an efficient printing machine, but it was the most successful and widely adopted. Prior to the linotype's success, typesetting was done by hand. Taking metal block letters and fitting together each letter in each word to build paragraphs and articles and stories was extremely time-consuming and limited. Newspapers and printers employed hundreds of compositors in order to build the typesetting required for printing. If you ran out of a letter, then you were relegated to cast another slug or dismantle other type that had already been painstakingly made.

Another precursor to the linotype machine was lithography. Using a stone or metal plate with a smooth surface, the plate was etched. Coating the etched plate with water would retain water in the etched grooves that would repel oil-based ink, which could then be transferred to a blank paper. Used in this way it could be used to create a repeated printed page. However, it's important to note that the etching would print as a mirror image, so text needed to be backward to transfer correctly onto the printed page. Before the linotype machine, there were several attempts to make the lithography more effective. One included a typewriter transfer machine where a document was typed on a typewriter and then transferred to a lithographic stone plate. The lithography strip machine built on the same idea, producing a strip of text that was cut and then arranged on the lithographic stone, but was only a small step up from the typewriter method.

It wasn't until 1884 when a German clock maker named Ottmar Mergenthaler, together with James Clephane and Charles Moore, conceived the idea of casting molten metal into letter molds and built the linotype machine. The linotype machine has a keyboard of 90 keys, arranged by case and usage.

These keys trigger mechanical retrieval of the appropriate letter matrix that are dropped into place in a line. Typically they support two positions, one primary for Roman fonts, and an additional for italic or other font faces like bold. Once the line of text is complete, the linotype machine casts the metal slug which can then be arranged into a line with other slugs and used for printing. The name linotype was derived because the machine could cast an entire line of type at a time as compared to the individual letters arranged by compositors. The linotype was used across many publishers and locales, including the *New York Tribune*, the *Chicago News*, and the *Louisville Courier-Journal* to name a few. Being mechanical and made of metal was very loud, and it was not uncommon to hire people who were deaf to work the machines because the noise was no bother to them.

Printing done with a linotype machine is often referred to as “hot metal”, referencing the molten metal casts that are being made. As one could imagine, melting metal and actively casting it in a large mechanical machine had the potential to be dangerous. Eventually phototypesetting replaced the linotype machine. Phototypesetters mimicked the mechanics of the linotype machine, using matrices, but unlike the older machine, replaced the molten metal with photographic technology. Eventually phototypesetters too were replaced, this time by computers.

The technology of the linotype machine replaced the jobs of compositors who hand-built type prior to its invention. But in light of that, it also increased printing efficiency, allowing a higher rate of manufacturing for books, newspapers, and pamphlets. It lowered the costs of manufacturing of such print media, and passed those savings onto the consumer, who now had information more readily at their fingertips. It also created jobs in linotype manufacturing and maintenance, as well as linotype operators.

Learning about the history and the art of typesetting, and specifically the linotype machine gives context to the modern technologies we often can take for granted. Living in the information age, with digital text a click away, it's extraordinary to consider the progress it took to get here. The linotype machine revolutionized the dissemination of information. Newspapers went from several pages to tens of pages, and issues could be distributed at scale, dropping information on people's doorsteps daily. The pace and scale of distributing information grew exponentially with the adoption of the linotype machine.

Nowadays, the linotype machine is a relic, left for niches, collectors, or museums. It's fascinating to consider how many people were employed and made their lives and livings with these machines that have since been replaced by other technology. But while the craft is obsolete, there are many who still respect and enthuse over the linotype machine. It is considered an art form, a legacy, to continue to use them today.