

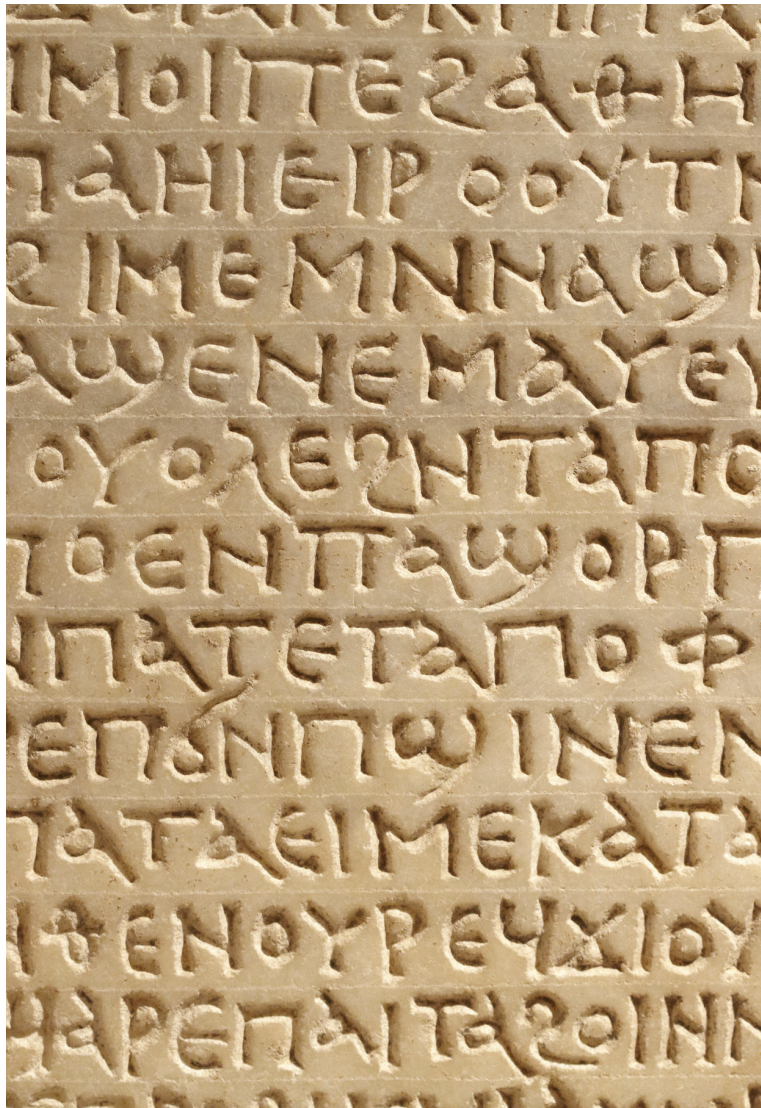
The Anatomy *of* Type



The Evolution *of the* Letterform

EVOLUTION: *Grecian Letterforms*

REFERENCE



FONTS

LITHOS

CAROL TWOMBLY (1988)

HERCULANUM

ADRIAN FRUTIGER (1990)

RUSTICANA

ADRIAN FRUTIGER (1991)

INFO

Greek capitals scratched into stone are the earliest surviving European letterforms.

The strokes are bony and thin and the letters are comprised of straight lines.

- Drawn freehand—not with a compasses and ruler
- Extremely open apertures (as seen in the S, C, M)
- No serifs
- No lowercase characters

EVOLUTION: *Roman Letterforms*

REFERENCE



FONTS

TRAJAN

CAROL TWOMBLY (1988)

PALATINO

HERMANN ZAPF (1949)

JENSEN

ROBERT SLIMBACH (1996)

INFO

The Roman inscription letters were formed with a flat, angled brush which introduced varying weights in letterforms. The letters were then carved in stone with a mallet and chisel.

- Modest aperture
- Modulated stroke (varying thickness of strokes)
- Full and formal serifs
- No lowercase characters

EVOLUTION: *Regional Scripts*

REFERENCE



FONTS

Carolina

GOTTFRIED POTT

Wilhelm Klingspor Groisich

RUDOLF KOCH

INFO

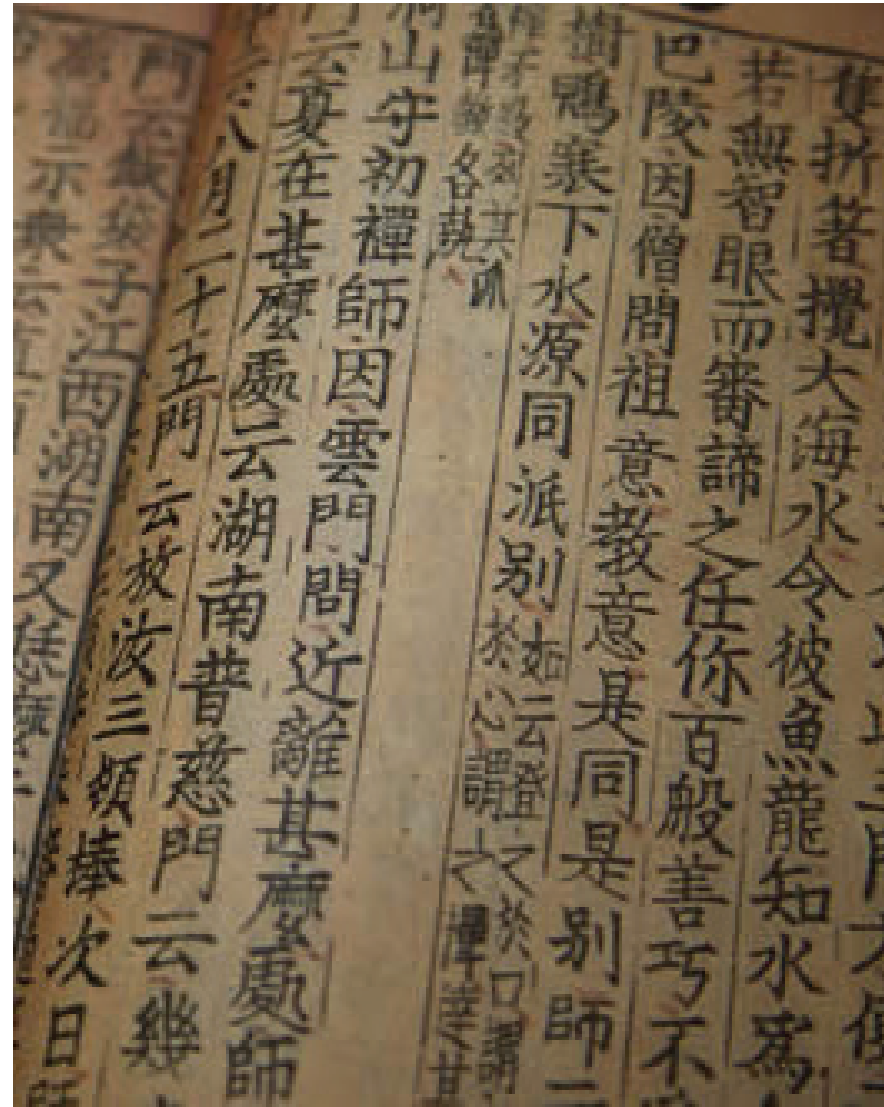
As writing spread across Europe, there was a rise in regional scripts and alphabets. Monastic scribes kept many of the older letterforms alive using them for titles, subheads and initials. They chose newer and more compact scripts for running text. Out of the multiplicity of letters, large formal letters and smaller, more casual ones were developed. We now know them as upper and lower case characters.

- Upper and lowercase forms
- Hand-drawn, calligraphic feel



Mechanical Typesetting

THE INVENTION OF MOVABLE TYPE: *Bi Sheng*



Movable type for automated printing was first developed in China by Bi Sheng around 1050. Sheng created the characters out of ceramic or wood that could be repositioned, inked and pressed into paper. Metal movable type was first invented in Korea during the Goryeo Dynasty (around 1230). This led to the printing of the *Jikji* in 1377—today the world's oldest extant movable metal print book.

THE INVENTION OF MOVABLE TYPE: *Johannes Gutenberg*



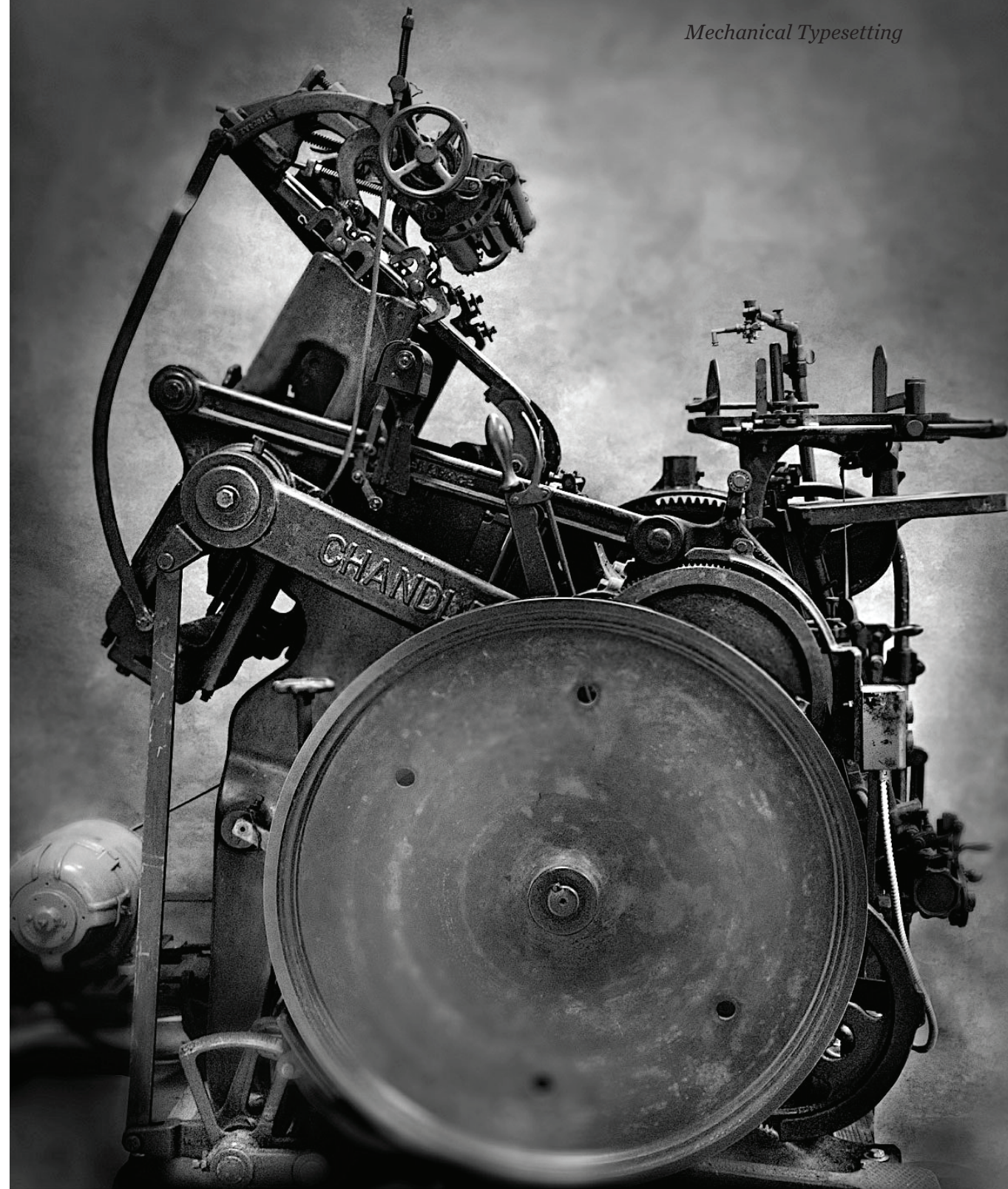
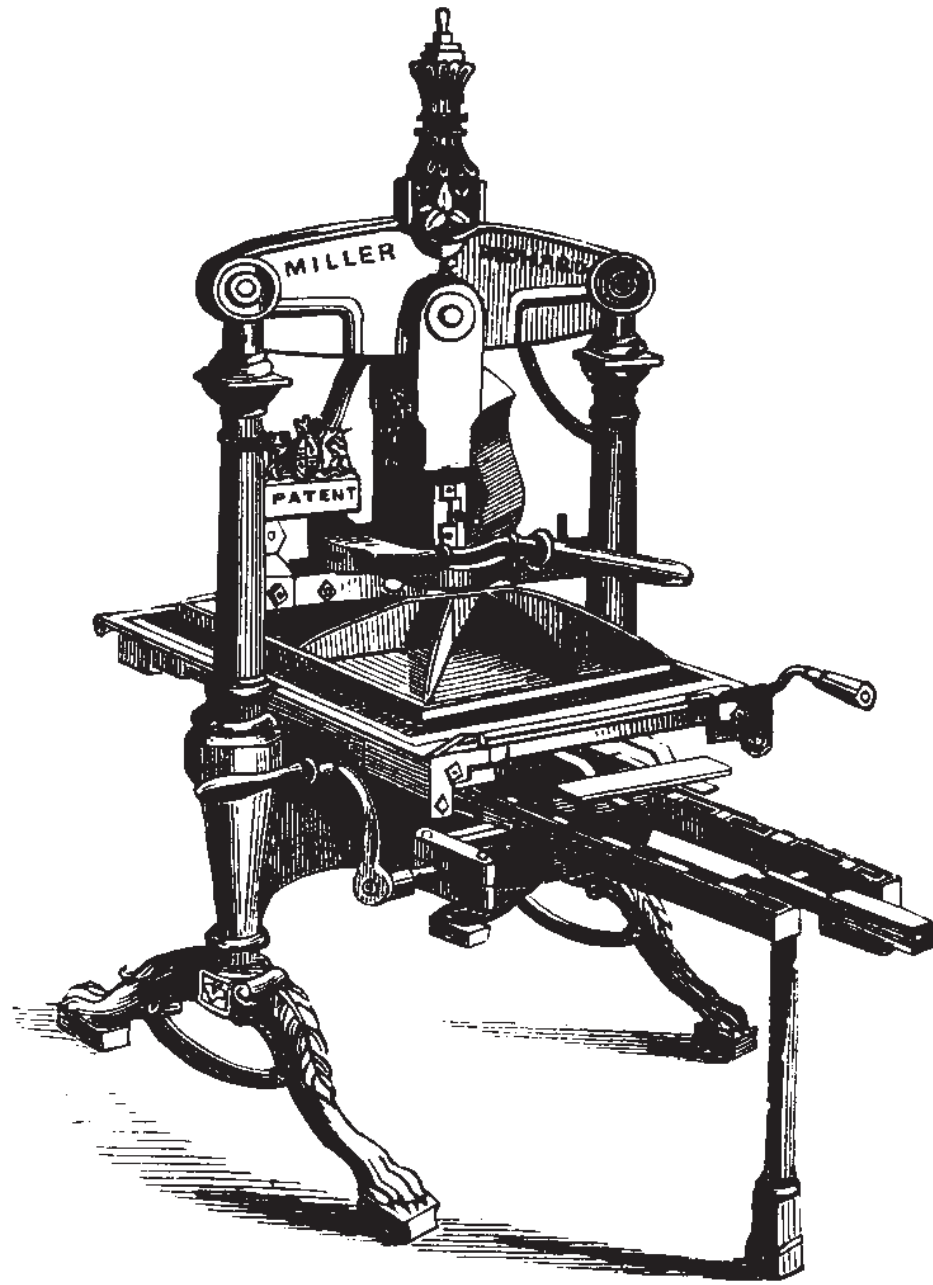
In 1450, Johannes Gutenberg introduced what is generally regarded as an independent invention of movable type in Europe. Gutenberg was the first to create his type pieces from an alloy of lead, tin and antimony. Compared to woodblock printing, movable type pagesetting was quicker and more durable for alphabetic scripts. The metal type pieces were more durable and the lettering was more uniform, leading to typography and fonts.

THE INVENTION OF MOVABLE TYPE: *Johannes Gutenberg*



The high quality and relatively low price of the Gutenberg Bible (1455) established the superiority of movable type, and printing presses rapidly spread across Europe, leading up to the Renaissance, and later all around the world. Today, practically all movable type printing ultimately derives from Gutenberg's movable type printing, which is often regarded as the most important invention of the second millennium.

LETTERPRESS PRINTING





Yzal and lavo in the sevench
The quick brown fox jumps over the lazy
dog and sits as it pe were in the sevench
heaven of typography together with Her-
mann Zsigl the most famous artist of the

Bachet



[WATCH A VIDEO >](#)

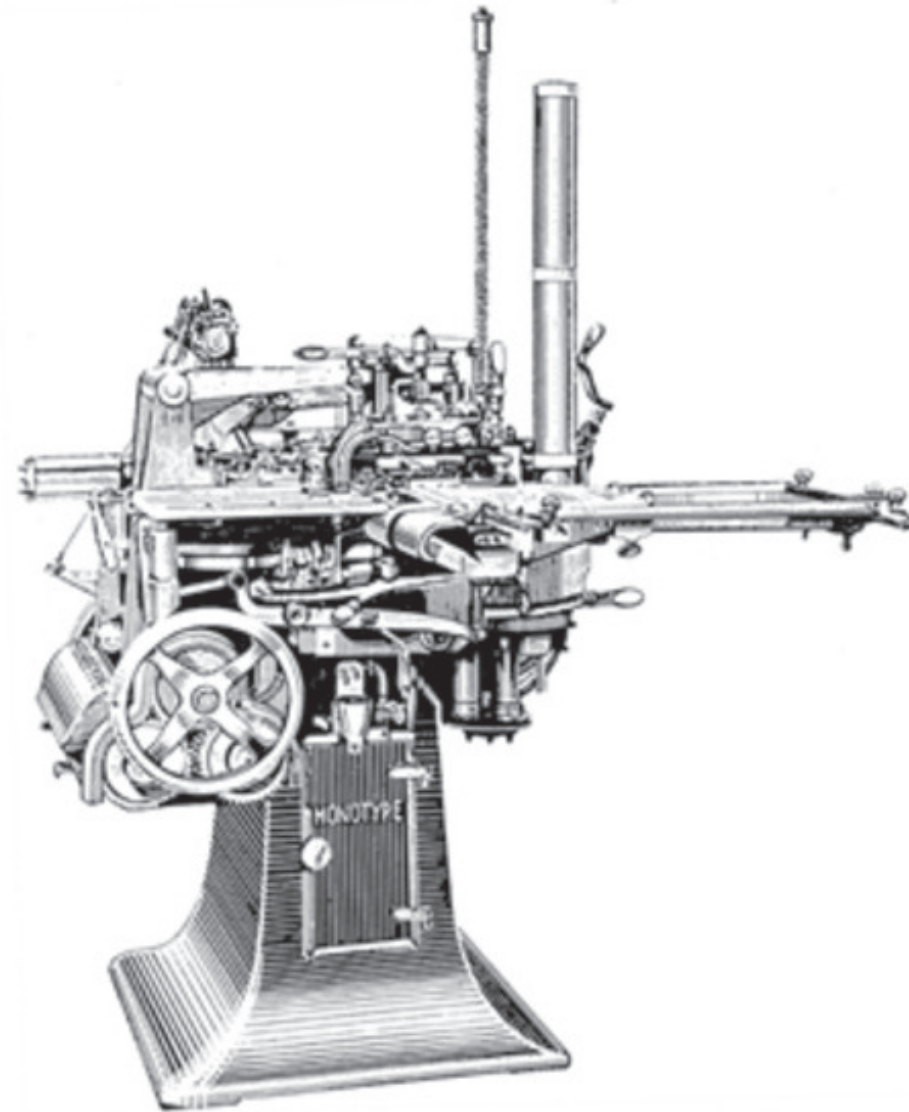
THE LINOTYPE MACHINE



The Linotype machine uses a 90-character keyboard to create an entire line of metal type at once hence the name 'line o' type'. This allowed much faster typesetting and composition than the original hand method with the Gutenberg-style system. This machine revolutionized newspaper publishing and made it possible for a small number of operators to set type for many pages on a daily basis.

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THE MONOTYPE MACHINE



The Monotype machine was the first fully mechanical typesetter. It consists of a terminal with a large mechanical keyboard (including 7 full alphabets) and an output device. The keyboard punches holes in paper tape, which is read by the output device which then casts and assembles the letters.

[WATCH A VIDEO >](#)

OFFSET PRINTING



Offset printing is a commonly used modern printing technique where the inked image is transferred (or “offset”) from a plate to a rubber blanket, then to the printing surface. Offset printing enabled 4-color process printing as opposed to only spot colors.

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PROCESS COLOR



The invention of offset printing brought with it process printing. Using four basic colors—cyan, magenta, yellow, and black (CMYK)—printing of custom mixed colors and photographic imagery was possible. All images were separated into CMYK plates and printed as a series of dots. As the colors build during the printing process, photographic images come to life.

No longer were we limited to the fonts that a printer had; the making of plates allowed for the selection of a wide range of typefaces.

SPOT COLOR



Spot colors are used by mixing ink to match the request of the designer. A plate is made for each color and is printed in a single pass. This method is typical in letterpress printing.

You may also combine a spot color with 4-color process printing if color accuracy is concerned.



INKJET PRINTING



Inkjet printing creates a digital image by propelling droplets of ink onto paper or other printing surface. This method of printing is best used for small quantity printing. There are no plates in inkjet printing—it utilizes process color printing.

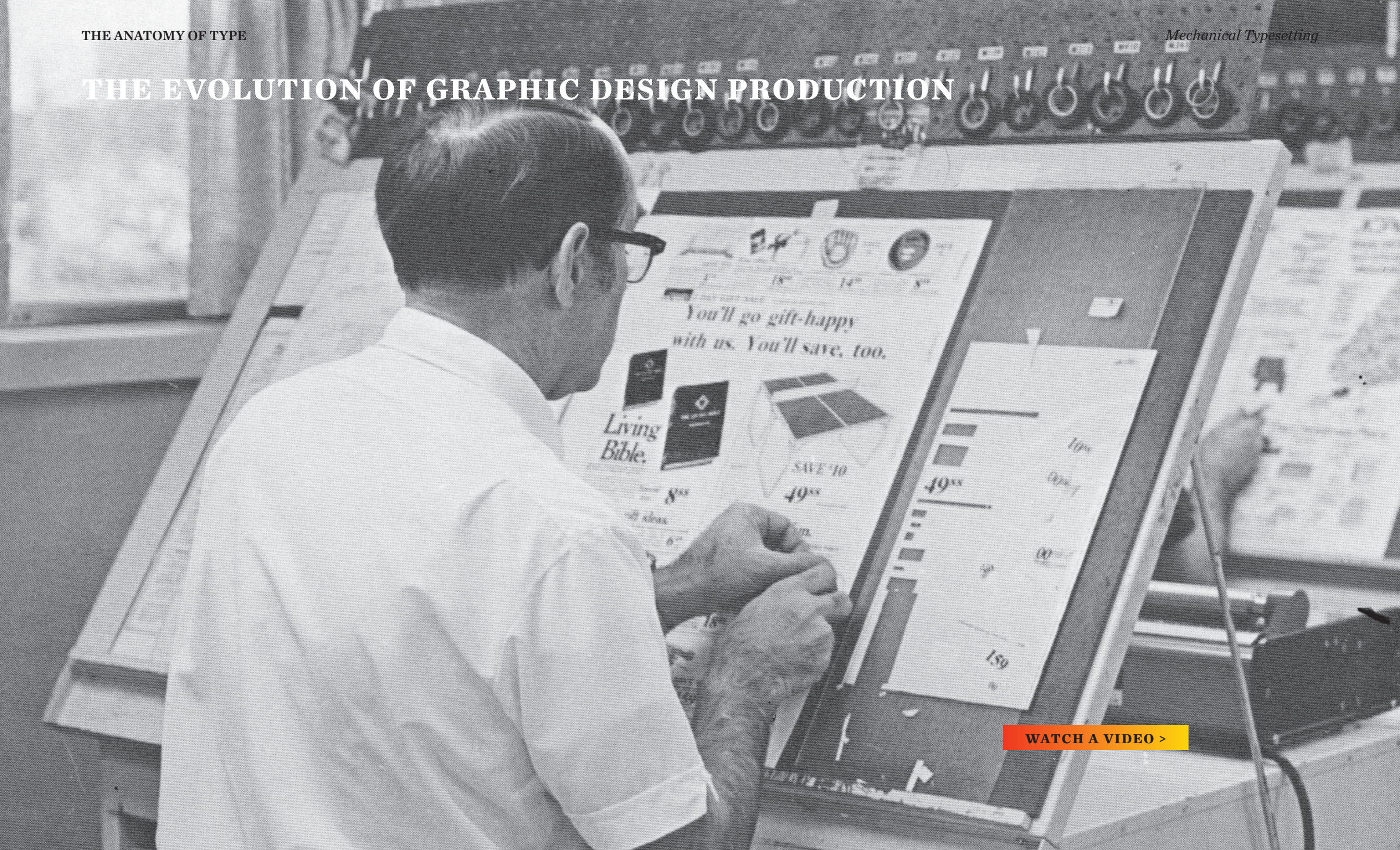
For optimal results, using a designated inkjet paper is highly recommended.

LASER PRINTING



An electrostatic digital printing process rapidly produces high quality text and graphics by passing a laser beam over a charged drum to define a differentially charged image. The drum then selectively collects charged toner and transfers the image to paper, which is then heated to permanently fix the image. There are no plates involved in laser printing.

THE EVOLUTION OF GRAPHIC DESIGN PRODUCTION



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Anatomy and Terminology

ANATOMY



X-HEIGHT

Mrs. Eaves Bembo Baskerville

All of the above typefaces are set at the same point size. Notice each typeface has a different x-height and cap height.

Each typeface's unique characteristics requires it to be set with consideration to optimal legibility. A small x-height may require a typeface to be set at a larger point size. Contrastly, a large x-height may require a smaller point size.

TYPE SIZE

Adobe Caslon Pro 6 pt.
Adobe Caslon Pro 10 pt.
Adobe Caslon Pro 14 pt.
Adobe Caslon Pro 18 pt.
Adobe Caslon Pro 24 pt.
Adobe Caslon Pro 30 pt.
Adobe Caslon Pro 36 pt.
Adobe Caslon Pro 48 pt.
Adobe Caslon Pro 60 pt.
Adobe Caslon Pro 72 pt.

Type is measured in points. There are 72 points in an inch. Type is measured from the top of the capital letter to the bottom of the lowest descender plus a small buffer.

LIGATURES

f1 ff fi ffi Th fj ffi et st

There are certain letter combinations that when placed next to one another create a new glyph. Oftentimes they replace consecutive characters that share a common component.

Not all typefaces have the same ligatures available.

NUMBERS

OLD STYLE FIGURES

1 2 3 4 5 6 7 8 9 0

1 2 3 4 5 6 7 8 9 0

LINING FIGURES

1 2 3 4 5 6 7 8 9 0

1 2 3 4 5 6 7 8 9 0

If a document that contains many numbers in the body copy, choose a typeface that has old style figures. They blend into the copy like letters. Not all typefaces have old style figures.

Lining figures may be a better option in chart and data-heavy contexts.

