

## Type and language

Type is the means by which an idea is written and given visual form. Many typefaces in use today are based upon designs created in earlier historical epochs, and the characters themselves have a lineage that extends back thousands of years to the first mark-making by primitive man, when characters were devised to represent objects or concepts.

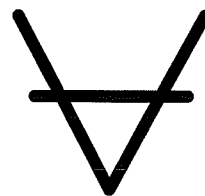
This section is an introduction to the complex origins of type. An appreciation of typography naturally involves understanding how written language developed. A general timeline is presented here but it is important to remember that there is overlap across epochs and for many major developments, there exist counter-claims to the invention. What is shown here serves as a guide to the major milestones in typography.

This section aims to be as comprehensive as possible, but it is impossible to be conclusive. One of the wonders of typography is this fluidity, its ability to adapt to circumstances, technological advances and cultural shifts. For simplicity, this section has been divided into the following categories; The alphabet, Early printing, 1800s, Arts and Crafts Movement, The early twentieth century, 1950s, 1960s, 1970s, 1980s, 1990s and Graphic design since 2000.

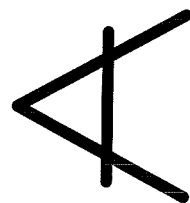
### Language is not static

Letters, language and indeed typography develop and change over time as the dominant power inherits, alters, adapts and imposes its will on existing forms. The modern Latin alphabet is a result of such ongoing transition having been developed and adapted over several millennia.

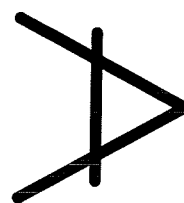
For example, the modern letter 'A' was originally a pictogram representing an ox's head, but as the Phoenicians wrote from right to left, the symbol was turned on its side. Under the Greeks, who wrote from left to right, it was turned again and finally, the Romans turned the character full-circle, giving it the form that we recognize today.



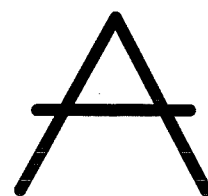
A pictogram of an ox's head...



...has been turned on its side by the Phoenicians...



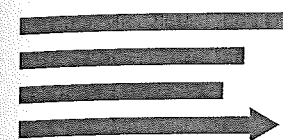
...rotated by the Greeks...



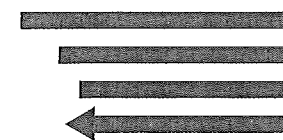
...and turned upright by the Romans, to form the modern 'A'.

## THE ALPHABET

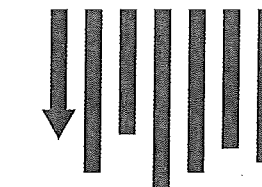
Latin



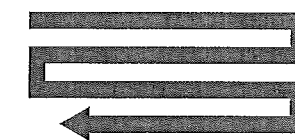
Arabic



Chinese



Greek boustrophedon



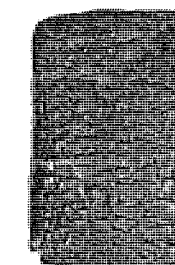
### Reading direction

The direction in which text is read varies from language to language and is determined in part by historical factors such as how text used to be written.

For example, Chinese calligraphers use paint brushes to draw ideograms and so it is easier to write down the page with the right hand, while controlling the scroll with the left.

### Cuneiform tablets

Cuneiform uses a wedge-shaped stylus to make impressions into a wet clay tablet and is one of the earliest standardized writing systems. It was developed in ancient Mesopotamia, the region that is now east of the Mediterranean, from about 4,000 BC until about 100 BC. Early forms of cuneiform were written in columns from top to bottom, but later changed to be written in rows from left to right. With this change the cuneiform signs were turned on their sides. Cuneiform began to die out as other language systems such as Aramaic spread through the region in the seventh and sixth centuries BC, and as the use of Phoenician script increased.



### Some terms to be familiar with

There are many terms used within this book that you'll need to be familiar with, many of which are often confused.

#### PHONOGRAM

A written symbol, letter, character or other mark that represents a sound, syllable, morpheme or word.

#### SYMBOL

A graphic element that communicates the ideas and concepts that it represents rather than denoting what it actually is.

#### IDEOGRAM

A graphic element that represents an idea or a concept.

#### PICTOGRAM

A graphic element that describes an action or series of actions through visual references or clues.

#### ICON

A graphic element that represents an object, person or something else.

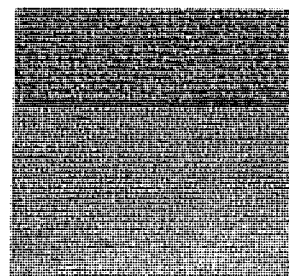
**Hieroglyphs**

Hieroglyphs use a pictogrammatic writing system and were used by several cultures including the Ancient Egyptians and Incas. Each pictogram represents an object rather than a vocal sound. There are over 750 individual Egyptian pictograms. Hieroglyphs can be written from right to left, left to right, or downwards. This is indicated in each piece of text by the direction in which the objects face. For example, if they are facing to the left, the inscription is read from left to right. Border lines are used to indicate that text should be read from top to bottom.



Hieroglyphs on papyrus, reading downwards, as indicated by the border lines (above left).

The Rosetta Stone (above right) was carved in 196 BC with an inscription in Egyptian hieroglyphs, demotic and Greek. Discovered in 1799, the three scripts were key in deciphering hieroglyphics.



These Chinese ideograms represent the four seasons (left to right) spring, summer, autumn and winter.

**Ideogram-based languages**

Ideogrammatic languages use characters or symbols to represent ideas or concepts. They have a one-to-one relation between a symbol and an idea. Ideogrammatic languages, traditionally written down the page, include Chinese, Japanese, Korean and Thai.

**Chinese and Japanese scripts**

Written Chinese assigns a single distinctive symbol, or character, to each word. Many symbols have remained fundamentally the same for over 3,000 years even though the writing system has been standardized and stylistically altered. The system became word-based to express abstract concepts, with ideograms representing sounds rather than concepts.

A Japanese writing system emerged in the fourth century, appropriating Kanji characters from Chinese for their phonetic rather than semantic value. Alongside Kanji, three 'Kana' scripts emerged. These syllabic scripts are Hiragana, Katakana and Romaji, (used for words borrowed from Western languages or where computer software does not accommodate Japanese script).

**Phoenician characters**

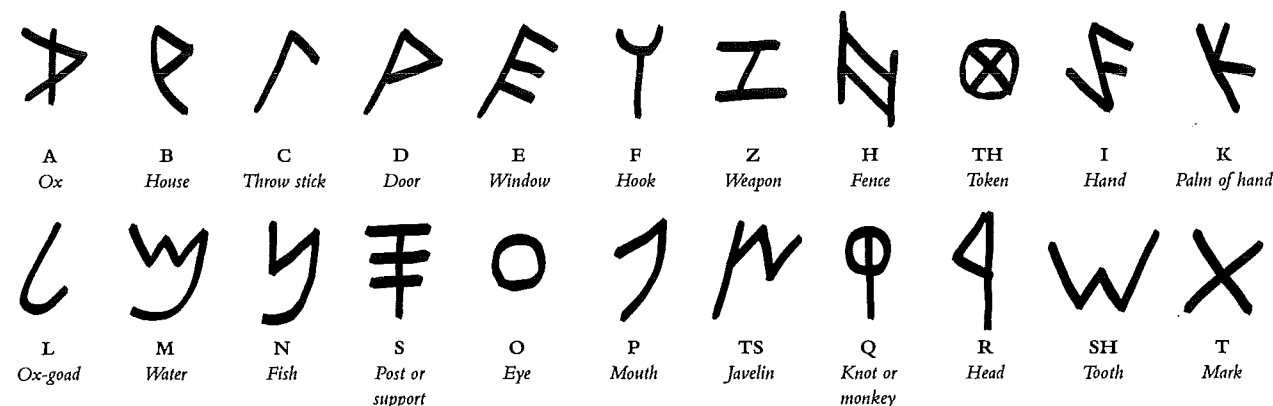
The Phoenicians lived in the eastern Mediterranean regions. They developed what was to become the basis of the modern Latin alphabet in around 1600 BC through a system of 22 'magic signs' or symbols that represented sounds rather than objects.

The symbols could be put together in different combinations to construct thousands of words, even though the alphabet only contained consonants. Phoenician was written horizontally from right to left without spaces between words, although dots were sometimes used to denote word breaks.

**The 22 magic signs**

The Phoenicians were responsible for the development of what is arguably the greatest invention in humanity.

The alphabet of 22 magic signs is pictured below along with its Latin equivalent and the objects that each character is believed to have originally represented.

**Some terms to be familiar with**

Linguistics – the study of language – uses the following terms to describe various elements of language and speech.

**Phoneme**

The basic sound units used to form words. For example, the phonemes 'o' and 'x' come together to make the word 'ox'. The pronunciation of letters varies, so there are more phonemes than letters.

**Morpheme**

Phoneme group forming the smallest language unit. Each morpheme has a meaning, for example 'discredited' has three; 'dis', 'credit' and 'ed'.

DIS CREDIT ED

**Syllable**

A unit of spoken language consisting of a single, uninterrupted sound. The word 'discredited' has four syllables.

DIS CRED IT ED

**Letter**

A letter is a mark or glyph (symbol) used in an alphabetic writing system to indicate a sound. A letter's context dictates its pronunciation

DISCREDITED

**The Greek alphabet**

The Greeks adopted characters from the Phoenician system (such as aleph (a) and beth (b)) and used them to develop their own alphabet. (Indeed, the word alphabet is derived from the Greek alpha (a) and beta (b).) By around 800 BC the Greeks had added other characters to their alphabet, and this became the basis of the modern-day Hebrew and Arabic scripts. Early Greek was written in the boustrophedon style (*see below*) where rather than proceeding from left to right as in modern English, or right to left as in Arabic, alternate lines must be read in opposite directions.

# Aleph Beth Alpha Beta AlphaBeta Alphabet

α	Alpha	η	Eta	ν	Nu	τ	Tau
β	Beta	θ	Theta	ξ	Xi or Si	υ	Upsilon
γ	Gamma	ι	Iota	ο	Omicron	φ	Phi
δ	Delta	κ	Kappa	π	Pi	χ	Chi
ε	Epsilon	λ	Lambda	ρ	Rho	ψ	Psi
ζ	Zeta	μ	Mu	σ	Sigma	ω	Omega

The 24 characters from the modern Greek alphabet and their Greek names.

**Vowels and spaces**

The Greeks developed vowels, which created a complete and flexible phonetic alphabet. The first vowel letters were A (alpha), E (epsilon), I (iota), O (omicron), and Y (upsilon). The origins of modern Latin vowels can clearly be seen. Greek and Latin manuscripts were originally written with no spacing between words, as shown below.

It was common for Greek to be written with no spacing.

The insertion of spaces between words and diacritical marks (see page 75) was a development that helped facilitate reading and comprehension.

**Boustrophedon writing**

Text written boustrophedonically moves across the page from left to right, then back to left, then right to left, and so on. There are three methods of doing this: reversing the lines, reversing the lines and words, or reversing the lines, words and letters.

**The Cyrillic alphabet**

The Cyrillic alphabet is based on Glagolitic (developed by missionaries during the ninth century) and Greek. Developed in the tenth century, it is widely used in Slavic languages such as Belarusian, Bulgarian, Macedonian,

Russian, Serbian and Ukrainian. The Cyrillic alphabet has 33 letters, including 21 consonants and ten vowels, and two letters without sounds that represent hard and soft signs. Some Cyrillic characters are shown below, along with their Greek equivalents.

Б

The Cyrillic letter Be is derived from the Greek letter Beta (β).

Д

The Cyrillic letter De is derived from the Greek letter Delta (δ).

З

The Cyrillic letter Ze is derived from the Greek letter Zeta (ζ).

Ж

Some characters, such as Zhe, have no similar letter in Greek or Latin.

**The Russian alphabet**

The 33 Russian Cyrillic lower-case and upper-case letters are shown with their English transliteration.

а	А	а	и	И	і	с	С	с	ъ	Ъ	“
б	Б	б	й	Й	ј	т	Т	т	ы	Ы	у
в	В	в	к	К	к	у	У	u	б	Б	’
г	Г	г	л	Л	l	ф	Ф	f	э	Э	eh
д	Д	д	м	М	m	х	Х	kh	ю	Ю	yu
е	Е	е	н	Н	n	ц	Ц	ts	я	Я	ya
ё	Ё	е	о	О	о	ч	Ч	ch			
ж	Ж	zh	п	П	p	ш	Ш	sh			
з	З	z	р	Р	r	щ	Щ	shch			

**Semitic and Aramaic languages**

Aramaic developed from Phoenician in around 900 BC in what is modern-day Syria and south-east Turkey. It is a Semitic language and a precursor for Arabic and Hebrew, which it closely resembles.

Aramaic was used and spread by the Assyrian empire and the Babylonian and Persian empires that followed it, taking the language as far as India and Ethiopia. Note the similarities with the original Phoenician symbols shown on page 13.

𐤀	𐤁	𐤂	𐤃	𐤄	𐤅	𐤆	𐤇	𐤈	𐤉	𐤊
a	b	g	d	h	w	z	h	t	y	k
𐤋	𐤌	𐤍	𐤎	𐤏	𐤐	𐤑	𐤒	𐤓	𐤔	𐤕
l	m	n	s	c	p	s	q	r	g	t

The 22 characters of the Aramaic alphabet and their Latin equivalents.

**Arabic**

Modern-day Arabic, like Phoenician, is written and read from right to left. Arabic is based on the 22 consonants of the Phoenician alphabet with an optional marking of vowels using diacritics. Arabic script uses the Aramaic letter names (Alef, Jeem, Dal, Zai, Sheen, and so on).

This alphabet contains 18 letter shapes but by adding one, two, or three diacritical marks (representing vowel sounds) to these letters, a total of 28 letters is obtained. These diacritical marks originate in Hebrew and Aramaic and were added so that Muslims of non-Arab origin could correctly pronounce the Koran.

ا	ب	ت	ث	ج	ح	خ	ر	ذ	د	ز	س	ش	ص	ض
a	b	t	th	j	h	kh	d	dh	r	z	s	sh	s	d
ط	ظ	ع	غ	ف	ق	ك	ل	م	ن	ه	و	ي		
t	z	c	gh	f	q	k	l	m	n	h	w	y		

**The Roman alphabet**

The 26-letter Roman alphabet that we use today was formed from the Greek alphabet and spread through the Roman empire. Majuscules or upper-case letters derive directly from the forms carved in stone by the Romans, and these are the basis for many modern-day typefaces.

Roman is now also frequently used to describe basic letterforms, principally the minuscules (lower-case letters), even though the name is derived from the majuscule forms. The Romans also used seven of their letterforms as base numerals, with each letter representing a numeric building block as pictured below.

I	V	X	L	C	D	M
1	5	10	50	100	500	1000

LIKETHEEARLIERGREEKALPHABETOFTENNOSPACEWASUSED BETWEENWORDS  
BUT OFTEN A DOT CHARACTER WAS USED INSTEAD

Trajan, Carol Twombly, 1989

Modern typefaces such as Trajan (above) have their roots in stone carving from the Roman era. Typographer Twombly was influenced by early Roman forms in this design, which is modern yet steeped in historical reference.

**The ampersand**

The ampersand character is a ligature of the letters of the Latin word *et*, which means 'and'. The name 'ampersand' is a contraction of the phrase 'and per se and', which translates as 'the symbol for and by itself means and'. The 'e' and 't' can still be clearly seen in many ampersand characters, as shown opposite.

**The modern Latin alphabet**

The modern Latin alphabet consists of 52 upper- and lower-case letters with ten numerals and a variety of other symbols, punctuation marks and accents that are employed

by various different languages. Lower-case letters developed from cursive (joined up) versions of the upper-case letters.

ABCDEFGHIJKLMNOPQRSTUVWXYZabcde  
ghijklmnopqrstuvwxyz1234567890§-=[];'\"',./  
%^&\*()\_+{}:~<>?;#¢¶•—≠CE®†¥Ø“”...  
Æ«Ç÷ÅÄÊÎÔÛØUÁÉÍÓÚåäêîôûøúáéíóú

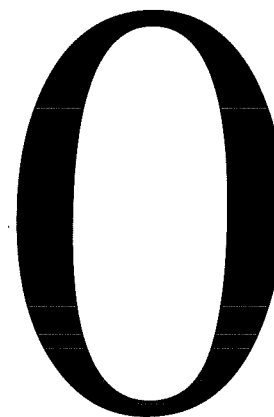
**All alphabets are not the same**

Although most European alphabets are Latin based they are not all the same.

English has 26 letters, while traditional Spanish has 30 with the addition of 'ñ', 'll', 'ch', 'rr'. Italian has only 21 letters, and lacks 'j', 'k', 'w', 'x' and 'y'.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

The modern Italian alphabet lacks the letters 'j', 'k', 'w', 'x' and 'y'.

**The 0**

Modern numbers derive from Arabic characters and their adoption brought the '0' with them. The numerals themselves originated in India and came into use in Arabic around AD 1000. Common usage in Europe did not occur until the Renaissance period. Modern European digits were created in India in the sixth century or earlier, and were introduced to the West by Arab scholars. As they represent place-based values and have a zero, calculations can be performed with relative ease (how quickly can you add up the roman numerals?). Another advantage is that numbers of infinite length can be formed, whereas Roman numerals soon meet with limitations.

M	1000
C	100
VI	6
IV	4
—	—

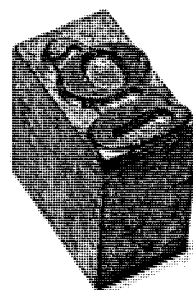
**Gutenberg**

Johannes Gutenberg (c.1400–1468) was a German printer who developed the first printing press and the use of movable type. The development of the printing press allowed the mass production of books.

Movable type further improved this development by allowing text characters to be reused, providing further time and cost savings. This technology remained the basis of the printing industry until hot metal printing.

**Movable type**

Shown is a piece of movable type. Many typographical terms are named after the different characteristics of these type blocks. The physical dimensions of the block dictated spacing and made negative spacing impossible, whereas computer technology makes spacing more flexible. While digitized type still adheres to the same conventions of the bounding box (pictured far right) in terms of measurements, digitization allows these boxes to overlap, and indeed have negative tracking.



space

space

**Blackletter**

Block, Blackletter, Gothic, Old English, black or broken typefaces are based on the ornate writing style prevalent during the Middle Ages. Nowadays these typefaces appear heavy and difficult to read in large text blocks due to the complexity of the letters and the fact that they seem antiquated and unfamiliar to us. Blackletter typefaces are commonly used to add decorative touches such as initial caps.

readability

**Blackletter 686**

Blackletter 686, a modern font created by Bitstream Inc. and based on London Text scripts from the Middle Ages that were written with feather quills. The clean lines of this font result in an engraved effect.

**The effect of printing in Europe**

As printing spread it gave rise to various typographical styles. Many printers adopted the Venetian model as interest in Italian Renaissance art and culture grew. Parisian printer Claude Garamond (c.1480–1561) established the first independent type foundry.

Letterforms from this period utilized the greater detail that working with metal offered. Old Style typeforms superseded Blackletter as people in Renaissance Europe began to favour classical forms. These are more condensed than the Carolingian forms that preceded them, but more rounded than Blackletter. Some common fonts are shown on the opposite page with an explanation of their development and characteristics.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

**Bembo**

Created by Monotype in 1929 for a Stanley Morison project, Bembo is an Old Style font based on a Roman face cut by Francisco Griffo da Bologna, which Aldus Manutius used to print Pietro Bembo's 1496 publication of *De Aetna*. Morison modified letterforms such as the 'G' to create a typeface with 31 weights – an all-purpose font family suitable for almost any application. Note the crossed strokes in the 'W'.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

**Garamond**

Based on designs by seventeenth-century French printer Jean Jannon that were themselves based on typefaces cut by Claude Garamond from the sixteenth century, Garamond is an Aldine font (fonts based on the designs of Aldus Manutius in the fifteenth century, of which Bembo and Garamond are examples) that is elegant and readable. Note the crossed strokes in the 'W', and the bowl of the 'P' that does not reach the stem.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

**Janson**

Created c.1685 by Hungarian punchcutter Miklós Kis, Janson wrongly bears the name of Dutch punchcutter Anton Janson to whom it was formerly attributed. The font has sturdy forms and strong stroke contrast. Note the long tail of the 'Q', the oval shape of the 'O' and the unified apex of the 'W'.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

**Caslon Antique**

This is a modern font based on a historical font. Modern typographers' attempts to recreate ancient fonts in digital format often involve imaginative leaps, as they are based on printed texts where there is ink spread, and in many cases the original fonts are not available to work from.

ABCDEFGHIJKLMNOPQRSTUVWXYZ vw

**Caslon**

Created in 1725 by typographer William Caslon, this serif font was styled on seventeenth-century Dutch designs. The font can be identified as most Caslons have a capital 'A' with a scooped-out apex, a capital 'C' with two full serifs, and in the italic, a swashed lower-case 'v' and 'w'.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

**Baskerville**

Created by John Baskerville in the eighteenth century, Baskerville is a versatile transitional font (making it a precursor to the modern faces that followed) with high contrast forms that are used for both body text and display type. Note the absence of the middle serif on the 'W' and the distinctive capital 'Q'.



### The Industrial Revolution

The Industrial Revolution brought mechanization, which allowed printing to speed up. Photo-engraving, which replaced handmade printing plates and line-casting machines that revolutionized typesetting also allowed for ever-increasing levels of detail and intricacy.

Technological development also meant that font creation took less time, and this opened the doors for the development of a wider range of typefaces.

One development of the time was the introduction of **BOLDFACE**, used for adding emphasis or hierarchy. Experimentation with serifs saw them become thinner and thinner until they ultimately disappeared. William Caslon's great grandson William Caslon IV cut the first sans serif font in 1816, called English Egyptian. Transitional fonts from this period typically have horizontal serifs, vertical stress and more contrast than Old Style typefaces.

## GROTESQUE & GOTHIC

### The first sans serif typeface, 1816

William Caslon developed a sans serif typeface called Egyptian in reference to public interest in Egypt following Napoleon's campaign. It was not well received, however, and was called 'grotesque' and 'Gothic' (a style of architecture going through a revival at the time).

Although Egyptian was originally a sans serif style of font, it has since come to refer to slab serif typefaces, perhaps because the slabs mirror the construction of the pyramids. Other terms for sans serif fonts including Doric and Antique (the French term for sans serif) are now used less, but are still in use as shown below.

## DORIC

Doric, Walter Tracy, 1973

Based on the earlier woodblock designs, this sans serif font retains some of the original characteristics and weight of the original typeface.

## ANTIQUÉ OLIVE

Antique Olive, Roger Excoffon, 1962-1966

Using the French term, this sans serif has distinctive characters such as the 'Q' and an exaggerated inner apex on the 'A'.

### Commercial art

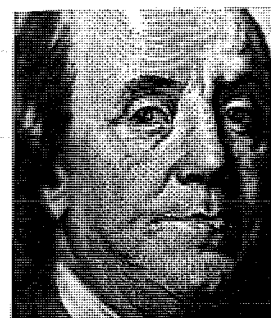
Lithography was invented in Austria by Alois Senefelder in 1796. Following refinements, by 1848 the process enabled print speeds of 10,000 sheets per hour, making mass production of designs economically viable. Lithography allowed the merging of art with industry to produce posters and colour plates for books.

The first person to mass produce posters with lithography was Jules Chéret (1836-1933) in Paris. Other early protagonists include Thomas Theodor Heine (1867-1948) and Henri de Toulouse-Lautrec (1864-1901). Despite these developments, the term 'graphic design' does not appear until the 1950s.

## THE ARTS AND CRAFTS MOVEMENT

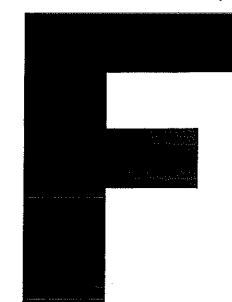
The Victorian Arts and Crafts Movement (1850s) developed as a rejection of heavily ornamented interiors with many pieces of furniture, collections of ornamental objects and surfaces covered with fringed cloths.

The Arts and Crafts Movement favoured simplicity, good craftsmanship and design. British artist and architect William Morris was a leading exponent of this new style that sought to re-establish a link between beautiful work and the worker.



Franklin Gothic, Morris Fuller Benton, 1904

Franklin Gothic was named after Benjamin Franklin. Morris Fuller Benton's design of 1904 is still popular today, appearing in many newspapers and as a headline typeface for advertising.



Copperplate Gothic, Frederic W. Goudy, 1901

Copperplate Gothic exhibits some of the attention to detail found in the Arts and Crafts Movement.

Kelmscott is a typeface designed by renowned architect and designer, William Morris. It is named after the house in which he lived between 1878 and 1896 and was used in early books produced by the Kelmscott Press.

**Modernism**

Modernism, through the cubist, surrealist and Dadaist movements was shaped by the industrialization and urbanization of Western society. Modernists departed from the rural and provincial zeitgeist prevalent in the Victorian era.

Functionality and progress became key concerns in the attempt to move beyond the external physical representation of reality. Modernist typefaces often sought to force viewers to see the everyday differently by presenting unfamiliar forms.

**De Stijl**

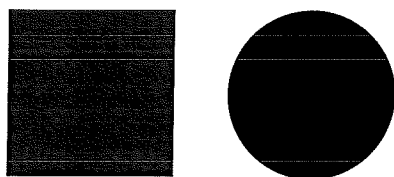
An art and design movement evolved from the magazine of the same name that was founded by Theo Van Doesburg. De Stijl used strong rectangular forms, employed primary colours and celebrated asymmetrical compositions.

**Constructivism**

A modern art movement originating in Moscow in 1920, characterized by the use of industrial materials to create non-representational, often geometric objects. Russian constructivism translated to graphic design through a use of black and red sans serif type arranged in asymmetrical blocks.

**The Bauhaus**

The Bauhaus opened in 1919 under the direction of renowned architect Walter Gropius. Until forced to close in 1933, the Bauhaus sought to initiate a fresh approach to design following the First World War, with a focus on functionality rather than adornment.

**Left**

In 1923 Wassily Kandinsky proposed a universal relationship between the three basic shapes and the three primary colours: the yellow triangle was the most active and dynamic, and the blue circle cold and passive.

bayer universal bΛSik ΔlfΛBET

**Bayer Universal, Herbert Bayer, 1925**

Herbert Bayer embodied the modernist desire to reduce designs to as few elements as possible and repeatedly experimented with typography to reduce the alphabet to a single case.

**Basic Alphabet**

Basic Alphabet was a further experimentation with language. Words are written as they sound, with silent letters dropped and typographical elements reduced. Capitals are indicated with an underscore, for example.

**Dadaism**

An artistic and literary movement (1916–1923) that developed following the First World War and sought to discover an authentic reality through the abolition of traditional culture and aesthetic forms. Dadaism brought new ideas, materials and directions, but with little uniformity. Its principles were of deliberate irrationality, anarchy and cynicism, and the rejection of laws of beauty. Dadaists lived in the moment and for the moment. The name Dada derives from the French for hobby horse.

hobby\* \* hOlSÉ

**Dada, Richard Kegler, 1995–1998**

Inspired by Dada typography and poetry, Richard Kegler created Dada according to the principles of irrationality and anarchic arrangement so that there appears to be little congruence from one letter to the next.

BASED ON ENGRAVINGS

**Perpetua, Eric Gill, 1928**

Gill based this design on characters from old engravings. Small diagonal serifs and a medieval number set add an element of formality to the typeface.

The constructivist tradition

**Futura, Paul Renner, 1927**

Futura is considered the major typeface development to come out of the constructivist orientation of the Bauhaus movement. The characters are based on the simple forms of circle, triangle and square, but softened them to be more legible and to create a new, modern type.

BODONI POSTER BOLDFACE

**Poster Bodoni, Chauncey H. Griffith, 1929**

Based on an eighteenth-century design by Gianbattista Bodoni, this is a modern font characterized by hairline serifs that are subtly bracketed, and heavy downstrokes that give a powerful vertical stress.

Following the Second World War a new optimism emerged as a consumer boom erupted in the USA. The cultural scene also expanded, boosted by many European creatives and intellectuals who had fled Nazi Europe. Design became more elaborate, with bright colours that celebrated life – as personified in cars such as the candy-coloured Ford Thunderbird.

The demand for wider choice and the emergence of phototyping helped typography develop. Typographers such as Hermann Zapf led the humanist movement, with the lines between serif and sans serif typefaces blurred as organic lines were reintroduced into typography. Humanist fonts have forms that are based on classic Romans, but without the serifs.

## HELVETICA

Created by Max Miedinger in 1957 – the forgotten designer – Helvetica is one of the most famous and popular typefaces in the world. Originally called Haas Grotesk, its name changed to Helvetica in 1960. The Helvetica family has 34 weights and the Neue Helvetica has 51.

G G Q Q y y a a

Pictured in black is Helvetica and in green is Univers. Although both are sans serif fonts, there are noticeable differences such as the absence of a tail on the Univers 'G', 'y' and 'a', the more open, rounded counter on the Univers 'a' and the bisecting tail of the Helvetica 'Q'.

### International Style (Swiss)

International or Swiss Style was based on the revolutionary principles of the 1920s, such as those devised by De Stijl, Bauhaus and Jan Tschichold's *The New Typography*, which became firmly established

in the 1950s. Grids, mathematical principles, minimal decoration and sans serif typography became the norm as typography developed to represent universal usefulness more than personal expression.

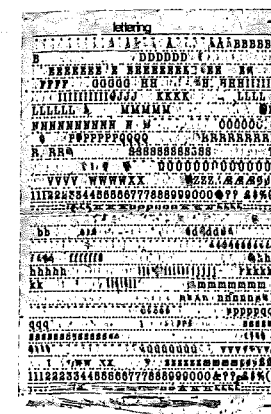
## OPTIMA – BASED ON THE GOLDEN RATIO

Optima, Hermann Zapf, 1958

Optima was inspired by letters Zapf sketched on two 1,000 lire bank notes, based on grave plates cut c.1530 that he saw while visiting the Santa Croce church in Florence. Optima is a humanist sans serif blended with Roman and calligraphic styles, making it a smooth read and general-purpose font, which became his most successful typeface. Letterforms are in the proportions of the golden ratio.

The world of culture went pop in the 1960s as music, art, literature and furniture design became more accessible and reflected elements of everyday life. Pop art developed as a reaction against abstract art. It was often witty, purposely obvious and throwaway in its reflection of consumer culture such as advertising and comic books.

Pop art's influence on typography resulted in fonts – particularly for display type – designed or selected according to possible associations or references in place of any particular theory regarding legibility or aesthetics, while the International Style remained influential for body text.



Letraset, 1961

Letraset dry-transfer lettering allowed anyone to do typesetting. Rubbed directly on to artwork or virtually any substrate, it was often used for headlines and display type while body type was supplied via a typewriter. Letraset commissioned new typefaces including Colin Brignall's futuristic Countdown font.

## Countdown, Colin Brignall, 1968

This typeface developed for Letraset is synonymous with the 1960s, the space race and the development of computer technology.

OCR-A, Optical Character Recognition, Adrian Frutiger and the USA Bureau of Standards, 1966

OCR-A is a standardized, monospaced font designed for Optical Character Recognition by electronic devices, using standards developed by the American National Standards Institute in 1966 for the processing of documents by banks and credit card companies. The characters fit into a 4 x 7 grid which makes them easily read by a scanner, even though they are not so legible to the human eye. Subsequent version OCR-B was made a world standard in 1973 and is more legible to the human eye.



## Eurostile

Eurostile, Aldo Novarese, 1962

Eurostile features a subtle distortion of circular sans serif geometric forms, with rounded corners that look like television sets of the time.



Typography in the 1970s continued where the 1960s left off, becoming more decorative, outrageous and extravagant until the middle of the decade, when punk emerged. Punk rejected the decadent, elaborate nature of music, fashion and the visual arts in favour of the disposable and shocking.

### ITC

The International Typeface Corp. (ITC) was formed in New York to market new typeface designs, distribute royalties to the creators and extend rights to typographers that were threatened by the photographic copying of fonts. Prior to this, type designers had been tied to particular typesetting machine manufacturers. The formation of the ITC resulted in a drive to collect and commission new work, including revisiting classic fonts.

Austrian designer Michael Neugebauer created *Cirkulus* in 1970 as an experimental display face using combinations of hairline circles and straight lines. The letters have a constructivist feel that is reminiscent of the revolutionary 1920s. *Cirkulus* is a unicasé alphabet (there are no upper-case characters), with a very lightweight appearance that is best used in large display sizes.

### Early computers and photocomposition

Photocomposition improved in the 1960s and facilitated the copying and production of fonts. By projecting a character created on the screen of a cathode ray tube (like a TV) through a lens on to light-sensitive paper or film, it could be stored in a magnetic memory, overwritten and edited. This was much faster than physically adjusting hot metal type and led to increased proliferation of typefaces and historical revivals as fonts became more international. The 1970s saw computers increasingly involved in this process through a mixture of photocomposition and the digital techniques that would emerge later, with several competing languages and formats. Throughout this decade the potential to design directly on screen increased, offering industry professionals more options and flexibility.

kabel

### ITC Kabel, Victor Caruso, 1976

*Kabel* features basic forms influenced by stone-carved Roman letters that consist of a few pure and clear geometric forms such as circles, squares and triangles. Art Deco elements such as the seemingly awkward angles of some of the curves makes *Kabel* appear very different from other geometric modernist typefaces. Based on an earlier design by Rudolph Koch in 1923, the typeface is reminiscent of constructivist experiments.

The 1980s saw the introduction of personal computers, computer games, music videos and desktop publishing, as the invention of the laser printer meant that expensive photosensitive paper was no longer needed. The digital revolution meant that new fonts could be designed and trialled quickly and easily, without the great expense and commitment of hot metal type.

**Arial is a contemporary sans serif design that contains many humanist characteristics. The overall treatment of curves is softer and fuller than in most industrial style sans serif faces. Terminal strokes are cut on the diagonal and help to give the face a less mechanical appearance. The typeface was designed in 1982 by Robin Nicholas and Patricia Saunders for Monotype.**

### The 'Mac'

Macintosh revolutionized the personal computer in 1984 by making computer screens user-friendly and hiding the operational programming from the user, in contrast to IBM's approach. Control in type production migrated away from professional typesetters to designers, and extended to amateurs as well as industry professionals. The low resolution of early personal computers called for new fonts to ensure legibility.

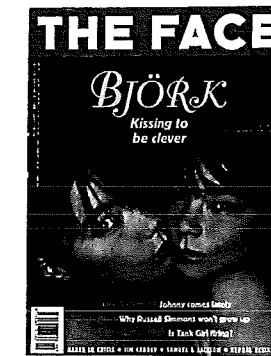
a a a a  
b b b b

### Trixie, LettError, 1989

*Trixie* was developed at a time when font design turned again towards developing more sophisticated and smoother fonts. LettError based *Trixie* on the look of a dirty, inky typewriter type to give a rougher look that is irreverent and playful. Dutch company LettError was established by Dutch designers Erik van Blokland and Just van Rossum.

### The Face, 1981–2004

Graphic designer Neville Brody revolutionized magazine design with his unabashed love of typography that he displayed on the pages of *The Face*, a style magazine covering music, design and fashion. Historic and contemporary type were subjected to exaggeration in scale and proportion, were exploded and otherwise distorted, and complemented with Brody's own computer-generated fonts as he challenged the notion of legibility.



As the 1990s began, graphic designers reacted to the International Style and sought to break away from the constraints of the grid patterns in favour of experimentation, playful use of type and a more handmade approach. Type use became more expressive – to be part of the message rather than just its conveyor.



## A font that's a sans and a serif

Officina, Erik Spiekermann and Schäfer, Ole, 1990

With both serif and sans serif forms, Officina embodies the ideals of efficient office communication, with styling based on traditional typewriters but adapted to modern technology and spaced for legibility.

## Designed for low grade printing

Meta, Erik Spiekermann and MetaDesign, 1991

Meta was based on a rejected typeface commissioned by the German Post Office (Bundespost) in 1984. Hailed as the typeface for the 1990s, it is named after Meta Studio, where the new typeface was used.

## A pattern of type

Flixel, Just van Rossum / FUSE, 1991

Flixel is a dot pattern font that pushes the boundaries of legibility with its unusual forms.

Just van Rossum / FUSE, 1991

Can You, Phil Baines / FUSE, 1995

This typeface uses key portions of letterforms that challenge the limits of legibility.

## A contemporary twist

Mrs Eaves, Zuzana Licko, 1996

Zuzana Licko based the design of Mrs Eaves on the Baskerville font. Licko gave the font ligatures, such as between the 's' and 't', that give it a contemporary twist.

FUSE, Neville Brody / Research Studios, 1991

Typography magazine FUSE, founded by Neville Brody and John Wozencroft, saw typography explode into uncharted realms as type designers grabbed hold of the 'free reins' that computer technology gave them.

# randomness and regradation Beowulf 21 randomness and regradation Beowulf 22 randomness and regradation Beowulf 23

Beowulf, Letterror, 1990

A misspelling of Beowulf, this radical font sees varying degrees of randomness and regradation. The first iteration, released at the end of 1989, went on to see multiple versions released during the 1990s.

Fresh Dialogue / Stefan Sagmeister, 1996

This poster for the American Institute of Graphic Arts features handwritten typography that is placed in seemingly haphazard blocks. Photos of cow tongues form the crossbars of the capital 'F' of Fresh and reversed 'E' at the end of Dialogue.

