

Chapter 1 : Typography | History of Graphic Design

History of typography Type, from Gutenberg to the 18th century. Whatever else the typographer works with, he works with type, the letter that is the basic element of his trade.

See Article History Typography, the design, or selection, of letter forms to be organized into words and sentences to be disposed in blocks of type as printing upon a page. Typography and the typographer who practices it may also be concerned with other, related matters—the selection of paper, the choice of ink, the method of printing, the design of the binding if the product at hand is a book—but the word typography without modifier most usually denotes the activities and concerns of those most involved in and concerned with the determination of the appearance of the printed page. The electronically created letter that lives out its brief life while moving across the face of a signboard or a cathode-ray tube is not a typographic item. Typography, then, exists somewhere between the extreme of manuscript writing, on the one hand, and the transient image on the electronic device, on the other hand. Whether the letter be made by metal type or photographic image is no longer important in defining the subject, and whether the finished item is a book or a page influences its inclusion as typographic not one bit. The nature of typography

Typography as a useful art

An overview of typography suggests that a number of generalized observations may be reasonable: First and most important, typography and printing, the mechanical processes by which the plans of the typographer are realized, are useful arts. Though there is indeed fine typography, typography is not a fine art. Books, the primary source of typographic examples, are written in the main by people with something to say; they are selected for printing in the main by publishers who see merit and hope for profit in disseminating the statements of the writers to an audience; properly they are edited and designed and printed in the main by craftsmen whose boundaries are fixed for them by considerations germane to the needs of the writers to communicate and the needs of the readers to understand and appreciate. The typographer exists not to express his own design preferences, his own aesthetic needs, but to provide a useful because usable connection between someone with something to say and someone to say it to. Nonetheless, there are limitations to what the typographer may and may not do; for, in addition to being a useful art with the generally accepted first use of transmitting information, typography for at least three reasons is a secondary art. First, it is secondary in that its basic materials, the alphabets or other similar notational systems with which it works, are not of its own invention. The influence of this fact on the art form is obvious. Generally speaking, Western writing, or printing, is accomplished by the use of a relatively small number of individual letters capable of being grouped in almost infinite numbers of meaningful permutations. Even in the face of language differences, there is a wide carry-over of letter shapes and typefaces from one language to another. The language carry-over makes possible the establishment of meaningful typologies, the evolution of international styles and conventions, and the development of criteria and traditions of taste by which typographers improve their work. As the result, it is fairly certain that in a little more than years of printing history since Gutenberg, at least 8, and very probably 10, or 11, typefaces have been designed. The practicing typographer has, then, a vast number of types to choose from, and, because the best of those types have evolved within cosmopolitan traditions and have stood the test of judgment by many people in many places over many years, there are, within the several thousands of types available, many that are of unquestioned excellence. By way of contrast, the Japanese method of writing and printing involves a combination of systems—some 3, kanji symbols based on Chinese characters, seicho based on the brush-written Kana, and two groups of phonetic symbols hiragana and katakana, each of which consists of 46 separate symbols. The problem of individually designing some 3, symbols, some of them of incredible complexity, is not one that many designers are able to surmount in a lifetime. In the s a group of Japanese designers produced a third typeface called Typos. Japanese typefaces

Three Japanese typefaces: The appearance of a book page, whether well or badly designed, is governed more by the fact that Western readers begin at the top left of a page and read right, a line at a time until they get to the bottom, than it is by the aesthetic desiderata of the designer. But the difficulty is that almost every study ever completed has indicated that sans serif type is less easy to read in text than is type

with the serif. It may well be that if Western texts were printed vertically, from the bottom of a page to the top and read upward so that each letter occupied a separate line with no horizontal connection to those before and after it, the apparent advantage of serif types in this regard might disappear. Typography as an art is concerned with the design, into organized be to forms letter of ,selection or words and sentences to be disposed in blocks of type. Third, it would appear to be reasonable to call typography a secondary art because, just as the typographer uses letter forms and reading conventions over which he has had little control, so too what he contributes comes into being only through the intervention of a mechanical process that, as often as not, in the 20th century at least, has become the province of the printer, so that the typographer practices his art at least once removed from its final production. The extreme example of the consequence of such a situation may have been seen in the early years of computer-generated typefaces in which, many felt, most faces revealed quite clearly that they had been developed by specialists whose first capabilities were not in the field of typography. And when typographers were later introduced into the process, they found that they had to work through the electronics expert, even as, for many years, those unable to cut their own type had been forced to work through typefoundries. It will already have become apparent that there is, at the worst, some confusion and, at the least, some lack of uniformity involved in talking about typographers and typography. The words themselves are of relatively recent origin and have been used self-consciously in their contemporary sense only from about the mid-century. The difficulty is, of course, the matter of the process involved. Gutenberg was his own typographer. It may well be, in fact, that his major personal contribution to the invention of printing was the development of a way to cut and cast type so that after the shape of the letter had been fixed and the molds prepared each letter form might be replicated over and over again in one relatively simple process. He was also the publisher, who undertook to risk capital in the selection and preparation of material to be printed for sale; he was presumably the man who designed the layout of each page; he may have done whatever editing was required, and he certainly either printed or supervised an assistant in the printing of the finished product. In the course of years many of the functions at first performed by one man came to be divided among several. Quite early, some printers employed men to cut type to their design; others employed men to design and cut the type; some held their services out for hire to others who became publishers; editors were separated from the process, though not always from decision-making roles in the appearance of the final product. After the introduction of bound volumes, trends were initiated that led eventually to the creation of binding designers as separate artists; it became not uncommon to find persons performing services as book designers and, as such, responsible for coordinating and leading the work of type designers, layout artists, binding designers—all who were in any way responsible for the appearance of the book as a whole. The situation became further clouded by the great variety of practice as to the status of each of the persons who perform one or more or, in some cases, all of these functions. Such a statement must not, however, be taken as dismissing the outstanding services rendered by the best work of the so-called private presses and by the valued demonstration volumes produced in limited numbers by major presses such as the Cambridge University Press in England, in holding up to view the best that the craft is capable of and thus serving as models for the craft itself. Aesthetic qualities of the typographic page Confusion notwithstanding, the typographer as he is most generally understood is responsible—whether or not he does all of the work himself—for the appearance of the printed page, and his work is best seen in the several examples of the printed page that are used to illustrate the present article. The typographic page may be considered in terms of two aesthetic qualities. It is easier felt than defined, and it depends in large measure on such things as the size of the block of type, its placement on the page, the kinds of display letters used for titles, running heads, and subheads, and the size of the margins—all elements that in the hands of a competent typographer create an expectation regarding the contents possibly even the purpose of the page and lead to a sense of the time of its production, its seriousness, and its function. The second aesthetic quality is that of colour, the darkness or lightness of the block of type sensed somehow as a whole rather than as a collection of individual letter forms with substantive meanings. Colour is the result of letter shapes, distances between letters and between words, the amount of space left between lines, the inking of the type, the printing process employed in making the impression on paper, and the paper itself. Of all elements the design of the letters is, in the dominant view, the

most important. It is important that early typography was in fact overtly engaged in the explicit search for typefaces that would mechanically reproduce the written scripts in which, before the invention of printing, books had been prepared. For most of its life since the invention of printing with movable type in the mid-th century, typography in the West has been dominated by three type families—roman, italic, and black letter—see below. All are easily recognizable as refined and regularized versions of letter styles first developed and standardized by scribes. The debt of sans serif, more a subclass than a family, is apparent but less unequivocal. To divide the several thousand typefaces that have existed since Gutenberg into three major families is only the grossest type of classification, and historians of typography, like teachers of typography, have found it useful to set up other classifications. Unfortunately, but not unexpectedly, they have not found it possible to agree on a system of classification. The variety of proposals has been so bewildering as to defeat one of the first purposes of classification. Others have concentrated on the major uses or types of literature from which various dominant types have come and talk, for example, of Humanistic faces. Other systems have employed nomenclatures that emphasize the early manuscript models from which a face evolved or a national influence. In attempts to meet a growing need for standards that can be applied more rigorously in legal and commercial and technical bibliographical uses, some countries and some craft associations have tried to develop classification schemes based on precise, in some cases almost mathematical, descriptions of the various elements of letter shapes. These schemes are not as yet worked out to the satisfaction of all concerned and are matters of some controversy, even among those who applaud the aims. The system that has enjoyed the longest general favour and seems to be about as useful as any other divides typefaces into four classifications. Unfortunately, though the classifications are based as much on differences in letter styles as on chronology, the names given each suggest a temporal alignment and one that is, at first glance, confusing. The first of these is called in most places old face—though Americans sometimes call it old style. In general, old faces were largely those types developed from c. Their letter forms had marked affinities with the penned letter styles of the scribes: The second classification is usually described as transitional and, as its name suggests, came more or less between—old face and modern. So-called modern types were produced between c. There is a marked contrast between the thick and thin strokes of the letter, the thins in particular being almost exaggeratedly thin, and the change from thick to thin is sudden and pronounced; serifs tend to be thinner and somewhat longer, and the stresses are less pronounced and are vertical rather than tilted. The effect is that of a letter less square, more up and down, than old-face letters, with lines more sharply defined. It is necessary to establish a special classification for such types because in each case the modern reworking, while it owed much to the original, was in fact sufficiently different to be a new creation in its own right. It is worth pointing out once more that typefaces are assigned to one or the other classification on the basis of the style in which their letters are drawn and not—despite their time-oriented designations—by the year of their creation. Finally, and although this is not the place for a detailed history of the evolution of the written letter forms on which printing depends, it is significant that models for all three major type families were in use before the invention of printing by movable type: The ready availability of serviceable letter models freed typography from the necessity of creating its own prototypes and left it able to spend its creative impulses in other ways. So well did it succeed that, within the first few decades after Gutenberg, it had brought forth almost every major development that it was to contribute and, in fact, had established itself so well that it may be fair to say that, until the 20th century, the art was a static one for all but the first 50 years of its existence. Further, the fact that the art form could take its basic ingredients from existing sources gave it a stability that it would not otherwise have had. Since it was unnecessary to wait while various producers in various countries came to agreement on which letter shapes to adopt or what reading conventions to employ, the typographer was enabled to get on with the work of overseeing the printing of books for distribution on a scale never before envisioned. The influence on the Renaissance was of incalculable importance if, indeed, it was not one of cause and effect. Page 1 of 2.

Chapter 2 : Typography timeline | World History Project

Inside this typography book is a view of the discipline incorporating an exploration of typography in media versus typography in motion, and coverage of topics like letterforms, syntax and legibility, the evolution and technology of typography, communication and the typographic message, typographic design processes, using the grid, and more.

In this copy the decorative colored initials were hand-lettered separately by a scribe. Typography, type-founding and typeface design began as closely related crafts in mid-century Europe with the introduction of movable type printing at the junction of the medieval era and the Renaissance. The scribal letter known as *textur* or *textualis*, produced by the strong gothic spirit of blackletter from the hands of German area scribes, served as the model for the first text types. A second typeface of about characters designed for the line Bible c. Bastarda, *fraktur*, *rotunda*, and *Schwabacher*. The rapid spread of movable type printing across Europe produced additional Gothic, half-Gothic and Gothic-to-Roman transitional types. The half-Gothic *Rotunda* type of Erhard Ratdolt c. The early printers of Spain were Germans who began by printing in up-to-date roman types but soon gave these up and adopted Gothic typefaces based on the letterforms of Spanish manuscripts. Valencia in the Kingdom of Aragon was the location of the first press, established in From there printers moved to other cities to set up presses. Roman types were used by the printers of Salamanca for their editions of classical authors. Printing in Portuguese began at Lisbon in the first book printed in Portugal was a Hebrew book printed in The inscriptional capitals on Roman buildings and monuments were structured on a euclidean geometric scheme and the discrete component-based model of classical architecture. Their structurally perfect design, near-perfect execution in stone, balanced angled stressing, contrasting thick and thin strokes, and incised serifs became the typographic ideal for western civilization. In their enthusiastic revival of classical culture, Italian scribes and humanist scholars of the early 15th century searched for ancient lower case letters to match the Roman inscriptional capitals. Practically all of the available manuscripts of classical writers had been rewritten during the Carolingian Renaissance, and with a lapse of three hundred years since the widespread use of this style, the humanist scribes mistook Carolingian minuscule as the authentic writing style of the ancients. Dubbing it *lettera antica*, they began by copying the minuscule hand almost exactly, combining it with Roman capitals in the same manner as the manuscripts they were copying. By the time moveable type reached Italy several decades later, the humanistic writing had evolved into a consistent model known as *humanistic minuscule*, which served as the basis for type style we know today as *Venetian*. The sequence of appearance and production dates for types used by these printers have yet to be established with certainty; all four are known to have printed with types ranging from *textur Gothic* to fully developed romans inspired by the earlier humanistic writing, and within a few years the center of printing in Italy shifted from Rome to Venice. Some time before in Venice, Johann and Wendelin issued material printed with a half-Gothic-half-roman type known as "*Gotico-antiqua*". This design paired simplified Gothic capitals with a rationalized humanistic minuscule letter set, itself combining Gothic minuscule forms with elements of Carolingian, in a one step forward, half step back blending of styles. Around the same time in Rome, Pannartz and Sweynheim were using another typeface that closely mimicked humanistic minuscule, known as "*Lactantius*". The *Lactantius* departed from both the Carolingian and Gothic models; a vertical backstem and right-angled top replaced the diagonal Carolingian structure, and a continuous curved stroke replaced the fractured Gothic bowl element. For details on the evolution of lower case letterforms from Latin capitals, see *Latin alphabet*. Development of roman type[edit] Nicolas Jenson began printing in Venice with his original roman font from The Jenson roman was an explicitly typographic letter designed on its own terms that declined to imitate the appearance of hand-lettering. Its effect is one of a unified cohesive whole, a seamless fusion of style with structure, and the successful convergence of the long progression of preceding letter styles. Jenson adapted the structural unity and component-based modular integration of Roman capitals to humanistic minuscule forms by masterful abstract stylization. The carefully modelled serifs follow an artful logic of asymmetry. The ratio of extender lengths to letter bodies and the distance between lines results in balanced, harmonious body of type. Jenson also mirrors the ideal expressed in

renaissance painting of carving up space typographic "white space" with figures letters to articulate the relationship between the two and make the white space dynamic. Later "old style" or Venetian book romans such as Aldines , and much later Bembo , were closely based on Jenson. The name "roman" is customarily applied uncapitalized to distinguish early Jenson and Aldine-derived types from classical Roman letters of antiquity. Some parts of Europe call roman "antiqua" from its connection with the humanistic "lettera antica"; "medieval" and "old-style" are also employed to indicate roman types dating from the late 15th century, especially those used by Aldus Manutius Italian: Roman faces based on those of Speyer and Jenson are also called Venetian. Italic type[edit] The humanist spirit driving the Renaissance produced its own unique style of formal writing, known as "cursiva humanistica". This slanted and rapidly written letter evolved from humanistic minuscule and the remaining Gothic current cursive hands in Italy, served as the model for cursive or italic typefaces. As books printed with early roman types forced humanistic minuscule out of use, cursiva humanistica gained favor as a manuscript hand for the purpose of writing. The popularity of cursive writing itself may have created some demand for a type of this style. The more decisive catalyst was probably the printing of pocket editions of Latin classics by Aldus Manutius. The "Aldino" italic type, commissioned by Manutius and cut by Francesco Griffo in , was a closely spaced condensed type. The fame of Aldus Manutius and his editions made the Griffo italic widely copied and influential, although it was not the finest of the pioneer italics. The "Aldino" style quickly became known as "italic" from its Italian origin. Around the Vatican chancellery scribe Ludovico Arrighi designed a superior italic type and had the punches cut by Lauticio di Bartolomeo dei Rotelli. Its slightly taller roman capitals, a gentler slant angle, taller ascenders and wider separation of lines gave the elegant effect of refined handwriting. Italic type designed by Ludovico Arrighi, c. This elegant design inspired later French italic types. Surviving examples of 16th-century Italian books indicate the bulk of them were printed with italic types. By mid-century the popularity of italic types for sustained text setting began to decline until they were used only for in-line citations, block quotes, preliminary text, emphasis, and abbreviations. Italic types from the 20th century up to the present are much indebted to Arrighi and his influence on French designers. Swiss art historian Jakob Burckhardt described the classically inspired Renaissance modello of dual case roman and cursive italic types as "The model and ideal for the whole western world". Venetian pre-eminence in type design was brought to an end by the political and economic turmoil that concluded the Renaissance in Italy with the sack of Rome in Renaissance Germany and Switzerland[edit] Soon after , roman typefaces began to gain popularity north of the Alps for printing of Latin literature. By using these large faces, Froben developed the title page as a fully organized artistic whole. These Swiss books are the first to have been designed in every detail as printed artifacts rather than as adaptations of manuscript technique. Towards the end of the 16th century, the Wechel family of Frankfurt , previously based in Paris, was producing fine books which used French typefaces in conjunction with heavy but resplendent woodcut ornaments to achieve a splendid page effect; but soon after there was a general, marked decline in the quality of both skill and materials, from which German printing did not recover until the 20th century. Gothic types dominated in France until the end of the 15th century, when they were gradually supplanted by roman designs. Printing with undeveloped Roman and half-Gothic types, the French pair were too occupied meeting the demand for Humanistic and classical texts to design any original types of their own. French books nonetheless began to follow the format established by Italian printers, and Lyon and Paris became the new centers of activity. Eventually, the French government fixed a standard height for all type, to ensure that different batches could be used together. The required phonetic and orthographic changes to French language hindered the evolution of type design in France until the late s. At the end of this period roman types introduced by Robert Estienne , Simon de Colines and Antoine Augereau began a phase of type design with a distinctly French character. Robert Estienne carried on the establishment of his father Henri Estienne, who had died in Narrower forms and tighter letter fit; a with low angled bowl; elevated triangular stem serifs on i, j, m, n and r; flattened baseline serifs, delicately modeled ascender serifs and graceful, fluid lines characterize the French style. The craftsmen who cut the punches for the romans used by Estienne and de Colines remain unidentified. Garamond type revival by Robert Slimbach. The svelte French style reached its fullest refinement in the roman types attributed to the best-known figure of French typographyâ€” Claude

Garamond also Garamont. In Robert Estienne , printer to the king, helped Garamond obtain commissions to cut the sequence of Greek fonts for King Francis I of France , known as the " grecs du roi ". Robert Granjon worked in the second half of the 16th century, mainly at Lyon, but was also recorded at Paris, Rome and Antwerp. His main contribution was an italic type known as "Parangon de Granjon". Italic type design had apparently become corrupted since the Arrighi and Aldine models. These qualities and its contrasting thick and thin strokes gave it a dazzling appearance that made it difficult to read. It was nevertheless the main influence for italic type design until the Arrighi model was revived in Contrast between thick and thin strokes increased. Tilted stressing transformed into vertical stressing; full rounds were compressed. Blunt bracketed serifs grew sharp and delicate until they were fine straight lines. Detail became clean and precise. Transitional roman types combined the classical features of *lettera antiqua* with the vertical stressing and higher contrast between thick and thin strokes characteristic of the true modern romans to come. The roman types used c. From mid 16th century until the end of the 17th, interference with printing by the British Crown thwarted the development of type founding in England—most type used by 17th-century English printers was of Dutch origin. The so-called Fell types, presumed to be the work of Dutch punchcutter Dirck Voskens, mark a noticeable jump from previous designs, with considerably shorter extenders, higher stroke contrast, narrowing of round letters, and flattened serifs on the baseline and descenders. The design retained a retrogressive old-style irregularity, smooth modeling from vertical to horizontal, and angled stressing of rounds except a vertically stressed o. Fell capitals were condensed, even-width, with wide flattened serifs; all characteristics of the definitive modern romans of the late 18th century. Fell italic types were distinguished by high contrast matching the Fell romans; wider ovals; a split-branching stroke from the stems of m n r and u; and long, flat serifs—prefiguring modern. They repeated the non-uniform slant of French models, and the capitals included swash J and Q forms. An open-source digitisation of the Fell Types has been released by designer and engineer Iginio Marini. Compare against the Fell type. The first major figure in English typography is reckoned by type historians to have ended the monopoly of Dutch type founding almost single-handedly. The complete canon included roman, italic, Greek, Hebrew, Arabic etc. Caslon type and its imitations were used throughout the expanding British empire. It was the dominant type in the American colonies for the second half of the 18th century. Caslon marks the rise of England as the center of typographic activity. He found employment with Dutch type founders in Holland and settled there c. Some time after he produced a distinguished roman design—related to the preceding transitional types but departing from them. It prefigured modern romans with sparse transaxial modeling joining the vertical stressing to hairline thins, and ball-ends. Fleischmann was held in great esteem by his contemporaries, his designs exerting a decisive influence in the last quarter of the 18th century. Like Baskerville, his italics were inspired by handwriting and the engraved lettering known as copperplate hand. Fournier also published a two volume *Manuel Typographique*, in which he recorded much European typographic history, and introduced the first standardized system of type size measurement—the "point". Baskerville[edit] The Baskerville typeface designed by John Baskerville.

Chapter 3 : A Brief History of Web Typography | Professional Web Typography by Donny Truong

History of Typography Timeline. History of Typography Key people and events from BC through Present Day BC: The typographical principle, that is the creation of a complete text by reusing identical characters, is first realized in the Phaistos Disc, an enigmatic Minoan print item from Crete, Greece, which dates between and BC.

Visual Timeline History of Typography Jan 10, Tweet on Twitter Typography Typography is the art of publishing from a movable form, which includes the practiced planning of size and typeface, layout and composition to make a harmonized and inviting whole online dictionary. Movable form needs to be set by hand for more than years before the advent of computers and typewriters. The View of Typography Typography has progressed to the point which an artist can select from an extensive selection of fonts for design elements and written communications. Typography is all over the place. It is viewed on artistic design utilized for publications houses and found on functional PC based items like remote controls, telephones and appliances like microwave. How Software Has Transformed Typography At this point in time, software can turn the typography into draw or sketch out. The internet became familiar with digitally transformed fonts as a work of art and not as typography. Simply because decorative typography makes shapes in designs as well as outlines, it can be organized to be middle point or utilized to make texture. Once decorative typography turns out to be the central point, it goes way ahead of what graphics could do in visual communication. In some circumstances or situations, graphic styles play the 2nd best portion of the written communication. As a whole, the written word is simpler to understand when assessing to graphic elements as well as editorial illustration and frequently, graphics are normally not as accurate as people like them to be. Even if an image is worth a thousand words, the misinterpretations of graphic is perhaps more liable to happen if opposed to straight forward and easy written communication. How Fonts Influence If styled fonts blend with the planned meaning at the back of them, they could give a powerful effect to what is being conversed or talked. A stylized font can clarify or mystify the true meaning of the word written, so you have to be attentive with your option of fonts in the layouts. There is no doubt on the subject of typography as the art of typography is ability itself. Efficient, attractive document or papers are based on the consistency and restraint of the typography. As a whole, you have to get away from utilizing more than 2 typefaces on a page once you take account of a sign typeface for end signs and lists. Lots of great looking papers are based on one san serif typeface for subheads as well as heads with a following serif typeface for captions and text. Utilize typography as an approach to entice and attract the readers as well as give emphasis to key points. This will make the page professional as well as simple to read.

Chapter 4 : A brief history of TrueType - Typography | Microsoft Docs

Typography *Typography is the study of type and type faces, the evolution of printed calendrierdelascience.com man did not begin to write with type, but rather the chisel, brush, and pen, it is the study of handwriting, that provides us with the basis for creating type designs.*

The typographical principle, that is the creation of a complete text by reusing identical characters, is first realized in the Phaistos Disc, an enigmatic Minoan print item from Crete, Greece, which dates between 1700 and 1500 BC. The Phoenicians gain independence from the Egyptians and develop their own alphabet--the first to be composed exclusively of letters. Charlemagne orders a system of writing called the Caroline miniscule which had the first versions of lowercase letters that were not just small versions of uppercase letters. Typography, type-founding, and typeface design begin as closely related crafts in mid-th century Europe due to the introduction of movable type printing at the junction of the medieval era and the Renaissance. Handwritten letter forms of the mid-th century embodied years of evolved letter design, and were the natural models for letter forms in systematized typography. The scribal letter known as *textur* or *textualis*, produced by the strong gothic spirit of blackletter from the hands of German area scribes, served as the model for the first text types. Johannes Gutenberg employs the scribe Peter Schoffer to help design and cut the letterpunches for the first typeface--the D-K type of characters used to print the first books in Europe. The rapid spread of movable type printing across Europe produces additional Gothic, half-Gothic and Gothic-to-roman transitional types. Claude Garamond from France develops the first true printing typeface not designed to imitate handwriting, but instead draws on rigid geometric principles. Garamond also begins the tradition of naming the typeface after himself. A printer by the name of Aldus Manutius invents the concept of pocket or portable books. In addition, he also creates the first Italic typeface one of the first typeface variations. In order to simulate handwriting, Robert Granjon develops the first cursive typeface. William Caslon issues a typeface bearing his name which includes straighter serifs and greater contrast between the major and minor strokes. The first transitional roman typeface is introduced by John Baskerville. This typeface increased the contrast between thick and thin strokes, had a nearly vertical stress in the counters, as well as very sharp serifs. Firmin Didot and Giambattista Bodoni of Italy develop the first modern romans. The moderns carry the transitionals to the extreme: Vincent Figgins designs a typeface with square serifs--these later become known as slab serifs. William Caslon IV produces the first typeface without serifs of any kind, however this sans serif style is ridiculed at the time. Herbert Bayer is appointed the head of a newly created workshop for print and advertising at the Dessau Bauhaus. It is here that he designs universal typefaces which are later adapted into Bauhaus fonts. A Swiss artist, Max Miedinger, creates Helvetica, the most popular typeface of our time. He is also the first designer to champion the use of white space as a design element. Howard Kettler designs Courier for IBM; which becomes the most popular typeface used on typewriters for 30 years. The first digital typesetter Digiset is invented by Rodolf Hell and used to produce the first digital font, Digital Grotesk. Although TrueType is not as clean or reliable as PostScript, its creation allowed for an explosion in font design. OpenType, a cross-platform font file format, is developed jointly by Adobe and Microsoft. Besides being supported by multiple platforms, it also supported expanded character sets and layout features. Both fonts proved to retain their legibility even at very small sizes on a screen.

Typography is the art and technique of arranging type to make written language legible, readable, and appealing when displayed. The arrangement of type involves selecting typefaces, point sizes, line lengths, line-spacing (), and letter-spacing (tracking), and adjusting the space between pairs of letters (kerning).

Printing Comes to Europe
Typography traces its origins to the first punches and dies used to make seals and currency in ancient times. The uneven spacing of the impressions on brick stamps found in the Mesopotamian cities of Uruk and Larsa, dating from the 2nd millennium BC, may have been evidence of type where the reuse of identical characters were applied to create cuneiform text. Babylonian cylinder seals were used to create an impression on a surface by rolling the seal on wet clay. Typography was also realized in the Phaistos Disc, an enigmatic Minoan print item from Crete, Greece, which dates between 1700 and 1500 BC. It has been proposed that Roman lead pipe inscriptions were created by movable type printing, but German typographer Herbert Brekle recently dismissed this view. The essential criterion of type identity was met by medieval print artifacts such as the Latin Pruefening Abbey inscription of that was created by the same technique as the Phaistos disc. The same printing technique can apparently be found in 10th to 12th century Byzantine reliquaries. Individual letter tiles where the words are formed by assembling single letter tiles in the desired order were reasonably widespread in medieval Northern Europe. Typography with movable type was invented in 11th-century China by Bi Sheng 毕昇 during the Song Dynasty. His movable type system was manufactured from ceramic materials, and clay type printing continued to be practiced in China until the Qing Dynasty. Wang Zhen was one of the pioneers of wooden movable type. Although the wooden type was more durable under the mechanical rigors of handling, repeated printing wore the character faces down, and the types could only be replaced by carving new pieces. Metal type was first invented in Korea during the Goryeo Dynasty around 13th century. Hua Sui introduced bronze type printing to China in AD. However, the diffusion of both movable-type systems was limited and the technology did not spread beyond East Asia. Modern movable type, along with the mechanical printing press, is most often attributed to the goldsmith Johannes Gutenberg, who independently invented the technology in mid-15th century Germany. His type pieces from a lead-based alloy suited printing purposes so well that the alloy is still used today. Gutenberg developed specialized techniques for casting and combining cheap copies of letterpunches in the vast quantities required to print multiple copies of texts. Computer technology revolutionized typography in the 20th century. Personal computers in the 1980s like the Macintosh allowed type designers to create types digitally using commercial graphic design software. Digital technology also enabled designers to create more experimental typefaces, alongside the practical fonts of traditional typography. Designs for typefaces could be created faster with the new technology, and for more specific functions. The cost for developing typefaces was drastically lowered, becoming widely available to the masses. The change has been called the "democratization of type" and has given new designers more opportunities to enter the field. In traditional typography, text is composed to create a readable, coherent, and visually satisfying whole that works invisibly, without the awareness of the reader. Even distribution of typeset material, with a minimum of distractions and anomalies, is aimed at producing clarity and transparency. Choice of typeface is the primary aspect of text typography—prose fiction, non-fiction, editorial, educational, religious, scientific, spiritual and commercial writing all have differing characteristics and requirements of appropriate typefaces and fonts. For historic material established text typefaces are frequently chosen according to a scheme of historical genre acquired by a long process of accretion, with considerable overlap between historical periods. Contemporary books are more likely to be set with state-of-the-art seriffed "text romans" or "book romans" with design values echoing present-day design arts, which are closely based on traditional models such as those of Nicolas Jenson, Francesco Griffo a punchcutter who created the model for Aldine typefaces, and Claude Garamond. With their more specialized requirements, newspapers and magazines rely on compact, tightly fitted seriffed text fonts specially designed for the task, which offer maximum flexibility, readability and efficient use of page space. Sans serif text fonts are often used for introductory paragraphs, incidental text and whole short articles. A current fashion is to pair

sans-serif type for headings with a high-performance seriffed font of matching style for the text of an article. Typography is modulated by orthography and linguistics, word structures, word frequencies, morphology, phonetic constructs and linguistic syntax. Typography is also subject to specific cultural conventions. For example, in French it is customary to insert a non-breaking space before a colon: Color In typography, color is the overall density of the ink on the page, determined mainly by the typeface, but also by the word spacing, leading and depth of the margins. Text layout, tone or color of the set text, and the interplay of text with the white space of the page in combination with other graphic elements impart a "feel" or "resonance" to the subject matter. With printed media typographers are also concerned with binding margins, paper selection and printing methods when determining the correct color of the page. Experimental typography Experimental typography is defined as the unconventional and more artistic approach to setting type. Francis Picabia was a Dada pioneer in the early 20th Century. David Carson is often associated with this movement, particularly for his work in Ray Gun magazine in the s. His work caused an uproar in the design community due to his abandonment of standards in typesetting practices, layout, and design. Experimental typography places emphasis on communicating emotion, rather than on legibility. Display typography 19th century wanted poster for John Wilkes Booth the assassin of U. President Abraham Lincoln printed with lead and woodcut type, and incorporating photography. Display typography is a potent element in graphic design, where there is less concern for readability and more potential for using type in an artistic manner. Type is combined with negative space, graphic elements and pictures, forming relationships and dialog between words and images. Color and size of type elements are much more prevalent than in text typography. Most display typography exploits type at larger sizes, where the details of letter design are magnified. Color is used for its emotional effect in conveying the tone and nature of subject matter.

Chapter 6 : History of Typography: Rockin' Rococo | The Paper Blog

Typography, type-founding and typeface design began as closely related crafts in mid-century Europe with the introduction of movable type printing at the junction of the medieval era and the Renaissance.

Unlike a printed artifact, text at a URL can be searched, copied, translated, linked to other documents. It can be printed. In its two and a half decades of existence, the web has revolutionized our daily communication, interaction, and business transaction, but the true transformation of typography to the web only took off in the last few years. For the first twenty years, the web had gone through many changes such as adopting web standards, using CSS for layouts, and focusing on content strategy. Even though the web embraced text from the beginning, they were not well integrated until recent years. In addition, he created the browser and wrote the software to run the web server. As a result, the site still works today as it did when the project was first published twenty-five years ago, which is impressive, despite the changes and advancements in web technologies. Type on Screen The lowercase g in pixels with vector outlines. Young Sun Compton, In the mids, type designer Matthew Carter gave birth to Georgia and Verdana, two widely used typefaces for screen-based media. Commissioned by Microsoft specifically for texts on web pages, both of these typefaces were designed first in bitmaps to match the pixels of the screen resolutions at the time and then translated into outline fonts. To make text legible and readable on screen, Carter had meticulously designed these fonts with large x-height, open aperture and generous space. In addition to Georgia and Verdana, the web could only display system fonts such as Arial, Helvetica, and Times New Roman, which are available on all computers. As graphic design was making the transition to the web from mids to mids, designers wanted to use more typefaces than just the handful that come with the operating system. The simplest alternative was to use image as text. Designers could use any typefaces available on their computer, but the downside was that each piece of text had to be sliced up individually in tools like Photoshop. One popular site that used images as texts was The New Yorker. To be consistent with its printed publication, each headline on The New Yorker web site served up images as texts in order to use NY Vogue Goat as its branded typeface. Image Replacement Techniques A major issue of using image as type was that text was not searchable, selectable, or translatable. To get around this problem, web practitioners came up with various image replacement techniques to fill the void. Furthermore, setting up s IFR required some web knowledge. This technique was easier to set up and did not rely on Flash. Although many image replacement techniques have continued to be developed and advanced over the years, they are not genuine web typography. Web Fonts Web typography is not a new concept. Internet Explorer 4 was the first browser to implement it, but with no success. The proposal had no piracy protection or licensing agreement in place. As a result, font-face was stalled for almost a decade. In , font-face made a comeback when Apple Safari and Mozilla Firefox implemented it. In May , Jeffrey Veen introduced Typekit , a type hosting service that let designers use high-quality fonts on websites with the ease of implementation and the worry-free of licensing and cross-browser compatibility. In , Google launched its own library of fonts for the world to use for free. With its ease of use API application programming interface , Google has succeeded in making web fonts more accessible. In just a few years, web fonts have swept the world of design. With the rise of responsive web design, typography is going through a new transformation like never before. Unlike a printed publication, the flexibility of the web gives designers no control of their work. In order to accommodate the growing number of devices coming to the market continuously, they have to embrace the fluidity of the web and let go of the notion of pixel perfect control. Designing for the unknown could be intimidating, but that also makes web design challenging and exciting. Brown is right in his statement. The web is the best place for accessing text.

Chapter 7 : Early Typographers : Design Is History

A paper-letter animation about the history of fonts and typography. Paper Letters. 2, Photographs. hours of work. Created by Ben Barrett-Forrest.

History of typography Type, from Gutenberg to the 18th century Whatever else the typographer works with, he works with type, the letter that is the basic element of his trade. It has already been said that there have been but three major type families in the history of Western printing: All had their origin in the scripts of the calligraphers whose work printing came ultimately to replace. Courtesy of the Newberry Library, Chicago Calligraphy is dealt with at length in other articles see also calligraphy. The basic letter forms of the Latin alphabet were established by the classical imperial capital letters of 1st-century Rome. Lowercase letters emerged only slowly, with their most vigorous development coming between the 6th and 8th centuries. Charlemagne , in order to encourage standardization and discourage further experimentation, ordered his educational program for the Holy Roman Empire to be written in a script consisting of roman capitals and a specific form of minuscules lowercase letters known as Carolingian minuscule. The uniformity thus achieved was short-lived. This was black letter. By the 15th century it had completed its evolution into the formal, square-text Gothic letter. It served well in Germany, but when printers in Italy, in part under the influence of the Humanist movement, turned to the printing of Latin texts, they found the pointed stateliness of the Gothic letter out of keeping with the spirit of Humanism. For these works, they went back in calligraphic history to a time when the text had been less open than the first Caroline alphabet but more rounded than the narrowed, blackened, and pointed Gothic that it had become. Known today as roman, it spread rapidly throughout western Europe except in Germany, where the Humanist movement was blocked by the counter-impulses of the Reformation. There, Gothic type was accepted almost as a national typeface until , when its discontinuance was ordered. It is notable that the majority of early printers continued for many years to use the Gothic type for non-Humanist texts, ecclesiastical writings, and works on law. In Spain, for example, Jacob Cromberger printed books in which the text was set in roman type and commentary on the text was set in Gothic. Like the Gothic and roman, the third great family of types had its origins in the writings of the scribes. The italic and the Gothic Schwabacher, which serves as a kind of italic to Fraktur as black letter is known in Germany , both had their genesis in the fast, informal, cursive, generally ligatured letters developed by chancellery clerks to speed their work. Later research in the 20th century, which has more or less become common consent, gives it to Johannes Gutenberg. Actually, the amount of invention involved in the development is open to argument. Certainly, there was in the air at the time much interest in an artificial method of reproducing calligraphic scripts, and books had already been printed from blocks; the techniques necessary to the punching of type and the making of matrices from which to cast it were known to the metalsmiths; paper was replacing vellum; and wine, oil, and cheese presses were readily available as adaptable models. It remained only for someone to combine what was in existence or clearly capable of creation. Gutenberg began his experiments around and was ready to put his method to commercial use by In that year, facing the need not unknown to later printers for financing, he borrowed from Johann Fust. About he borrowed once more from Fust, who at that time became his partner. Experts are generally agreed that the Bible displays a technical efficiency that was not substantially bettered before the 19th century. The Gothic type is majestic in appearance, medieval in feeling, and slightly less compressed and less pointed than other examples to appear shortly. A page from the Gutenberg line Bible, Courtesy of the Newberry Library, Chicago The Forty-two-Line Bible, like the other works of its day, had no title page, no page numbers, no innovations to distinguish it from the work of a manuscript copyist—this was presumably the way both Gutenberg and his customers wanted it. Some five years later, also in Mainz and quite possibly from the re-established printshop of a refinanced Gutenberg, there appeared the Catholicon , notable among other reasons for its early use of a colophon , a tailpiece identifying the printer and place of printing, and for the slight condensation of its type—a move toward more economic use of space on the page and greater type variety in printing. Within 15 years of the Forty-two-Line Bible, the printing press had been established in all of western Europe except Scandinavia. Italy When printing moved

outward from Germany, it established itself first in Italy, where it was nurtured by German and German-trained craftsmen. Sweynheim and Pannartz mentioned above were the first printers in Italy. They opened their press in Subiaco in and almost immediately produced a Cicero De oratore printed in an early and interesting Antiqua type that would with time become roman. This, rather than a type cut by another German, Adolf Rusch, in Strassburg in , is generally credited with being the initial roman simply because to most modern eyes its connection with the later face seems more clearly demonstrable, less tenuous. Indeed, more conservative theorists are not entirely convinced that even the Subiaco type was close enough to roman to be so called, except in the light of very informed hindsight. Courtesy of the Newberry Library, Chicago The brothers Johann and Wendelin von Speyer sometimes called da Spira and sometimes of Spire opened the first press in Venice in and, until Johann died in , had a one-year monopoly on all printing in that city. They used a clear and legible typeface that represented another step toward the contemporary roman. Whether or not these earlier types were really roman, there would seem to be no reason for putting the production of the first clearly recognizable roman any later than the work of a Frenchman, Nicolas Jenson , who had learned printing in Germany and set up business in Venice at about the time the von Speyer monopoly ran out. It has been described by most modern critics as an elegant cutting, and oneâ€™ Stanley Morison â€™called it perhaps the most perfect roman face ever cut. It is notable that Jenson never used his roman type for the printing of ecclesiastical or legal worksâ€™for which various versions of black letter were to remain standard. By all measurement the commanding figure in the typography of the late 15th century was Aldus Manutius , who also was in Venice. Manutius established his business around and, by , was issuing a series of Greek texts which were notable more for their editorial authority than for their typographical excellence. Manutius was his own editor. His type designer and cutter was Francesco Griffo of Bologna , who made two major contributions: It was, in the opinion of some critics, not a very good italic face, and it has been described as more a slanted roman than an italic. Nevertheless, it was the first of a new family of typefaces. Interestingly, it was at first a combination of new-face lowercase letters with roman uppercases. Equally interesting, the entire text of the Aldine books for which it was used were set in the new type. Not until did it become what it is today, a special-function type. To fill that market, Manutius projected a series of books compact enough to be carried easily, set in type that was both economical and highly readable, edited with scrupulous accuracy, and sold as inexpensively as possible. They were, indeed, the first pocketbook best-sellers , and they were what would today be called an instant success. The volumes were sought after throughout Europe, as much or more for their scholarly authority as for the excellence of their typography. New volumes were issued every two months for the next five years, and Manutius early had the honour, but dubious pleasure, of being pirated. Courtesy of the Newberry Library, Chicago The continuity implicit in the work of Manutius and others during this period destroys the value of that older approach to the history of typography that isolated everything printed from to as incunabula. France In Germany and in Italy, the many centres of printing grew up for the most part in the centres of commerce. But in Franceâ€™where printing was from the first a sponsored activityâ€™there were only two such centres: Lyon , from which significant printing largely disappeared after the Inquisition; and Paris , where it was established in about by the rector and librarian of the Sorbonne, who invited three German printers to occupy university-owned property and who later supervised all of their work. The first book printed in Franceâ€™a manual of instruction in Latin compositionâ€™was printed in an Antiqua type; and though there is some history of the use of a mixed Gothic until about , printers in France from the start led the way to establishing the predominance of roman and italic. Perhaps because of the quasi-official nature of printing in France, French publishers early established and long maintained a reputation for careful and elegant work. Their volumes, sumptuous more often than not, were characterized by minute attention to almost extravagant detailing. They are precise, mannered, delicate, and elegant. Henri Estienne established himself sometime around the beginning of the 16th century. A scholar, publisher, and printer, he gained his reputation as a publisher of classical literature. Estienne, for a time, had as his adviser Geoffroy Tory , a scholar who later became a printer himself. Strongly influenced by Italian typography , Tory experimented with the use of floral ornamentation and ornate initial letters. Tory, Colines, and a few others introduced the Aldine publishing methods into France. Colines designed italic, roman, and Greek type fonts, some of which

were cut for him by his punch cutter, Garamond. In they created, for an edition of St. Garamond quickly became a major force in making well-designed and superbly cut types available to printers, including those who generally could not have afforded the services of capable cutters. In , after years of experimentation, Garamond perfected a roman type that, though it had affinities with the lettering of scribes, was designed unmistakably for mechanical reproduction. It was sharply drawn, graceful and of good contrast, and it soon displaced most other typefaces then in use. This typeface ushered in the new era in which, for the first time, the typographic book was more common than the manuscript one. He envisioned it as a national type for the use of French printers. Reminiscent of a cursive Gothic, it ultimately found its only acceptance as a display face and was not utilized in the printing of books. England Printing was introduced into England near the beginning of the last quarter of the 15th century by an Englishman who had traveled widely throughout Europe to study the art— William Caxton , who was a gentleman and dilettante. Setting up in business in Bruges in , he issued *The Recuyell of the Historyes of Troye* , the first book printed in English, about ; in he returned to England and established a press in Westminster. The first dated book printed in England was the *Dictes and Sayenges of the Phylosophers* , issued from his press in . Printed in black-letter type of an almost startling blackness, its pages command attention by means of a contrast too pronounced to be comfortable to the reader. Caxton printed some 90 books—70 of them in English—before turning his business over to Wynkyn de Worde , his former assistant. De Worde used the first italic type in England in . Stanley Morison is authority for the statement that English typography in the first years after the invention of printing was of a secondary order except for the work of Richard Pynson , a Norman who operated a press in London from to about . Pynson, who used the first roman type in England in , issued more than works during his approximately 40 years of printing. Of these, a substantial number are legal handbooks and law codes, on the printing of which he enjoyed an effective monopoly. Courtesy of the Newberry Library, Chicago

Maturation of the printed book Well before the end of the first century of typography, the printer had brought to the book the basic forms of nearly every element that he was to contribute. The styles of the three major typefaces had been formalized to the point at which little other than refinement remained to be added to them; most of the business and craft functions that were to mark the production of books down to the present had been identified and differentiated; the printed book had achieved an acceptance comparable to, and an audience far greater than, that of the manuscript volume; and publishing specialties had already emerged. Fully one-third of all of the books printed during the period of the incunabula—that is from the s to —were illustrated. The printing of music had become practical, and the practice of numbering the pages of a volume in sequence had been adopted. Whether or not it is accurate to assert that the title page —the major nonmanuscript feature of the typographic book—emerged from the colophon, it is a fact that the title page took over some of the content of the colophon, which, however, continued to exist. The full title page did not appear until , when one Erhard Ratdolt in Venice used it on an astronomical and astrological calendar. The device was well established by the end of the incunabula period. Continuing the tradition of relative anonymity of authorship of the manuscript books, the earliest pages never, and later ones only seldom, revealed the author of the work. The title page, apparently, was meant to provide, first, a protective cover for the text within and, second, an opportunity for advertising for the publisher-printer. The middle years

The first really notable roman type had been cut by Jenson for a text by Cicero in . It had been replaced in popularity and importance by the romans that Francesco Griffo cut for Manutius in the late 15th century. The first italic had been a Griffo design introduced by Manutius in his pocket editions early in the 16th century. These two faces had, in turn, been displaced in European typography by letters designed in the mid-16th century by Garamond in France: By the end of the 16th century, typography in Europe had, generally speaking, deteriorated in vigour and quality. The commission, whose deliberations were fully recorded, worked mathematically, drawing and redrawing each letter on squares divided into 2, equal parts.

Chapter 8 : The Evolution of Typography: A Brief History - Print Magazine

History of Graphic Design, Graphic Designers, Art and Design Movements, Motion Graphics, Typography, Color, Design, graphic, Design, Reference, Referenced, A collection of information intended to be used as a primer and a reference tool in relation to the history of graphic design.

A Brief History of Type The Origin of the Typographic Form We are well accustomed to the written word as a primary method of communication in our culture. Its primary elements, the characters of the modern alphabet, were once quite literal symbols of everyday objects which were gradually abstracted to the letters of the alphabet. Pictograms, ideograms, and phonograms While cave paintings, dating as far back as 20,000 B.C. They are known to have recorded stories and preserved records using simple drawings of everyday objects, called pictograms. Sumerian pictogram for "mountains" As civilizations become more advanced, they experienced a need to communicate more complex concepts. A symbol for an ox could mean food, for example, or the symbol of a setting sun combined with the symbol for a man could communicate old age or death. Egyptian ideogram for "weeping" The Roman numerals we use today are considered to contain ideograms: In addition to sounds, phonograms could also represent words. Phoenician "aleph" Today, our own alphabet contains many such phonograms: Primarily a seafaring merchant society, they traded with many cultures, spreading their alphabet throughout the Western world. Pictograms evolved into the letters of the alphabet Early symbol for "ox" Greek "A" Roman "A" Several hundred years later, the Romans used the Greek alphabet as the basis for the uppercase alphabet that we know today. They refined the art of handwriting, fashioning several distinctive styles of lettering which they used for different purposes. They scribed a rigid, formal script for important manuscripts and official documents and a quicker, more informal style for letters and routine types of writing. Over the next 1,000 years, manuscript preparation developed into a specialized, highly regarded craft and came to be practiced chiefly in monasteries. Books were objects of immense value, and contained elaborate ornamentation. Illuminated, or illustrated, initials were painstakingly designed and incorporated into exactly rendered text. It was not uncommon for a monk to devote an entire lifetime to the completion of a single manuscript. Moveable type and printing The fifteenth century was a pivotal time for written communication. Manuscripts were treasured possessions which rarely appeared outside monasteries or the courts of royalty. The written word was reserved for the privileged few. In fact, less than one-tenth of the European population could read. In 1469, in Mainz, Germany, Johann Gutenberg changed the course of the written word. While Gutenberg is often credited with inventing both the printing press and metal type, he, in fact, did neither. Printing had been practiced for several hundred years in China and for at least several decades in Europe. Type had been cast successfully, albeit crudely, several years earlier in the Netherlands. What Johann Gutenberg did do was make these technologies practical. He perfected a workable system of moveable type, developing an ingenious process employing a separate matrix, or mold, for each alphabet character, from which metal types could be hand-cast in great quantities. These types could then be assembled into a page of text, and imprinted to paper via special inks and a printing press of his own design. For the first time, a technical system of mass production was applied to publishing. The next 50 years witnessed an explosion of printing throughout Europe and, by the year 1500, more than 10 million copies of nearly works were printed and distributed. An unprecedented diffusion of technical and social knowledge spread throughout the Western world and the education of the masses had begun.

Chapter 9 : History of Typography: A Few You Should Know

Typography is the art of creating the letters we use everyday. It's designing them and creating them and making them real. It's designing them and creating them and making them real. A font is a collection or set of letters - they're the mechanism you use to get your message across to your reader.

Phinney in a altcomp news group [http:](http://) No changes were made to the original content other than those noted. Fonts and major names links will take you to pages for those items. Phinney wrote this forward to his discussion of the history of typography: It is difficult to cover all the developments and movements of typography in a short space. My separation of evolving technologies from the development of typefaces is an artificial one -- designs and the technology used to create them are not truly separable -- but perhaps it is conceptually useful. Where names of typefaces are used, I attempt to use the original name: I shall update, clarify and correct this essay periodically, and will be happy to credit contributors. I can be contacted through my blog at [http:](http://) The process of writing out an entire book by hand was as labor-intensive as it sounds try it some time: Gutenberg, Picture although a man of vision, did not personally profit from his invention. A punch made of steel, with a mirror image of the letter is struck into a piece of softer metal. Molten metal is poured into this, and you get type. The type is put into a matrix to form the page of text, inked, then pressed into paper. Within several decades typesetting technology spread across Europe. The speed with which it did so is impressive: Typical print runs for early books were in the neighborhood of two hundred to a thousand books. The modern view of a classical era in which craftsmanship predominated appears unjustified to scholars: To those who have grown up with television, radio, magazines, books, movies, faxes and networked computer communications it is difficult to describe just how much of a revolution printing was. It was the first mass medium, and allowed for the free spread of ideas in a completely unprecedented fashion. Many groups sought to control this new technology. Scribes fought against the introduction of printing, because it could cost them their livelihoods, and religious and sometimes secular authorities sought to control what was printed. Sometimes this was successful: Printers would be held responsible rather than authors for the spread of unwanted ideas, and some were even executed. But this was a largely futile struggle, and most such restraints eventually crumbled in the western world. Towards the end of this period, the industrial revolution brought major innovations in printing technology. Rotary steam presses steam , rotary replaced hand-operated ones, doing the same job in 16 per cent of the time; photo-engraving took over from handmade printing plates. Essentially, line-casting allowed type be chosen, used, then recirculate back into the machine automatically. In optical scaling, the thickest strokes retain the same relative thickness at any size, but the thinnest strokes are not simply scaled up or down with the rest of the type, but made thicker at small sizes and thinner at large display sizes, so as to provide the best compromise between art and readability. He managed manufacturing at ATF from until , the year of his death. The economic impact of all these advances on the type industry cannot be overstated. For example, in the United States, the majority of type foundries escaped a bankruptcy bloodbath in by merging into a single company, called American Type Founders ATF. Ultimately twenty-three companies merged into ATF, making it far and away the dominant American type foundry. In the earlier days of printing, different sizes of type had simply been called by different names. Thus, "Brevier" was simply the British name for 8-point type of any style. Unfortunately, these names were not standardized internationally; 8-point type was called "Petit Texte" by the French and "Testino" by the Italians. This put approximately 72 points to the inch and now exactly 72 points to the inch on most computer-based typesetting systems. Typeface masters for photocomposition Phototypesetting are on film; the characters are projected onto photo-sensitive paper. Lenses are used to adjust the size of the image, scaling the type to the desired size. In some senses this technology was an "improvement," allowing new freedoms, such as overlapping characters. However, it also pretty much eliminated optical scaling see 2. Digital start The earliest computer-based typesetters were a hybrid between the above-mentioned photocomposition machines and later pure digital output. They each had their own command language for communicating with output devices. Although these machines had advantages, they also had problems. None of these early command languages

handled graphics well, and they all had their own formats for fonts. However, some of these devices are still in service as of , for use in production environments which require more speed and less flexibility phone books, newspapers, flight schedules, etc. This was due to a variety of reasons, including its inclusion in the Apple Laserwriter printer and its powerful graphics handling. A portion of the high-end typesetting still involves printing to film, and then making printing plates from the film. However, the increasing use of high-resolution printers dots per inch makes the use of actual printing presses unnecessary for some jobs. And the next step for press printing is the elimination of film altogether, as is done by a few special systems today, in which the computer can directly create printing plates. Digital typesetting is commonplace, and photocomposition is at least dying, if not all but dead. Digital typefaces on computer, whether Postscript or some other format, are generally outline typefaces, which may be scaled to any desired size although optical scaling is still an issue. There has been considerable economic fallout from all this in typography. Although some digital type design tools are beyond the price range of the "average" user, many are in the same price range as the mid- to high-end graphics and desktop publishing programs. This, combined with the introduction of CD-ROM typeface collections, has moved digital type away from being an expensive, specialized tool, towards becoming a commodity. As a result of both this and the brief photocomposition interregnum, the previously established companies have undergone major shakeups. Major vendors, such as American Type Founders, have failed to successfully make the digital transition, and gone bankrupt instead although at this time ATF has undergone a resurrection. More recently, even major digital type foundries have --dare one say foundered? Although there is a new accessibility of type design tools for hobbyists and professional graphic artists, the decreasing value of individual typefaces has resulted in a decrease in the number of working type designers per se both independents and company-employed.