

1: Books Before and After

The history of books starts with the development of writing, and various other inventions such as paper and printing, and continues through to the modern day business of book printing. The earliest history of books actually predates what would conventionally be called "books" today and begins with tablets, scrolls, and sheets of papyrus.

Enjoy the Famous Daily Engraved texts: His purpose is to preserve them for posterity in what is held to be authentic version of the text. But his enterprise has an unexpected result. Confucian scholars are eager to own these important texts. Now, instead of having them expensively written out, they can make their own copies. Simply by laying sheets of paper on the engraved slabs and rubbing all over with charcoal or graphite, they can take away a text in white letters on a black ground - a technique more familiar in recent centuries in the form of brass-rubbing. Subsequent emperors engrave other texts, until quite an extensive white-on-black library can be acquired. It is a natural next step to carve the letters in a raised form and in mirror writing and then to apply ink to the surface of the letters. When this ink is transferred to paper, the letters appear in black or in a colour against the white of the paper - much more pleasant to the eye than white on black. This process is printing. But it is the Buddhists, rather than the Confucians, who make the breakthrough. Printed Buddhist texts in Korea and Japan: Korea takes the lead. This is closely followed in Japan by a bold experiment in mass circulation precisely the area in which printed material has the advantage over manuscript. In, in devoutly Buddhist Nara, the empress commissions a huge edition of a lucky charm or prayer. It is said that the project takes six years to complete and that the number of copies printed, for distribution to pilgrims, is a million. The first printed book: Discovered in a cave at Dunhuang in, it is a precisely dated document which brings the circumstances of its creation vividly to life. It is a scroll, 16 feet long and a foot high, formed of sheets of paper glued together at their edges. The text is that of the Diamond Sutra, and the first sheet in the scroll has an added distinction. In a tradition later familiar in religious art of the west, a small figure kneels and prays in the foreground. He is presumably the donor who has paid for this holy book. The name of the donor, Wang Chieh, is revealed in another device which later becomes traditional in early printed books in the west. This reveals that the scroll is a work of Buddhist piety, combined with the filial obligations of good Confucian ideals: But the lucky accident of the cave at Dunhuang has given his parents a memorial more lasting than he could have imagined possible. Cutting round the characters: They are printed from pieces of wood in which the white areas on the page have been carefully cut away, until the remaining parts of the flat surface represent in reverse the shapes to be printed, regardless of whether they are to be text or image. Printing is achieved by covering the flat surface with ink, placing a piece of paper on it and rubbing the back of the paper. Yet the Chinese printers work wonders. In the 10th and 11th centuries all the Confucian classics are published for the use of scholar officials, together with huge numbers of Buddhist and Daoist works amounting to around scrolls of each and the complete Standard Histories since the time of Sima Qian. The carving of so many characters in reverse on wood blocks is an enormous investment of labour, but the task is unavoidable until the introduction of movable type. This innovation, once again, seems to have been pioneered in China but achieved in Korea. The concept is experimented with in China as early as the 11th century. But two considerations make the experiment unpractical. One is that the Chinese script has so many characters that type-casting and type-setting become too complex. The other is that the Chinese printers cast their characters in clay and then fire them as pottery, a substance too fragile for the purpose. Type foundry in Korea: Unlike earlier Chinese experiments with pottery, bronze is sufficiently strong for repeated printing, dismantling and resetting for a new text. Known as Jikji, it is a collection of Buddhist texts compiled as a guide for students. Only the second of the two published volumes survives held at present in the National Library of France. It reveals not only the date of its printing but even the names of the priests who assisted in the compiling of the type. The Koreans at this time are using the Chinese script, so they have the problem of an unwieldy number of characters. By one of the strange coincidences of history this is precisely the decade in which Gutenberg is experimenting with movable type far away in Europe, which has enjoyed the advantage of an alphabet for more than years.

2: History of printing - Wikipedia

Block printing is used to print books in Europe. Metal plates are first used in printing in Europe. Johannes Gutenberg begins printing the Bible, which he finishes in The first color printing is produced by Fust and Schoeffer. Drypoint engravings are invented by Germans.

Acting companies in London during the Renaissance were perennially in search of new plays. They usually paid on a piecework basis, to freelance writers. Publishing as it is known today depends on a series of three major inventions—writing, paper, and printing—and one crucial social development—the spread of literacy. Before the invention of writing, perhaps by the Sumerians in the 4th millennium bc, information could be spread only by word of mouth, with all the accompanying limitations of place and time. Writing was originally regarded not as a means of disseminating information but as a way to fix religious formulations or to secure codes of law, genealogies, and other socially important matters, which had previously been committed to memory. Publishing could begin only after the monopoly of letters, often held by a priestly caste, had been broken, probably in connection with the development of the value of writing in commerce. Scripts of various kinds came to be used throughout most of the ancient world for proclamations, correspondence, transactions, and records; but book production was confined largely to religious centres of learning, as it would be again later in medieval Europe. Only in Hellenistic Greece, in Rome, and in China, where there were essentially nontheocratic societies, does there seem to have been any publishing in the modern sense.ⁱ The invention of printing transformed the possibilities of the written word. Printing seems to have been first invented in China in the 6th century ad in the form of block printing. An earlier version may have been developed at the beginning of the 1st millennium bc, but, if so, it soon fell into disuse. The Chinese invented movable type in the 11th century ad but did not fully exploit it. Other Chinese inventions, including paper ad , were passed on to Europe by the Arabs but not, it seems, printing. The invention of printing in Europe is usually attributed to Johannes Gutenberg in Germany about 1450, although block printing had been carried out from about 1000. In less than 50 years it had been carried through most of Europe, largely by German printers. Printing in Europe is inseparable from the Renaissance and Reformation. It grew from the climate and needs of the first, and it fought in the battles of the second. It has been at the heart of the expanding intellectual movement of the past years. Although printing was thought of at first merely as a means of avoiding copying errors, its possibilities for mass-producing written matter soon became evident. In 1475, for instance, 18,000 letters of indulgence were printed at Barcelona. The market for books was still small, but literacy had spread beyond the clergy and had reached the emerging middle classes. The church, the state, universities, reformers, and radicals were all quick to use the press. Freedom of the press was pursued and attacked for the next three centuries; but by the end of the 18th century a large measure of freedom had been won in western Europe and North America , and a wide range of printed matter was in circulation. The mechanization of printing in the 19th century and its further development in the 20th, which went hand in hand with increasing literacy and rising standards of education, finally brought the printed word to its powerful position as a means of influencing minds and, hence, societies. The functions peculiar to the publisherⁱ. With increasing specialization, however, publishing became, certainly by the 19th century, an increasingly distinct occupation. Most modern Western publishers purchase printing services in the open market, solicit manuscripts from authors, and distribute their wares to purchasers through shops, mail order, or direct sales. Published matter falls into two main categories, periodical and nonperiodical; i. Of the nonperiodical publications, books constitute by far the largest class; they are also, in one form or another, the oldest of all types of publication and go back to the earliest civilizations. There is no wholly satisfactory definition of a book, as the word covers a variety of publications for example, some publications that appear periodically, such as The World Almanac and Book of Facts, may be considered books. Though the boundary between them is not sharp—there are magazines devoted to news, and many newspapers have magazine features—their differences of format, tempo, and function are sufficiently marked: Both sprang up after the invention of printing, but both have shown a phenomenal rate of growth to meet the demand for quick information and

regular entertainment. Newspapers have long been by far the most widely read published matter; the democratizing process of the 19th and 20th centuries would be unthinkable without them. There are, of course, many other types of publications besides books, newspapers, and magazines. In many cases the same principles of publishing apply, and it is only the nature of the product and the technicalities of its manufacture that are different. There is, for instance, the important business of map and atlas publishing. Another important field is music publishing, which produces a great variety of material, from complete symphonic scores to sheet music of the latest popular hit. A great deal of occasional publishing, of pamphlets and booklets, is done by organizations to further particular aims or to spread particular views; e. This kind of publishing is sometimes subsidized. Book publishing The form, content, and provisions for making and distributing books have varied widely during their long history, but in general it may be said that a book is designed to serve as an instrument of communication. The Babylonian clay tablet, the Egyptian papyrus roll, the medieval vellum codex, the printed paper volume, the microfilm, and various other combinations have served as books. The great variety in form is matched by an equal variety in content. The book is also characterized by its use of writing or some other system of visual symbols such as pictures or musical notation to convey a meaning. As a sophisticated medium of communication, it requires mastery of the hard-won skills of reading and writing. Another distinguishing feature is publication for tangible circulation. A temple column with a message carved on it is not a book. Signs and placards that are easy enough to transport are made to attract the eyes of passers-by from a fixed location and thus are not usually considered books. Private documents not intended for circulation also are not considered to be books. A book, for the purpose of this discussion, is a written or printed message of considerable length, meant for public circulation and recorded on materials that are light yet durable enough to afford comparatively easy portability. Its primary purpose is to carry a message between people, depending on the twin faculties of portability and permanence. As such, the book transcends time and space to announce, to expound, and to preserve and transmit knowledge. Books have attended the preservation and dissemination of knowledge in every literate society. The following account, keeping mainly within the scope of civilization as it developed in western Europe and North America, considers the book as it appeared at different times in history, the characteristic content and survival of copies and texts, and the means of production and distribution. The origins of books How soon after the invention of writing men began to make books is uncertain because the books themselves have not survived. The oldest surviving examples of writing are on clay or stone. The more fragile materials used for writing at various times have generally perished. The earliest known books are the clay tablets of Mesopotamia and the papyrus rolls of Egypt. There are examples of both dating from the early 3rd millennium bc. Books on clay tablets The ancient Sumerians, Babylonians, Assyrians, and Hittites wrote on tablets made from water-cleaned clay. Although these writing bricks varied in shape and dimension, a common form was a thin quadrilateral tile about five inches long. While the clay was still wet, the writer used a stylus to inscribe it with cuneiform characters. By writing on every surface in small characters, he could copy a substantial text on a single tablet. For longer texts he used several tablets, linking them together by numbers and catchwords as is done in modern books. Book production on clay tablets probably continued for 2, years. The nature and volume of the surviving records from Mesopotamia and Asia Minor indicate a heavy emphasis on the preservative function of writing and the book. Either dried in the sun or baked in a kiln, clay tablets were almost indestructible. The latter process was used for texts of special value, legal codes, royal annals, and epics to ensure greater preservation. Buried for thousands of years in the mounds of forgotten cities, they have been removed intact in modern archaeological excavations. The number of clay tablets recovered approaches ,, but new finds continually add to the total. The largest surviving category consists of private commercial documents and government archives. Of the remainder, many are duplications of texts. When the Aramaic language and alphabet arose in the 6th century bc, the clay tablet book declined because clay was less suited than papyrus to the Aramaic characters. The Egyptian papyrus roll The papyrus roll of ancient Egypt is more nearly the direct ancestor of the modern book than is the clay tablet. Papyrus as a writing material resembles paper. It was made from a reedy plant of the same name that flourishes in the Nile Valley. Strips of papyrus pith laid at right angles on top of each other and pasted together made cream-coloured papery sheets. Although the sheets varied in size, ordinary ones measured

about five to six inches wide. The sheets were pasted together to make a long roll. To make a book, the scribe copied a text on the side of the sheets where the strips of pith ran horizontally, and the finished product was rolled up with the text inside. The use of papyrus affected the style of writing just as clay tablets had done. Scribes wrote on it with a reed pen or brush and inks of different colours. The result could be very decorative, especially when done in the monumental hieroglyphic style of writing, a style best adapted to stone inscriptions. The Egyptians created two cursive hands, the hieratic priestly and the demotic a simplified form of hieratic suited to popular use, which were better adapted to papyrus. Compared with tablets, papyrus is fragile, yet an example is extant from bc; and stone inscriptions that are even older portray scribes with rolls. This amazing survival is partly the result of the dry climate of Egypt, in which some papyrus rolls survived unprotected for centuries while buried in the desert sands. The practice of certain Egyptian funerary customs also contributed to the preservation of many Egyptian books. Obsessed by a concern with life after death, they wrote magical formulas on coffins and on the walls of tombs to guide the dead safely to the gates of the Egyptian underworld. When the space thus provided became insufficient, they entombed papyrus rolls containing the texts. These mortuary texts are now described collectively as the Book of the Dead, although the Egyptians never standardized a uniform collection. Such books, when overlooked by grave robbers, survived in good condition in the tomb. Besides mortuary texts, Egyptian texts included scientific writings and a large number of myths, stories, and tales. Quotations from ancient writings show that scribes were highly regarded in ancient Egypt. They were the priests and government officials employed in the temples, pyramid complexes, and the courts of the pharaohs. The Greek historian Herodotus reported that Egyptian embalmers did a thriving business in copies of the Book of the Dead. Chinese books The Chinese, though not so early as the Sumerians and the Egyptians, were the third people to produce books on an extensive scale. Although few surviving examples antedate the Christian Era, literary and archaeological evidence indicates that the Chinese had writing and probably books at least as early as bc. Those primitive books were made of wood or bamboo strips bound together with cords. The fragility of materials and the damp climate resulted in the loss of other ancient copies. Some books escaped, however, and these, together with whatever books may have been produced in the intervening period, constituted a large enough body for a Chinese national bibliography to appear in the 1st century bc.

3: The history of printing | The evolution of print from Gutenberg to now

*The Book in America: A History of the Making and Selling of Books in the United States (New York: Bowker,). *R- *IIE Printing and Society in Early America, William L. Joyce, ed. (Worcester, MA: American Antiquarian Association,).*

Evolution of the book The Evolution of the book As books have now reached the 21st century with the creation of the increasingly popular e-book format, we thought it would be a good idea to take a look back at the long and involved history of the humble book. From the clay tablets to the e-book format, the book has enjoyed a remarkable evolution, presented here is a snapshot of that history: Mesopotamia is an ancient name for the area in the middle east that stretches from the Zagros Mountains in the northeast to the spurs of the Anti-Taurus Mountains in the north west and the Persian Gulf in the south east to the Arabian Plateau in the south west. The Sumarians devised a "cuneiform" alphabet a system that consists of logophonetic, consonantal alphabetic and syllabic signs , the symbols of which were etched into clay tablets with a triangle shaped stylus called a "Calamus" and then allowed to dry or fired in a kiln to make them last as long as possible. The Sumarians are believed to be the first people to ever use the Cuneform script, which itself is the earliest known written system in the world. Papyrus is a very thick paper like material that is made from the "pith" centre of the stem of the papyrus plant, a reed like swamp plant that used to be found in abundance along the Nile river. This "pith" was cut into thin strips, pressed together and then glued and dried to form a thin flat surface that could be written on. Again a calamus cut from the stem of a reed and then sharpened was often used to scribe but bird feathers were also used. Egyptians used this material for hundreds of years before the Greeks and Romans eventually adopted the technique. These scrolls were rolled up and often contained within wooden tubes to protect them and books were produced by glueing together a number of scrolls up to a length of 10 metres or in some cases even longer The history of the Egyptian King Ramses III was over 40 metres long. The Books were always rolled out horizontally and the text occupied on side, split into columns. This method of writing was used extensively until the 8th century AD. This favoured the left to right system that is now the standard in western cultures, although there is still a number of written scripts that use the right to left script, including Arabic and Hebrew. Before this was decided many cultures wrote left to right, right to left, up to down and even down to up. Herodotus, the Greek historian who lived in the 5th century BC regarded as the "Father of History" in Western culture described the use of skins to write on as common in his time. According to the Roman Varro a scholar and writer who lived BC - 27BC parchment was invented under the patronage of Eumenes of Pergamum an ancient Greek city in modern-day Turkey due to shortages of Papyrus. After a great library was setup in Pergamon that rivalled the Library of Alexandria prices began rising for the price of papyrus partly due to the increasing scarcity of the papyrus reeds as it was overfarmed leading to the adoption of parchment as the main writing material. Parchment is distinct from leather in that it is limed soaked in an Alkali solution which removed the hairs on the skin but not tanned. As such parchment reacts with changes in humidity being partly hygroscopic and is not waterproof. The finer quality parchments are known as vellum and even in the modern age parchment has been called the "finest writing material ever devised" with even the most modern papers not reaching the quality of the finest vellum. The tablets were essentially blocks of wood with were coated in wax allowing them to be written upon using a stylus, and later erased for re-use. These tablets were sometimes joined together at one end with cords like an early form of ring binder to form a "codex" original latin meaning "wood" but later known as a collection of bound pages , as such this is the earliest known form of a bound book. The "codex" became very popular around europe, replacing the scroll. Recent archaeological discoveries have been reported from near Dunhuang of paper with writing on it dating from 8 BC, while paper had been used in China for wrapping and padding since BC. The process of papermaking regardless of scale involves making a mixture of fibers in water to form a suspension and then allowing this suspension to drain through a screen so that a mat of fibers remains. This is then pressed and dried to make paper. After the paper is dry it is often run between heavy rollers to produce a harder writing surface this process is known as calendering. Paper can be "sized" to reduce the absorption of water and there are 3 categories - unsized water-leaf which is very absorbent and used for blotting and paper

towels, weak sized slack sized which is still somewhat absorbent and used for newspapers and strong sized hard sized which offers good water resistance. When paper was originally developed it was a fairly standard size and each peice of paper is known as a "leaf". When a leaf is printed on without being folded it is refered to as a "folio" which also means leaf this size is roughly that of a small newspaper sheet although folio can be other sizes. If this original folio is folded once to produce two leaves or 4 pages then the size of these leaves is refered to as a Quarto. If a Quarto is folded once to produce 4 leaves or 8 pages then this is known as a Octavo and is about the size of an average modern novel there are also Sixteen-mo and even thirty-two-mo but this is less common. These early manuscripts were still written on Parchment which had replaced Papyrus rather than the more "modern" paper due to the quality of Parchment over paper. These handwritten books were decorated in silver or even gold with striking colours and very detailed designs. The earliest known examples of illustrated manuscripts originate from Italy and the eastern Roman Empire. In Europe this became a very highly developed art form as well as some Muslim countries and this method of transcribing books prevailed until the invention of the moveable type. The significance of these works lie not just in the artwork itself but also in the maintainence of the non illustrated works. Had this not been done mainly by the monastic scribes of the Late Antiquity a time that stretches from the 3rd to 7th centuries AD then it is likely the entire collection of literature of Greece and Rome would have perished. Ink was then placed on the block of wood to create a print on paper. This technique is known as "block printing" or more accurately in this case "woodblock printing" and was originally used as early as AD as a means of printing on cloth. A block of wood is carefully prepared with a knife, chisel or sandpaper along the grain of the wood as a "relief matrix", so that the raised areas are the black type. The content has to be created in reverse so that when printed it forms the mirror image. This process of carving the wood is known as Xylography. Block printing could even be done in colour, by using multiple blocks one block for each colour , although overprinting two colours can produce further colours on the print. Multiple colours can be printed by keying the paper to a frame around the woodblocks. A Chinese man called Bi Sheng came up with the very first moveable type, with each letter created from wooden pieces tablets and then placed onto a wooden board. As a result of these issues wooden moveable type was quickly abandoned and replaced with ceramic tablets, which were made from baked clay. Around AD the very first metal moveable type was created, this time in Korea during the Goryeo Dynasty. This breakthrough led eventually the the very first movable metal print book in AD called the "Jikji". This block printing method appears to be almost exclusively used by the Muslim community. Most surviving extant prints suggest that block printing was mainly restricted to religious texts such as amulets long thin strips of paper bearing quotes from the Quran, listing the names of God and other texts designed to ward off evil. These "amulets" were rolled into metal tubes and worn around the neck on a chain. It is unknown why block printing never developed within Egypt, or the Muslim community but it is thought that this may be due to the fact that Tarsh was used by Itinerant tanners, rogue scribes such as Abu Dulaf al-Khazraji who frequented the courts of Iranian Buyid princes and has written of the Tarsh process and other confidence men who could take advantage of the piety of the gullible masses. Already familiar with the technique of cutting punches for coins and moulds, Johannes developed a metal moveable type system of casting letters from matrices using a device called a hand mould a very simple two part mould which contains the hand-made moveable type. The matrix itself was produced from a lead alloy known as type metal which was discovered by Johannes himself. This alloy allowed for more durable and uniform lettering which eventually gave rise to typography and fonts. The hand mould was the very first practical method of producing cheap copies of letterpunches in the vast quantities required for printing of the average book. This made moveable type a viable business and this is seen as truly monumental invention that has revolutionised the writing and printing of information and led directly to the printing press. This is widely regarded as the most important event of the modern period and played a key role in the development of the Renaissance, Reformation and the Scientific Revolution while at the same time spreading a means of learning to the masses and forming the basis for the modern knowledge-based economy we see today. There are thought to be 21 complete copies still in existence and are considered to be the most expensive books if they were ever to go on sale. Gutenberg made 3 very significant changes during the print process for the Bible, the first change was "Rubication" a process that involved

adding additional text in red for headings, a starting character or annotations of the pages by being passed twice through the press, with the second pass being made in red. This process was soon abandoned with spaces being left for the Rubication to be added by hand. Some time after this the number of lines were increased from 40 to 42, most likely to save on paper. As a result pages and pages to have 40 lines being the first ones printed, page 10 has 41 lines and the remaining pages all have 42 lines. The third change was to increase the print run which meant that those pages that had already been printed had to be reset. All new sheets used the new default of 42 lines. As a result there are two distinct settings in the folios and of volume I and folios and of volume II. The Bible is printed in what is now called the "blackletter" type styles of Gothic Bookhand Textualis and Schwabacher and followed the technique of justification. These books left the workshop unillustrated, unbound and mostly un-rubicated. A guide was produced for the Rubicators to add text and a generous margin was left for illustrators although some copies were left unillustrated. It is believed that in total copies of the Gutenberg Bible were created, on paper and a further 45 on vellum. Of these it is known that 21 exist in complete condition while there are a further 26 or 27 copies that are incomplete. After Gutenberg produced his Bible he fought and lost a lawsuit against his investor Johann Fust, who put Peter Schoffer Gutenberg Employee in charge of the print shop. Gutenberg himself started a new print company but the monopoly over the technology was lost and thus began the endemic spread of print presses throughout Germany and the rest of the world. From this time onwards it is generally assumed that the printed book was in universal use throughout Europe. This rapid expansion and sharp fall in production costs took everyone by surprise, created the very first "bestsellers", the very first Newspaper and a whole new branch of media with the publishing press. Aldus has the distinction of inventing italic type, establishing the modern use of the semicolon and most importantly, introducing inexpensive small format books octavos which were bound in vellum and were read much like the modern paperback. He invented the pocket book editions of the classics in Greek and Latin so that all could own and read these books but also gentlemen of leisure could easily transport in a pocket or a satchel. To this end he introduced the italic type, which was not used for emphasis as it is today but for his pocket books due to the narrow and compact letter forms. Vergili Maronis Opera in AD. The Bay Psalm is essentially a "psalter", a volume containing the book of Psalms sacred poems from the Hebrew Bible, which are sung, translated into English. At the time of printing there were 13 British colonies and it is a mark of their desire to consider themselves an "advanced civilisation" that this press arrived and the book printed just 20 years after the Mayflower arrived at Plymouth Rock and with it the very first British Colonists. Scheele observed the gas produced by the reaction of Hydrochloric Acid known as Muriatic acid at the time and Manganese Dioxide. So why is this element appearing in the history of the book? Chlorine is used in the bleaching of paper and without this discovery the modern paper would not have that nice clean white look. This book jacket design remained relatively unchanged for the following 60 years until the first 2 decades of the twentieth century brought new designs and ideas. In Britain there were two distinct markets these mass publications were aimed at, the juvenile market with the "story papers" and the working class adult which were known as a "penny dreadful", "penny number" or a "penny blood" - due to the fact that they each cost a "penny". Eventually these novels were exclusively aimed at the working class youth market and the term story paper became interchangeable with penny dreadful. These stories were printed on cheap "pulp" paper and featured reprints or rewrites of stories, largely in the Gothic thriller or Crime genre including the tales of Sweeney Todd and Varney the Vampire. One of the most popular of these series was "Black Bess or the Knight of the Road" which ran for an impressive episodes and featured fictional events of the real life Highwayman Dick Turpin. A good number of these proved remarkably popular with largely wild west tales such as "Deadwood Dick" and "Buffalo Bill" delighting the penny dreadful audience, thus began for many the love affair with the largely fictional wild west and "cowboys and indians" tales. Those working class boys who could not afford a penny a week often teamed up with friends to form reading clubs and share the cost. Some of the more entrepreneurial of boys would even rent their copies out to others. The Beadles Dime series ran for issues and established nearly all the conventions of the genre. Much of the material for dime novels came from the weekly story papers which were newspaper like publications varying from tabloid to full broadsheet in size. In the modern age the term "dime novel" is generally used to describe a sensationalized yet

superficial piece of written work. Without the penny dreadfuls and the dime novels we would likely have never seen the mass market paperback that has become so widely used in the 20th and 21st Century. Other similar experiments had the same results. There was however one publisher who did have a great deal of success with the paperback format, even though he was not exactly "mainstream" in publishing and advertising.

4: The Evolution of the book

The history of printing starts as early as BCE, when the Persian and Mesopotamian civilizations used cylinder seals to certify documents written in clay. Other early forms include block seals, pottery imprints and cloth printing.

Stencil Hand stencils, made by blowing pigment over a hand held against a wall, have been found in Asia and Europe dating from over 35,000 years ago, and later prehistoric dates in other continents. Stencils may have been used to colour cloth for a very long time; the technique probably reached its peak of sophistication in Katazome and other techniques used on silks for clothes during the Edo period in Japan. In Europe, from about 1500 they were commonly used to colour old master prints printed in black and white, usually woodcuts. In China seals were used since at least the Shang dynasty. In the Western Zhou, sets of seal stamps were encased in blocks of type and used on clay moulds for casting bronzes. By the end of the 3rd century BC seals were also used for printing on pottery. In the Northern dynasties textual sources contain references to wooden seals with up to 10 characters. Daoists used seals as healing devices by impressing therapeutic characters onto the flesh of sick people. They were also used to stamp food, creating a talismanic character to ward off disease. The first evidence of these practices appeared under a Buddhist context in the mid 5th century. Centuries later seals were used to create hundreds of Buddha images. Archaeological evidence of them have been unearthed at Mawangdui and in the tomb of the King of Nanyue, while block printed fabrics have been discovered at Mashan zhuanchang in Jiangling, Hubei. Among the earliest evidence of this is a stone inscription cut in mirror image from the early 6th century. Yuan Dynasty woodblocks edition of a Chinese play Mongolian Buddhist printing block. Korean wood printing block from the 19th century, on display at the British Museum in London. A printing block from Yangzhou. Song dynasty bronze plate advertising print for the Liu family needle shop at Jinan. Earliest extant print advertisement. Copperplate of "cash Jin dynasty" paper money with bronze movable type counterfeit markers Ceramic movable type print from the Western Xia. Discovered in the Mogao caves. It became widely used throughout East Asia both as a method for printing on textiles and later, under the influence of Buddhism, on paper. As a method of printing on cloth, the earliest surviving examples from China date to about 1500. Ukiyo-e is the best known type of Japanese woodblock art print. Most European uses of the technique on paper are covered by the term woodcut see below, except for the block-books produced mainly in the fifteenth century. The semi-mythical record of him therefore describes his usage of the printing process to deliberately bewilder onlookers and create an image of mysticism around himself. By copying and preserving these texts, Buddhists could accrue personal merit. As a consequence the idea of printing and its advantages in replicating texts quickly became apparent to Buddhists, who by the 7th century, were using woodblocks to create apotropaic documents. These Buddhist texts were printed specifically as ritual items and were not widely circulated or meant for public consumption. Instead they were buried in consecrated ground. The Great Dharani Sutra Korean: They have been dated to the reign of Wu Zetian using character form recognition. This copy of the Diamond Sutra is 14 feet long and contains a colophon at the inner end, which reads: Reverently [caused to be] made for universal free distribution by Wang Jie on behalf of his two parents on the 13th of the 4th moon of the 9th year of Xiantong [i. During the Song dynasty, the Directorate of education and other agencies used these block prints to disseminate their standardized versions of the Classics. Other disseminated works include the Histories, philosophical works, encyclopedias, collections, and books on medicine and the art of war. It took 10 years to finish the, blocks needed to print the text. The finished product, the Sichuan edition of the Kaibao canon, also known as the Kaibao Tripitaka, was printed in The completed work, amounting to some 6,000 volumes, was finished in Unfortunately the original set of woodblocks was destroyed in a conflagration during the Mongol invasion of King Goryeo ordered another set to be created and work began in, this time only taking 12 years to complete. In the complete Goryeo Daejanggyeong numbered 81, printing blocks, 52,000 characters, titles, and volumes. Due to the stringent editing process that went into the Goryeo Daejanggyeong and its surprisingly enduring nature, having survived completely intact over years, it is considered the most accurate of Buddhist canons written in Classical Chinese as well as a standard edition for East Asian Buddhist scholarship. Fan Ping had in

his collection 7, rolls juan , or a few hundred titles. Two centuries later, Zhang Mian owned 10, juan, Shen Yue 20, juan, and Xiao Tong and his cousin Xiao Mai both had collections of 30, juan. Emperor Yuan of Liang was said to have had a collection of 80, juan. The combined total of all known private book collectors prior to the Song dynasty number around , with the Tang alone accounting for 60 of them. The Song dynasty alone accounts for some known private collections, more than triple the number of all the preceding centuries combined. Private libraries of , juan became commonplace while six individuals owned collections of over 30, juan. The earliest extant private Song library catalogue lists 1, titles in 24, juan. The majority of which were secular in nature. The Three Institutes were one of several imperial libraries, with eight other major palace libraries, not including imperial academies. The emperor went to the Directorate of Education to inspect the Publications Office. He asked Xing Bing how many woodblocks were kept there. Bing replied, "At the start of our dynasty, there were fewer than four thousand. Today, there are more than one hundred thousand. The classics and histories, together with standard commentaries, are all fully represented. When I was young and devoted myself to learning, there were only one or two scholars in every hundred who possessed copies of all the classics and commentaries. There was no way to copy so many works. Today, printed editions of these works are abundant, and officials and commoners alike have them in their homes. Scholars are fortunate indeed to have been born in such an era as ours! I can recall meeting older scholars, long ago, who said that when they were young they had a hard time getting their hands on a copy of Shiji or Han shu. If they were lucky enough to get one, they thought nothing of copying the entire text out by hand, so they could recite it day and night. In recent years merchants engrave and print all manner of books belonging to the hundred schools, and produce ten thousand pages a day. Yet, to the contrary, young men and examination candidates leave their books tied shut and never look at them, preferring to amuse themselves with baseless chatter. The advantage was that it was now possible to flip to a reference without unfolding the entire document. Woodblock prints allowed two mirror images to be easily replicated on a single sheet. Thus two pages were printed on a sheet, which was then folded inwards. The sheets were then pasted together at the fold to make a codex with alternate openings of printed and blank pairs of pages. In the 14th century the folding was reversed outwards to give continuous printed pages, each backed by a blank hidden page. Later the sewn bindings were preferred rather than pasted bindings. For example, one complete Tripitaka had over 6, juan in tao. Indeed, manuscripts remained dominant until the very end of Imperial China: As a result of block-printing technology, it became easier and cheaper to produce multiple copies of books quickly. By the eleventh century, the price of books had fallen by about one tenth what they had been before and as a result they were more widely disseminated. Nevertheless, even in the fifteenth century most books in major libraries were still in manuscript, not in print. Almost to the end of the empire it remained cheaper to pay a copyist than to buy a printed book. About 4 percent of it was printed in movable type in , but it was hand-carved movable wooden type. Indeed, the entire collection was only printed for the first time in the s. Access to books, especially large works, such as the Histories, remained difficult right into the twentieth century. The age of printing gave the act of copying by hand a new dimension of cultural reverence. Those who considered themselves real scholars and true connoisseurs of the book did not consider imprints to be real books. Under the elitist attitudes of the time, "printed books were for those who did not truly care about books. According to the Ming dynasty author Hu Yinglin , "if no printed edition were available on the market, the hand-copied manuscript of a book would cost ten times as much as the printed work," [26] also "once a printed edition appeared, the transcribed copy could no longer be sold and would be discarded. In , the Korean Choe Bu observed during his trip to China that "even village children, ferrymen, and sailors" could read, although this applied mainly to the south while northern China remained largely illiterate. Stamps were carved for printing these prayers on clay tablets from at least the 7th century, the date of the oldest surviving examples. History of Western typography Printing with a press was practiced in Christian Europe as a method for printing on cloth, where it was common by Images printed on cloth for religious purposes could be quite large and elaborate, and when paper became relatively easily available, around , the medium transferred very quickly to small woodcut religious images and playing cards printed on paper. These prints were produced in very large numbers from about onwards. These were all short heavily illustrated works, the bestsellers of the day, repeated in many different

block-book versions: There is still some controversy among scholars as to whether their introduction preceded or, the majority view, followed the introduction of movable type, with the range of estimated dates being between about 1450 and 1500

"book history" OR "history of the book" OR "history of books" OR "printing press history" OR "history of the printing press" , Results Archival Material (93) Include Exclude.

History of printing Origins in China By the end of the 2nd century ce, the Chinese apparently had discovered printing; certainly they then had at their disposal the three elements necessary for printing: Some of the texts were classics of Buddhist thought inscribed on marble pillars, to which pilgrims applied sheets of damp paper, daubing the surface with ink so that the parts that stood out in relief showed up; some were religious seals used to transfer pictures and texts of prayers to paper. It was probably this use of seals that led in the 4th or 5th century to the development of ink of a good consistency for printing. A substitute for these two kinds of surfaces, the marble pillars and the seals, that was more practical with regard both to manageability and to size, appeared perhaps by the 6th century in the wood block. First, the text was written in ink on a sheet of fine paper; then the written side of the sheet was applied to the smooth surface of a block of wood, coated with a rice paste that retained the ink of the text; third, an engraver cut away the uninked areas so that the text stood out in relief and in reverse. To make a print, the wood block was inked with a paintbrush, a sheet of paper spread on it, and the back of the sheet rubbed with a brush. Only one side of the sheet could be printed. The oldest known printed works were made by this technique: Invention of movable type 11th century About 1048 a Chinese alchemist named Pi Sheng appears to have conceived of movable type made of an amalgam of clay and glue hardened by baking. He composed texts by placing the types side by side on an iron plate coated with a mixture of resin, wax, and paper ash. Gently heating this plate and then letting the plate cool solidified the type. Once the impression had been made, the type could be detached by reheating the plate. It would thus appear that Pi Sheng had found an overall solution to the many problems of typography: In about 1070 a magistrate named Wang Chen seems to have had a craftsman carve more than 60,000 characters on movable wooden blocks so that a treatise on the history of technology could be published. To him is also attributed the invention of horizontal compartmented cases that revolved about a vertical axis to permit easier handling of the type. In Korea, on the contrary, typography, which had appeared by the first half of the 13th century, was extensively developed under the stimulus of King Taejong, who, in 1392, ordered the first set of 28,000 pieces of type to be cast in bronze. Nine other fonts followed from then to 1470; two of them were made in 1470, before Europe in its turn discovered typography. Transmission of paper to Europe 12th century Paper, the production of which was known only to the Chinese, followed the caravan routes of Central Asia to the markets at Samarkand, whence it was distributed as a commodity across the entire Arab world. The transmission of the techniques of papermaking appears to have followed the same route; Chinese taken prisoner at the Battle of Talas, near Samarkand, in 751 gave the secret to the Arabs. Paper mills proliferated from the end of the 8th century to the 13th century, from Baghdad and then on to Spain, then under Arab domination. Paper first penetrated Europe as a commodity from the 12th century onward through Italian ports that had active commercial relations with the Arab world and also, doubtless, by the overland route from Spain to France. Papermaking techniques apparently were rediscovered by Europeans through an examination of the material from which the imported commodity was made; possibly the secret was brought back in the 11th century by returning crusaders or merchants in the Eastern trade. Papermaking centres grew up in Italy after 1150 and in France and Germany in the course of the 14th century. But knowledge of the typographic process does not seem to have succeeded, as papermaking techniques had, in reaching Europe from China. It would seem that typography was assimilated by the Uighurs who lived on the borders of Mongolia and Turkistan, since a set of Uighur typefaces, carved on wooden cubes, has been found that date from the early 14th century. It would be surprising if the Uighurs, a nomadic people usually considered to have been the educators of other Turco-Mongolian peoples, had not spread the knowledge of typography as far as Egypt. There it may have encountered an obstacle to its progress toward Europe, namely, that, even though the Islamic religion had accepted paper in order to record the word of Allah, it may have refused to permit the word of Allah to be reproduced by artificial means. The invention of printing Thus, the essential elements of the printing process collected slowly in western Europe, where a

favourable cultural and economic climate had formed. Xylography Xylography, the art of printing from wood carving, the existence and importance of which in China was never suspected by Marco Polo , appeared in Europe no earlier than the last quarter of the 14th century, spontaneously and presumably as a result of the use of paper. It had been observed that paper was better suited than rough-surfaced parchment for making the impressions from wood reliefs that manuscript copyists used to reproduce the outline of ornamental initial capital letters. The process was extended to the making of religious pictures. These at first appeared alone and later were accompanied by a brief text. As engravers became more skillful, the text finally became more important than the illustration, and in the first half of the 15th century small, genuine books of several pages, religious works or compendiums of Latin grammar by Aelius Donatus and called donats, were published by a method identical to that of the Chinese. Given the Western alphabet, it would seem reasonable that the next step taken might have been to carve blocks of writing that, instead of texts, would simply contain a large number of letters of the alphabet; such blocks could then be cut up into type, usable and reusable. It is possible that experiments were in fact made along these lines, perhaps in or by a Dutchman from Haarlem, Laurens Janszoon, known as Coster. The encouraging results obtained with large type demonstrated the validity of the idea of typographic composition. But the results were disappointing with regard to type destined for use for text of the usual size. The letters of the roman alphabet were smaller than Chinese ideograms, and cutting them from wood was a delicate operation. Moreover, type made in this way was fragile, and it wore out at least as quickly as blocks carved with a whole text. Further, since the letters were individually carved, no two copies of the same letter were identical any more than when the text was engraved directly on a wood block. The process, thus, represented no advance in ease of production, durability, or quality. Metallographic impression is more likely to turn out to be the direct ancestor of typography, although the record is far from clear. Several medieval craft guilds, notably the metal founders, the die-cutters, and goldsmiths and silversmiths, were familiar with the technique of using dies. Masters of this technique apparently realized that it could be applied to a process that would enable texts to be set in relief more quickly than by carving wood blocks, probably in three steps: The theoretical advantages of this process were that only one engraving per letter, that of the die, was required to make the letter as often as desired, and any two examples of the same letter would be identical, since they came from a single die; sinking the matrix and casting the lead were rapid operations; the lead had better durability than wood; and by casting several plates from the same matrix the number of copies printed could be rapidly increased. Metallographic printing appears to have been practiced in Holland around and next in the Rhineland. Gutenberg used it in Strassburg now Strasbourg, France between and But the experiments were not followed up because of problems created by the cast plates. It was difficult to strike each letter die with the same force and to keep a regular alignment, and, worse, each strike tended to deform the adjacent letter. It may well be that the major value of metallographic printing was that it associated the idea of the die, the matrix, and cast lead. The invention of typographyâ€™ Gutenberg ? This association of die, matrix, and lead in the production of durable typefaces in large numbers and with each letter strictly identical, was one of the two necessary elements in the invention of typographic printing in Europe. The second necessary element was the concept of the printing press itself, an idea that had never been conceived in the Far East. Johannes Gutenberg is generally credited with the simultaneous discovery of both these elements, though there is some uncertainty about it, and disputes arose early to cloud the honour. It is true that his signature does not appear on any printed work. The assumption is based solely on the interpretation of obscure aspects of a lawsuit that Gutenberg lost against his associates in The first pieces of type appear to have been made in the following steps: Spectroscopic analyses of early type pieces reveal that the alloy used was a mix of lead, tin , and antimony â€™the same components used today: Until the middle of the 19th century, type generally continued to be made by craftsmen in this way. Perhaps the printing press was first just a simple adaptation of the binding press, with a fixed, level lower surface the bed and a movable, level upper surface the platen , moved vertically by means of a small bar on a worm screw. The composed type, after being locked by ligatures or screwed tight into a right metal frame the form , was inked, covered with a sheet of paper to be printed, and then the whole pressed in the vise formed by the two surfaces. This process was superior to the brushing technique used in wood-block printing in Europe and China because it was possible to

obtain a sharp impression and to print both sides of a sheet. Nevertheless, there were deficiencies: It is generally thought that the printing press acquired its principal functional characteristics very early, probably before the first of these may have been the mobile bed, either on runners or on a sliding mechanism, that permitted the form to be withdrawn and inked after each sheet was printed. Next, the single thread of the worm screw was replaced with three or four parallel threads with a sharply inclined pitch so that the platen could be raised by a slight movement of the bar. This resulted in a decrease in the pressure exerted by the platen, which was corrected by breaking up the printing operation so that the form was pushed under the press by the movable bed so that first one half and then the other half of the form was utilized. Improvements after Gutenberg Several of the many improvements in the screw printing press over the next years were of significance. About 1470 the wooden screw was replaced by iron. Twenty years later, innovators added a double-hinged chase consisting of a frisket, a piece of parchment cut out to expose only the actual text itself and so to prevent ink spotting the nonprinted areas of the paper, and a tympan, a layer of a soft, thick fabric to improve the regularity of the pressure despite irregularities in the height of the type. About 1618 Willem Janszoon Blaeu in Amsterdam added a counterweight to the pressure bar in order to make the platen rise automatically; this was the so-called Dutch press, a copy of which was to be the first press introduced into North America, by Stephen Daye at Cambridge, Massachusetts in 1639. The metal press The first all-metal press was constructed in England in about 1725. Some years later a mechanic in the United States built a metal press in which the action of the screw was replaced by that of a series of metal joints. Stereotypy and stereography late 18th century An increasing demand for printed matter stimulated the search for greater speed and volume. The concepts of stereotypy and stereography were explored. Stereotypy, used with notable success around 1780 in Paris, consisted in making an impression on text blocks of type in clay or soft metal in order to make lead molds of the whole. The stereotyped plates thus obtained made it economically possible to print the same text on several presses at the same time. The plates left the pieces of type in the form immediately available for further use and thus increased the rate at which they could be recycled. A variation of stereotypy was the application, after 1800, of galvanoplastic metallization, in which process plates of thin metal lined with a base of lead alloy were made by electrolytic deposition of a coat of copper on a wax mold of the typeform. Stereography aimed at bypassing the composition of the type in making the mold. Attempts to perfect the old metallographic method of preparing a clay matrix by stamping with dies brought no better results. In 1811 a variation was tried in which sets of copper matrices of each letter were made in large numbers. The matrices were then assembled according to the wording of the text, so that they covered the whole surface of the bottom of a mold in which the lead plate was then cast. Once the cast had been made, the matrices were available for further use. In 1811, in Germany, Friedrich Koenig envisaged a press in which the raising and lowering of the platen, the to-and-fro movement of the bed, and the inking of the form by a series of rollers were controlled by a system of gear wheels. Early trials in London in 1812 were unsuccessful. Though Nicholson very early took out patents for a printing process using a cylinder to which the composed type pieces were attached, he was never able to develop the necessary technology involved. The cylinder was in fact the most logical geometric form to use in a cyclical process. It was also the one capable of providing the greatest output. Given an equal amount of energy, the pressure exerted by a platen had to be spread over the whole of the surface to be printed, whereas the pressure exerted by a cylinder could be concentrated on the strip of surface actually in contact with the cylinder at any one instant. A limited demonstration of the efficiency of the cylinder had been made as early as on a French press for books for the blind. In 1814 Koenig and an associate, Andreas Bauer, in another approach to the rotary principle, designed a cylinder as a platen bearing the sheet of paper and pressing it against the typeform placed on a flatbed that moved to and fro. The rotation of the cylinder was linked to the forward movement of the bed but was disengaged when the bed moved back to go under the inking rollers. The first stop-cylinder printing machine, in 1814, built by Friedrich Koenig and Andreas Bauer. Courtesy of Koenig and Bauer AG In the first stop-cylinder press of this kind to be driven by a steam engine was put into service at the Times of London. It had two cylinders, which revolved one after the other according to the to-and-fro motion of the bed so as to double the number of copies printed; a speed of 1,000 sheets per hour was achieved. In 1818 Koenig and Bauer designed a double press in which a sheet of paper printed on one side under one of the cylinders passed to the

other cylinder, to be printed on the other side. This was called a perfecting machine. In William Church added grippers to the cylinder to pick up, hold, and then automatically release the sheet of paper.

6: Self Publishing Book Costs | How Much Does It Cost To Print A Book?

The History of the Book and Printing Collection encompasses materials that describe the development, production, and dissemination of the written and printed word including works that illustrate manuscript origins, printing processes, book trading, binding, and book illustration in the broadest sense published prior to

The history of printing Printing, or the process of reproducing text and images, has a long history behind it. This page describes the evolution of print. It acts as a summary of a more elaborate description which starts here. You can also click on the title of each century to get more in-depth information. There is a separate section on the history of prepress. In other early societies in China and Egypt, small stamps are used to print on cloth. Seventh century A small book containing the text of the Gospel of John in Latin is added to the grave of Saint Cuthbert. In it is recovered from his coffin in Durham Cathedral, Britain. The Cuthbert Gospel is currently the oldest European book still in existence. Eleventh century A Chinese man named Pi-Sheng develops type characters from hardened clay, creating the first movable type. The fairly soft material hampers the success of this technology. Twelfth century Papermaking reaches Europe. Thirteenth century Type characters cast from metal bronze are developed in China, Japan and Korea. The oldest known book printed using metal type dates back to the year Fifteenth century Even though woodcut had already been in use for centuries in China and Japan, the oldest known European specimen dates from the beginning of the 15th century. Woodcut is a relief printing technique in which text and images are carved into the surface of a block of wood. The printing parts remain level with the surface while the non-printing parts are removed, typically with a knife or chisel. The wood block is then inked and the substrate pressed against the wood block. The ink that is used is made of lampblack soot from oil lamps mixed with varnish or boiled linseed oil. Books are still rare since they need to be laboriously handwritten by scribes. The University of Cambridge has one of the largest libraries in Europe – constituting of just books. In Gutenberg begins work on a printing press. It takes him 4 years to finish his wooden press which uses movable metal type. Among his first publications that get printed on the new device are bibles. The first edition has 40 lines per page. A later line version comes in two volumes. In the first drypoint engravings are created by the Housebook Master, a south German artist. In their print shop in Venice John and Wendelin of Speier are probably the first printers to use pure roman type, which no longer looks like the handwritten characters that other printers have been trying to imitate until then. In William Caxton buys equipment from the Netherlands and establishes the first printing press in England at Westminster. That same year copper engravings are for the first time used for illustrations. With engravings, a drawing is made on a copper plate by cutting grooves into it. By the end of the century, printing has become established in more than cities around Europe. One of the main challenges of the industry is distribution, which leads to the establishment of numerous book fairs. The most important one is the Frankfurt Book Fair. Sixteenth century Aldus Manutius is the first printer to come up with smaller, more portable books. He is also the first to use Italic type, designed by Venetian punchcutter Francesco Griffo. In Lucas Cranach invents the chiaroscuro woodcut, a technique in which drawings are reproduced using two or more blocks printed in different colors. The Italian Ugo da Carpi is one of the printers to use such woodcuts, for example in Diogenes, the work shown below. The Bembo typeface is named after him. Christophe Plantin is one of the most famous printers of this century. In his print shop in Antwerp, he produces fine work ornamented with engravings after Rubens and other artists. Many of his works as well as some of the equipment from the shop can be admired in the Plantin-Moretus museum. Seventeenth century Plantin is also the first to print a facsimile. A facsimile is a reproduction of an old book, manuscript, map, art print or other item that is as true to the original source as possible. The printers, Robert Barker and Martin Lucas, are fined and have their printing license revoked. The tiny pits in the plate hold the ink when the face of the plate is wiped clean. The first American paper mill is established in Eighteenth century In the German painter and engraver Jakob Christof Le Blon produces the first engraving in several colors. He uses the mezzotint method to engrave three metal plates. Each plate is inked with a different color, using red, yellow and blue. Later on, he adds a fourth plate, bearing black lines. This technique helped form the foundation for modern color printing. William

Caslon is an English typographer whose foundry operates in London for over years. His Caslon Roman Old Face is cut between and The letters are modeled on Dutch types but they are more delicate and not as monotonous. It is generally considered to be the first general interest magazine. In Benjamin Franklin establishes his own printing office and becomes the publisher of the Pennsylvania Gazette. Alois Senefelder invents lithography in and uses it as a low-cost method for printing theatrical works. In a more refined form lithography is still the dominant printing technique today. Another famous person from this era is Giambattista Bodoni who creates a series of typefaces that carry his name and that are still frequently used today. They are characterized by the sharp contrast between the thick vertical stems and thin horizontal hairlines. Nineteenth century In Charles Stanhope, the third Earl Stanhope, builds the first press which has an iron frame instead of a wooden one. This Stanhope press is faster, more durable and it can print larger sheets. A few years later another performance improvement is achieved by Friedrich Gottlob Koenig and Andreas Friedrich Bauer who build their first cylinder press. Their company is still in existence today and is known as KBA. In Godefroy Engelmann is awarded a patent on chromolithography, a method for printing in color using lithography. Chromolithographs or chromos are mainly used to reproduce paintings. The advertisement below is from the end of the century and shows what can be achieved using this color printing technique. Another popular technique is the photochrom process, which is mainly used to print postcards of landscapes. It costs five pence in Around cards are printed and hand-colored. Ten of these are still in existence today. Around the same time the American inventor Richard March Hoe builds the first lithographic rotary printing press, a press in which the type is placed on a revolving cylinder instead of a flatbed. This speeds up the printing process considerably. This process can be used to faithfully reproduce the detail and continuous tones of photographs. With this typesetter, an operator can enter text using a character keyboard. The machine outputs the text as slugs, which are lines of metal type. This pop-up book contains six pop-up scenes of circus acts, including acrobats, clowns, and daredevil riders. In Bibby, Baron and Sons build the first flexographic press. This type of press uses the relief on a rubber printing plate to hold the image that needs to be printed. Twentieth century In American printer Ira Washington Rubel is instrumental in producing the first lithographic offset press for paper. In offset presses a rubber roller transfers the image from a printing plate or stone to the substrate. Such an offset cylinder was already in use for printing on metals, such as tin. Screen printing quickly becomes popular for producing expensive wallpaper and printing on fabrics such as linen and silk. A few of the new press manufacturers that appear on the market are Roland nowadays known as Man Roland in and Komori Machine Works in In Hallmark, founded in , creates its first Christmas card. It can be used for printing banknotes. Over time security printing becomes one of the main focus points of the company. The first commercially successful series of paperback books is published by Penguin Books in the UK in Earlier in German publisher Albatross Books had already tried to market a series of lower-priced books with a paper cover and glue binding. Penguin copied many of the concepts of their failed attempt, such as the use of color-coded covers. In Xerography, a dry photocopying technique is invented by Chester Carlson. The first commercial xerographic copier is introduced in but it is the Xerox plain paper copier that is the breakthrough. A popular press from that time is the Heidelberg Tiegel. This is a unique numeric identifier for commercial books. Pad printing can now be done on an industrial scale. In the USA newspaper circulation reaches its highest level ever in The first laser printers, such as the IBM and Xerox , hit the market in They are prohibitively expensive but useful for applications such as cheque printing.

7: HISTORY OF BOOKS AND PRINTING

Printing is achieved by covering the flat surface with ink, placing a piece of paper on it and rubbing the back of the paper. Chinese publishing: 10th - 11th century Printing from wood blocks, as in the Diamond Sutra, is a laborious process.

Sumerian clay tablet , currently housed in the Oriental Institute at the University of Chicago , inscribed with the text of the poem Inanna and Ebih by the priestess Enheduanna , the first author whose name is known [1] Clay tablets were used in Mesopotamia in the 3rd millennium BC. The calamus, an instrument in the form of a triangle, was used to make characters in moist clay. People used to use fire to dry the tablets out. At Nineveh , over 20, tablets were found, dating from the 7th century BC; this was the archive and library of the kings of Assyria , who had workshops of copyists and conservationists at their disposal. This presupposes a degree of organization with respect to books, consideration given to conservation, classification, etc. Tablets were used right up until the 19th century in various parts of the world, including Germany, Chile, Philippines and the Saharan Desert. Many clay tablets have been found that show cuneiform writing used to record legal contracts, create lists of assets, and eventually to record Sumerian literature and myths. Scribal schools have been found by archaeologists from as early as the second millennium BCE where students were taught the art of writing.

Papyrus Egyptian Papyrus After extracting the marrow from the stems of Papyrus reed, a series of steps humidification, pressing, drying, gluing, and cutting produced media of variable quality, the best being used for sacred writing. The script of Egyptian scribes was called hieratic , or sacerdotal writing; it is not hieroglyphic , but a simplified form more adapted to manuscript writing hieroglyphs usually being engraved or painted. Egyptians exported papyrus to other Mediterranean civilizations including Greece and Rome where it was used until parchment was developed. Some books, such as the history of the reign of Ramses III , were over 40 meters long. Books rolled out horizontally; the text occupied one side, and was divided into columns. The title was indicated by a label attached to the cylinder containing the book. Many papyrus texts come from tombs, where prayers and sacred texts were deposited such as the Book of the Dead , from the early 2nd millennium BC.

East Asia[edit] A Chinese bamboo book Before the introduction of books, writing on bone , shells, wood and silk was prevalent in China long before the 2nd century BC, until paper was invented in China around the 1st century AD. The format of the book evolved with intermediate stages of scrolls folded concertina -style, scrolls bound at one edge "butterfly books" and so on. Although there is no exact date known, between and ADâ€”The period of the Tang Dynastyâ€”the first printing of books started in China. This process was incredibly time-consuming. These were thought to have existed since the time of the Classical Period between the 3rd and 8th centuries, CE. Many of these codices were thought to contain astrological information, religious calendars, knowledge about the gods, genealogies of the rulers, cartographic information, and tribute collection. Many of these codices were stored in temples but were ultimately destroyed by the Spanish explorers. The Maya, along with several other cultures in Mesoamerica , constructed concertina-style books written on Amate paper. Nearly all Mayan texts were destroyed by the Spanish during colonization on cultural and religious grounds. One of the few surviving examples is the Dresden Codex.

Florentine Codex[edit] There are more than 2, illustrations drawn by native artists that represent this era. The Florentine Codex speaks about the culture religious cosmology and ritual practices, society, economics, and natural history of the Aztec people. The manuscript are arranged in both the Nahuatl language and in Spanish. The English translation of the complete Nahuatl text of all twelve volumes of the Florentine Codex took ten years. Anderson and Charles Dibble had a decade of long work but made it an important contribution to Mesoamerican ethnohistory. Years later, in , the Mexican government published a full-color volume of the Florentine Codex. Now, since , it is available digitally and fully accessible to those interested in Mexican and Aztec History. The Florentine Codex is a 16th century ethnographic research study brought about by the Spanish Franciscan friar Bernardino de Sahagun. The Florentine Codex consist of twelve books. It is pages long but divided into the twelve books by categories such as; The Gods, Ceremonies, Omens, and other cultural aspects of Aztec people.

Wax tablets[edit] Woman holding wax tablets in the form

of the codex. Wall painting from Pompeii, before 79 AD. Romans used wax-coated wooden tablets or pugillares upon which they could write and erase by using a stylus. One end of the stylus was pointed, and the other was spherical. Usually these tablets were used for everyday purposes accounting, notes and for teaching writing to children, according to the methods discussed by Quintilian in his *Institutio Oratoria* X Chapter 3. Several of these tablets could be assembled in a form similar to a codex. Also the etymology of the word codex block of wood suggest that it may have developed from wooden wax tablets. Parchment progressively replaced papyrus. Legend attributes its invention to Eumenes II, the king of Pergamon, from which comes the name "pergamineum," which became "parchment. Made using the skins of animals sheep, cattle, donkey, antelope, etc. It was a very expensive medium because of the rarity of material and the time required to produce a document. Vellum is the finest quality of parchment. Greece and Rome[edit] The scroll of papyrus is called "volumen" in Latin, a word which signifies "circular movement," "roll," "spiral," "whirlpool," "revolution" similar, perhaps, to the modern English interpretation of "swirl" and finally "a roll of writing paper, a rolled manuscript, or a book. It is called codex by way of metaphor from the trunks caudex of trees or vines, as if it were a wooden stock, because it contains in itself a multitude of books, as it were of branches. This design allows only sequential usage; one is obliged to read the text in the order in which it is written, and it is impossible to place a marker in order to directly access a precise point in the text. It is comparable to modern video cassettes. Moreover, the reader must use both hands to hold on to the vertical wooden rolls and therefore cannot read and write at the same time. The only volumen in common usage today is the Jewish Torah. Anyone could have a text recopied, and even alter its contents. Scribes earned money and authors earned mostly glory, unless a patron provided cash; a book made its author famous. This followed the traditional conception of the culture: The status of the author was not regarded as absolutely personal. From a political and religious point of view, books were censored very early: Generally, cultural conflicts led to important periods of book destruction: Some Christians later burned libraries, and especially heretical or non-canonical Christian texts. These practices are found throughout human history but have ended in many nations today. A few nations today still greatly censor and even burn books. But there also exists a less visible but nonetheless effective form of censorship when books are reserved for the elite; the book was not originally a medium for expressive liberty. It may serve to confirm the values of a political system, as during the reign of the emperor Augustus, who skillfully surrounded himself with great authors. This is a good ancient example of the control of the media by a political power. However, private and public censorship have continued into the modern era, albeit in various forms. Proliferation and conservation of books in Greece[edit] Little information concerning books in Ancient Greece survives. Several vases 6th and 5th centuries BC bear images of volumina. There was undoubtedly no extensive trade in books, but there existed several sites devoted to the sale of books. The spread of books, and attention to their cataloging and conservation, as well as literary criticism developed during the Hellenistic period with the creation of large libraries in response to the desire for knowledge exemplified by Aristotle. These libraries were undoubtedly also built as demonstrations of political prestige: It contained, volumes in the Museion section and 40, at the Serapis temple Serapeion. All books in the luggage of visitors to Egypt were inspected, and could be held for copying. The Museion was partially destroyed in 47 BC. The Library at Pergamon, founded by Attalus I; it contained, volumes which were moved to the Serapeion by Mark Antony and Cleopatra, after the destruction of the Museion. The Serapeion was partially destroyed in, and the last books disappeared in CE following the Arab conquest. The Library at Rhodes, a library that rivaled the Library of Alexandria. The Library at Antioch, a public library of which Euphorion of Chalcis was the director near the end of the 3rd century. The libraries had copyist workshops, and the general organisation of books allowed for the following: Conservation of an example of each text Translation the Septuagint Bible, for example Literary criticisms in order to establish reference texts for the copy example: The Iliad and The Odyssey A catalog of books The copy itself, which allowed books to be disseminated Book production in Rome[edit] Book production developed in Rome in the 1st century BC with Latin literature that had been influenced by the Greek. Conservative estimates places the number of potential readers in Imperial Rome at around, people. Atticus was the editor of his friend Cicero. However, the book business progressively extended itself through the Roman Empire; for example, there were

bookstores in Lyon. The spread of the book was aided by the extension of the Empire, which implied the imposition of the Latin tongue on a great number of people in Spain, Africa, etc. Libraries were private or created at the behest of an individual. Julius Caesar, for example, wanted to establish one in Rome, proving that libraries were signs of political prestige. In the year 28, there were 28 libraries in Rome, and it is known that there were many smaller libraries in other cities. Despite the great distribution of books, scientists do not have a complete picture as to the literary scene in antiquity as thousands of books have been lost through time. History of paper Papermaking has traditionally been traced to China about AD 105, when Cai Lun, an official attached to the Imperial court during the Han Dynasty BC 206 – AD 220, created a sheet of paper using mulberry and other bast fibres along with fishnets, old rags, and hemp waste. An important development was the mechanization of paper manufacture by medieval papermakers. Papermaking centres began to multiply in the late 13th century in Italy, reducing the price of paper to one sixth of parchment and then falling further. Manuscript culture and Illuminated manuscript The codex Manesse, a book from the Middle Ages By the end of antiquity, between the 2nd and 4th centuries, the scroll was replaced by the codex. The book was no longer a continuous roll, but a collection of sheets attached at the back. It became possible to access a precise point in the text quickly. The codex is equally easy to rest on a table, which permits the reader to take notes while he or she is reading. The codex form improved with the separation of words, capital letters, and punctuation, which permitted silent reading. Tables of contents and indices facilitated direct access to information. This form was so effective that it is still the standard book form, over years after its appearance.

8: Printing Yesterday and Today

Printing Types: Their History, Forms and Use by Daniel Berkeley Updike. DIN standard for paper sizes introduced in Germany. Laboratory Press, directed by Porter Garnett, started as the first U.S. fine press educational program at Carnegie Institute of Technology in Pittsburgh, Pennsylvania.

9: History of books, printing and publishing - University of Reading

Printing, or the process of reproducing text and images, has a long history behind it. This page describes the evolution of print. It acts as a summary of a more elaborate description which starts here.

The dynamics and nature of civil society Robert A. Dowie and Josephine Dowie Gathering the Priests The heresy of plot. 1000 Things You Should Know About Geography (1000 Things You Should Know About.) Why we fight Terry Foland Wandering Star, Vol. 3 (Wandering Star) Holiday coloring pages The tumble of reason Doddridge Co WV Marriages 1845-1900 Financial markets and institutions 8th edition solutions Greek heroine cults Encyclopedia of American Historical Documents Onkyo ht r520 manual Ibps clerk main exam study material 3. Special Status States (Arts. 370 371) V. 1. 1812-1847. v. 2. 1847-1870. Ashrae standard 170 Elementary treatise on the mathematical theory of perfectly elastic solids Destiny: or, The Chiefs daughter Animal origami for enthusiast Painting Fairies in Watercolour (Fantasy Art series) Namaz e janaza I Am a Special Person (Lifepac History Geography Grade 1) Marathi novels list Postjudgment matters Campaign savvy-school support Intel Microprocessors Positive addiction The Andromeda Incident The Lost Wagon Train (Home Repair Is Homicide Mysteries) Chemistry of carbon A-Z guide to dressmaking Devils arithmetic study guide The watsons go to birmingham chapter questions Rev. Dr. David O.V. Lot Bseb 12th exam date 2018 God touched the earth V. 3. Ozone chemistry, photo and singlet oxygen and biochemical oxidations. The exchange, by S. Cech. Open Arms: The Steve Perry Anthology