

History of Communications Media

Class 2

Email: wreader@cox.net

The Impact of Printing



2

Printing

- Johann Gutenberg of Mainz was a German goldsmith and printer:
 - The first European to use movable type printing (c 1439, and
 - The global inventor of the mechanical printing press.
- After printing several books, he started printing his famous Gutenberg Bible in 1455
 - About 180 of these Bibles were printed
 - The Gutenberg Bible is more a printed manuscript rather than a printed book

At its inception, the printed book was closely modeled on the manuscript; but as printers became more familiar with the new technique, the printed book gradually acquired a personality of its own. This process was completed **some** time between 1520 and 1540. As Marshall McLuhan noted, "As might be expected, the book was a long time in being recognized as anything but a typescript accessible and portable kind of manuscript. It is this kind of transitional awareness that in our own century is recorded in words and phrases such as 'horseless carriage,' 'wireless,' or 'moving-pictures.'" "

Printing

- Gutenberg's printing press depended on 3 innovations which he combined
 - Movable type cast in metal
 - Oil-based ink
 - Wooden press

Gutenberg's specific contributions to printing are:

- 1.the invention of a process for mass-producing movable type,
- 2.the use of oil-based ink, and
- 3.the use of a wooden printing press similar to the screw olive and wine presses of the period.

His truly epochal invention was the combination of these elements into a practical system

The Printing process - Instead of trying to carve out a separate stamp for each page of print, or even for each separate word, Gutenberg

- 1.Made stamps for each individual letter, punctuation mark and other symbol in large numbers with one box for all the capital 'A's, another for the small 'a's and so on.
- 2.When he wanted to set up a page of type all he had to do was to select the necessary letters to make the desired sequence of words, set them in a frame and, when the page was complete, clamp them firmly together.
- 3.He then inked the type face, using an 'ink ball', and pressed it against a sheet of paper to print off a page.

Printing

- Printing spread very rapidly
 - By 1480, 110 towns had printing presses
 - By 1500, 236 towns had print shops
- It greatly multiplied the number of books and titles
 - Before Gutenberg, there were an estimated 30,000 manuscript books in Europe
 - By 1500, there were more than 20 million books in 35,000 titles
 - By 1600, there were more than 200 million books

Some Notes about Printing - 1

- Printing involved not only text but also images, maps, diagrams, and data tables
- Economics of printing – high upfront costs combined with relatively small marginal costs for each additional item
 - This contrasted sharply with the economics of manuscript production where upfront costs were low but marginal costs were extremely high

Some Notes about Printing – 2

- Effects of printing took a long time to show their effects
- Out of printing emerged not only the printed book, but also the:
 - Broadside
 - Pamphlet
 - Leaflet
 - Newspaper
 - Scholarly Journal
 - Poster
 - Magazine
 - Cartoon
 - Comic Strip

Printing affected the literate elite and the illiterate masses differently
As more people became literate over time, printing began to have more and more significant consequences.

Effects of Printing -1

- The Printing Revolution had a host of effects, all stemming from the fact that Print:
 - Made possible the mass production of books and other printed material
 - Drastically lowered the cost of reproducing information
 - Produced typographical fixity

Mass production – Printing made it possible to publish hundreds of identical copies of a book or document. It also made it possible to produce literature and other printed material that was cheap enough both to reach the literate masses and to encourage illiterates to learn how to read.

Lower cost - Each copy of a hand-produced book or newsletter cost as much to make as the last, and took as long. The printing press reduced the unit cost, and produced copies in bulk

Produced typographical fixity – As historian Elizabeth Eisenstein in *The Printing Revolution in Early Modern Europe* , noted “Typographical fixity is a basic prerequisite for the rapid advancement of learning. It helps to explain much else that seems to distinguish the history of the past five centuries from that of all prior eras.”

Effects of Printing - 2

- The mass production of books created new information management problems
 - Need for libraries to store the books
 - Need for catalogs to retrieve the books
 - Need for book reviews and bibliographies in order for readers to identify books of interest

Superfluity of Books - As Asa Briggs and Peter Burke in *A Social History of the Media* noted, ““In the early Middle Ages the problem had been the lack of books, their paucity. By the sixteenth century, the problem had become one of superfluity. An Italian writer was already complaining in 1550 that there were 'so many books that we do not even have time to read the titles'.

There were serious problems of information retrieval and, linked to this, the selection and criticism of books and authors. There was a need for new methods of information management, just as there is today, in the early days of the Internet.

Catalogs & Book Reviews - Briggs and Burke also noted, ““Librarians also faced the problems of keeping catalogues up to date and of learning about new publications. Since so many more books existed than could be read in a life-time, readers had to be helped to discriminate by means of select !! bibliographies and, from the later seventeenth century, reviews of new publications.“

Some Effects of Lower Costs

- Reduced books from a status symbol of wealth to a mere commodity
- Made the monastic scriptoria and the university scribes obsolete
 - Reduced the economic importance of the monasteries
- Made it economically feasible to publish books in the vernacular languages as well as Latin

Reduced status – As book historian Alberto Manguel noted in his *History of Reading*, “Since these books were cheaper than manuscripts, especially illuminated ones, and since an identical replacement could be purchased if a copy was lost or damaged, they became, in the eyes of the new readers, far less symbols of wealth than of intellectual aristocracy, and essential tools for study.

After Gutenberg, for the first time in history, hundreds of readers possessed identical copies of the same book, and (until a reader gave a volume private markings and a personal history) the book read by someone in Madrid was the same book read by someone in Montpellier.”

Rendered the scribes obsolete –

1. Printing devalued the scriptoria where monks had hand-reproduced books and manuscripts since a printing press could do in hours what had monks many months. This made the religious orders less economically important.

2. “Mass production of books ended the Church’s monopoly on Scripture, as well as other forms of information.”

3. It also rendered the peccia system of the university-related scribes obsolete as well, since it was much cheaper for students to buy textbooks than to hand-copy them.

Vernacular language publication - The printing press was a mass-production technology in which the cost of printing the first book was

Intellectual Effects - 1

- The Print Revolution:
 - Made Possible a vast expansion of knowledge. It did this in the following ways:
 - Re-arranging the arts and routines of book-making in a way that brought printers, intellectuals, merchants, and workers into contact with each other
 - Revealed the knowledge deficits and errors in ancient texts
 - Permitted scholars to improve and correct their works in subsequent editions
 - Created print shops that were meeting places and message centers for scholars

Changed book-making routines – According to historian Elizabeth Eisenstein in *The Printing Revolution in Modern Europe*:

1. The advent of printing led to new forms of cross-cultural interchange. It brought former priests and university professors into closer contact with metal workers and mechanics. Printing together astronomers and engravers, physicians and painters, dissolving older divisions of intellectual labor and encouraging new ways of coordinating the work of brains, eyes, and hands.

2. Problems of financing the publication of the large Latin volumes that were used by late medieval faculties of theology, law, and medicine also led to the formation of partnerships that brought rich merchants and local scholars into closer contact.

3. The new financial syndicates that were formed to provide master printers with needed labor and supplies brought together representatives of town and gown.

Revealing ancient knowledge deficits – By increasing the output of Aristotelian, Alexandrian, and Arabic texts, printing made it clear that there were things that the classical authorities had not known, things not yet discovered, and ways to improve that which was already known.

Permitted scholarly improvement of existing works – Printing made it possible to continually improve and correct successive editions of a work, especially a large reference work. The new medium made errors and inconsistencies more visible to learned men. David Hume noted, “The Power which Printing gives us of continually improving and correcting our Works in successive editions appears to me the chief advantage of that art.” *What was true of a single author's work applied with even greater force to large collaborative reference works. A series of new and augmented editions made the future seem to hold more promise of enlightenment than the past.* With printing, successive generations could build on scholarly work instead of trying to retrieve scattered fragments of it.

Print shop meeting places - During the 16th century, printing shops (like Aldus Manutius in Venice, the Amerbachs in Basel, Plantin in Antwerp, or the Wechtels in Frankfurt) represented miniature ‘international houses’ that provided wandering scholars with a meeting place, message center, sanctuary, and cultural center all in one. This encouraged the formation of an ethos specifically associated with the Commonwealth of Learning.

Intellectual Effects - 2

- The Print Revolution:
 - By making possible a vast expansion of knowledge, it changed the concept of knowledge
 - Knowledge was no longer a closed body of knowledge passed down generation to generation
 - Knowledge was now the accumulated results of open-ended investigatory processes that continually expanded what was known

Intellectual Effects - 3

- The Print Revolution
 - Helped insure against the loss of knowledge
 - While loss of single manuscripts were common, the multiple copies that printing produced insured that at least some copies would escape destruction
 - Knowledge preservation made intellectual progress possible.
 - Before printing, knowledge was fragile and easily destroyed, leading to cycles of intellectual progress and regression

Preservation - Charles Murray in *Human Accomplishment* notes that “Many of the artistic and literary contributions of the Past have been lost.
•Sophocles wrote 123 plays of which only 7 survive in their entirety.
•Aeschylus wrote about 90 plays of which we have only 7.
•Euripides wrote at least 92 plays of which we have only 19.”

Peter Watson, in *Ideas: A History of Thought and Invention from Fire to Freud*, noted that in 855, one Photius, a Byzantine scholar, recorded a list of the books he had read – a total of 280 works that constituted a wide selection of pagan and Christian literature. !! Of the 280, 42 have been lost. A further 81 are preserved only in the form of quotations from those works. Thus, 44% of the books on the list are effectively missing.

Intellectual Effects - 4

- The Print Revolution:
 - Led to the creation of new types of reference books – dictionaries, encyclopedias, chronological tables, gazetteers
 - Led to a range of “how-to-do-it” books on subjects as varied as agriculture, mining, good manners, cooking, and calligraphy
 - Led to the creation of a new genre of entertainment books ranging from romances to crime dramas, often within a moralistic framework

The Print Revolution – 1

- Created a ‘reading public’
- Fostered privacy and isolation
 - Reading demands quiet and freedom from distraction
 - Print set the stage psychologically for solo reading
 - Replaced aural reading with silent reading
 - Printed books permitted people to escape from the outside world

Created a reading public - The relatively cheap popular books flooding from the presses created a new reading public (especially among the literate merchants and artisans who knew little or no Latin)

Public Figures & Celebrities - The circulation of broadsides and engravings carrying pictures of kings, princes, and public figures heightened royal visibility and began the notion of recognized public figures and celebrities. In the 18th and 19th centuries, this reading public expanded to embrace much larger proportions of the population and was characterized by the rise of the cheaper book, the emergence of public libraries, and the development of the newspaper and magazine.

Privacy & Isolation – According to historian Walter Ong in *Orality and Literacy*, “*Print was also a major factor in the development of the sense of personal privacy that marks modern society. It produced books smaller and more portable than those common in a manuscript culture, setting the stage psychologically for solo reading in a quiet corner, and eventually for completely silent reading. In manuscript culture and hence in early print culture, reading had tended to be a social activity, one person reading to others in a group*”

The Print Revolution - 2

- Made possible the creation of identical images, maps, diagrams, charts, and numerical tables
 - This fostered the development of science
 - It permitted copies of art works to be seen by people who would never visit the site where the original artwork was located
 - It led to the mass printing of playing cards and religious images

Identical images & maps –With the advent of woodcarving and engraving, it became possible to make precise reproductions of fine detail images, diagrams, and maps.

Science – As Walter Ong noted, *“One consequence of the new exactly repeatable visual statement was modern science. ...What is distinctive of modern science is the conjunction of exact observation and exact verbalization: exactly worded descriptions of carefully observed complex objects and processes. The availability of carefully made, technical prints (first woodcuts and later even more exactly detailed metal engravings) implemented such exactly worded descriptions. Technical prints and technical verbalization reinforced and improved each other.”*

Implications of Illustrated Books - With illustrated books, it became possible to take the writings of ancient authors on science into the field to see if their descriptions of plants and animals or other natural phenomena corresponded with reality. The fact that they sometimes did not led to a change in the perception between newness and truth. *In an oral culture, the fact that something was old or ancient was prima facie an indication of truth. With print, what most recently became known was the truth because it was up-to-date*

The Print Revolution - 3

- Made possible the creation of more accurate maps
 - Printing made possible an era of feedback from map users to mapmakers
 - It also prevented the degradation that results over successive generations of a map

Maps prior to printing - While exceptional manuscript maps existed, “they were unavailable to scattered readers for guidance, for checking, and for feedback. When these maps were hand-copied over multiple generations, there was usually degradation and decay, as errors crept in and significant details got left out.

More accurate maps –With printing came an era of feedback from the users of maps to the mapmaker. A mapmaker who puts out an inaccurate map will soon have this fact called to his attention by people who find it inconsistent with their personal experience. This process has, indeed, never ceased; increments of information are still being added to geodetic surveys and mapmakers. But this kind of checking could not occur until voyagers were provided with uniform maps and encouraged to exchange information with map publishers. Even then it took many centuries and cost many lives to achieve the absolute confidence a modern atlas conveys.

The Print Revolution – 4

- Made possible the creation of illustrated books
 - This was a boon to science, technology, and engineering
- The creation of illustrated books and other illustrated material
 - Made celebrities out of authors and people who were the subject of a book
 - Enabled rulers to impress their personal image on their subjects

Implications of Illustrated Books - With illustrated books, it became possible to take the writings of ancient authors on science into the field to see if their descriptions of plants and animals or other natural phenomena corresponded with reality. The fact that they sometimes did not led to a change in the perception between newness and truth. *In an oral culture, the fact that something was old or ancient was prima facie an indication of truth. With print, what most recently became known was the truth because it was up-to-date*

Celebrities - As James Burke & Robert Ornstein in *The Axmaker's Gift. A double-edged history of human culture* noted, "The circulation of broadsides and engravings carrying pictures of kings, princes, and public figures heightened royal visibility and began the notion of recognized public figures and celebrities." One of the first public figures/celebrities made famous by print was Martin Luther.

Images of monarchs – As Elizabeth Eisenstein noted, "*The circulation of prints and engravings made it possible for rulers to impress a personal presence on their subjects by making their*

The Print Revolution – 5

- Created private ownership of knowledge. This led to:
 - The concept of the author
 - Resentment of plagiarism
 - Copyright laws
 - Copyright laws led to the practice of authors selling their manuscripts to publishers

Private ownership of knowledge –Asa Briggs and Peter Burke note that “the concept of an 'author', linked to the idea of a correct or authorized version of a text” was an outgrowth of printing. Thus, Print made important the idea of authorship. The notion of authorship elevated the individual to a unique status, separating him or her from the collective voice of the community. *With authorship comes the concept of owning the words one has written. With private ownership of words comes both a resentment of plagiarism and the idea of copyright. With copyright, communication among people becomes a commodity. The idea that one could own thoughts and words and that others would have to pay to hear them marked a seminal turning point in the history of human relations.*

A note about copyright – With printing, the cost of duplication was lower than the cost of appropriation. It was now cheaper to print thousands of exact copies of a manuscript than to copy or alter it by hand. Copy makers could now profit more than creators. This imbalance led to copyright which bestowed on the creator of a work a temporary monopoly over any copies of the work. The idea of copyright was to encourage authors and artists to produce more works.

Selling manuscripts to publishers – With copyright laws (which

The Print Revolution – 6

- Extended the power of monarchs and bureaucrats
 - As noted before, prints and engravings made it possible for rulers' facial images and physical features to be known to their subjects
 - Monarchs used print to convey information to their subjects and to affect the attitudes of their subjects

Rulers' images – Often rulers would seek to impress their subjects with his authority by having engravings and portraits of him in royal regalia – i.e. wearing his crown and ermine robes.

Monarchs' use of print – As Elizabeth Eisenstein noted in *The Printing Revolution in Modern Europe*, Princes were quick to use print to announce declarations of war, publish battle accounts, promulgate treaties or argue disputed points in pamphlet form. The English crown under Henry VIII and Thomas Cromwell made systematic use of both Parliament and press to win public support for the Reformation ... In France, the regency of Louis XIII saw the last meeting of the Estates General before 1789; it also saw the founding of the first royally sponsored newspaper in Europe.”

The Print Revolution – 7

- Led to the institution of censorship
 - Political & religious leaders were quick to see the subversive power of print. This led them to:
 - Require printers to be licensed
 - Restricting the number of printers in the realm
 - Censorship
 - Banning of radical, heretical, pornographic, and libelous books

Censorship - Political and religious elites were quick to ban works that promoted political radicalism or religious heresy, were pornographic, or which libeled public officials.

In 1501 Pope Alexander VI published his bull *Inter multiplices*, which forbade the printing of any book in Germany without the permission of the ecclesiastical powers. At the Lateran Council of 1515 this power was extended to all Christendom and came under the Holy Office and the Inquisitor General.

Islam & printing - It might be added that in comparison with Islamic cultures, the attitude of the Catholic Church and the European monarchs was relatively enlightened. The Ottoman Empire and other Islamic realms banned the printing of anything in either Arabic, Turkish, or Persian. It was not until the 18th century that the ban on printing was modified.

As Bernard Lewis noted in his *The Middle East. A history of the last 2,000 years*, “Islamic society proved very resistant to printing.” A decree of Sultan Bayezid II in 1485 forbade printing, probably in response to the powerful vested interest of the scribes and calligraphers. In the early 16th Century, Jewish refugees from Spain had set up printing presses in Istanbul and Salonika, but they were not allowed to print in either Turkish or Arabic. In 1567 and 1627, first an Armenian and then a Greek press were established in Istanbul, subject to the same restrictions. It was not

The Print Revolution - 8

- Censorship in turn led to attempts at evasion
 - Smuggling of banned books into countries that banned them
 - Clandestine printing and publication
 - Organization of clandestine communication networks

As Asa Briggs and Peter Burke, in their *A Social History of the Media*, note, ***“One of the unintended consequences of censorship was to awaken interest in banned titles which some readers might not otherwise have known about. Another reaction to formal censorship was to organize or reorganize clandestine communication. A considerable variety of messages was communicated underground, from the secrets of governments to commercial or technical secrets, and from unorthodox religious ideas to pornography. “***

Language Effects - 1

- Affected both Latin and the vernacular languages of Europe
 - As noted earlier, printing made it profitable to publish books in vernacular languages as well as in Latin
 - This raised the status of vernacular languages such as English, French, and German by giving them a literary status equal to that of Latin
 - This contributed to the slow decline of Latin as a European elite lingua franca

Slow decline of Latin - Of the books published prior to 1500, 77 per cent, are in Latin. In the 16th century, Latin began to lose ground. From 1530 certainly this trend is clear. By 1740, only 27.7% of the titles at the book fairs were in Latin. By 1800, only 3.97% were in Latin.

Market for Books - “The initial market was literate Europe, a wide but thin stratum of Latin-readers. Saturation of this market took about a hundred and fifty years. The determinative fact about Latin — aside from its sacrality — was that it was a language of bilinguals. Relatively few were born to speak it and even fewer, one imagines, dreamed in it. In the sixteenth century the proportion of bilinguals within the total population of Europe was quite small; very likely no larger than the proportion in the world’s population today. Then and now the bulk of mankind is mono-glot. The logic of capitalism thus meant that once the elite Latin market was saturated, the potentially huge markets represented by the mono-glot masses would beckon.

Language Effects - 2

- Whether or not there was a printed Bible in the language determined whether the language became permanent or became a mere provincial dialect
- Printing contributed to the homogenization of many regional dialects into a few national languages

Bible languages - *"Translation of the Bible into the vernacular languages,"* writes Hans Kohn, *"lent them a new dignity and frequently became the starting point for the development of national languages and literatures."* *The printed Bible "gave permanence to the language in which they were printed,"* and in doing so, strengthened the unity of each language community and the power of their rulers.

Between 1478-1571, in spite of the fact that Latvia, Lithuania, Estonia, Wales, Ireland, the Basque country, Catalonia, and Finland were all within the economic and political sphere of another more powerful language group, these countries preserved and strengthened a sense of separate national identity because they had a Bible printed in their own language.

Languages in which Bibles were not printed either disappeared or became provincial dialects, subordinate to the politically or economically dominant language group of the area. Thus, the language and political identity of Sicily was subsumed into Italy; Provence and Brittany into France; Frisia into the Netherlands; Rhaetia into Austria; Cornwall into England; and Prussia into Germany.

Language Effects - 3

- Printing led to standardized grammar and spelling
 - This in turn led to notions of ‘correctness’ in language
 - The idea of using correct language in turn led to mass publication of dictionaries
- Printing replaced poetry with prose

Standardized spelling – With printing, spelling now became fixed, corresponding less and less to pronunciation.

Dictionaries - Dictionaries took as their norm the language usage of esteemed writers and taught dictionary readers, taught their readers proper pronunciation of a word, and also taught readers proper word usage, carefully delineating what words were acceptable or standard, what words were slang or argot, and what were mere dialect.

Poetry & Prose – Putting words into poetry and rhyme is universal in non-literate cultures since poetry and rhyme facilitate memorization and recall of large bodies of material such as epic poems. Poetry and rhyme are also very common in manuscript cultures since these cultures are still largely oral. With print, prose begins to replace poetry.

Print & Manuscript - 1

- What Print does that the Manuscript does not
 - Print permitted externalization of our memories
 - Print made the Bible a single book rather than a collection of discrete mss known as the Scriptures
 - Print fostered a linear, rational, sequential way of thinking

Externalization of memory - Oral or non-literate and Manuscript (largely illiterate) cultures make it necessary that people memorize large amounts of material. In contrast, we have books and other media to store and jog our memories. Instead of memorizing the Bible or the Declaration of Independence, we focus merely on remembering where we can retrieve biblical passages or the Declaration whenever we want or need to. With the computer plus audio and video recording, our external aids to memory are becoming ever more powerful.

Bible vs Scripture – Prior to the invention of the Codex, the individual books of the Bible existed as separate papyrus scrolls. With the invention of the codex, putting all of the books of the Bible into a single codex was possible but rarely done, if only for the reason that some books of the Bible were seen as more theologically and liturgically relevant than others. Thus Jewish scholars probably produced more manuscript copies of the Torah than of any of the other books. Christian monks in turn produced more copies of the New Testament than of the Old, and probably more copies of the Psalms and Isaiah than of Leviticus or Judges.

Linear thinking - Jeremy Rifkin in *The Age of Access* noted that print organizes phenomena in an orderly, rational, and objective

Print & Manuscript - 2

- What Print does that the Manuscript does not
 - Print permitted pagination; Mss were organized by chapter and verse
 - Pagination led to page numbers, indexes, cross-references, and table of contents – all lacking in manuscripts
 - Print led to title pages; Mss were labeled by their incipits

Pagination – Scribally- or scrivener-produced manuscripts were unique in that the pagination of even different copies of the same text would differ due to the difference in individual handwriting. The printed book allowed two readers to discuss a passage in a work they were both reading by referring to the precise page on which it occurred. Previously, passages were identified by chapter and verse as with the case of the Bible.

Page numbers – The desire of printers to keep pages of books in proper sequence (especially since they were printed either separately or in groups of 4) led them to pagination with Arabic numerals. Pagination in turn led to indexing, cross-referencing, and table of contents.

Title pages – With print, two different copies of the same edition of a work were duplicates of one another as objects. This situation invited the use of labels, and the printed book, being an object, naturally took a label – the title page.

Print & Manuscript - 3

- What Print does that the Manuscript does not
 - Print led to the concept of the book as a logical unit
 - Print changed the document focus from that of the producer/copyist to that of the reader
 - Print encouraged a sense of closure and finality – the idea that the represents the author's words in a definitive or final form

Book as logical unit – Since the book was a physical unit, it was natural to think that the book should therefore be a logical unit. No publisher would accept a book that contained two or more unrelated subject matters – such as Colonial American History and Nuclear Physics. Yet individual medieval manuscripts often contained two or more unrelated works, such as a commentary on Aristotle's Politics, a treatise on the theology of Peter Lombard, and a history of the local monastery.

Change of focus – Manuscript culture was producer-oriented since every individual copy of a work represented a great expenditure of an individual copyist's time. Print is reader-oriented since a few hours spent producing a more readable text will immediately improve thousands of copies. Thus writing for print often called for painstaking revisions by the author of an order of magnitude virtually unknown in manuscript culture. Typically, a printed book underwent many revisions by the author or editor before it finally came to press. This was not true of manuscripts.

Closure – Once a letterpress form is locked up, or a

Social & Historical Effects

- Print was a major factor in the development of the following:
 - Capitalism
 - The Protestant Reformation
 - Nationalism
 - Intellectual Liberalism
 - The creation of childhood as a distinct social category
- I will discuss each in turn

Printing & Capitalism

- Printing shops were the first major urban capitalist enterprises
 - Print shop economics – large up-front costs combined with later revenues
 - The print shop's demand for paper stimulated the growth of the paper manufacturing industry which led it to rationalize the collection of rags
 - Printing resulted in new occupations – printers, booksellers, proof readers, editors, and librarians
 - Printing press technology anticipated many features of industrial production

Print shop economics - Printing required a large initial capital investment for a press, movable type, large quantities of paper, and a building to house the above-- preferably in an urban setting near potential customers (educated people, teachers, clergy, officials) -- while income came much later in drips and drabs as individual books were sold. Hence, print shops required access to credit and a Capitalist approach to business -- i.e. they were the first major urban capitalist enterprises.

Paper – According to Lisa Jardine *Worldly Goods. A new history of the renaissance*, the major expense in printing was the paper on which the book was printed, representing 2/3rd of the cost of a book's publication. {The other 1/3rd consisting of the price of acquiring the text, the amortized cost of purchasing and installing the printing press and associated technology, and related labor costs}. The press was a huge consumer of paper, using three reams (1500 sheets) per press per day.

Anticipation of industrial production - Printing press technology anticipated many features of industrial production -- the assembly of

Printing & Protestantism -1

- When Luther nailed his Ninety-Five Theses to the church door, he saw it as merely an invitation to an academic disputation
- Protestantism was the first religious movement to fully exploit printing's potential as a mass medium
 - Luther described printing as “God’s highest and extremist act of grace, whereby the business of the gospel is driven forward.”

Ninety-Five Theses - When Luther proposed debate over his Ninety-five Theses his action was not in and of itself revolutionary. It was entirely conventional for professors of theology to hold disputations over an issue such as indulgences and "church doors were the customary place for medieval publicity." But these particular theses did not stay tacked to the church door. Luther himself expressed puzzlement, when addressing Pope Leo X six months after the initial event: *“It is a mystery to me how my theses, more so than my other writings, indeed, those of other professors were spread to so many places. They were meant exclusively for our academic circle here . . . They were written in such a language that the common people could hardly understand them.”*

Printing’s revolutionary potential - Protestantism was also the first movement of any kind, religious or secular, to use the new presses for overt propaganda and agitation against an established institution. By pamphleteering directed at arousing popular support and aimed at readers who were unversed in Latin, the reformers unwittingly pioneered as revolutionaries and rabble rousers. They also left ‘ineradicable impressions’ in the form of broadsides and caricatures.

Printing & Protestantism - the reformers were aware that the printing press useful to their cause and they acknowledged its importance in their writings. From Luther on, the sense of a special blessing conferred on the German nation was associated with Gutenberg's invention, which in their eyes emancipated the Germans from bondage to Rome and brought the light of true religion to a God-fearing people.

Printing & Protestantism - 2

- Printing brought into focus many troublesome issues that had been easily glossed over before
 - One issue was the relation of Scripture and Tradition
 - Another was the relationship of faith and works
- Printing with its focus on the word of God led to simpler forms of church architecture
 - Art was banished from the churches – compare the Gothic cathedral with the Old South Church

Scripture & Tradition - Oral testimony, for example, could be distinguished much more clearly from written testimony when giving dictation or reading out loud became detached from the publication of a given work. This raised questions about the transmission of teaching that came from the lips of Christ or from the dictation of the Holy Spirit to the Apostles.

- Was all of the Christian heritage down in written form and contained solely in Scripture?
- Was not some of it also preserved "in the unwritten traditions which the Apostles received from Christ's lips or which, under the inspiration of the Holy Spirit, were by them, as it were, passed down to us from hand to hand"?
- Was it meant to be made directly available to all men in accordance with the mission to spread glad tidings?
- Or was it rather to be expounded to the laity only after passing through the hands of priests, as had become customary over the course of centuries?

Another issue was how could the traditional mediating role of the priesthood be maintained without a struggle when scholar-printers summoned lay grammarians and philologists to help with the task of editing old texts? The priest might claim the sacred office of mediating between God and man but when it came to

Printing & Protestantism - 3

- Popular editions of the Bible (such as the Luther & King James versions) had some interesting results:
 - They led people to draw an inevitable contrast between the idealized origin Church depicted in Acts and its current reality
 - Led many to see the present as a corruption and a decline from the past
 - Contrary to the intentions of the Reformers, it led to the fracturing of Protestantism

Origins vs present - The contrast between the ideal Church depicted in the early chapters of the Book of Acts and the sometimes sordid realities of a Church that seemed in need of moral reform led to reform efforts – some by Protestants who felt that fundamental overhaul was required and some by Catholics who felt that the problems, while real, were not inherent in the Church and could be corrected.

Another contrast was between the teachings described in Scripture and the doctrines of the 16th century Church. Catholic theologians could argue, with justification, that current dogmas were simply the explicit logical outcome and development of teachings that were implied in Scripture. But if one were a literate individual who was not conversant with the detailed history of the Church and of Catholic theology, it would often be hard to see how a current dogma was anything but either a distortion of Christianity or an addition to it. Examples are the Doctrine of Transubstantiation in the Eucharist and the role of the saints, and especially Mary, as intercessors with God.

Printing & Science

- The Book of Scripture or the Book of Nature – both were seen as the handiwork of God
 - Printing had a differential impact on the study of both:
 - Biblical scholarship could not get back to the pure original words of God before they had been corrupted by copyists over time
 - The study of nature, however, could progress as corrupted scientific data could be compared with, and corrected by, current observations and experiments

In the words of Elizabeth Eisenstein, *“Confronted with conflicting astronomical tables based on corrupted scribal data, an astronomer like Tycho Brahe could check both versions against fresh observations of the sky. But dissatisfaction with the corrupted copies of St Jerome’s Latin translation could not be overcome in the same way. Instead it led to multilingual confusion and a thickening special literature devoted to variants and alternative theories of composition. ... Thus the effect of printing on Bible study was in marked contrast with its effect on nature study.”*

Printing & Science - 2

- But if the Book of Nature (what science revealed) seemed to contradict the Book of Scripture (what God revealed), then what:
 - For intellectuals and members of the educated elite, the logical conclusion was that the Book revealed by science was true and that the Bible was simply a collection of legends
 - For common believers, the logical conclusion was that Scripture was an infallible source of scientific knowledge

Science as true - This led to the Enlightenment, religious Modernism, and the alienation of Western intellectuals from religion. Their alienation from religion in turn led many to their infatuation with secular ideologies, such as Communism, Fascism, and militant Atheism.

Bible as true - This led to Biblical Fundamentalism, and such corollaries as Scientific Creationism, rejection of Darwinism, and Intelligent Design.

Printing & Nationalism - 1

- Printing created a unified official vernacular out of numerous local dialects
 - E.g. the King's English, Parisian French, Tuscan Italian, Castilian Spanish, & High German
- Printing gave a new fixity to language, building an image of antiquity so central to the subjective idea of a nation
- Printing helped create the bourgeoisie as both an 'imagined community' and as a class

As Benedict Anderson in his *Imagined Communities* stated, ““The pre-bourgeois ruling classes generated their cohesions in some sense outside language, or at least outside print-language. If the King of England married a Spanish princess — did they ever talk seriously together? Solidarities were the products of kinship, clientship, and !! personal loyalties. The relatively small size of traditional aristocracies, their fixed political bases, and the personalization of political relations implied by sexual intercourse and inheritance, meant that their cohesions as classes were as much concrete as imagined. An illiterate nobility could still act as a nobility.

But the bourgeoisie? A Factory-owner in Lille was connected to a factory-owner in Lyon only by reverberation. They had no [necessary reason to know of one another's existence; they did not typically marry each other's daughters or inherit each other's property. But they did come to visualize in a general way the existence of thousands and thousands like themselves through print-language. For an illiterate bourgeoisie is scarcely imaginable. Thus in world-historical terms, the bourgeoisies were the first classes to achieve solidarities on an essentially imagined basis.”

Printing & Nationalism - 2

- Printing fostered the idea of being part of large-scale collective groups
- Printing, as noted earlier, elevated the status of the vernacular language, thus fostering a sense of ethnic-linguistic nationalism
- Printing created walls between different language groups while homogenizing differences within
- Print media proved very useful in arousing nationalist feelings and hatreds

Supra-local identification - With printing, people began to read about what went on beyond their local village and achieve both vicarious participation in more distant events and links to larger collective units. Printed materials encouraged silent adherence to causes whose advocates could not be found in any one parish and who addressed an invisible public from afar. Being able to read books and later newspapers from the capital led local provincials to see themselves as part of a national state.

Vernacular language –The vernacular languages which most people spoke acquired an importance once a mass market arose for printed material in those languages. This made it commercially profitable to produce books in the vernacular, which in turn gradually raised the literary status of these languages. This helped foster a sense of identity with those who also spoke the language. Two of these vernacular languages, French and early English, had become competitors of Latin as "languages of power" by the sixteenth century. In England early English had become the legal language in 1362, in France in 1539

Walls & homogeneity – The preservation of a given literary language often depended on whether or not a few vernacular primers, catechisms or Bibles happened to get printed (under foreign as well as domestic auspices) in the sixteenth century. When this was the case, the subsequent expansion of a separate "national" literary culture ensued. The spread of books and later newspapers and magazines did much to weaken cultural regionalism. The information and ideas available in East Prussia, for example, no longer differed so drastically from what was available in the Rhineland. This was a homogenizing tendency.

Print media & Nationalist hatreds – Print media proved very useful in arousing nationalist feelings and a sense of identity. Often this took place in the context of opposition to some outsider that was seen as a threat. Thus, English supporters of the Crown stimulated English Nationalism by attacking Catholic Spain and then Catholic France. American newspapers played a big role in bringing about the American Revolution by attacking the policies of the English Parliament.

Printing and Intellectual Liberalism

- Printers disliked censorship
 - They were natural libertarians who generally wanted the freedom to print whatever they wanted and whatever they thought would sell
- Printers had to deal with scholars and intellectuals
 - This in itself contributed to liberal attitudes since intellectual pursuits brought together people from very diverse backgrounds and from different religions

Dislike of censorship - The printing industry was the principal natural ally of libertarian, heterodox, and ecumenical individuals. Eager to expand markets and diversify production, printers were the natural enemy of narrow minds

Dealing with scholars & intellectuals – A merchant-publisher had to know as much about books and intellectual trends as a cloth merchant had to know about cloth and dress fashions. He had to have a wide circle of acquaintances from various fields of endeavor and often wide contacts with foreigners (to serve as foreign experts and translators). One result of all of this was exposure to people with different theologies and different points of view – all of which encouraged ecumenical and tolerant attitudes. Thus Christopher Plantin of Antwerp could be the official printer of Phillip II in the Low Countries but at the same time willingly serve Calvinists and have close friends who espoused unorthodox opinions that both Catholics and Calvinists considered beyond the pale.

Printing & Childhood - 1

- Printing created childhood as a distinct social category
 - Before the printing press, children became adults by learning to speak
 - In the centuries after the invention of printing, Adulthood was redefined – one became an adult by learning how to read

Speaking – Speaking is a behavior for which all humans are hardwired and which they generally master by age 7. Thus the Catholic Church and the Law both defined age 7 as the age of reason and the age at which they became morally and legally responsible for their actions.

Reading – Unlike speaking, reading has to be taught and requires effort on the part of the student.

Printing and Childhood – 2

- After printing, children had to earn adulthood by becoming literate, for which people are not hardwired
 - This meant children had to go to school
 - With the establishment of schools, children came to be viewed as a special class of people different from adults
- People began to see human development as a series of stages, with childhood being a bridge between infancy and adulthood
 - Before print, children were seen as little adults and seen as part of the adult world

Children as a special class – Once children were seen as a special class, special institutions were developed for their nurturing. These include kindergartens, little leagues, Boy Scouts, Cub Scouts, Girl Scouts, Brownies, day care centers, Boys' Clubs, orphanages, summer camps, Juvenile courts, etc. We also conferred on children a special status, reflected in the distinctive ways we expect them to think, talk, dress, play, and learn.

Childhood, then adolescence - Later as schooling began to extend beyond literacy and primary or elementary school to high school, adolescence was added as a new stage between childhood and adulthood.

New Literary Genres

- As noted before, printing led to new formats and genres of literature:
 - Early genres included the book, broadside, and pamphlet
 - The mid-17th century saw the newspaper
 - The late-17th –early-18th centuries saw the scholarly journal
 - The 19th century saw the daily newspaper and the magazine

Printing – Pamphlet

- Pamphlets – an unbound printed publication with either no cover or a paper cover and generally many fewer pages than a book
- Pamphlets were an ideal print medium for circulating opinions, sermons, and pornographic writings and images
 - Pamphlets have played a major role in many political, social, and religious controversies and revolutions

How Pamphlets Changed History

- Some examples
 - The Protestant Reformation
 - The Enlightenment Debate between Rationalists, Deists/Skeptics/Atheists and Traditional Christians
 - The “Pamphlet War” at the End of the Seven Years War
 - The American Revolution
 - The Abolitionists
 - The Influence of two pamphlet writers on Adolf Hitler

Protestant Reformation - Between 1520 and 1523, soon after Luther had raised his voice against the preaching of indulgences, a vast 'press campaign' developed in Germany. Thousands of pamphlets circulated throughout the Empire. The same texts, presented in the form of sermons, dialogues or letters, were often reproduced from one city to another in what was in fact the first instance of the use of print to arouse public opinion.

Deists vs Traditional Christians – In the words of historian Peter Watson in his *Ideas. A history of thought and invention from fire to Freud*, the Enlightenment “occurred in four stages. These were what we may call *rationalistic supernaturalism, deism, scepticism and, finally, full-blown atheism. It is also worth pointing out that the advent of doubt, besides being a chapter in the history of ideas, was also a stage in the history of publishing.*” The battle between orthodox traditionalists and free thinkers was fought out at a time when pamphleteering was at its height. Watson noted that many of the ideas of Enlightenment thinkers were published as pamphlets, often with a combative style and title, such as *The Unreasonableness of the Doctrine of the Trinity briefly demonstrated, in a letter to a friend* (1692).

The Pamphlet War – As the Seven Years War neared its end, the government in London, then winning the American phase of the Seven Years' War (also known as the French and Indian War), had to decide whether to return conquered Canada or the captured Caribbean island of Guadeloupe to France as part of a peace settlement. Draper notes a peculiar aspect of the “Canada versus Guadeloupe” controversy: “Fear of the growth of the colonies appeared in so many pamphlets that it was clearly more than a curious aberration on the part of some nervous British officials.” One English pamphleteer warned, “*If, Sir, the People of our Colonies find no Check from [French] Canada, they will extend themselves, almost, without bounds into the Inland Parts. The possession of Canada, far from being necessary to our Safety, may in its Consequence be even dangerous. A Neighbour that keeps us in some Awe, is not always the worst of Neighbours.*” Another English pamphleteer was even more blunt: “*Nothing can secure Britain so much against the revolting of North-America, as the French keeping some footing there, to be a check upon them [for] if we were to acquire all Canada, we should soon find North-America itself too powerful, and too populous to be long governed by us at this distance.*” Such fears were justified. Once the colonists no longer needed British military power to protect them from the French, they became increasingly resentful of British rule and more willing to contemplate independence.

American Revolution – Pamphlets played a major role in fomenting the revolution. The American Revolution generated particularly strong popular beliefs in a free press because the events that led up to the war helped to identify the press with the patriotic cause. A critical formative experience was Britain's attempt to impose a key element of its communication regime on the colonies. The Stamp Act tax on newspapers, pamphlets, almanacs, and legal forms inflamed the most articulate people in the colonies -- lawyers, printers, merchants, and college students. But far from stifling the press, the Stamp Act politicized it by turning the press into a forum for discussion and protest, helping to turn mere disorder into a coherent opposition movement.

Abolitionists - The great abolitionist undertaking of 1835 and their mass mailing of pamphlets to southern addresses provoked riots. The communications revolution, by empowering social critics on the one hand and fanning conservative fears on the other, catalyzed the violence. Future president John Tyler, addressing an antiabolition crowd at Gloucester Courthouse, Virginia, in August 1835, focused his remarks on the sensationalism of the antislavery tracts, their wide circulations, and “the cheap rate at which these papers are delivered.” He pointed with horror to the novel involvement of women in the abolitionist movement, particularly in the circulation of mass petitions, and to the “horn-books and primers” aimed at “the youthful imagination.” Tyler viewed the abolition crusade as an assault not only on slavery but on the entire traditional social order. This reaction, combined with the Post Office ban on the sending of abolitionist literature through the mails in turn led civil libertarians to the side of the abolitionists and helped widen the breach between North and South.

Hitler – In a discussion on the roots of Adolph Hitler's anti-semitism, historian and psychoanalyst Robert Waite noted, “*It was from racist pamphleteers and politicians, rather than from great figures in German intellectual history, that Hitler drew the ideas that were so important to his life and work. ... Hitler was also heavily and directly influenced by two racist pamphlet writers, Guido von List and Lanz von Liebenfels, men who reached the height of their influence during his Vienna period, 1908-1913.*” From von Liebenfels, Hitler imbibed the following notions: First, their pseudo-scientific notions of race, including the racial superiority of the Aryans and the racial inferiority of rest of mankind, especially the Jews. Second, the establishment of a racially elite group. Third, the symbol of the swastika. Fourth, the idea that strict laws needed to be passed to prevent the mongrelization of the Aryan race. Fifth, the idea that lesser races needed to eventually be eliminated. From von List, Hitler got the notion of an international Jewish conspiracy against which a global war needed to be waged. For evidence that Hitler read von Liebenfels' and von List's pamphlets, Waite notes that the pamphlets were

Pornography - 1

- It didn't take some authors and printers too long to find out that sex sells
 - Pietro Aretino *Postures* (1524)
 - Francois Rebelais *Gargantua and Pantagruel* (1530-1540)
- "Great art is always flanked by its dark sisters, blasphemy and pornography." Camille Paglia

Early printing - Early printing, though voluminous, was largely devoted to the Bible, to other theological, legal, and scientific works, to texts for scholars like the Greek and Latin classics, to popular sheet music, and to local religious and political broadsides

Two porn classics - But two less noble works did more to popularize print and bring literacy to the masses than the scholarly works. These were Pietro Aretino's *Postures* (1524) and Francois Rabelais' *Gargantua and Pantagruel* (1530-40). Of the two, the *Postures* was the more pornographic in the strict sense, a series of engravings of sexual positions, each with a ribald sonnet. Rabelais' work, on the other hand, instantly entered the canon, where it has remained ever since. Both were popular, Aretino remaining *the* underground porn classic for centuries, Rabelais traveling a somewhat higher road. Rabelais' boast in *Gargantua and Pantagruel* that "more copies of it have been sold by the printers in two months than there will be of the Bible in nine years" was first, probably true, and second, prescient advice to new media: sex sells.

Pornography - 2

- Prior to the 19th century, pornography was a vehicle to attack the political and religious authorities through the shock of sex
 - “Pornography has the power to delegitimize, by stripping the high ones of respect and exposing them to contempt. Pornography, customarily regarded as apolitical, has therefore enormous revolutionary potential.” *Conor Cruise O’Brien*

Pornography - 3

- Pornography played a major role in the French Revolution
 - *Les Libelles* – pornographic pamphlets graphically described the alleged sex-lives of the French royal family and aristocracy
 - This did much to shape the attitudes of the Paris mobs toward the royal family
 - Thus, politically-motivated pornography helped bring about the Revolution by undermining the legitimacy of the ancien regime.

Conor Cruise O'Brien in his *On the Eve of the Millennium* notes, "Much ink has been spilt on the intellectual origins of the French Revolution. Much less has been heard about that revolution's *pornographic* origins. The intellectual origins were, it is true, extremely important in the long run, as Burke had seen. But on the eve of the revolution itself, in the 1780s, the business end of the pre-revolutionary process was in the hands of the pornographers. The favourite reading of Parisians in those years consisted of *les libelles*. These were pornographic pamphlets, clandestinely published or illegally imported, but widely available and delusively directed at the supposed sex-life of the French royal family, and of Marie Antoinette in particular. These fascinatingly smutty little booklets which could be read aloud to the illiterate — did much to shape the attitudes of the Paris mob towards the royal family: a major factor at various stages of the revolution."

Pornography - 4

- In the 19th and 20th centuries, Pornography has been used to attack and discredit other groups
 - Anti-Catholics wrote numerous pornographic works describing the alleged sexual misdeeds of priests and nuns
 - Abolitionists wrote extensively about slave masters allegedly raping their slaves
 - Russian revolutionaries wrote extensively about the alleged sexual misdeeds of Rasputin and the Czarina

Accusing specific groups and individuals of grossly immoral and deviant sexual behavior has often been effective and has also allowed writers and readers of such material to indulge in such material without the guilt feeling that they were doing something immoral

Pornography - 5

- In later 19th century America, Pornography largely took on an apolitical nature and began to focus more and more on the erotic and sexually explicit
 - It thus came to be seen as a separate, if disreputable, genre
 - If it was banned, it was banned for its alleged effects on morals, not for its libelous statements and political-religious radicalism

News and Newspapers

- News information – information and data about recent events
 - It consists of information transmitted via the media about the people, places, and events that engage us, influence our view of the world, or even directly affect our lives

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In the pre-printing cultures of the past, news was often conveyed by the town crier, the visiting traveler or troubadour, the minister or priest via his sermon, or a letter from afar to one of the few persons in the community who were literate and who read the letter or conveyed its contents to friends and neighbors.

In the 18th and 19th century, it was conveyed largely by newspapers and magazines

In the 20th century, it was conveyed first by newspapers and then largely by radio and television, followed in the 1990s and thereafter by internet websites, emails, and blogs

News and Newspapers

- Definition of News
 - New information about a subject of some public interest that is shared with some portion of the public.
 - Thus news can be distinguished from:
 - History – since it lacks the requisite newness
 - Art – since it does not offer compelling information
 - Intelligence – which is reserved for governmental or private use and is usually close hold
 - Chit-chat & gossip – which is normally only of personal, family, or small group interest

News and Newspapers

- Some Notes About News
 - Not all events are news
 - Events must be selected to be news and they are selected because
 - They are considered to be of interest
 - They are within the news gatherers' perceptual reach
 - They are seen as out of the ordinary
 - News imparts to occurrences a public character
 - It transforms mere happenings into publicly discussible events

News and Newspapers

- Some Notes About News – 2
 - News is usually a report about an event, but
 - Word on the President's position on a major political issue of controversy would be news
 - News is usually about recent occurrences, but
 - Fresh information on whether President Zachary Taylor was or was not deliberately poisoned would be news
 - News is usually deliberately gathered for purposes of dissemination, but
 - Some news is obtained merely by stumbling upon it

News and Newspapers

- Some Notes About Newspapers
 - Until the 19th century, almost all newspapers were weeklies whose content consisted largely of advertisements and news from outside the community. This was so for two reasons
 - Until the 19th century, printing remained a handicraft process
 - In small communities, local news could travel via the grapevine far quicker than by newspaper. Thus newspapers focused on news originating elsewhere

Printing of Newspapers – In 1800, no press was much different from that of Gutenberg's 350 years earlier – hand-operated and fed one sheet of paper at a time. With such a hand press, relays of experienced printers could print 2000 sheets on one side in eight hours; a newspaper with a circulation of 3000 required twelve hours, printing at top speed, and a popular paper had four presses, two for each side of the sheet, the whole paper being set at least twice. These limitations favoured other forms such as the weekly paper, the monthly magazine, the novel, and children's books.

Death of Local News – Given the grapevine effect, what local news there was usually consisted of obituaries and reprints of sermons and speeches by public officials

News and Newspapers

- Some Notes About Newspapers
 - Despite their limitations, newspapers often had a major influence
 - Newspapers and the printers who printed them were often well-educated individuals who were leaders and opinion makers in their community
 - Newspapers are a media that thrives on controversy, provided they are able to take part in public discussions with some degree of freedom

News and Newspapers

- Newspapers and the American Revolution
 - The Stamp Act tax paved the way for the American Revolution by:
 - Politicizing the press so that it became a forum for discussion and protest, thus giving rise to a coherent and powerful inter-colonial opposition movement
 - Newspapers played a key role in organizing a revolutionary movement in America
 - Printers played a key role in organizing both the Committees of Correspondence and the Sons of Liberty

Stamp Act – The Stamp Act imposed taxes on newspapers and legal documents. It was one thing for Parliament to regulate trade in the empire, but taxes imposed on colonists, as some people in Virginia and elsewhere asserted, were another thing, by no means acceptable. In the colonists' world, their legislatures set such taxes, and conceding a precedent threatened to undermine the self-government they had come to view as their birthright. Elected to the House of Burgesses, Patrick Henry arrived at his first session, in May 1765, just in time to participate in the response to the Stamp Act. He framed the Stamp Act Resolves that, broadcast from Virginia, invigorated resistance in other colonies as well.

Revolutionary organization – According to Michael and Edwin Every in their *The Press and America. An interpretive history of the mass media*, "As a propagandist, [Samuel] Adams was without peer. He understood that to win the inevitable conflict, he and his cohorts must achieve five main objectives: they must justify the course they advocated; advertise the advantages of victory; arouse the masses—the real "shock troops"—by instilling hatred of enemies; neutralize any logical and reasonable arguments proposed by the opposition; and finally phrase all the issues in black and white, so that the purposes might be clear even to the common laborer. Adams was able to do all this, and his principal tool was the colonial newspaper. "[Samuel] Adams was more than a writer; he was an expert news gatherer. His Committees of Correspondence, organized in 1772, kept him alert to every movement and sentiment throughout the colonies. His agents "covered" every important meeting as ably as modern reporters gather information for the press services today. In a remarkably short time all such news reached Adams's local committee, which then processed it for effective dissemination where such information was needed. This primitive news service was highly efficient, yet no one in the colonies had thought of such a device until Adams came along. "The Boston Radicals who gathered about Sam Adams at the Gazette office were the core of the revolutionary movement. But they needed a way to win the support of other colonies for the hard line toward the British they were developing in Massachusetts. This was supplied by the Sons of Liberty, whose chapters sprang into being during the spontaneous popular uprising over the Stamp Act of 1765. Adams, printer Benjamin Edes, and engraver Paul Revere were among the key Boston members from the Gazette group. Other printers rated as strong activists in the Sons of Liberty propaganda network were fellow Bostonian Isaiah Thomas of the Massachusetts Spy; John Holt of the New York Journal; Peter Timothy of Charleston's South Carolina Gazette; William Goddard of

News and Newspapers

- In the 19th century, newspapers would be revolutionized by
 - Faster presses powered first by steam and then by electricity
 - The telegraph and then the telephone
 - The railroad and the post office
 - Cheap newsprint made of wood pulp paper
 - News photography and color lithography

These innovations, which I will discuss later, turned the newspaper from a normally 4-page weekly with limited news content and limited circulation to the newspaper as we know it today – a daily paper of many pages replete with local, national, and international news and containing numerous photographs and illustrations.

19th Century Newspaper Innovations

- In the 19th century, the newspaper would be revolutionized by
 - Faster presses powered first by steam and then by electricity
 - The telegraph and then the telephone
 - The railroad and the post office
 - Cheap paper made of wood pulp
 - Photoengraving and color lithography

These innovations, which I will discuss later, turned the newspaper from a normally 4-page weekly with limited news content and limited circulation to the newspaper as we know it today – a daily paper of many pages replete with local, national, and international news and containing numerous photographs and illustrations.

19th Century Newspaper Innovations

- Use of steam power in printing
 - 1810 – Friedrich Koenig uses steam power to run a press
 - 1814 – *London Times* installs Koenig's press
 - Can print 1,100 sheets an hour (4X that of hand presses)
 - By 1850, further improvements raise the rate to over 4,000 sheets an hour
 - ***London Times*** circulation rose from 5,000 in 1815 to 50,000 in the 1850s

Steam-powered press - In 1810 Friedrich Koenig, a German working in London, harnessed steam power to operate a press that rolled a cylinder over a paper sheet lying on a bed of inked type, instead of pressing a flat weight on it like the old hand presses. In 1814 The Times of London installed such a press, with automatic inking rollers. It was still fed paper one sheet at a time, but it could print 1,100 sheets an hour, four times the pace of hand presses. During the next 30 years further improvements raised that rate fourfold, and the circulation of The Times rose from 5,000 in 1815 to 50,000 in the 1850's.

19th Century Newspaper Innovations

- Stereotyping – 1811
 - Before stereotyping, a printer wishing to reprint something needed either to keep the original type in place or to reset it
 - With stereotyping, the set type was used to make a lead mold from which metal plates were cast
 - This freed up the type for other uses
 - It also facilitated multiple press runs

Stereotyping - Stereotyping, which came to America c1811 from England, solved other problems. Traditionally, to be able to reprint a book, a printer needed either to keep the original type standing (a substantial capital cost since it precluded use of the type for other purposes) or to reset it (a substantial cost in labor). With stereotyping, the set type was used to make lead molds from which metal plates were cast, freeing the type for other uses. Since stereotyping made it cheaper to reprint a book when the demand arose, the technology helped to modulate print runs, cut inventory costs, and reduce the risk of being stuck with unsold copies. By investing in plates, a printer could also run multiple presses without having to make correspondingly large investments in type or causing wear to the type itself. The plates themselves could be sold or rented as part of joint publishing or other arrangements. Thus, the technology was a source of flexibility as well as of economies of scale.

19th Century Newspaper Innovations

- Rotary press invented by Richard Hoe - 1846
 - Rotary press consisted of a cylinder with type fixed to its surface, which rolled against another cylinder as paper passed between the two.
 - By 1860, the *Daily Telegraph* in London, which used a rotary press, was rolling out 130,000 copies a day.
 - This was followed by:
 - Four cylinder presses capable of printing on both sides of a paper simultaneously
 - Automated printing on continuous rolls of paper

19th Century Newspaper Innovations

- Reporters
 - Early newspapers did not have reporters
 - Local News was acquired by conversations at the print shop or local tavern
 - National and Foreign News acquired from letters to the newspaper and from other newspapers
 - Reporting -- going into the field in search of news -- was a consequence of:
 - Newspaper competition
 - Faster and better means of communication (which encouraged the use of out-of-town and overseas correspondents)
 - Growth of cities (which created an appetite for local news that word-of-mouth could not meet).

Before reporters - Early newspapers did not have reporters. What little local news there was in the papers -- what little they attempted to compete with word of mouth for -- could usually be obtained in the course of conversations at the print shop or friends at the tavern. National and foreign news was taken from letters or, more commonly, from other newspapers. When Lewis & Clark returned from their expedition to the West on September 23, 1806, Boston newspapers obtained the news from the *National Intelligencer* of Washington, which itself was reprinting a letter from President Thomas Jefferson summarizing a letter he had received from William Clark in St. Louis. The news was not published in Boston until November 6, 1806.

Reporting - Early 19th Century big city newspapers began sending reporters to cover court room and legislative proceedings since both crime and the passage of new laws was of interest to readerships. Reporting also got a big boost from the telegraph and later the telephone which made it feasible for newspapers to hire out-of-town correspondents to provide the paper with news of whatever was going on in the area where the correspondent. One noted foreign correspondent for New York City newspapers during the Civil War was Karl Marx.

19th Century Newspaper Innovations

- Telegraph
 - Revolutionized the newspaper business
 - Made feasible the use of out-of-town and foreign correspondents
 - Led to the creation of news wire services, such as the Associated Press and Reuters
 - Had other impacts on the newspaper which I will talk about when I discuss the Telegraph and its impacts

19th Century Newspaper Innovations

- Investigative Journalism
 - Pioneered by the *New York Tribune* and the *New York Times*
 - *Tribune's* investigation of the 1836 murder of Ellen Jewett
 - *Times'* expose of the Tweed Ring in 1870

Investigative Journalism - James Gordon Bennett's *New York Tribune* and the *New York Times* pioneered the field of investigative journalism -- Bennett through his investigative reporting of the 1836 murder of Ellen Jewett and the *New York Times* through its expose of the Tweed Ring in 1870, in which reporter John Foord revealed that Tweed had added 1,300 new employees to the city payroll in six weeks, that city park lamps were being painted on rainy days so that they would have to be repainted at lucrative rates, that some city election districts had 70% more registered voters than male citizens over the age of 21, and that the city paid over \$1,200,000 for plumbing and gas fittings in the new courthouse and over \$779,000 for carpets and shades

19th Century Newspaper Innovations

- Cheap Paper
 - As noted in the first class, paper meant rag paper until the middle decades of the 19th century
 - In the 1830s came hemp paper and straw paper
 - Hemp had a high cellulose content with strong fibers, but it was costly and could not be bleached – used for manila folders
 - Straw was cheap, but it had short fibers that were neither strong nor durable
 - Mixed with rags, it was widely used for newsprint and dime novels by mid-century

19th Century Newspaper Innovations

- Cheap Paper – 2
 - Wood Pulp Paper
 - Production began in Germany In 1847
 - German immigrants brought the technology and production techniques to the U.S.
 - U.S. began wood pulp paper production in 1867
 - Wood Pulp Paper was less durable and weaker than paper made from straw, but was also cheaper
 - When it became available, newsprint prices dropped from 25 cents per lb in the 1860s to 2 cents per lb in 1897
 - U.S. newspapers begin using wood pulp paper in the late-1870s—early-1880s

19th Century Newspaper Innovations

- Wood Pulp Paper
 - Facilitated the penny press and the dime novel by drastically lowering the cost of paper
 - Created a record storage medium that was highly prone to acidification and degradation
 - Thus many 19th and 20th century newspapers, books, and documents have become unreadable and have either been lost or have had to be deacidified and laminated at great expense

19th Century Newspaper Innovations

- Penny Press
 - Became possible when newsprint became cheap
 - Began with the rag-straw paper but was facilitated by the adoption of wood pulp paper
 - Depended on advertising revenues and newspaper sales rather than upon subsidies and printing contracts from political parties
 - This led to “sensationalism”, a focus on local news and especially crime news and human interest stories , and less of a focus on political and business news

Effects of cheap newsprint - Reductions in the cost of paper and printing contributed not only to the proliferation of political and reform-oriented papers, most of them weeklies with fewer than a thousand subscribers; but also made possible the ‘penny press’ mass (and sensationalistic) journalism of the New York *Sun* (launched in 1833 by printer Benjamin H. Day) and the New York *Herald* (launched in 1835 by the journalist James Gordon Bennett and destined to become largest-circulation newspaper in the world) plus imitator ‘penny press’ newspapers in Boston, Philadelphia, Baltimore, and other cities. !!

Penny press - In the 18th and early-19th centuries, the press depended on governments and political parties for subsidy. Unlike other newspapers, the ‘penny press’ newspapers depended entirely for revenue on advertisers and sales to readers. Hence, they were independent of political parties and could and did represent themselves as unfettered champions of the public in reporting the news. Unlike earlier newspapers which focused on business, political, and foreign news, the penny papers, while not abandoning politics and business, focused on local news, especially crime news, and human interest items. With their higher income from their high circulations and increased advertising revenue, the penny papers could engage in independent news-gathering. The penny papers were the first papers in the U.S. to cover local news extensively and the first to turn news itself into entertainment.

19th Century Newspaper Innovations

- Linotype
 - The machine revolutionized printing and especially newspaper publishing, making it possible for a small number of operators to set type for many pages on a daily basis.
 - Resulted in an 85% reduction in the time it took for setting type
- Color Lithography & News Photography
 - Will talk about these when I discuss Photography

The Linotype machine operator enters text on a 90-[character keyboard](#). The machine assembles "matrices", which are molds for the letter forms, into a line. The assembled line is then cast as a single piece, called a "slug", of [type metal](#). The matrices are then returned to the type [magazine](#) from which they came. The name of the machine comes from the fact that it produces an entire line of metal type at once - hence a "line o' type". This allows much faster typesetting and composition than original hand composition in which operators place down one pre-cast metal [letter](#), [punctuation mark](#) or [space](#) at a time.