History of Communications Media

Class 5

History of Communications Media

- What We Will Cover Today
  - Photography
    - Last Week we just started this topic
  - Typewriter
  - Motion Pictures
    - The Emergence of Hollywood
    - Some Effects of the Feature Film

Photography - Origins

- Joseph Nicephore Niepce –first photograph (1825)
  - – Used bitumen and required an 8-hour exposure
  - – Invented photoengraving
    - Today's photolithography is both a descendent of Niepce's technique and the means by which printed circuits and computer chips are made
  - – Partner of Louis Daguerre

Niepce – Niepce dissolved bitumen in lavender oil, a solvent often used in varnishes, and coated the sheet of pewter with this light capturing mixture. He placed the sheet inside a camera obscura to capture the picture, and eight hours later removed it and washed it with lavender oil to remove the unexposed bitumen. It was said that he made his first long lasting images in 1824. The earliest known example of a Niépce photograph (or any other photograph) was created in June or July, 1827.
Photoengraving - Niepce oiled a paper print of an ordinary copper engraving -- in order to make the ink-free portions of the sheet translucent -- and laid on top of an unmarked copper plate coated with bitumen, the gunky black tar that hardens into asphalt. After several hours of exposure to sunlight, the bitumen under the translucent portion hardened and became insoluble. This allowed Niepce to wash away the unexposed portion of the bitumen coating with a kerosene-based solvent. He thereby obtained a negative image of the original drawing which he could then chemically engrave into the surface of the new plate -- etching the unprotected metal with an acid solution. *photolithography* (printing from photo-etched plates) not only produces the great majority of all plates for the printing industry, but also provides the basic technology for the electronics industry as well. In this latter application, layers of metal and other substances are deposited on sheets of semicon-ducting silicon crystals covered with *photoresist,* an updated version of Niepce's bitumen. The coated surface is illuminated through a mask (a cutout equivalent of Niepce's oiled paper) that casts a pattern, like sunlight streaming through a Venetian blind. Once the light has caused the exposed areas of photoresist to harden, a solvent bath washes away the still-soft unexposed photoresist, leaving behind a pattern that replicates the holes in the mask. Next, an acid (or other etching material that does not attack the photoresist) eats away the unprotected areas, after which the hardened photoresist is removed by yet another solvent (which dissolves photoresist but does not attack the material beneath it). As a result, the remaining material in the etched layer matches the pattern cutout of the mask. Creating an integrated circuit on a blank slab of semiconduc-tor involves several repetitions of this photolithographic process—separated from each other by the growth of new layers of material on the surface in order to construct semiconductor "sandwiches" and interconnecting strips of metallic conduc-tors. Each of these materials can be applied by a variety of methods, such as electroplating, wetting the surface with a thin coat of molten material, or even "spray-painting." In each case the undesired material is etched away, and the process is re-peated for the next layer. Creating an integrated circuit on a blank slab of semiconductor material involves several repetitions of this photolithographic process—separated from each other by the growth of new layers of material on the surface in order to construct semiconductor "sandwiches" and interconnecting strips of metallic conductors.

Photography - Origins

- Louis Daguerre – invented daguerreotype
  - Daguerre was a panorama painter and theatrical designer
  - Announced the daguerreotype system in 1839
- Daguerreotype – a photograph in which the image is exposed onto a silver mirror coated with silver halide particles
  - The first commercially practical photographic process
    - Exposures of 15 minutes initially but later shortened
  - The polaroid of its day – capable of only a single image

daguerreotype - This was an early type of photograph in which the image is exposed directly onto a mirror-polished surface of silver bearing a coating of silver halide particles deposited by iodine vapor. In later developments bromine and chlorine vapors were also used, resulting in shorter exposure times. Exposure to a scene or image through a focusing lens formed a latent image. The latent image was made visible, or "developed", by placing the exposed plate over a slightly heated (about 75°C) cup of mercury. The daguerreotype is a negative image, but the mirrored surface of the metal plate reflects the image and makes it appear positive in the proper light. Thus, daguerreotype is a direct photographic process without the capacity for duplication.

While the daguerreotype was not the first photographic process to be invented, earlier processes required hours for successful exposure, which made daguerreotype the first commercially viable photographic process and the first to permanently record and fix an image with exposure time compatible with portrait photography. The daguerreotype, although stunningly beautiful, was rarely used by photographers after 1860, and had died as a commercial process by 1865.

Photography – Origins

- William Henry Fox Talbot – invented the calotype or talbotype
  - Calotype was a photographic system that:
    - Used salted paper coated with silver iodide or silver chloride that was developed with gallic acid and fixed with potassium bromide
    - Produced both a photographic negative and any desired number of positive prints

Photography – Origins

- Wet Collodion Process - 1
  - Invented in 1850 by Frederick Scott Archer and Gustave Le Grey
  - Wet plate process that required the photographer to coat the glass plate, expose it, and develop it within 10 minutes
  - Required a portable photographic studio
  - Created a glass negative from which any number of positive paper prints could be made

Wet collodion process – In this process, bromide, iodide or chloride salts were dissolved in a collodion mixture that was poured onto a cleaned glass plate, and allowed to sit for a few seconds. The plate was then placed into a solution of silver nitrate and water, which would convert the iodide, bromide or chloride salts to silver iodide, bromide or chloride, respectively. Once this reaction was complete, the plate was removed from the silver nitrate solution, and exposed in a camera while still wet. It was developed with a solution of iron sulfate, acetic acid and alcohol in water

Photography – Origins

- Wet Collodion Process -2
  - It was a relatively inexpensive process in comparison with the daguerreotype
  - Produced better positive prints than Talbot's paper calotype negatives
  - Reduced exposure time to seconds
  - Matthew Brady used this process
  - Dominated photography until the invention of dry photographic plates and roll film

Photography – Origins

- The wet collodion process was used with other supports as well as glass plates
  - Tintypes used metal
  - Ambrotypes used glass plates coated with a black varnish on one side to produce a positive photographic image
    - Wet collodion version of the daguerreotype

Photography

- George Eastman
  - Developed a practical photographic process that used dry plates coated with a gelatin emulsion that contained silver bromide
  - Developed a coating machine to produce uniform quality gelatin emulsion dry plates
  - Invented photographic roll film
  - Invented a camera that used the roll film he developed
  - Introduced the Kodak Brownie camera for $1

Kodak camera - In 1888, started selling the Kodak camera for $25 -- the first celluloid roll film camera and the first camera an amateur could operate. When the camera operator shot the 100-picture roll, he returned the camera to Kodak for processing of the film and mounting of the finished prints and received the camera back loaded with a new roll of film. The photographer had only to point the camera at the subject and 'push the button.' When he had exposed all the film, he had only to return the camera to the factory where for $10, the film was removed, processed, and reloaded with a fresh roll of film. By late summer 1888, the demand for cameras and film astounded even the usually unexcitable Eastman.

Kodak Brownie - In 1900, Kodak came out with the Brownie, costing $1.00 and made especially for children. !! "Cheap cameras and inexpensive film meant that for the first time, ordinary people in considerable numbers had the means to make their own pictures."

What Eastman accomplished - Thanks to Eastman, anyone who wanted photographs could press the button on a simple hand-held camera, remove the exposed film from the camera and mail it to either Eastman Kodak or a local photographer, and in a few days obtain finished prints. The change in the practice of photography from the dominance of the professional to that of the amateur revolutionized both the photographic industry and the social role of photography

Photography

- Effects of Eastman's Innovations
  - Changed photography from an endeavor practiced by a few professional photographers to an endeavor practiced by nearly everyone
  - Gelatin emulsions made possible shutter speeds as fast as 1/50th of a second
    - Made possible the news photographer and the war photographer who could now photograph people without requiring them to pose
  - Roll film made possible the development of motion pictures

Photography – Some Notes

- The photograph freezes an image of reality in time
  - While people age and things change, the photographic image does not age or change
  - Thus the photograph did for visual information and space what the manuscript and printed text did for verbal information and time
- "A picture shows us something about the world. A story tells us something about the world."

Photography – Some Notes

- The visual image depicts and organizes objects in space
- Verbal information in the form of a Narrative or Story places and organizes people and objects in time
  - This is especially true in the genres of the novel, the history, and the movie which all have a beginning or starting point, a middle, and an end
- Describing space –whether it be a landscape, a street scene, or a person's features – takes a considerable amount of words, but only one picture

The construction and reception of narrative depends on the concepts of time and causality, neither of which are essentially visual. Narrative organizes time, the visual image organizes space. When space is described in a narrative text -- as in the description of a landscape, a street, or a person's physical appearance -- the narrative qua narrative stops, because the chronological progress of the action is arrested." Visual images, however, play a significant part in our experience of literary narrative because literary narratives of any sophistication contain more than just narrative. The 19th and 20th century novel, in contrast to the absence of highly conventionalized descriptions of landscape, townscape, people's physical appearance, dress, etc. in the 18th century novel, in particular is notable for the amount of description it contains of the visible world. From Sir Walter Scott onwards, novelists became lavish in detailed descriptions of such things.

Photography – Some Notes

- Photographs imply transparency – that they don't lie, that they are a window on a part of the world
  - One reason is that the photographer does not impose himself between us and the content in the way that the artist does in a painting
- Photographs (along with MOPIC film and video) focus attention on a subject or event
  - What is photographed or recorded is seen to exist
  - What is NOT photographed or recorded is often not noticed
- Photographs, like art, however, are composed
  - What is shown in the photograph depends on several factors
  - What is not shown often can affect the context in which the photograph is interpreted
  - The caption affects perception of the content and provides vital contextual information

Transparency - As David Sless notes in his *Learning and Visual Communication,* "The mechanical basis of photography seems to deny any role to the photographer. As the early photographers described the process, it is light, not the artist, which paints the picture. This places the photographer in a subtly different role to that of other communicators. The areas of choice are different. A painter, for example, can choose a whole range of techniques of painting and he can innovate with new styles. (It is partly on the basis of style that one can distinguish between a Rembrandt, a van Gogh and a Matisse; the artist, if he chooses and has the ability, can use every stroke of his brush to mark the image with his own identity.) Realism in art was a deliberate and difficult choice to make."

Focusing attention – Photographs focus attention on the subjects and events they record, especially if the arouse the viewer's emotions. But if something happens and no one is there to photograph or record it, then often out of sight, out of mind – not only for the public at large, but also for the news media and key decision-makers.

Photographic composition – What is visible in the photograph depends on such things as the angle at which the subject(s) are shot, the distance of the photographer from the subject(s) and whether or not and to what extent he used a telescopic lens, the shutter speed and f-stop level which impact on depth of focus and whether blurring due to motion of the subject(s) occurs. Often more importantly, what the photographer decides not to include in the scene he/she photographs can affect how the viewer perceives what is seen.

Photography – Some Notes

- Caption - short text message that appears with the image and clarifies its import.
  - Identifies the subject(s) of the photograph
    - Who and/or What
  - Add vital context to a photograph
    - Who took the photo
    - When, Where, and sometimes How and Why
    - If relevant, what happened before and after the photo was shot and/or what is not in the picture
  - Can draw attention to something in the image that is not obvious, such as the presence of someone or something in the background that gives the photograph added meaning or relevance
  - Permits or facilitates retrieval of individual photographs from a large collection of photographs

Context – We have often had the experience of coming across old photos and often wondering – who are the people in the picture? Where was this taken? When was it shot? And sometimes wondering – what were they doing? Why are they wearing those clothes? One reason photos often fail to convey much information to us is precisely because the contextual who, when, where information is missing. It was present in the photographer's brain when he/she shot the pictures but that information is now lost to us unless a caption was written and is available to us.

Example of a photo where someone or something in the background gives added relevance – Photo of a large crowd in Munich patriotically cheering the announcement of German mobilization for World War I. In the crowd is a joyful Adolf Hitler.

Photography – Some Notes

- Photography has a whole host of different genres
  - Examples
    - Snapshot
    - News photograph
    - Advertisement

The same subject in each of the different genres will convey a different message and meaning to the viewer. A snapshot of a husband and wife depends on a consuming interest in this particular family, representing as it does a moment in their shared personal history. The newspaper photograph also represents a moment — but it is a public moment; the husband and wife are observed by an outsider. Something has happened to bring them under public gaze. Some incident, whatever it may have been, has catalyzed a change from the private to the public domain. That is part of the defining characteristic of photo-journalism. The advertisement is also public, but in a different sense. The advertising photograph is the product of a stage-managed 'event' It is a fiction. This photograph sets up very different expectations, and of all the photographs this one is in a certain sense the easiest to relate to. There is no standard of veridicality against which to judge meaning, only the standards of plausibility. The husband and wife, as a family, are simulated, idealized, flattered, but we accept this as part of the rhetorical role of advertising. In each case there is a different implied epistemological status: personal knowledge in the first, public detached knowledge in the second and plausible fiction in the third.

Photography - Newspapers

- Newspaper Photography and Photojournalism
  - In the early-1890s, it became commercially feasible to incorporate photographs in large newspaper editions. This was because of Halftone printing.
  - Halftone printing uses dots that vary in either size or spacing to create the optical illusion of a smooth tone photograph
    - Thus the halftone print of a black & white photograph that we see as containing a range of continuous tone shades of grey will consist of black and white dots that are so small that we perceive them as a continuous tone

Halftone is the reprographic technique that simulates continuous tone imagery through the use of dots, varying either in size or in spacing.[1] 'Halftone' can also be used to refer specifically to the image that is produced by this process.[1]
Where continuous tone imagery contains an infinite range of colors or greys, the halftone process reduces visual reproductions to a binary image that is printed with only one color of ink. This binary reproduction relies on a basic optical illusion—that these tiny halftone dots are blended into smooth tones by the human eye. At a microscopic level, developed black and white photographic film also consists of only two colors, and not an infinite range of continuous tones. Just as color photography evolved with the addition of filters and film layers, color printing is made possible by repeating the halftone process for each subtractive color—most commonly using what is called the 'CMYK color model.' [2] The semi-opaque property of ink allows halftone dots of different colors to create another optical effect—full-color imagery

Photography – Newspapers

- Before half-tone printing, photographs had to be transcribed into line engravings
  - This meant that newspapers and magazines had very few illustrations and virtually no photographs
- Half-tone printing led to a new brand of newspapers using halftone illustrations based on photographs in place of woodcuts based on drawings
  - Newspapers begin to employ photographers as well as (and often instead of) artists
  - Newspaper and magazine began to contain pictures and photographs

The idea of halftone printing is due to William Henry Fox Talbot. In the early 1850s, he suggested using "photographic screens or veils" in connection with a photographic intaglio [an engraving or incised figure in stone or other hard material depressed below the surface so that an impression from the design yields an image in relief. i.e. the image is sunk below the surface of the printing plate] The first truly successful commercial method was patented by Frederic Ives of Philadelphia in 1881. Although he found a way of breaking up the image into dots of varying sizes, he did not make use of a screen. In 1882, the German George Meisenbach patented a halftone process in England. He used single lined screens which were turned during exposure to produce cross-lined effects. He was the first to achieve any commercial success with relief halftones [In relief printing the areas of the matrix (plate or block) that are to show as printed are *on the original surface;* the parts of the matrix that are to be blank having been cut away, or otherwise removed. Printing the image is therefore a relatively simple matter of inking the face of the matrix and bringing it in firm contact with the paper] Shortly afterwards, Ives, this time in collaboration with Louis and Max Levy, improved the process further with the invention and commercial production of quality cross-lined screens. The relief halftone process proved almost immediately to be a success. The use of halftone blocks in popular journals became regular during the early 1890s

Photography – Effects

- Effects of Photography:
  - Along with color lithography and halftone printing, it allowed the cheap reproduction of all kinds of images
    - Any photograph or any painting could now be readily converted into an attractive half-tone illustration. This was a boon to advertisers, businesses, and home decorators
  - Changed the concept of what constituted Art
    - Art was no longer an imitation of external objects; it was now the external manifestation of the artist's self-expressive creativity

Lithography – In this printing method, a smooth limestone or metal plate is coated with oil, fat, or gum arabic to divide the plate into hydrophobic regions which accept the ink and hydrophilic regions which reject it and thus become the background. Invented by Bavarian author Alois Senefelder in 1796, it can be used to print text or artwork onto paper or another suitable material. Most books, indeed all types of high-volume text, are now printed using offset lithography, the most common form of printing production.

Offset lithography - In offset lithography, the offset printing technique where the inked image is transferred (or "offset") from a plate to a rubber blanket, then to the printing surface is used in combination with the lithographic process, which is based on the repulsion of oil and water. The offset technique employs a flat (planographic) image carrier on which the image to be printed obtains ink from ink rollers, while the non-printing area attracts a water-based film (called "fountain solution"), keeping the non-printing areas ink-free. Ira Washington Ruble invented the first offset printing press in 1903 by accident When operating his lithographic press he noticed that if he failed to insert paper the stone plate would transfer its image onto the rubber impression cylinder. When he then placed paper into the machine it would have the image on two sides, one from the stone plate and one from the rubber impression cylinder. To Rubel's amazement, the image from the rubber impression cylinder was much clearer; the soft rubber was able to give a sharper look than the hard stone litho plate. Soon he created a machine that repeated this original "error".

New Concept of Art – As historian J.L. Talmon notes, all theories of art since Plato and Aristotle were based on the idea that the essence of art was the imitation of external objects, with due regard to the exigencies of theme, medium, and response of the audience. It was only in the 19th Century that writers began to apply the word expression to art, thinking solely of the artist's need for self-expression. To create was not to represent and describe, but to press out something from within

Photography – Effects

- Effects of Photography – 2
  - Pushed pictorial art into depictions that were impressionistic, abstract, and non-representational
  - Created a new art form – the photograph
  - Along with offset color lithography, helped make artist-signed lithographic copies of his original work a major element in both the art market and the modern art museum

Pushing art into non-representational forms - Photography was both a new art form for representing symbols and a major impact on traditional art. The effectiveness of the camera in reproducing images of the real or natural world made it seem superfluous for painting to pursue this task. The painter or sculptor was no longer called upon to illustrate scenes from life or the human face or body -- photographs could do it better and far more cheaply and rapidly than the artist. Thus, artists -- unless they were commercial illustrators -- felt increasingly impelled to make their mark by depicting a non-representational abstract world. Thus, we got the French Impressionists, the Cubists, the Abstract Expressionists, and the other types of modern art that often puzzle and irritate those of us who identify pictorial art (painting, sculpture, illustrations, etc) with the traditional concept that art should imitate external objects.

Photography – Effects

- Effects of Photography – 3
  - Became a major tool of news reporting (including war reporting), crime investigation, and scientific research
  - Led to the tabloid newspaper
  - Along with the telegraph and the railroad, the photograph created the 'star' and the celebrity
  - Turned the world into a "museum of known objects"

Reporting & investigating – The camera and the photographs it took became a major feature of news reporting. It now became mandatory that public events be photographed by newspaper and news magazine photographers. In 1861, only one photographer was present at Lincoln's inauguration and he had to be content with a peripheral vantage point. In 1901, a large platform is expressly built to give a whole battalion of press photographers an optimal viewpoint. Concerning crime, it became standard procedure for police to photograph the crime scene and take mug shots of all individuals arrested by them. Scientific researchers were quick to apply photography to the microscope to photograph bacteria and other microscopic life forms and to the telescope to photograph the stars. When combined with the spectroscope, telescopic photography enabled astronomers to make major advances in knowledge – e.g. that the universe is expanding and that Cepheid variable stars can be used as standard candles with which to measure the distances to astronomical objects – Since Cepheids vary in their brightness period according to the stars' intrinsic brightness, all one has to do is compare the observed brightness with the intrinsic brightness and then calculate how far away the observed object is. It was this that enabled astronomers to find out that there are galaxies other than our Milky Way.
Tabloid newspaper - The tabloids, starting with the *New York Daily News* in June 1919, were based on the realization that pictures packed more wallop than textual news -- 'The story that is told by a picture can be grasped initially **…,**" according to *Chicago Tribune* publisher Joseph Medill Patterson. According to editor Philip Payne of the *New York Daily Mirror,* 'Pictures are the very essence of tabloidism.'
Stars and celebrities - "*The stars could not be in all places at all times, but suddenly their images could. As the technology of photography and photographic reproduction advanced, they were swiftly put to the purpose of disseminating stars' pictures, particularly of their faces.* Photographs of baseball players and other sports figures were circulated widely in the 1880s and 1890s. Pictures of stage performers, especially actresses like Maude Adams and Ethel Barrymore, came into vogue at the same time.
Known objects – In the words of Marshall McLuhan in *Understanding Media*, "[With photography and video] the world itself becomes sort of a museum of objects that have been encountered before … the tourist who arrives at the Leaning Tower of Pisa or the

Typewriter

- Invented by Christopher Sholes
  - Christopher Sholes:
    - Developed a workable typewriter in 1867,
    - Drew in some co-inventors to improve the device
    - Found a manufacturer in small-arms maker Remington
  - 1874 – First Remington typewriter
  - 1876 - Exhibited at the 1876 Centennial Exposition in Philadelphia
  - 1878 - Remington Model 2 typewriter – the manual typewriter as we remember it

Christopher Sholes - Christopher L. Sholes, a Milwaukee newspaperman, poet, and part-time inventor, was the main creator of this machine. The Sholes & Glidden typed only in capital letters, and it introduced the QWERTY keyboard, which is very much with us today. The keyboard was probably designed to separate frequently-used pairs of typebars so that the typebars would not clash and get stuck at the printing point. The S&G was a decorative machine, boasting painted flowers and decals. It looked rather like a sewing machine, as it was manufactured by the sewing machine department of the Remington arms company. The initial Sholes-Glidden-Soule design was inelegant. Users could not see their work as they typed. Typebars clashed frequently, having to be untangled. *{The need to prevent tangling of type bars led to the relatively inefficient QWERTY keyboard}* . Initially, the machine was limited to a single typeface. !! Nevertheless, the Sholes design triumphed for two major reasons. First, it could be steadily improved. Second, Sholes' associate, James Densmore found both a market for the typewriter in court reporters and a manufacturer -- the Remington Arms Company -- that was both looking for a product to manufacture and which had expert mechanics who were experienced in the advanced machine shop practice developed at the national armories.

Model 2 typewriter – Unlike the Model 1, the Model 2 allowed the typist to see what he/she typed. It It had a carriage return lever on the machine itself and a shift mechanism to allow for printing both capital and lower case letters. By 1882, typewriter sales reached 2,300 a year; by 1892 -- 25,000 a year. By 1886, Remington and other typewriter manufacturers were selling 50,000 typewriters a year. By 1895, the Federal Government had 1,990 typewriters in use -- 80% Remington models

Typewriter

- Initially marketed to authors, lawyers, clergymen, and court reporters
  - Court reporters were the first major adopters of the typewriter
- Businessmen saw its commercial potential to speed up correspondence
  - The typewriter found large-scale popularity in the business office, then spread to government, and finally to individual authors and students

Business use of typewriter - As Frank H. Palmer noted in 1892, "With one of these machines, a businessman can dictate with ease, and his clerk can neatly print, 60 business letters in a day. It has been demonstrated by many tests that the typewriter, as compared with the pen, saves 40 minutes an hour, or five hours and 20 minutes in a business day. If 'time is money,' it is easy to calculate what kind of bargain one makes in purchasing one of these labor-saving machines."

Authors & students - The typewriter found its initial niche in the business office. It later spread to government offices and then to individual writers and students -- both of whom found that publishing houses and professors found it easier to read (and thus favored) typewritten as opposed to handwritten manuscripts. The typewriter remained an office fixture until the emergence of the personal computer/the computer printer/word processing software at which point it became relegated to the storeroom or unused desk for which it was used only to fill in forms and type in labels. When form-filling and labeling software became common, the typewriter vanished.

Typewriter

- Effects of the Typewriter
  - Created a demand for typists and stenographers
    - Feminized the clerical work force
      - Impacted upon female fashion
      - This opened up a new niche for women, but also confined them to a subservient status
  - Led people to start composing documents on the typewriter
  - Led to the photographic print with typed caption
    - Affected how photographs were stored and indexed

Women in the clerical work force - Since women were considered to have more nimble fingers and bertter memories than men, the typewriter opened up the formerly all-male office to women secretaries, stenographers, and clerk-typists. In 1870, 4.5% of clerks and stenographers were female. In 1930, 91.8% of typists and stenographers were female.
Female fashion – In the words of Marshall McLuhan, “The uniform ranks of fashionable female typists made possible a revolution in the garment industry What she wore, every farmer's daughter wanted to wear, for the typist was a popular figure of enterprise and skill. She was a style-maker who was also eager to follow styles.” This was especially the case after Charles Gibson produced his famous illustrations of the Gibson Girls whose “ready-to-wear” clothes (which consisted of a blouse, called a shirt-waist and a skirt which were purchased separately) other women wanted to wear.
Female subservience – G.K. Chesterton pointed out both the new niche and the fact of female subservience in his famous comment - "women refused to be dictated to and went out and became stenographers."

Typewriter

- Effects of the Typewriter – 2
  - Revolutionized the Office
    - Produced text that was more legible than handwriting
    - With carbon paper, produced multiple copies of the same document
      - Revolutionized office filing
      - Multiplied the quantity of office records
      - Created the typewritten form
    - Changed the furniture of the office
    - Divided correspondence into official (typed) and personal (handwritten)

The typewriter along with carbon paper revolutionized the office and office filing. It had the advantage of producing text that was more legible than almost all forms of handwriting and could, with carbon paper, produce multiple copies of the same document.

Office filing - Instead of incoming correspondence bound with red tape and copy or letter press books of outgoing correspondence, the typewriter made possible case files that combined all documents relating to a particular case, transaction, event, or person in which original incoming documents and carbon copies of outgoing documents were all interfiled -- case files that were easily retrievable by resort to typed index cards. Prior to the case file or project file, the typical office would have a file of incoming correspondence that was usually filed chronologically or alphabetically and a separate file of hand-copied or letterpress copies of outgoing correspondence together with an index book that listed the name & date of all incoming correspondence and the number or date of the related outgoing correspondence. In addition, the typewriter could easily be used to type data into forms to create uniform-type data for many types of transactions.

Records – One consequence of the typewriter and the case file was the proliferation of records, especially as carbon copies of outgoing correspondence were often circulated to higher levels or other offices dealing with the same subject. To take the Federal Government as an example, the Federal Government from 1774 to 1861 accumulated 100,000 cubic feet of records. From 1861 to 1916, it accumulated 1, 600,000 cubic feet of records.

Office furniture - To accommodate the typewriter, office furniture was changed -- the roll top desk with its pigeonholes gave way to the tabletop desk with underlying drawers. Along with the telephone (women were considered to have more pleasant voices and thus considered to be ideal telephone answerers and screeners), the typewriter opened up the formerly all-male office to women secretaries, stenographers, and clerk-typists. It also led to a division of correspondence into business or official (which was typed) and personal (which was still handwritten. Combined with the telegraph and later the telephone in the form of the teletypewriter and later the fax machine, it speeded up communication of messages

Movies

- Origins of Motion Pictures
  - Thomas Edison devised a kinetoscope that cast separate still photos on a screen one after the other so rapidly that the pictures seemed to be moving
    - Used the celluloid roll film produced by George Eastman in an endless loop
    - It was designed for its film to be viewed individually through the window of a cabinet housing its components

Edison' kinetoscope – Edison's kinetoscope was a device for viewing through a magnifying lens a sequence of pictures on an endless band of film moved continuously over a light source and a rapidly rotating shutter that creates an illusion of motion. It was designed for films to be viewed individually through the window of a cabinet housing its components. The first public showings were in New York City, in Broadway kinetoscope parlors with slot machines that charged ten cents for a program lasting sixteen seconds. The subjects were violent and included lynchings, scalpings, and beheadings.

Movies

- Origins of Motion Pictures
  - Thomas Armat and Charles Francis Jenkins invented the first film projector – the Vitascope
    - The Film Projector allowed motion picture film to be shown in a dark room to moderately large audience
      - This became the standard method by which people viewed motion pictures
    - The kinetoscope with its individual viewing largely survived not in theaters but in establishments that catered to persons interested in porn

Large screen - The transformation of these hole-in-the-corner affairs into large-screen exposures was the work, not of Edison, but of little-known inventor and realtor Thomas Armat of Washington. Edison's backers knew that the new invention would have more appeal to the public if it carried Edison's name. Accordingly, when the Amazing Vitascope was shown to the press on April 3, 1896, it was described as "Thomas A. Edison's latest marvel." Armat was initially quite content to forgo the credit and take the cash. This prototype of modern film projectors cast images onto a wall or screen for a moderately large audience. A renegade Edison associate, William Dickson, developed a camera taking pictures eight times larger than Edison's. He filmed the *Empire State Express,* and, when his show opened at Hammerstein's Theater on October 12., 1896, the sight of the great train hurtling along was so realistic that the alarmed audience stampeded for the exits

Movies

- Motion pictures create the illusion of continuous motion through:
  - The persistence of vision – the brain retains images cast upon the retina for 1/20th to 1/5th of a second beyond their removal from the field of vision
  - The Phi phenomena – that which causes us to see the individual blades of a rotating fan as a unitary circular form
- Because of persistence of vision, we do not see the dark interface areas of a projection print as it moves through the projector

Motion pictures or the illusion of continuous motion are dependent on:
•The persistence of vision (a characteristic of human perception whereby the brain retains images cast upon the retina of the eye for approximately 1/20th to 1/5th of a second beyond their actual removal from the field of vision), and
•The Phi phenomena (the phenomenon which causes us to see the individual blades of a rotating fan as a unitary circular form or the different colors of a spinning color wheel as a single homogeneous color)

Persistence of vision prevents us from seeing the dark interface areas of a projection print and the phi phenomenon or “stroboscopic effect” creates apparent movement from frame to frame.

Movies

- Edison and other earlier pioneers such as the Lumiere brothers saw motion pictures as a documentary medium
  - They filmed actual scenes or events, recording noteworthy persons, scenes, and events
- George Meliès was the first to see that editing could manipulate time and space to make the MOPIC film a narrative or storytelling medium
  - Meliès originated the fade-in, fade-out, dissolve, and stop-motion shot, multiple exposure, and time-lapse shots
  - His most famous film was *A Trip to the Moon*

Melies - In 1902 he produced the influential 30-scene narrative *Le Voyage dans la lune* (*A Trip to the Moon*). Adapted from a novel by Jules Verne, it was nearly one reel in length (about 825 feet [251 metres], or 14 minutes). It was the first film to achieve international distribution (mainly through piracy), *Le Voyage dans la lune* was an enormous popular success. It helped to make Star Film one of the world's largest producers (an American branch was opened in 1903) and to establish the fiction film as the cinema's mainstream product. In both respects Méliès dethroned the Lumières' cinema of actuality. Despite his innovations, Méliès's productions remained essentially filmed stage plays. He conceived them quite literally as successions of living pictures or, as he termed them, "artificially arranged scenes." From his earliest trick films through his last successful fantasy, *La Conquête du pole* ("The Conquest of the Pole," 1912), Méliès treated the frame of the film as the proscenium arch of a theatre stage, never once moving his camera or changing its position within a scene.

Movies

- Edwin S. Porter in *The Great Train Robbery* originated the idea of combining stock footage from the Edison archives with staged scenes to create a uniquely cinematic form – a fiction constructed from recordings of empirically real events and the use of intercuts to depict parallel actions.
- D.W. Griffith in *Birth of a Nation* pioneered the full-length feature film and was the first to make use of the close-up, cutaways, parallel action shots, and the re-creation of historical events

Porter - The major problem for early filmmakers was the establishment of temporal continuity from one shot to the next. Porter's *The Great Train Robbery* (1903) is widely acknowledged to be the first narrative film to achieve such continuity of action. Comprised of 14 separate shots of noncontinuous, nonoverlapping action, the film contains an early example of parallel editing, two credible back, or rear, projections (the projection from the rear of previously filmed action or scenery onto a translucent screen to provide the background for new action filmed in front of the screen), two camera pans, and several shots composed diagonally and staged in depth—a major departure from the frontally composed, theatrical staging of Méliès. The industry's first spectacular box-office success, *The Great Train Robbery* is credited with establishing the realistic narrative, as opposed to Méliès-style fantasy, as the commercial cinema's dominant form. The film's popularity encouraged investors and led to the establishment of the first permanent film theatres, or nickelodeons, across the country. Running about 12 minutes, it also helped to boost standard film length toward one reel, or 1,000 feet (305 metres [about 16 minutes at the average silent speed])

Movies

- *Birth of a Nation* did the following:
  - Created the historical epic as a film genre
  - Established the motion picture as an artistic medium and inspired subsequent directors and filmmakers
  - Distorted history by providing a militantly white-supremacist perspective on the Civil War, Reconstruction, and African-Americans
    - Filled with factual distortions and racist stereotypes
    - Led to the origin and growth of the Ku Klux Klan

Moving images are as powerful as photos, if not more so. Like photographs, they appeal to emotion and can be read in competing ways. Yet moving images change so rapidly and so often that they arrest our attention and task the brain's ability to absorb what we are seeing. They are becoming a ubiquitous presence in public and private life—so much so that Camille Paglia, an astute critic of images, has called our world "a media starscape of explosive but evanescent images."

Movies - Emergence of Hollywood

- Prior to WWI, France and Italy regularly surpassed the U.S. in film exports
- WWI shut down the European film industry as celluloid film production was diverted to the production of explosives
- Hollywood emerged as the center of U.S. film production for two reasons
  - Sunny California climate
  - Lower wage rates in non-unionized LA
  - Desire of independent film producers to get away from the Motion Picture Patents Company

Pre-WWI film industry - Hollywood's ascendancy to domination of movie-making was not preordained. Before World War I, both the French and the Italian movie industries regularly surpassed the U.S. in film exports

WWI and European film - WWI destroyed the ability of European cinema to compete commercially with Hollywood. British, French, and Italian production was curtailed or suspended during the war; and post-war reconstruction demands left little money to finance large-scale moviemaking.

Emergence of Hollywood - Hollywood became the epicenter of U.S. film production for two major reasons -- the temperate sunny climate which permitted outside camera shooting throughout the year and the fact that Los Angeles, as the country's principal non-unionized city, had lower wage rates than East Coast cities. (p65) [Puttnam]

Movies – Emergence of Hollywood

- Motion Picture Patents Company ("Edison Trust")
  - Formed to resolve litigation over patents
    - Charged exhibitors a uniform price per foot of film shown
    - Limited its members to one- and two-reelers
    - Made Eastman Kodak the sole source of raw film with Kodak selling only to licensed members
  - Aim was to control competition and shift profits from the distributors and exhibitors back to the producers and patent holders

Motion Picture Patents Company - By 1908 there were about 20 motion-picture production companies operating in the United States. They were constantly at war with one another over business practices and patent rights, and they had begun to fear that their fragmentation would cause them to lose control of the industry to the two new sectors of distribution and exhibition. The most powerful among them—Edison, Biograph, Vitagraph, Essanay, Kalem, Selig Polyscope, Lubin, the American branches of the French Star Film and Pathé Frères, and Kleine Optical, the largest domestic distributor of foreign films—therefore entered into a collusive trade agreement to ensure their continued dominance. On September 9, 1908, these companies formed the Motion Picture Patents Company (MPPC), pooling the 16 most significant U.S. patents for motion-picture technology and entering into an exclusive contract with the Eastman Kodak Company for the supply of raw film stock. The MPPC, also known as the "Trust," sought to control every segment of the industry and therefore set up a licensing system for assessing royalties. The use of its patents was granted only to licensed equipment manufacturers; film stock could be sold only to licensed producers; licensed producers and importers were required to fix rental prices at a minimum level and to set quotas for foreign footage to reduce competition; Patents Company films could be sold only to licensed distributors, who could lease them only to licensed exhibitors; and only licensed exhibitors had the right to use Patents Company projectors and rent company films. To solidify its control, in 1910—the same year in which motion-picture attendance in the United States rose to 26 million persons a week—the MPPC formed the General Film Company, which integrated the licensed distributors into a single corporate entity. Although it was clearly monopolistic in practice and intent, the MPPC helped to stabilize the American film industry during a period of unprecedented growth and change by standardizing exhibition practice, increasing the efficiency of distribution, and regularizing pricing in all three sectors. Its collusive nature, however, provoked a reaction that ultimately destroyed it.

Movies – Emergence of Hollywood

- Precipitated a battle with independent producers and theater exhibitors
  - Led to a lot of litigation with many independents relocating to the West Coast
  - The Independents imported films from foreign producers excluded by the trust, obtained raw film stock from abroad, and made their own pictures.
    - By 1910, they made two-thirds as many reels of film as the trust's licensed companies and served 30% of the nation's 10,000 motion picture theaters.

Distributors & Exhibitors React - In a sense, the MPPC's ironclad efforts to eliminate competition merely fostered it. Almost from the outset there was widespread resistance to the Patents Company on the part of independent distributors (numbering 10 or more in early 1909) and exhibitors (estimated at 2,000 to 2,500); and in January 1909 they formed their own trade association, the Independent Film Protective Association—reorganized that fall as the National Independent Moving Picture Alliance—to provide financial and legal support against the Trust. A more effective and powerful anti-Trust organization was the Motion Picture Distributing and Sales Company, which began operation in May 1910 (three weeks after the inception of General Film) and which eventually came to serve 47 exchanges in 27 cities.

Movies – Emergence of Hollywood

- Edison Trust failed for two basic reasons:
  - It lost an anti-trust suit
  - It made some erroneous decisions and assumptions
    - Setting a uniform price per foot of film eliminated any incentive to invest in elaborate and costly productions
    - Limiting films to one- or two-reelers prevented trust producers from making "feature films" that appealed to upscale audiences
    - Trust members refused to publicize their stars

Anti-Trust Suit - In August 1912, the U.S. Justice Department brought suit against the MPPC for "restraint of trade" in violation of the Sherman Antitrust Act. Delayed by countersuits and by World War I, the government's case was eventually won and the MPPC formally dissolved in 1918.

Feature Films - The multiple-reel film—which came to be called a "feature," in the vaudevillian sense of a headline attraction—achieved general acceptance with the smashing success of Louis Mercanton's three-and-one-half-reel *La Reine Elisabeth* (*Queen Elizabeth*, 1912), which starred Sarah Bernhardt and was imported by Zukor (who founded the independent Famous Players production company with its profits). In 1912 Enrico Guazzoni's nine-reel Italian superspectacle *Quo Vadis?* ("Whither Are You Going?") was road-shown in legitimate theatres across the country at a top admission price of one dollar, and the feature craze was on. Exhibitors quickly learned that features could command higher admission prices and longer runs; single-title packages were also cheaper and easier to advertise than programs of multiple titles. As for manufacturing, producers found that the higher expenditure for features was readily amortized by high volume sales to distributors, who in turn were eager to share in the higher admission returns from the theatres. The whole industry soon reorganized itself around the economics of the multiple-reel film, and the effects of this restructuring did much to give motion pictures their characteristic modern form.

Movies – Emergence of Hollywood

- The Feature Film revolutionized the movie industry
  - Allowed motion pictures to appeal to the middle class
    - Format was similar to that of the legitimate theater
    - Format allowed for adaptation of middle-class appealing novels and plays
  - Inspired exhibitors to replace storefronts with new movie palaces
  - Led producers to create and publicize stars in order to promote their films

Appeal of Feature Films - Feature films made motion pictures respectable for the middle class by providing a format that was analogous to that of the legitimate theatre and was suitable for the adaptation of middle-class novels and plays. This new audience had more demanding standards than the older working-class one, and producers readily increased their budgets to provide high technical quality and elaborate productions. The new viewers also had a more refined sense of comfort, which exhibitors quickly accommodated by replacing their storefronts with large, elegantly appointed new theatres in the major urban centres (one of the first was Mitchell L. Marks's 3,300-seat Strand, which opened in the Broadway district of Manhattan in 1914). Known as "dream palaces" because of the fantastic luxuriance of their interiors, these houses had to show features rather than a program of shorts to attract large audiences at premium prices. By 1916 there were more than 21,000 movie palaces in the United States. Their advent marked the end of the nickelodeon era and foretold the rise of the Hollywood studio system, which dominated urban exhibition from the 1920s to the '50s.

Star System - Borrowed from the theatre industry, this system involves the creation and management of publicity about key performers, or stars, to stimulate demand for their films. Trust company producers used this kind of publicity, but they never exploited the technique as forcefully or as imaginatively as the independents did, when in 1910 Carl Laemmle of Independent Motion Pictures (IMP) promoted Florence Lawrence into national stardom through a series of media stunts in St. Louis, Missouri. Finally, and most decisively, in August 1912 the U.S. Justice Department brought suit against the MPPC for "restraint of trade" in violation of the Sherman Antitrust Act. Delayed by countersuits and by World War I, the government's case was eventually won and the MPPC formally dissolved in 1918

Movies – Emergence of Hollywood

- Results – The independent opponents of the Trust (and Hollywood) won out
  - The independents went on to found the major Hollywooed studios:
    - William Fox (20th Century Fox)
    - Carl Laemmle (Universal Pictures)
    - Adolph Zukor (Paramount)
  - Only one of the Edison Trust companies lasted beyond 1920
    - Vitagraph – died in 1925

Movies – Emergence of Hollywood

- Reasons –
  - The Motion Picture Patents group were people who either invented, modified, or bankrolled movie hardware – cameras, projectors, etc
  - The independents were people who either ran theaters or came from fashion-conscious industries
    - They had much better awareness of what the public wanted

Movies – Why Hollywood Won Out

- Why the Movie Makers Went to Hollywood
  - Large demand for films required that film production be put on a year-round schedule
  - Slow film speeds required that most shooting take place outdoors in available light
  - Hollywood had an average 320 days of sun a year, a temperate climate, and a wide range of topography within a 60-mile radius
  - It was far removed from MPPC headquarters in New York City

High Film Demand -As a result of the nickelodeon boom, exhibitors had begun to require as many as 20 to 30 new films per week, and it became necessary to put production on a systematic year-round schedule.

Slow Film Speeds - Because most films were still shot outdoors in available light, such schedules could not be maintained in the vicinity of New York City or Chicago, where the industry had originally located itself in order to take advantage of trained theatrical labour pools.

Why Hollywood - As early as 1907, production companies, such as Selig Polyscope, began to dispatch production units to warmer climates during winter. It was soon clear that what producers required was a new industrial centre—one with warm weather, a temperate climate, a variety of scenery, and other qualities (such as access to acting talent) essential to their highly unconventional form of manufacturing. By 1915 approximately 15,000 workers were employed by the motion-picture industry in Hollywood, and more than 60 percent of American production was centred there

Movies – A Note About European Film

- Before WWI, France and Italy dominated European film production
  - Meliès had made the movie a storytelling medium
  - Ferdinand Zecca at Pathe perfected the chase film, which inspired Mack Sennett's keystone comedies
  - Louis Feuillade created the serial, starting with *Fantômas* (1913–14), *Les Vampires* (1915–16), and *Judex* (1916).
  - Louis Maggi created the first historical spectaculars with casts of thousands

Sennett's Keystone comedies focused on a visual humor of pie-throwing, auto chases, cliff-hanging, things blowing up, and last-minute rescues. His flims launched the careers of Charlie Chaplin, Harry Langdon, Fatty Arbuckle, Mabel Normand, Ben Turpin, Gloria Swanson, Carole Lombard, Wallace Beery, Marie Dressler, W.C. Fields, George Stevens, and Frank Capra.

Costume spectaculars - His nine-reel *Quo Vadis?* ("Whither Are You Going?" 1912), with its huge three-dimensional sets recreating ancient Rome and 5,000 extras, established the standard for the superspectacle and briefly conquered the world market for Italian motion pictures. Its successor, the Italia company's 12-reel *Cabiria* (1914), was even more extravagant in its historical reconstruction of the Second Punic War, from the burning of the Roman fleet at Syracuse to Hannibal crossing the Alps and the sack of Carthage. The Italian superspectacle stimulated public demand for features and influenced such important directors as Cecil B. DeMille, Ernst Lubitsch, and especially D.W. Griffith.

Movies – The Effects of WWI

- Shut down European film production
  - By the end of the war, the U.S. dominated the international film market
    - In 1919, 90% of all films screened in Europe were American
  - Allowed the American film industry to grow and prosper
    - Stimulated Allied demand for American films
      - In some cases, Allied governments financed the making of anti-German films, such as D.W. Griffith's *Hearts of the World* (1918)

Shut down European production - During the war, however, European film production virtually ceased, in part because the same chemicals used in the production of celluloid were necessary for the manufacture of gunpowder. The American cinema, meanwhile, experienced a period of unprecedented prosperity and growth. By the end of the war, it exercised nearly total control of the international market: when the Treaty of Versailles was signed in 1919, 90 percent of all films screened in Europe, Africa, and Asia were American, and the figure for South America was (and remained through the 1950s) close to 100 percent. The main exception was Germany, which had been cut off from American films from 1914 until the end of the war.

Movies – Why Hollywood Won Out

- Why Hollywood Became the Center of World Feature Film Production
  - Large domestic audience and consequently larger profits to finance productions with lavish sets and expensive stars
  - Development of the Star system
  - Studio control over distribution networks
  - Heterogeneity of the American population
  - Dependency of American films on commercial success

Factors Favoring Hollywood - The existence of a large domestic audience in the U.S. enabled American studios to recover the cost of production and make a substantial profit on a movie before they ever turned to an international market. They, then, could charge lower rental fees overseas and undersell their European rivals. In addition, the devices of block booking, the imposition of tariffs on imported foreign films, the use of the star system to create 'brand names,' and studio control over distribution networks both protected the home market against European films and created a continued demand for Hollywood films. In addition, Hollywood simply made better movies with more luxurious sets and magnetic stars.

Heterogeneity - "the heterogeneity of the American population -- its ethnic, racial, class, and regional diversity -- forced the media to experiment with messages, images, and story lines that had a broad multicultural appeal, an appeal that turned out to be equally potent for multi-ethnic audiences abroad. ... In sum, the domestic market was a laboratory for and a microcosm of the world market." Europeans, operating in much smaller markets with homogeneous populations, had much less incentive to communicate with a multicultural audience and were thus ill-equipped to compete in the international arena.

Need for commercial success – In the words Richard Pells in his *Not Like Us*, "In the United States, moviemakers and television producers had to pay attention to the audience because if they did not, their films would quickly disappear from the theaters and their shows would be cancelled within weeks. The hunger for a hit and the fear of commercial failure gave American films and television programs ... their vitality, their emotional connection with viewers ..., and their immense global popularity. Not infrequently, the effort to enthrall an audience also resulted in works that were original and provocative. In fact, markets had always served as a stimulus for art: Shakespeare cared as much as Walt Disney about box office receipts."

Movies – The Result

- Effects of WWI and the emergence of Hollywood
  - By the mid-1920s, approximately 95% of the films shown in Great Britain, 85% in the Netherlands, 70% in France, 65% in Italy, and 60% in Germany were American films
  - The beginning of the "Americanization" of first European and then World popular culture

Through movies people became familiar with American products, lifestyles, patterns of behavior, and values. The opulence of the average Hollywood film made Europeans want to drive American cars, eat American foods, smoke American cigarettes, and wear American clothes. Even worse, according to some intellectuals, Europeans were losing respect for their native cultures and traditions."

Movies – The Studios

- Paradoxically, the studio system originated in France with Charles Pathé
  - Involved actors under exclusive contract
  - Vertical integration – screenwriting, production, promotion, distribution & exhibition under one roof
  - Use of the profits of one film to fund the production of another

Charles Pathe - Charles Pathe adopted the regimented techniques of mass production to the business of film making, just as a few years later Henry Ford would apply them to the auto industry. Thus, Pathe, more than any of his American rivals, was able to guarantee a consistent supply of films. Pathe introduced the idea of employing a company of actors, anticipating the Hollywood studio system of putting leading actors and actresses under exclusive contracts. He also introduced the concept of vertical integration -- bringing the development, production, promotion, distribution, and screening of films together under one company roof. Pathe's vertical structure allowed him to minimize risks by using the profits generated by the distribution of his films to fund the production of new ones, thus spreading the risk across a number of films. "Pathe saw that in a market where the public was consistently clamoring for new films, power would inevitably accrue to anyone who could supply a consistly high output of quality product."

By 1908, Pathe's domination of world cinema was complete. He was selling twice as many films in the U.S. as all American companies put together. Pathe's success stemmed from two separate insights:

1. A recognition that the movie business had to be organized like other late-19th century mass production industries; and
2. An understanding (which eluded Edison and others) that the biggest profits lay not in manufacturing cameras, film projectors, or film stock, but in the production and distribution of movies themselves.

Movies – The Studios

- Some Notes About the Studio System
  - Reflected the ideas of Charles Pathé and Thomas Harper Ince. Ince at his studio in Inceville CA:
    - Functioned as the central authority over multiple production units, each headed by a director
    - Each director shot an assigned film according to a detailed continuity script, detailed budget, and tight schedule
    - Ince supervised the final cut

The growing industry was organized according to the studio system that, in many respects, the producer Thomas Harper Ince had developed between 1914 and 1918 at Inceville, his studio in the Santa Ynez Canyon near Hollywood. Ince functioned as the central authority over multiple production units, each headed by a director who was required to shoot an assigned film according to a detailed continuity script. Every project was carefully budgeted and tightly scheduled, and Ince himself supervised the final cut. This central producer system was the prototype for the studio system of the 1920s, and, with some modification, it prevailed as the dominant mode of Hollywood production for the next 40 years.

Movies – The Studios

- Emergence of the Hollywood Studios reflected:
  - The success of Pathe and Ince and the adoption of their approaches by American moviemakers
  - Oligopolistic success in a highly competitive industry
  - The need to finance ever increasing production costs and the conversion of theaters to sound
    - Required an ability to obtain bank loans and Wall Street investment bank financing

Hollywood Studios in the 1920s -The most powerful companies in the new film capital were the independents, who were flush with cash from their conversion to feature production. These included the Famous Players–Lasky Corporation (later Paramount Pictures, *c.* 1927), which was formed by a merger of Zukor's Famous Players Company, Jesse L. Lasky's Feature Play Company, and the Paramount distribution exchange in 1916; Universal Pictures, founded by Carl Laemmle in 1912 by merging IMP with Powers, Rex, Nestor, Champion, and Bison; Goldwyn Picture Corporation, founded in 1916 by Samuel Goldfish (later Goldwyn) and Edgar Selwyn; Metro Picture Corporation and Louis B. Mayer Pictures, founded by Louis B. Mayer in 1915 and 1917, respectively; and the Fox Film Corporation (later Twentieth Century–Fox, 1935), founded by William Fox in 1915. After World War I these companies were joined by Loew's, Inc. (parent corporation of MGM, created by the merger of Metro, Goldwyn, and Mayer companies cited above, 1924), a national exhibition chain organized by Marcus Loew and Nicholas Schenck in 1919; First National Pictures, Inc., a circuit of independent exhibitors who established their own production facilities in Burbank, California, in 1922; Warner Brothers Pictures, Inc., founded by Harry, Albert, Samuel, and Jack Warner in 1923; and Columbia Pictures, Inc., incorporated in 1924 by Harry and Jack Cohn.

Movies – The Studios

- By the mid-1930s, Hollywood was dominated by 8 studios – the Big 5 and the Little 3
  - Big 5 – Paramount, 20th Century Fox, Warner Bros, RKO, and M-G-M
  - Little 3 – Universal, Columbia, and United Artists
  - A few independents – Republic & Monogram
- This system dominated Hollywood until the early-1950s

Movies – Talking Pictures

- The idea of uniting motion pictures and sound actually began with Edison
  - Edison's associate, Dickson, synchronized Edison's kinetoscope with his phonograph & marketed the device as the Kinetophone
  - By the 1910s, producers regularly commissione orchestral scores to accompany prestigious productions and accompanied their films with cue sheets for appropriate music during the exhibition

Pictures and Sound - The idea of combining motion pictures and sound had been around since the invention of the cinema itself: Edison had commissioned the Kinetograph to provide visual images for his phonograph, and Dickson had actually synchronized the two machines in a device briefly marketed in the 1890s as the Kinetophone. Léon Gaumont's Chronophone in France and Cecil Hepworth's Vivaphone system in England employed a similar technology, and each was used to produce hundreds of synchronized shorts between 1902 and 1912. In Germany, producer-director Oskar Messter began to release all of his films with recorded musical scores as early as 1908. By the time the feature had become the dominant film form in the West, producers regularly commissioned orchestral scores to accompany prestigious productions, and virtually all films were accompanied by cue sheets suggesting appropriate musical selections for performance during exhibition.

Movies – Talking Pictures

- Actual recorded sound required amplification
  - This became possible only after Lee De Forest's invention of the audion tube – a 3-element vacuum tube - in 1907 that amplified sound and drove it through the speakers
  - Lee de Forest invented an optical sound-on-film system but had trouble selling it to the studios who saw sound as having little profit but great expense

Movies – Talking Pictures

- Lee De Forest in 1919 invented an optical sound-on-film system which he tried to market to Hollywood
- Western Electric in 1925 invented a sound-on-disc system but was likewise rebuffed by Hollywood except for Warner Bros
  - Warner Bros bought the system and the rights to sublease it
  - Initially Warner Bros used it to produce films with musical accompaniment, starting with *Don Juan* in 1926

In 1919 De Forest developed an optical sound-on-film process patented as Phonofilm, and between 1923 and 1927 he made more than 1,000 synchronized sound shorts for release to specially wired theatres. The public was widely interested in these films, but the major Hollywood producers, to whom De Forest vainly tried to sell his system, were not: they viewed "talking pictures" as an expensive novelty with little potential return. In 1925, Western Electric, , the manufacturing subsidiary of American Telephone & Telegraph Company, had perfected a sophisticated sound-on-disc system called Vitaphone, which their representatives attempted to market to Hollywood. Like De Forest, they were rebuffed by the major studios, but Warner Brothers, then a minor studio in the midst of aggressive expansion, bought both the system and the right to sublease it to other producers

Movies – Talking Pictures

- In 1927, Warner Bros released *The Jazz Singer* which included dialog as well as music. Its phenomenal success ensured the film industry's conversion to sound.
- Rather than use Warner Bros sound system, however, the other studios decided to use a sound-on-film system since this enabled images and film to be recorded simultaneously on the same film medium, insuring automatic synchronization
  - As a result of competition between Western Electric's Movietone and General Electric's Photophone competing sound-on-film systems, RCA acquired the Keith-Albee-Orpheum vaudeville circuit and merged it with Joseph P. Kennedy's Film Booking Offices of America (FBO) to form RKO Pictures

Despite Warner Brothers' obvious success with sound films, film industry leaders were not eager to lease sound equipment from a direct competitor. They banded together, and Warner Brothers was forced to give up its rights to the Vitaphone system in exchange for a share in any new royalties earned. The major film companies then wasted no time. By May 1928 virtually every studio in Hollywood, major and minor, was licensed by Western Electric's newly created marketing subsidiary, Electrical Research Products, Incorporated (ERPI), to use Western Electric equipment with the Movietone sound-on-film recording system. ERPI's monopoly did not please the Radio Corporation of America (RCA), which had tried to market a sound-on-film system that had been developed in the laboratories of its parent company, General Electric, and had been patented in 1925 as RCA Photophone. In October 1928, RCA therefore acquired the Keith-Albee-Orpheum vaudeville circuit and merged it with Joseph P. Kennedy's Film Booking Offices of America (FBO) to form RKO Radio Pictures for the express purpose of producing sound films using the Photophone system (which ultimately became the industry standard).

Movies – Talking Pictures

- Talking Pictures had some interesting consequences
  - Increased Hollywood's share of cinematic revenue
  - Meant the demise of many "Silent Era" film stars
  - Made Bank of America a major financial institution since they, unlike other banks, were willing to finance Hollywood productions
  - Led to the dominance of the studio system
  - Led to the creation of distinct genres to facilitate marketing

Increased Hollywood's share of world cinema revenue - Counterintuitively, the onset of the sound era increased Holly-wood's share of world cinematic revenue. At the time of the transi-tion, equipping the theaters with sound and making movies with sound were costly. To recoup these costs, theaters sought out high-quality, high-expenditure productions for large audiences. The small, cheap, quick film became less profitable, given the suddenly higher fixed costs of production and presentation. This shift in emphasis favored Hollywood moviemakers over their foreign competitors. Also, The talkies, by introducing issues of translation, boosted the dominant world language of English and thus benefited Holly-wood. Given the growing importance of English as a world language, and the focal importance of the United States, European countries would sooner import films from Hollywood than from each other. A multiplicity of different cultures or languages often favors the relative position of the dominant one, which becomes es-tablished as a common standard of communication

Silent Film stars - Many silent film stars who had excellent acting and pantomime skills but thick foreign accents or voices maladapted to early sound equipment never made the transition to talking movies

Bank of America - A.P. Giannini and his Bank of America was the first banker to recognize the motion picture business as a legitimate industry. By the end of the 1930s, the Bank of America had pumped about $130,000,000 in loans into Hollywood. The Bank of America handled 70 per cent of film-making loans in the United States, advancing up to 80 or 90 per cent of the cost of making productions. As the Giannini's showed that it was possible to make a lot of money by financing a maverick industry, Otto Kahn of *Kuhn, Loeb, & Company* started the flow of Wall Street investment bank money into Hollywood and he was followed by others.

Creation of distinct genres - Another method of marketing films was to offer an increasingly clear cut variety of styles. The studios began to group their productions into standard narrative forms -- westerns, musicals, gangster films, horror films, screwball comedies, war films, detective or 'who done it?' films, etc. Thus, individual movies acquired a 'brand identity' which greatly facilitated their marketing and advertising, both at home and abroad

Movies – Some Notes

- Movies initially appealed to a lower class (immigrants & working class) audience
  - Explains why we eat popcorn at the movies but not at plays or the opera
- Movie producers were quick to seek respectability
  - Luxurious movie palaces

Lower class audience - The social origins of motion pictures were a critical early influence on their path of development. Whereas newspapers and magazines had begun among the elite and evolved in a more popular direction, movies acquired a lowbrow image at an early point in their history and faced a challenge in achieving respectability. According to an 1911 study of New York City moviegoers, 72% of the audience came from the lower class, *{25% from the middle class},* and only 3% from the leisure class. By comparison, the legitimate theater audience was only 2% working class, with 51% coming from the leisure class and 47% from the middle class. {Two factors that made the movies popular with immigrants were (1) they were cheap, and (2) as a purely visual entertainment medium before 'talkies,' they could be easily understood and appreciated by immigrants whose fluency in English was limited

Popcorn at the movies - As in the theater before the middle class began enforcing its protocols of passivity, working class patrons made a display of their lack of breeding -- members of the audience would neck during performances, munch peanuts or eat fruit, talk, wander, shout at the screen. Even today, the fact that one eats popcorn at the movies and would not think of doing so at the ballet, opera, or symphony, is a demarcation between low and high culture.

Respectability – Movie studios were quick to seek to appeal to a middle class audience by upgrading the sites where movies were shown. The movie palaces brought together regular patrons of the legitimate theater who paid $2.00 per ticket to see moving pictures in their first class playhouses, vaudeville customers, and nickelodeon and neighborhood theater regulars accustomed to paying a nickel or dime to see short films. Because the movies were so entertaining and so useful, they would rapidly grow in popularity, rapidly extending their power over the middle class and ultimately leaving the working class storefronts behind for capacious and often opulent uptown theaters. In 1922, average weekly movie attendance was 40 million with an average weekly household attendance of 1.56. This continued to grow until weekly attendance peaked out at 90 million in 1948 with an average weekly household attendance of 2.22.

Movies – Some Notes

- Movies and plays were both narrative and storytelling media but they differed in that:
  - Treatment of time – movies handle flashbacks and multiple time perspectives differently and more easily
  - Close-ups – Movies permit close-ups while plays do not for most members of the audience

Time - Film treated time differently than does the stage. Flash backs, multiple time perspectives, and overlays, come across differently on the screen than they do on the stage. Both TV and film are nearer to narrative and depend much more on the episodic
Close-ups - Just as radio helped bring back inflection in speech, so film and TV recovered gesture and facial awareness -- a rich colorful language, conveying moods and emotions, happenings and characters, even thoughts, none of which could be properly packaged in words."

Movies – What Hollywood Wrought

- Movies had the following effects:
  - Constituted a lifestyle classroom on a whole host of topics – clothes, hairstyles, social attitudes, behavior, and much else
  - Provided a set of shared experiences for almost the whole population
  - Affected people's concepts of historical fact
  - Served as a purveyor of a whole host of consumer goods
    - Fostered discontent in the Third World

Movies – What Hollywood Wrought

- Movies had the following effects – 2
  - Along with the automobile, led to the Drive-in movie
  - Initially supplemented and then supplanted lecture hall and vaudeville theater audiences
  - Brought the "Star" system to full fruition
    - Led to fan magazines and fan clubs
  - Played a major role in creating the myth of the "Wild West"

Drive-in movie - Drive-ins appealed to two distinct groups -- teenagers seeking a place where they and their dates could make-out and married couples with preteen kids who wanted to see a movie without having to having to pay a babysitter. To accommodate both, drive-in theater managers would show a G-rated film or films for the kids, sometimes followed either by a more adult-oriented film for the adults after the kids had fallen asleep or by a Grade B horror flick designed to scare teenage girls into the arms of their male dates.
Supplemented and supplanted audiences – The movies converted lecture hall audiences into motion picture show fans, the same process was taking place in the nation's vaudeville theaters. Screened projected films fit perfectly into the vaudeville program as opening and closing 'dumb' acts (along with animals, pantomimes, puppets, and magic lantern slides) that were silent and thus would not be disturbed by late arrivals or early departures.
Star system – While the star system had its origins in the 19th century with theater and sports stars whose performance tours were facilitated by the railroad and telegraph/telephone and whose images were displayed on posters and photographs, the star system reached its fruition with Hollywood. After some hesitation, the studios realized that promoting stars not only sold films to audiences, but also upgraded the image of the industry. With 'stars', the movie industry could separate itself further from its peep show past (there were no stars in the penny arcades) and connect itself with the legitimate theater (which gloried in its stars). Like the stars of live theater, movie stars were larger than life. Thus, it took only a few years for the MOPIC players to ascend from anonymity to omnipresence and their own kind of notoriety. A new institution, the fan magazine, was created to better acquaint audiences with their favorite stars. By 1911, movie stars were touring local theaters to promote their films, granting regular interviews, writing articles for newspapers and fan magazines, and distributing photographs of themselves to their admirers. !! The stars were worth the money because their appearance in a film boosted receipts and added a degree of predictability to the business -- a predictability welcomed by the banks and financiers that loaned money to the studios to pay their production costs. The stars not only brought new customers into the theaters but also incorporated a movie audience scattered over thousands of sites into a unified public that not only saw its favorite pictures and stars but also talked about them, read about them, collected pictures and posters, and bought fan magazines to learn more about the stars' personal lives and loves.
Wild West myth -

Movies – What Hollywood Wrought

- Movies had the following effects – 3
  - Films made cultural production a major economic force
  - Films made commercial entertainment a center of American social life
  - As noted earlier, films constituted a major force in Americanizing world popular culture
    - As a backlash, it also led both intellectuals and traditionalists to react against aspects of American culture deemed incompatible with traditional values

Film a major economic force - According to Jeremy Rifkin of *The Age of Access, "*it was the advent of films that established cultural production as a truly significant force in the capitalist marketplace and elevated commercial entertainment to the center of American social life. With film, high and pop culture became 'consumer culture,' and cultural capitalism was born."

Entertainment a social force - Movies were *the* preeminent form of popular culture in the 1930s. Almost everyone who could afford to (and millions who could not) went to the cinema frequently through-out the decade. During the depths of the Depression in the early thirties, an average of 60 million to 75 million movie tickets were purchased each week. Although part of this remarkable figure represented repeat customers, the number itself corresponds to more than 60 percent of the entire American population. In the 1970s, movie attendance was less than 10% of the population.

Americanization – Through movies, people became familiar with American products, lifestyles, patterns of behavior, and values. It made people throughout the world want to drive American cars, eat American foods, smoke American cigarettes, and wear American clothes.

Cultural backlash – One reason the Ayatollah Khomeini referred to America as the Great Satan" was that Satin in Islamic theology was seen as the great and subtle tempter and he saw American popular culture as depicted in the movies and TV as a temptation for people to abandon traditional Islam.

Movies – What Hollywood Wrought

- Movies had the following effects – 4
  - Popularized air conditioning
    - Seeing movies in comfort on hot summer day fueled a desire for air conditioning in the home and office
  - Gave us the animated feature cartoon
    - The marriage of the newspaper comic strip with the movie gave us the animated cartoon and feature film
  - Diverted artistic talent from other endeavors to the movies
    - People who formerly composed symphonies now wrote movie scores; persons who in the past wrote novels now wrote screenplays

Air Conditioning - In 1922 Carrier engineers built the first top-down, or bypass, cooling system for Grauman's Metropolitan Theater in Los Angeles. This is generally considered to be the birthplace of theater air conditioning, although the real test came three years later at the Rivoli Theater in New York. THE AIR-CONDITIONED Rivoli Theater opened Memorial Day weekend, 1925. After the show Adolph Zukor came downstairs and approached Carrier. The movie had been silent, but the studio chief was not. "Yes," he said, "the people are going to like it."

The box-office grosses at the Rivoli during the next three months proved Zukor correct: ticket sales were up $100,000 over the previous summer -- more than the cost of installation itself. During the next five years Carrier air-conditioned over three hundred theaters around the country. Not only had he saved Hollywood from its summer doldrums but, by introducing comfort cooling to the masses, he created a demand for air conditioning that carried his own company through the Depression.

Animation - Winsor McCay, the earliest animator, created *Little Nemo in Slumberland* in 1911, and then *Gertie the Trained Dinosaur* three years later. Gertie had charm and personality aplenty, a progenitor of Barney. The development of animation began to hit its stride in 1915-16, when Mutt and Jeff films achieved popularity. By the late teens most animated cartoons were adaptations of successful comic strips: "Bringing up Father," "The Katzenjammer Kids," and "Krazy Kat." "Felix the Cat," always outwitted by a mouse, made his first appearance in 1921. Created by Otto Messmer, Felix had a very distinctive personality which made him the greatest cartoon star of the silent era. Until 1928, all animated cartoons had been derived from New York-produced comic strips. But then came an unknown named Walt Disney from California with *Steamboat Willie,* a landmark her synchronized sound with the pictures. Next came Mickey Mouse and an amazing burst of creativity for Disney that endured without a break for more than a decade. The notion that make-believe cartoon characters could talk, sing, play instruments, and move to a musical beat seemed absolutely magical. *Snow White and the Seven Dwarfs* was a landmark in