

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

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

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

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

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 $1/50^{\text{th}}$ 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

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

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

Photography – Some Notes

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

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

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

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

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

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”

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

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

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

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)

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

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

Movies

- Motion pictures create the illusion of continuous motion through:
 - The persistence of vision – the brain retains images cast upon the retina for $1/20^{\text{th}}$ to $1/5^{\text{th}}$ 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

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*

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

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

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

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

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.

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

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

Movies – Emergence of Hollywood

- Results – The independent opponents of the Trust (and Hollywood) won out
 - The independents went on to found the major Hollywood 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

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 spectacles with casts of thousands

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)

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

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

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

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

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

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 commissioned orchestral scores to accompany prestigious productions and accompanied their films with cue sheets for appropriate music during the 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

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

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

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

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

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”

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

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