Early History of Film

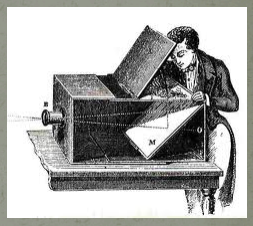
Dates, Developments, Influences

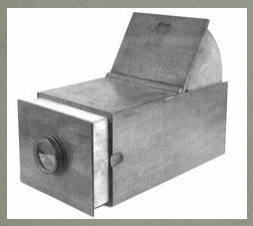
Paving the Way

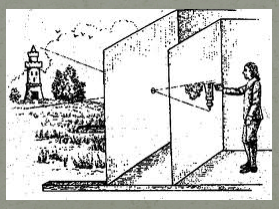
Early Influences from Optics & Photography

The Camera Obscura

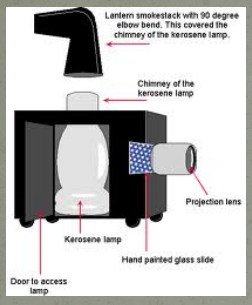
- Circa 1000 C.E.
- A box to facilitate lifelike drawing
- Later, transportable boxes were developed
- Helpful for looking at things such as eclipses … a thin opening through which images are projected against the back in reverse



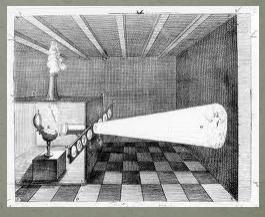




The Magic Lantern



- Invented circa 1686 and common throughout 18th and 19th centuries
- A means for protecting images (sometimes on glass) onto a wall in a darkened room
- Whereas the Camera Obscura projects inward, the Magic Lantern projects outward
- Both were beloved by magicians, charlatans, and tricksters, especially at travelling fairs



Stroboscopic Effect

- A key "discovery" by Michael Faraday – that a rapid series or progression of photographic images gives the illusion of fluid motion
- The origin of the term "motion pictures"
- Think of "thumb books" or "flip books"
- Also the origin of the so-called "frame rate," the speed at which images need to sequence in order to convince the brain that motion is occurring: 24 frames per second (actually rounded up from 23.976). Just remember 24p or 24 f/s

A Very Brief History of Photography

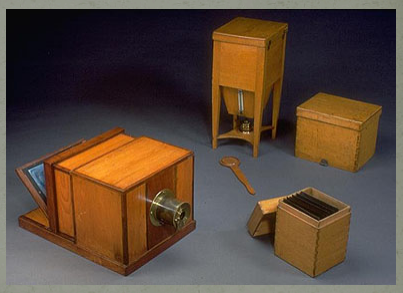
Frenchman Joseph Nicéphore Niépce produced the first photograph by using silver nitrate: the fine dust darked when exposed to a beam of light

- First photograph ever was produced by Niépce in June/July 1826
- "View from the Window at La Gras"
- Method was called "heliography" or "sun writing"
- The photograph took 8 hours of exposure time (allowing for sunlight on both sides of the building)

Niépce then shared his technique with artist and chemist Louis Jacques Mandé Daguerre, and the two became colleagues.

Daguerre & Daguerreotypes

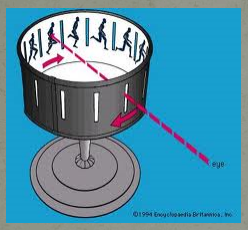
Daguerre realized that if the image was placed in a solution of quicksilver in a dark room, it wouldn't get washed out by light. Niépce died in 1833, and Daguerre continued to refine his "daguerreotypes"



Above: first daguerreotype (Jan. 1839)

Right: the Giroux Daguerreotype camera, first mass-manufactured camera

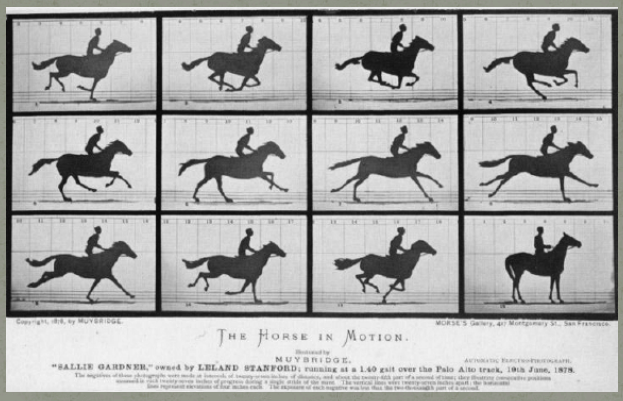
Zoetrope, the "Wonder Drum"



Strips of photos mounted on the inside of a horizontal drum which, when spun, produces the optical illusion of motion

Earliest historical reference is 180 C.E. in China; however, modern zoetrope was invented in 1834

Series Photography



To settle a bet in 1878, Eadward Muybridge set up 12 cameras, all tripped by wires. Proved that during full gallop all of a horse's legs come off the ground.

Series Photography's Legacy



"Bullet time" sequencing using green screen and dozens of cameras in "The Matrix" trilogy (Wachowski brothers, 1999-2003)



Review and Synthesis:

1. What are the differences between the following: Camera Obscura, Magic Lantern, Zoetrope?
2. What commonalities exist between ALL of these inventions, ie. what common goals and objectives did their creators have?
3. Who is best known for "series photography" and what is it?
4. What relationship exists between series photography and the Zoetrope?
5. How many frames per second is necessary to trick the brain into believing motion has occurred? What is this "effect" called?

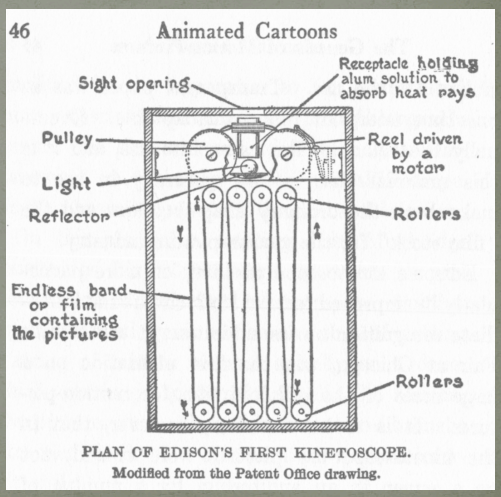
The Birth and Infancy of Film

Early Inventors and Inventions

Thomas Edison – "Kinetoscope"

- Patent Submitted 1891
- First Created 1893

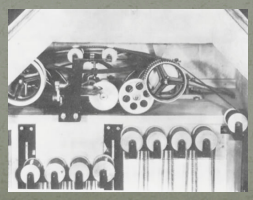
- Only one person could look at a time … invention of the peep-show, essentially



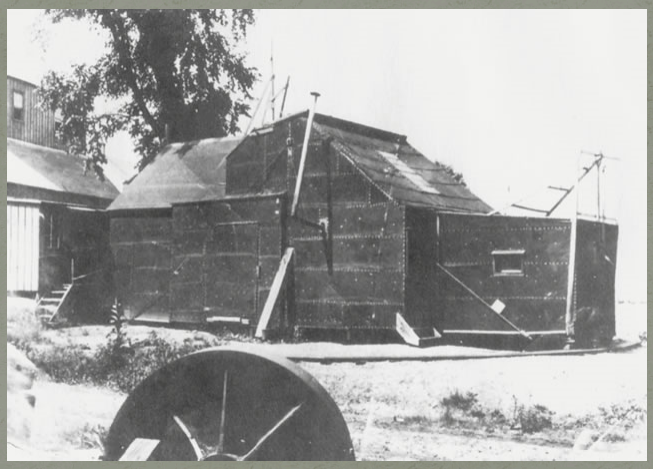
PLAN OF EDISON'S FIRST KINETOSCOPE.
Modified from the Patent Office drawing.

Thomas Edison – "Kinetoscope"

Despite the machine's "clunkiness" and inelegance, "kinetoscope parlors" sprang up to capitalize on the invention; also "penny arcades"

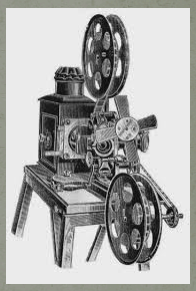


Thomas Edison – Black Maria (1895)



Sklandowsky Brothers – "Bioscope"

- Premiered "living photographs" in Berlin in 1891
- Improvements included multiple viewers, but apparatus remained clunky and awkward



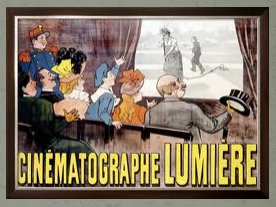
Select Images from "The Bioscopewallah" (2006, Prashant Kaddam)

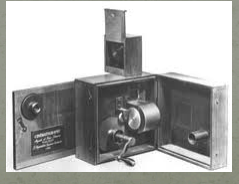




Auguste & Louis Lumière: The Cinématographe

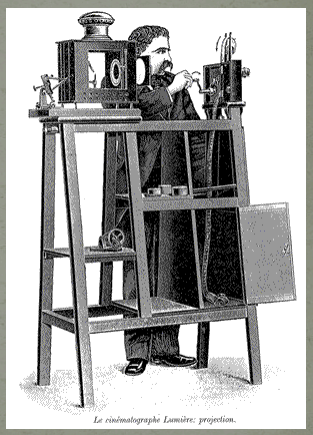
- Premiered December 28, 1895 in Paris
- Developed the Cinématographe based on Edison's designs
- Edison had pioneered using holes on the sides of film but neglected to patent his design outside of the U.S.




Cinématographe vs. Kinetoscope

- While based on Edison's designs, the Lumiere Brothers devised a method to advance the film and added a magic lantern as a light source
- Kinetoscope was heavy (100+ pounds) and required a battery source
- Cinématographe was light (16 pounds), hand-cranked, and portable
- Cinématographe was actually 3 machines in one: camera, developer, projector


Le cinématographe Lumière: projection.

Review and Synthesis:

1. What did these early inventors have in common?
2. What were their mutual goals, aims, outcomes?
3. How did their inventions forecast the future of filmmaking – even as it is conceived today?
4. What lessons can you learn from Thomas Edison?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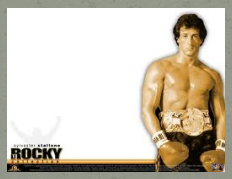
Every Force Evolves a Form

Early Films

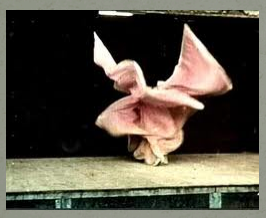
Edison Kinetoscope Films

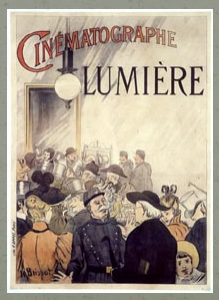
- Record of a Sneeze (January 1894) – earliest surviving copyrighted motion picture
- Sandow the Strong Man (1894) – Eugene Sandow, strongest man
- The Kiss (1896) – John C. Irwin & May Rice, first film kiss
- Interrupted Lovers (1896) – a tribute to angry dads
- Library of Congress Edison YouTube page



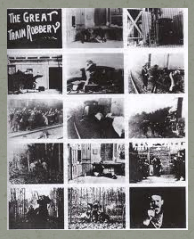
Lumière Cinématographe Films

- Arrival of a Train at La Ciotat (1895) – significance of camera angle; supposedly terrified audiences at the time
- Workers Exciting the Factory (1895) – camera angle; also early realism
- The Sprinkler Sprinkled (1896) – early comedy and farce
- Serpentine Dance (1899) – hand colored



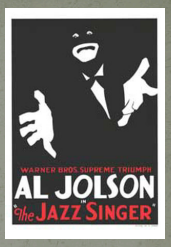


Other Early Classics



- A Trip to the Moon (George Méliès, 1902) – established science fiction as a cinematic genre. Widely famous and distributed.
- The Great Train Robbery (Edward S. Porter, 1903) – First western; helped establish the fundamental narrative grammar of film. Shot outdoor, using real horses and real risk. Also color: drawn directly on film stock.
- Nero, or the Fall of Rome (1909). The Italians introduce the film world to the Epic, using hundreds of extras and elaborate sets. In the process, they also introduce audiences to cinematic boredom.

Final Trivia



1927: Sound Film Developed

- First Sound Film: The Jazz Singer (1927)
- Starring Al Jolson, who sang 6 songs
- Heralded the decline of silent film era
- Remains a cultural icon to this day for its use of black face

1936: Color Film Refined

- Earlier Tests Performed in early 1920's
- Debate remains regarding earliest color film
- Kodak Test "Lovely Ladies" from 1922
- Most famous (but not earliest) color films are unquestionably Gone with the Wind and The Wizard of Oz (both 1939), whose shift from black and white to color amazed audiences at the time.

Review and Synthesis

1. What common elements suffuse all these early films?
2. Analyze the use of the camera: how is form evolving alongside meaning – and alongside new technology?
3. What elements of modern-day filmmaking are missing from these early films?
4. What, if any, equivalents can we find in our own time to these early experiments?

Homework

- Watch The Cabinet of Dr. Caligari (if we don't get to it in class)
- Write (~word process) one full page, double-spaced, on the following question:

  Although an old film, The Cabinet of Dr. Caligari has some surprisingly contemporary elements. Identify some things that impressed you about this early film?