

# Photography: Technologies of The Image

History of Information, August 6, 2010

# Agenda

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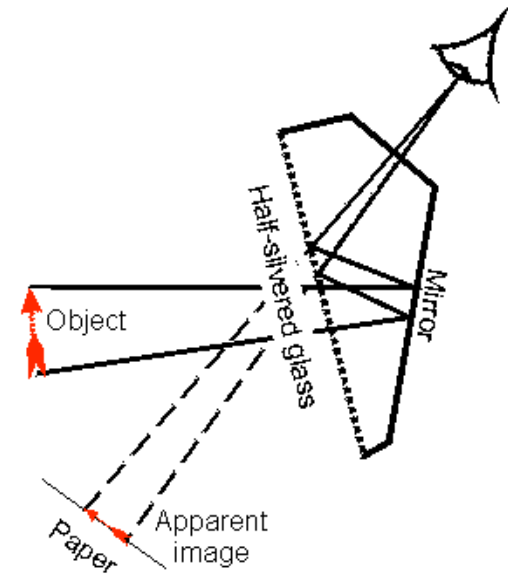
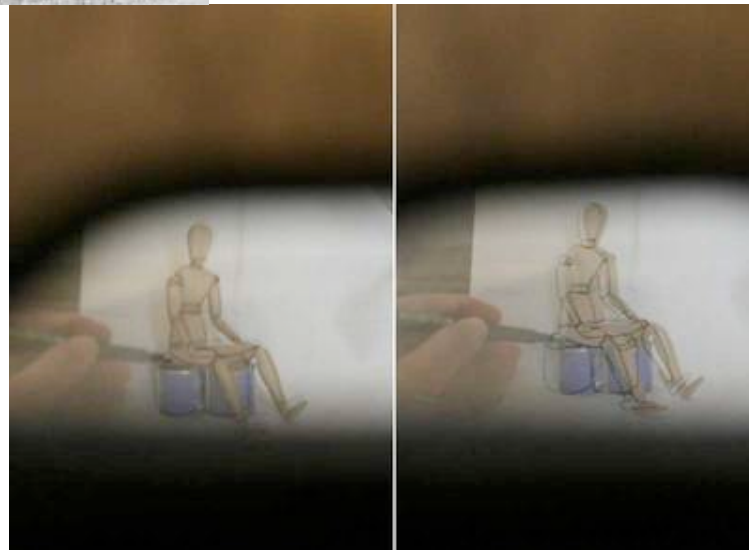
- ▶ **Administrivia**
  - ▶ ***Optional*** RR4: posted tonight, due Monday
  - ▶ All outstanding written work due by Monday
  - ▶ Unreturned work
  - ▶ Alternate Final For Preaddressed Time Conflicts
  - ▶ Today's Session Time
- ▶ **Technology of the Photograph**
- ▶ **The Photograph**



# Camera Lucida



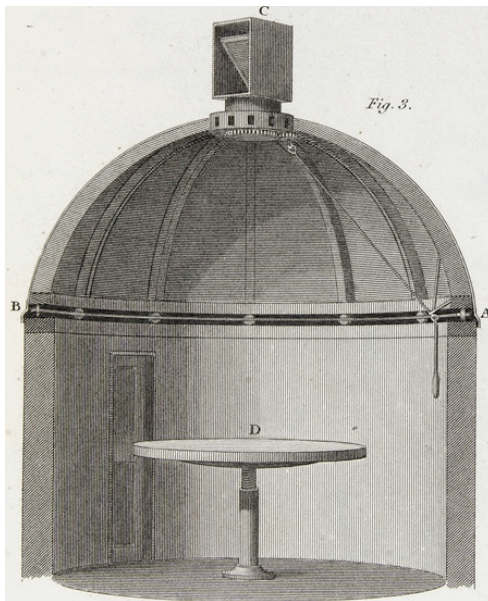
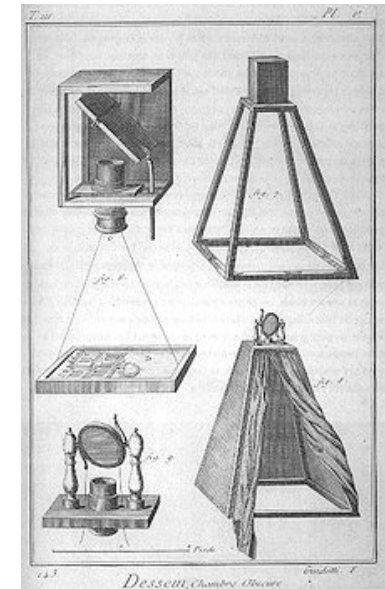
- 1807 – Patented by Wollaston
- Used as a guide for drawing
- Hockney-Falco thesis
- Still used in neuroscience, paleontology



# Camera Obscura

This instrument combines for the sociologist the advantages of the astronomical observatory and the microscopical laboratory. One sees both near and distant things. One has a wider field of view than can be enjoyed by the naked eye, and at the same time finds more beautiful landscape thrown on the table by the elimination of some of the discordant rays of light. One sees at once with the scientist's and the artist's eye.

- Charles Zueblin, *The World's First Sociological Laboratory*,  
The American Journal of Sociology, 1899



Abu 'Ali al-Ḥasan ibn al-Ḥasan ibn al-Haytham, or "Alhazan" (965 – 1039 AD)



"We did not invent this."



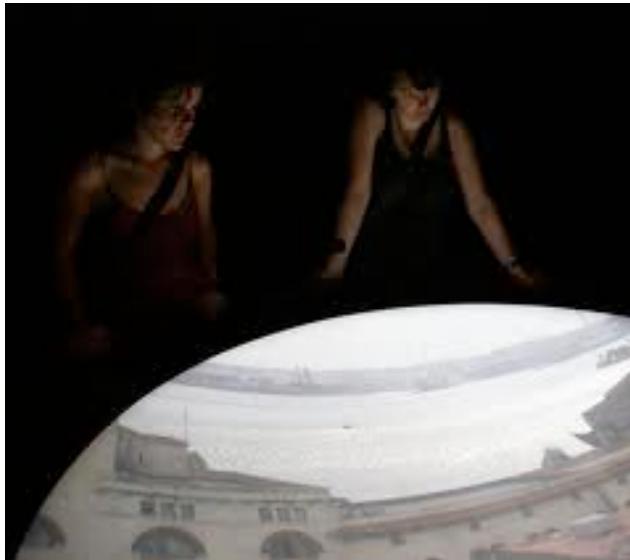
# Camera Obscura (Cont.)

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# Camera Obscura (Cont.)

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## But How To Capture The Light?

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- ▶ Mo-Ti: First mention of pinhole camera concept (472-391 BC)
- ▶ Aristotle: questions sun's ability to make circular light when shining through square hole (300 BC)
- ▶ Euclid: camera obscura as proof that light travels in straight lines (330 BC)





# Heliography

- ▶ “The objects appear with astonishing sharpness and exactitude down to the smallest details and finest gradations. As the image is almost colorless, one can judge it only by holding it at an angle, and I can tell you the effect is downright magical.” —*Joseph Nicéphore Niépce's letter to his brother, Claude. 16 September 1824.*
- ▶ Pewter/Bitumen; 8 hours' exposure
- ▶ Direct Positive
- ▶ Worked with Louis Daguerre from 1829 to his death in 1833





# Herschel

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- ▶ Sodium thiosulfate (“hypo”)
  - ▶ Arrests continuing action of light
  - ▶ Almost all subsequent photographic processes rely on this



# Daguerreotype

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- ▶ How does he improve the process?
- ▶ How is he rewarded for his innovation?



# Daguerreotype

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- ▶ Improves process with copper plates thinly coated with silver; uses mercury vapor to develop
- ▶ Very transient; had to be mounted in sealed cases or frames with glass cover
- ▶ Each one unique; could only copy by re-Daguerreotyping
- ▶ Patents process, lifelong pension, international fame



# Talbotype (Calotype)

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- ▶ Negative/Positive Technique
  - ▶ What was the significance?
- ▶ Talbot's patent experience?



# Talbotype (Calotype)

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- ▶ Negative/positive technique
  - ▶ “changed the course of photographic history, for it made possible the mass printing and publication of photographs.”
- ▶ Patented in an effort to duplicate Daguerre’s success; ultimately relinquishes it except for commercial portraiture



# Portraiture

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- ▶ 1840s: Portrait galleries are ubiquitous: fortunes to be made
- ▶ 1850s: Blanquart-Evrard improves exposure/development times
  - ▶ Prints have withstood the test of time
- ▶ What drives the adoption of the Daguerrotype in America?





# Portraiture

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- ▶ What drives the adoption of the Daguerrotype in America?
  - ▶ No license fees!



# Tintype and the Advent of Mass Images

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- ▶ New techniques continue to drive prices down and production up
- ▶ Collodion process supplants calotype and Daguerreotype
- ▶ Ferrotypes or Tintypes modifies process, using thin metal plates as medium
  - ▶ Portable and cheap



## Tintype vs. “Art”

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- ▶ While the tintype represented a step forward both in technical innovation and in the commodification of the image, how did this contrast with the behavior of those interested in developing photography as an art form?



## Tintype vs. “Art”

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- ▶ While the tintype represented a step forward both in technical innovation and in the commodification of the image, how did this contrast with the behavior of those interested in developing photography as an art form?
- ▶ They looked back
  - ▶ “Reproduction” of scenes previously captured with painting
  - ▶ Painterly effects
  - ▶ Classical allusions
  - ▶ But also “concerned with the accurate representation of fact”



# Mobility

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- ▶ **1879: dry plate invented**
  - ▶ Short exposure time makes handheld camera possible
- ▶ **1889: flexible roll film (Eastman)**
  - ▶ Makes mass commercialization of box camera feasible



# Wartime Photography

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- ▶ From the Crimean War (1853-56) to the American Civil (1861-65) War to the Russo Japanese War (1904-05) we see a complete shift in the media used to represent the war
- ▶ Illustrators lose their jobs to photographers
- ▶ Some celebrity photographers emerge





# Photojournalism

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- ▶ 1906 SF Earthquake

- ▶ Printed material

- ▶ Hysterical Headlines of Horror

- Rumors
      - Epitaphs and Paeans to the “dead City”

- ▶ Hyperbolic Headlines of Hope

- Rosy, glorified accounts of heroism
      - Triumphalist “pre-reports” of the City’s impending rebirth



- ▶ The photograph of the amateur (“the Public”?) becomes authoritative medium for information about the event, both in terms of volume and authenticity



# Seeing is Believing

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- ▶ “In the modern way of knowing, there have to be images for something to become ‘real.’ Photographs identify events. Photographs confer importance on events and make them memorable.”
  - Susan Sontag, quoted by Fradkin
- ▶ The photographic “truth”
  - ▶ The facts vs. the story



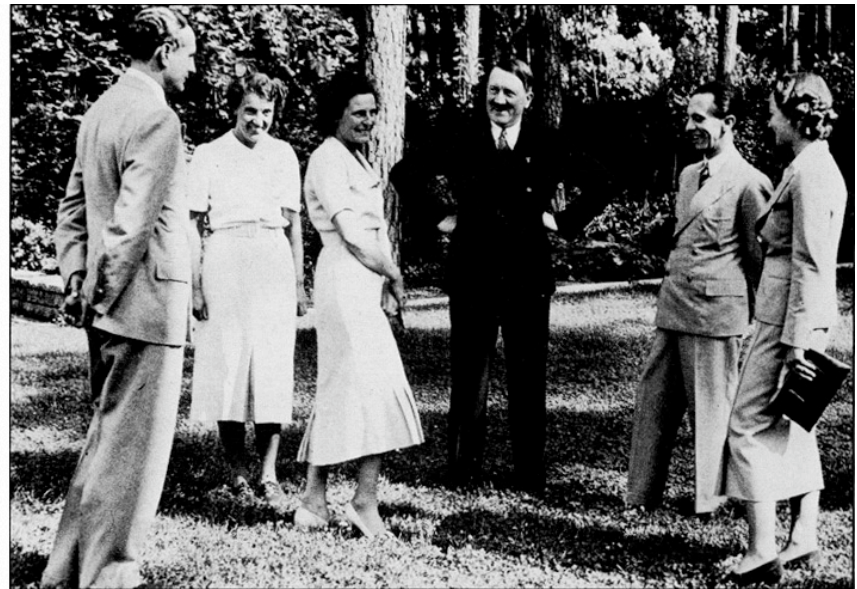
...Or Is It?

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# Manipulation

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# Manipulation



# Remixing and Mashups

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# Remixing and Mashups

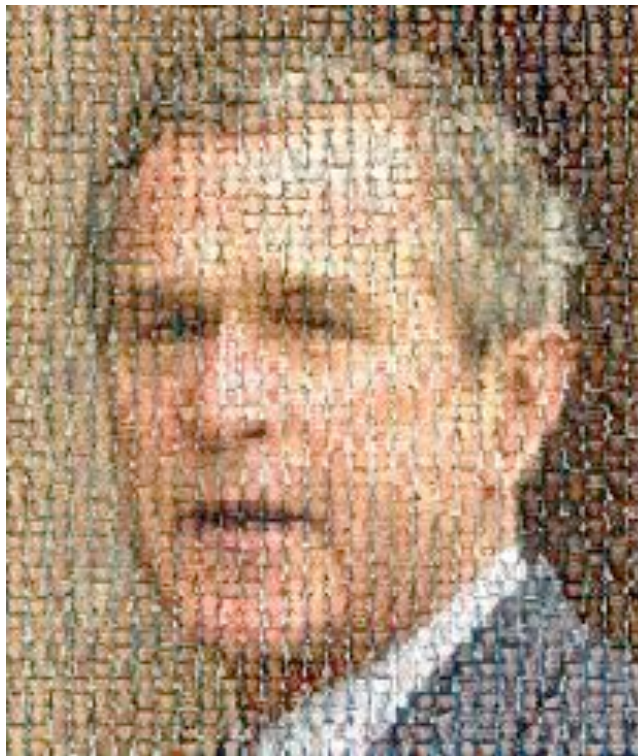
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- ▶ Have we come to accept some level of manipulation?



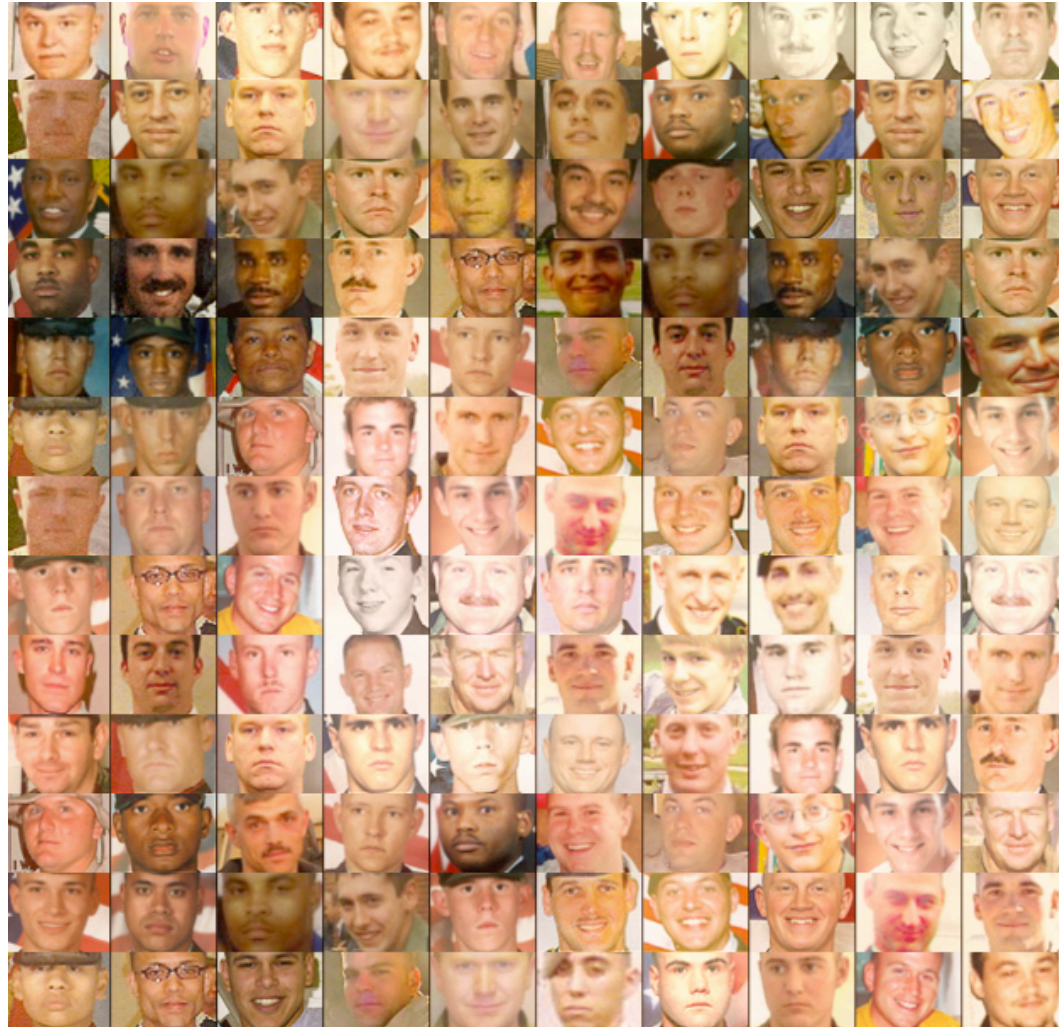
# Photomosaic

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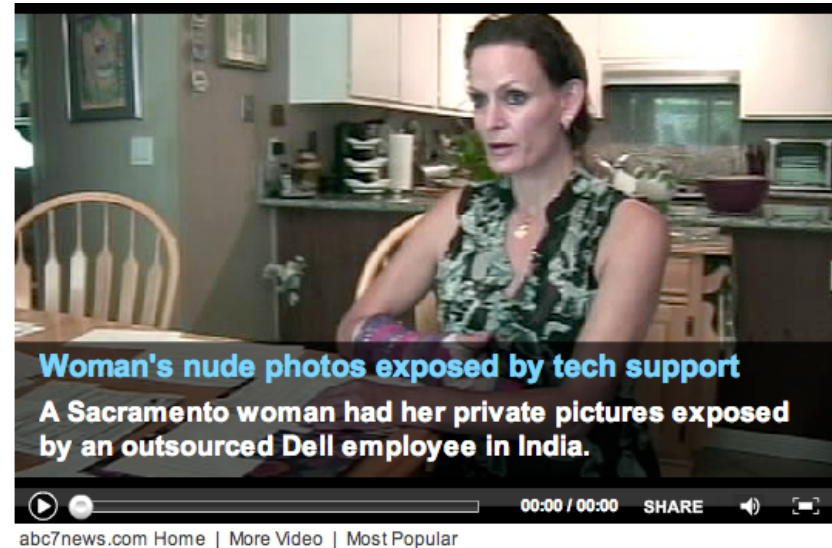
## Photomosaic (Cont.)

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# Ethereal and yet “Permanent”?

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## Are drunk Facebook photos killing your job prospects?

Natasha Lomas silicon.com | February 6, 2009 4:54 AM PST





## Or Not?

- ▶ StreetView image “removal” software
- ▶ Researchers at the University of Washington are developing a technology called Vanish that makes electronic data "self-destruct," after a specified period of time. Tadayoshi Kohno, a designer of Vanish, told me that Facebook, if it wanted to, could implement expiration dates on its own platform.



Src: <http://www.katonda.com/news/06/2010/1625>

Src: <http://www.ottawacitizen.com/technology/forgetting+Internet+remembers+everything/3345448/story.html#ixzz0vqqaJO9F>

# From Literacy to Visuality

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- ▶ “Everywhere we look, we see screens. The other day I watched clips from a movie as I pumped gas into my car. The other night I saw a movie on the backseat of a plane. We will watch anywhere. Screens playing video pop up in the most unexpected places — like A.T.M. machines and supermarket checkout lines and tiny phones; some movie fans watch entire films in between calls. These ever-present screens have created an audience for very short moving pictures, as brief as three minutes, while cheap digital creation tools have empowered a new generation of filmmakers, who are rapidly filling up those screens. We are headed toward screen ubiquity... We are now in the middle of a second Gutenberg shift — from book fluency to screen fluency, from literacy to visuality.”

- Kevin Kelly, *Becoming Screen Literate*, New York Times Magazine, 2008

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