

ARTH 4573
HISTORY OF GRAPHIC DESIGN

week 3 | section 4b - industrial revolution

Industrial Revolution

- ▶ Technically England 1760-1840
 - ▶ But overall, a radical process of social and economic change rather than a mere historical period of time

Industrial Revolution

- ▶ "Industrialization spread from Britain to other European countries, including Belgium, France and Germany, and to the United States. By the mid-19th century, industrialization was well-established throughout the western part of Europe and America's northeastern region. **By the early 20th century, the U.S. had become the world's leading industrial nation.**"

<http://www.history.com/topics/industrial-revolution>



Coal, Steam, and The Industrial Revolution: Crash Course World History #32

Industrial Revolution

- ▶ Steam Engine (1780s deployed)
- ▶ Factories
- ▶ **Iron and Steel, Sciences**
 - ▶ Sense of dominion over nature
 - ▶ Exploit earth's resources to satisfy material wants and needs

Industrial Revolution

- ▶ Agricultural rural communities move to **CITIES**
- ▶ **Social power shift**
 - ▶ **Aristocracy to capitalist manufacturer, merchants, and the working class**
 - ▶ **Wealth more evenly distributed**

Industrial Revolution

- ▶ Spiraling production cycle from new Supply and Demand:
 - ▶ Demand from rapidly growing urban population with expanding buying power
 - ▶ Stimulated technological improvements
 - ▶ Enabled mass production
 - ▶ Increased availability of products = lowered costs = even greater demand
 - ▶ Caused relentless industrial development

Industrial Revolution **EFFECTS**

- ▶ **Standard of living increased**
 - ▶ Though often overworked
 - ▶ Overall, civilization's interest shifted from human values to a preoccupation with material goods BUT ALSO
 - ▶ Also greater human equality
 - ▶ Increased public education and **literacy**
 - ▶ = **insatiable demand for mass communication**

Industrial Revolution EFFECTS

- ▶ People losing communication with nature, aesthetic experience, spiritual values
- ▶ **Handicrafts almost vanished**

Innovations in Typography

- ▶ Early 19th century saw unprecedented development of type designs
- ▶ Shifting social, economic role of type communications
- ▶ Larger scale, more impact
- ▶ *Thomas Cotterell, Robert Thorne, Vincent Figgins, Henry Caslon, Robert Besley, William Thorowgood*

**MINT
main.**

▶ **Fat-Face**

**Quousque tandem abutere,
Catilina, patientia nostra?
quandiu nos etiam furor is
te tuus eludet? quem after
CONSTANTINOPLE
£123 4567890**

▶ Robert Thorne, fat-face types, 1821 from *New Specimen of Printing Types*

**GUN
haul
RIE**

- ▶ Fat-Face
- ▶ Egyptian
- ▶ Antique

▶ <http://www.papers.com/blog/wp-content/uploads/2012/04/antique-history-egyptian.htm>

**GUN
haul
RIE**

- ▶ Fat-Face
- ▶ Egyptian
- ▶ Antique
- ▶ Slab-serif

▶ <http://www.papers.com/blog/wp-content/uploads/2012/04/antique-history-egyptian.htm>

**HER
HER
THIN**

- ▶ Fat-Face
- ▶ Egyptian
- ▶ Antique
- ▶ Slab-serif
- ▶ Tuscan

▶ Robert Thorne, fat-face types, 1821 from *New Specimen of Printing Types*

**ABCDEFGHI
IJKLMNOP
RSTUVWX.**

- ▶ Fat-Face
- ▶ Egyptian
- ▶ Antique
- ▶ Slab-serif
- ▶ Tuscan
- ▶ 3-D

▶ Vincent Figgins, 3-D Slab, 1815

MOLDER

- ▶ Fat-Face
- ▶ Egyptian
- ▶ Antique
- ▶ Slab-serif
- ▶ Tuscan
- ▶ 3-D
- ▶ Reversed

▶ William Thorowgood, Reversed Egyptian Italic, 1828

CAS

W CASLON JUNR LETTERFOUNDER

- ▶ Fat-Face
- ▶ Egyptian
- ▶ Antique
- ▶ Slab-serif
- ▶ Tuscan
- ▶ 3-D
- ▶ Reversed
- ▶ **Sans Serif**

▶ William Caslon: TC 2-Line English, Egyptian type specimen, 1816

Printing Revolution

- ▶ **Press Construction**
- ▶ Paper
- ▶ Mechanization of Typography
- ▶ Photography
- ▶ Lithography

Press Construction

- ▶ Before: Wood Type Poster (LARGE TYPE!)

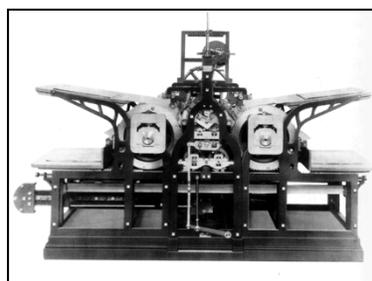


Press Construction

- ▶ Before: Wood Type Poster (LARGE TYPE!)
- ▶ **Improvements to Gutenberg's**
- ▶ Hand press stronger
- ▶ Converted to high speed factory operation
- ▶ Method of inking type by rollers instead of by hand

Press Construction

- ▶ **1815, William Cowper**
- ▶ Patent using curved stereotyped plates wrapped around a cylinder



Press Construction

- ▶ **1815, William Cowper**
- ▶ Patent using curved stereotyped plates wrapped around a cylinder
- ▶ Next, built using 4 cylinder steam-powered press using curved stereotyped plates
- ▶ *Printed 4,000 sheets per hour both sides!!!*

Printing Revolution

- ▶ Press Construction
- ▶ **Paper**
- ▶ Mechanization of Typography
- ▶ Photography
- ▶ Lithography

Paper

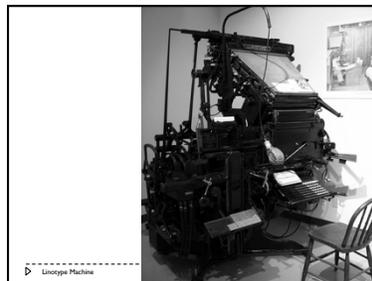
- ▶ **1803, Frogmore, England**
- ▶ Unending sheet of paper could be produced

Printing Revolution

- ▶ Press Construction
- ▶ Paper
- ▶ **Mechanization of Typography**
- ▶ Photography
- ▶ Lithography

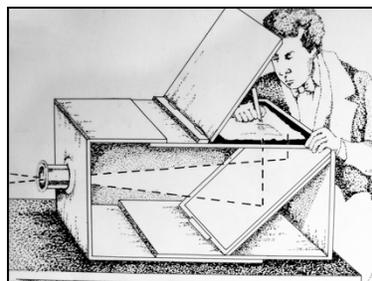
Mechanization of Typography

- ▶ Many trying to figure out automatic typesetting
- ▶ Ottmar Mergenthaler
- ▶ **LINOTYPE MACHINE**



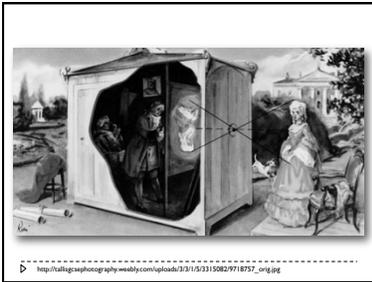
Printing Revolution

- ▶ Press Construction
- ▶ Paper
- ▶ Mechanization of Typography
- ▶ **Photography**
- ▶ Lithography



CAMERA OBSC

- ▶ Camera Obscura had existed in ancient world since Aristotle 4th century BCE.
- ▶ Darkened room or box with a small opening or lens on one side.
- ▶ Light rays passing through this aperture projected on to opposite side and form a picture of bright objects outside.
- ▶ Artists have used as aid for drawing for centuries.



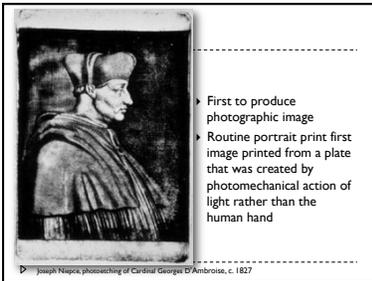
http://alltags-photography.weebly.com/uploads/3/3/1/5/3150829718757_orig.jpg

Also Camera Lucida

▶ "The camera lucida is an optical device which merges an image of a scene and the artist's hand on paper for tracing. By contrast, the camera obscura is an optical device that projects a real-time image through a small pinhole (or lens) into a darkened room."

CAMERA OBSCURA and CAMERA LUCIDA

- ▶ Camera Obscura had existed in ancient world since Aristotle 4th century BCE.
- ▶ Darkened room or box with a small opening or lens on one side.
- ▶ Light rays passing through this aperture projected on to opposite side and form a picture of bright objects outside.
- ▶ Artists have used as aid for drawing for centuries.
- ▶ **WHAT WAS MISSING?**
- ▶ **How to "fix" the image**



Joseph Niépce, photoengraving of Cardinal Georges D'Amboise, c. 1827

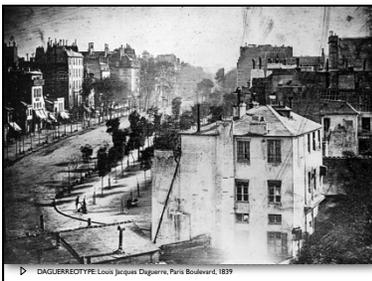
- ▶ First to produce photographic image
- ▶ Routine portrait print first image printed from a plate that was created by photomechanical action of light rather than the human hand



First photograph from nature Joseph Niépce, View from the Window at Le Gras, c. 1826



Creating "View from the Window at Le Gras"



DAGERRETYPE Louis Jacques Daguerre, Paris Boulevard 1839



Advertisement for Kodak Camera c. 1889



John M. Cameron, "St. John Herdner", 1867



Photography

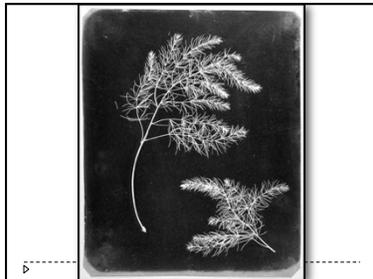
- ▶ **Photogravure**
 - ▶ "Photogravure is an intaglio printmaking or photo-mechanical process whereby a copper plate is coated with a light-sensitive gelatin tissue which had been exposed to a film positive, and then etched, resulting in a high quality intaglio print that can reproduce the detail and continuous tones of a photograph."

Photography

- ▶ **Daguerreotype prints**
 - ▶ "Daguerreotype was the first publicly announced photographic process.
 - ▶ To make a daguerreotype, the daguerreotypist would polish a sheet of silver-plated copper to a mirror finish; treat it with fumes that made its surface light-sensitive; expose it in a camera for as long as was judged to be necessary, which could be as little as a few seconds for brightly sunlit subjects or much longer with less intense lighting; make the resulting latent image on it visible by fuming it with mercury vapor; remove its sensitivity to light by liquid chemical treatment; rinse and dry it; then seal the easily marred result behind glass in a protective enclosure."

Photography

- ▶ **Photogenic Drawings**
 - ▶ "At the time of William Henry Fox Talbot's announcement, his 'art of photogenic drawing' was clearly better suited for recording the shadows of plant specimens, lace, or similar flat objects by direct contact—pictures we would now describe as photograms—than for camera images."
 - ▶ Talbot discovered that an exposure of mere seconds, leaving no visible trace on the chemically treated paper, nonetheless left a latent image that could be brought out with the application of an "exciting liquid" (essentially a solution of gallic acid). This discovery, which Talbot patented in February 1841 as the "calotype" process opened up a whole new world of possible subjects for photography."



Photography

- ▶ **1871, John Calvin Moss (New York)**
 - ▶ Commercially feasible photograving method for translating line artwork into metal letterpress plates

Photography

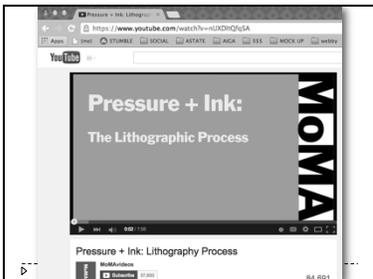
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Photography

- ▶ **1871, John Calvin Moss (New York)**
 - ▶ Commercially feasible photograving method for translating line artwork into metal letterpress plates
 - ▶ Gradual implementation of photograving cut the cost and time required to produce printing blocks
 - ▶ Achieved greater fidelity to the original
 - ▶ Eventually evolved into **halftone**

Printing Revolution

- ▶ Press Construction
- ▶ Paper
- ▶ Mechanization of Typography
- ▶ **Photography**
- ▶ **Lithography**



Lithography

- ▶ The image to be printed is neither raised nor incised
- ▶ Oil and water do not mix.

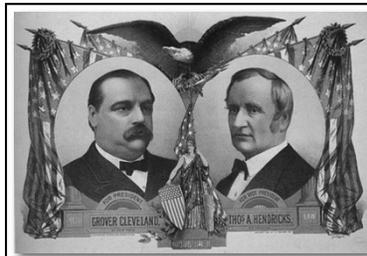


CHROMO*lithography*

- ▶ The image to be printed is neither raised nor incised
- ▶ Oil and water do not mix
- ▶ FRENCH printer Godefroy Engelmann patented process in 1837
- ▶ **BOSTON**
 - ▶ Richard M. Hoe, Rotary Lithographic Press, 1846
 - ▶ John H. Bufford,



John H. Bufford's Sons "Swedish Song Quartett" poster, 1887



SS Frossell (artist) and John H. Bufford's Sons, Cleveland and Hendricks Presidential Campaign poster, 1884



Pfing and Co. and others, c. 1880 - early 1900s, collection of chromolithography

