The Industrial Revolution
Approximately 1760 - 1840
Chapter 9
Typography for an Industrial Age
Deployment of Energy

• Before 1780s, human and horse power was the primary source of energy.

• Energy was the major impetus for the conversion from agriculture society to industrial society.

• James Watt perfected the steam engine after 1780.
Industrial Revolution in Europe

- Driven not just by technology, but by the political and social change brought about by the new technology.

- Not just a time period, but a radical process of political and social upheaval.
What drove the Industrial Revolution

• What drove the industrial revolution were profound social changes, as Europe moved from a primarily agricultural and rural economy to a capitalist and urban economy.

• This required rethinking social obligations and the structure of the family; the abandonment of the family economy, for instance, was the most dramatic change to the structure of the family that Europe had ever undergone—and we're still struggling with these changes.
A website to study.

http://www.wsu.edu/~dee/ENLIGHT/INDUSTRY.HTM
The Industrial Revolution
France and American
France - Revolution

• More equality between working class and royalty

• It is widely seen as a turning point in continental European history.

• Working class revolted for better living conditions and equality.
America during the Revolution

- The Industrial revolution was a time of drastic change and transformation from hand tools, and hand made items to machine manufactured and mass produced goods.

- The Industrial revolution brought on more technology, wealth and power, but at what consequence? The people were living in filth, working unthinkable hours and being paid very little however, the revolution shaped modern society to what it is today.
Graphic Design Changes

- Technology lowered the cost of printing
- Handicrafts mostly disappeared
- Graphic Design became fragmented into separate design and production categories.
- Public education and literacy increased
- The dawn of MASS COMMUNICATIONS
Typography

- Caslon IV introduced a sans-serif font in 1816.
- Plethora of innovative typefaces - some good and some awful!
- Book publishing no longer could fulfill the needs of an increasingly industrialized society.
People to know...

- William Caslon 3 & 4
- Vincent Figgins
- Thomas Cotterell
- Joseph Jackson
- Robert Thorne
- James Watt
Sample: American Sans-Serif Gothic
Introduction of Poster

- 1828 - Headline type set with wood type
- Introduced by Darius Wells
- Router introduced in 1834 - Now many typefaces could be designed.
- Design decisions were pragmatic. (Make it fit!)
Divergently

Battle frizz with quick hair

The vegetarian menu included gazpacho,
Water, glycol stearate, sodium C14-16, polysorbate 20,

Example: Caslon Doric Sans-serif
Typeface
Industrial Revolution and Printing

- Printing press had changed very little between 1450 and 1800 - since Gutenberg.

- Energy produced by the steam engine was about to change all that.

- An updated all-metal parts press was made in 1800 by Stanhope.
1832 Stanhope Press - metal parts -
Industrial Revolution and Printing

- 1804 Koenig (a German immigrant to London) presented plans to construct a fully steam-powered printing press.

A Koenig-type cylindrical press manufactured by Applegath and Cowper in London (before 1832).
Mechanization of Typography (Typesetting)

• The Good News: By mid-19th century, presses could produce 25,000 impressions an hour.

• The Bad News: EACH letter still had to be laboriously set by hand - just as in the 15th century.

• The race was on to see WHO would invent the first typesetting machine.
The First FUNCTIONAL Typesetting Machine

- Ottmar Mergenthaler demonstrated a typesetting machine in the office of the New York Tribune - 1832.
- Mergenthaler’s invention changed the way type was set forever by drastically improving the speed and efficiency of typeset print production.
Mergenthalaler Linotype - 1884
Inventors of Photography

- Photography and graphic design since Joseph Niepce (1765-1833) first transferred an image onto a printing plate.
- Developed the technique known as Photogravure.
1st image printed from a plate that was created by the photochemical action of light - not by human hand

Taken by Joseph Niepce in 1822 of French Cardinal d’Ambroise.
This image is of a 17th century Dutch engraving showing a man leading a horse. The photograph was sold at Sotheby's in Paris on March 21, 2002, to the French National Library for $443,000 (£330,000).

The Niépce correspondence that accompanied the print gave a step-by-step account of how Niépce made his discovery. The print is the only surviving testament to Niépce's achievement in the summer of 1825 using light alone to make a plate from which an image could be printed.
Inventors of Photography

Websites for further Info.

• http://www.kamprint.com/printmak.html

• http://www.infoplease.com/ce6/ent/A0860364.html
William Henry Fox Talbot

• Fox Talbot was not the first to produce photographs.

• Talbot made a major contribution to the photographic process as we know it today.

• Made a print from the first photographic negative.
Talbot in 1840 produced an image without the aid of a pen or paper. - Note: 3 minutes for exposure.

They weighed 120 pounds each and cost 400 Francs (about $50).

More information at: George Eastman Photography Collections Online has additional information concerning this camera as well as excellent photos and detailed information regarding many other early cameras. [http://www.geh.org/](http://www.geh.org/)
KODAK BROWNIE - 1900.

The Brownie is given credit for creating the hobby of photography as an American national pastime early in the 20th Century. The film was loaded into a removable film carrier/exposure chamber that slid into the back of the camera.

The original Brownie Camera was only in production for about four months and is quite rare today. Price then: $1.00. Price now: about $1,000! See McKeown's price guide to antique and classic cameras.
First halftone for printing of photos

• The problem with mechanically printing photographs by the ‘letterpress’ process was resolved by the invention of the halftone. The halftone converts the different tones of a photograph into dots of varying size. The eye has limited resolving power and, at a distance, is tricked into seeing these dots as continuous tone.

• William Fox Talbot first suggested in 1852 that tones could be reproduced by means of photographic screens. However it was not until the 1890’s that the first halftone photographic reproductions appeared in daily newspapers, and then it took another ten years before the process was fully adopted.

• Halftones were created by using a camera containing a ruled glass screen with a grid pattern to break up the image into tiny dots of different sizes. In 1882 George Meisenbach, following work done by Frederick Ives the previous year, introduced a single lined screen that was turned ninety degrees during exposure. In 1890 Frederick Ives, with Louis and Max Levy, introduced the first cross lined screen. Nowadays halftones are computer generated and are also used for full colour printing.
Photojournalism

• Photojournalism was born in the 1920s when the printing technology was mature enough to support mass production.

• In addition camera development had also progressed.

• By 1920 Germany produced more illustrated publications than any other country, with titles like the "Berlin Illustrated Newspaper".

• During the 1930s and 1940s picture magazines thrived. These magazines were possibly the most important persuasive visual medium before television.

• Including the British "Picture Post" and the American "Life" publications, they had enormous status and were able to mould public opinion.
During the 1920 - 40s, photojournalism flourished with picture magazines, however their decline in popularity started in the 1950s, Picture Post closed in 1957. Television had started to take over and many advertisers abandoned the picture magazines.
The Apple Quicktake 100 camera was launched at the Tokyo MacWorld Expo on 17 February 1994, to work with Apple Macintosh computers, at an expected street price of £535. A Windows was available in June 1994 at £599.

The camera stored up to 32 images at a resolution of 320 x 240 pixels - each a quarter of a 13 inch monitor screenful - or eight 640 x 480 pixel images - each a full 13 inch monitor screenful.