Birth of the Modern World

Also known as the Second Industrial Revolution 1870-1914
London Science Museum

Image courtesy of Michael Caroe Andersen on Flickr.
“The Birth of the Modern World” (Christian, Chap. 13)

• “Revolution” becomes “normal”
• Tighter connections between knowledge and power (science and medicine)
• Interactive layers of systems (communication, transportation, production, distribution, financial)
• Globalization of systems: “the age of empire” (Eric Hobsbawm)
Train #25, The Powhatan Arrow
Norfolk and Western Railway
Salem, Virginia       July 11, 1953

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See: http://upload.wikimedia.org/wikipedia/en/a/ae/OP-13841.jpg
The Brooklyn Bridge

Image courtesy of Sarah Ackerman on Flickr.
Plan for one of the towers of the Brooklyn Bridge, 1867
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Grain Elevator

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Oldest existing grain elevator in western Canada
Fleming, Saskatchewan  1895

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See: http://esask.uregina.ca/entry/grain_elevators.html
Cheadle, Alberta, Canada on Transcanada Highway

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See: http://www.cheadlealberta.com/images/Grain_Elevator.jpg
From Bijker, Hughes, Law, *The Social Construction of Technological Systems*

Image courtesy of Flowizm on Flickr.

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Appalachian Train Tracks

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See: http://www.wju.edu/ai/profile/steeliron.asp
Carnegie Steel Furnace

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See: http://www.census.gov/history/img/Carnegie_Steel_furnace.jpg
South Works, Carnegie Steel Company

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Abandoned Mills

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1913 Model T Ford

Image courtesy of Greg Moine on Flickr.
Global Oil Consumption

- 1890  10 million tons
- 1920  95 million tons
- 1940  294 million tons
- Doubled every decade thereafter:
  - 1970s  2.5 billion tons

- In 1900, 4% of world’s energy
- In 1970s, 50% of world’s energy
Edison’s prototype dynamo
From Thomas P. Hughes, *Networks of Power*
Electric light and power systems in Pennsylvania 1900
From Thomas P. Hughes, *Networks of Power*
Electric light and power systems in Pennsylvania 1910
From Thomas P. Hughes, *Networks of Power*
Electric light and power systems in Pennsylvania 1930

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Dufayel’s credit establishment
Interior dome, Dufayel’s credit establishment
Rue de Clignancourt, Paris, 1902
Wigmaking, as illustrated in Diderot’s *Encyclopédie*
Collection of Virginia Historical Society
Silkworm cultivation

From Diderot's Encyclopédie

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