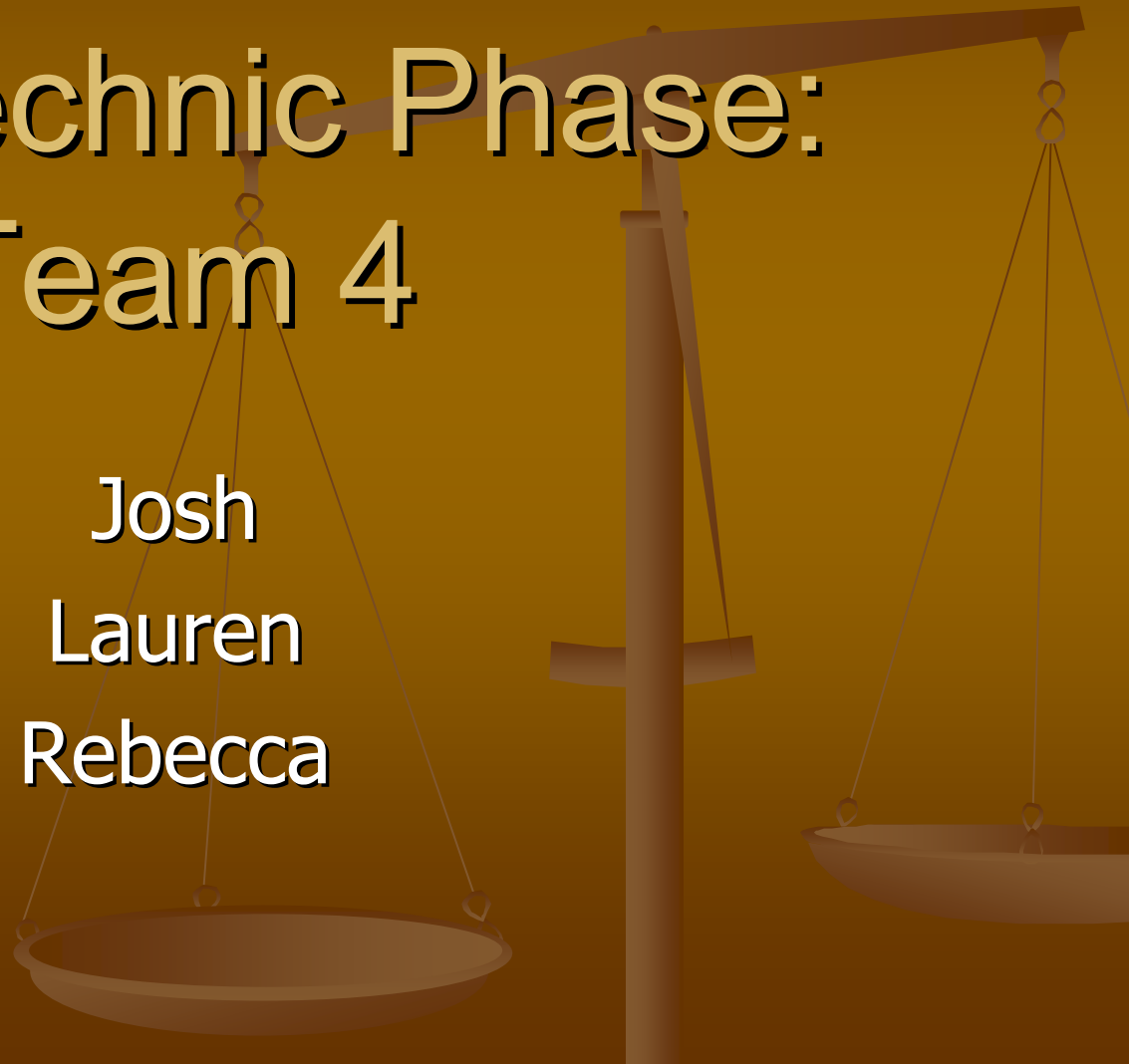


Paleotechnic Phase: Team 4

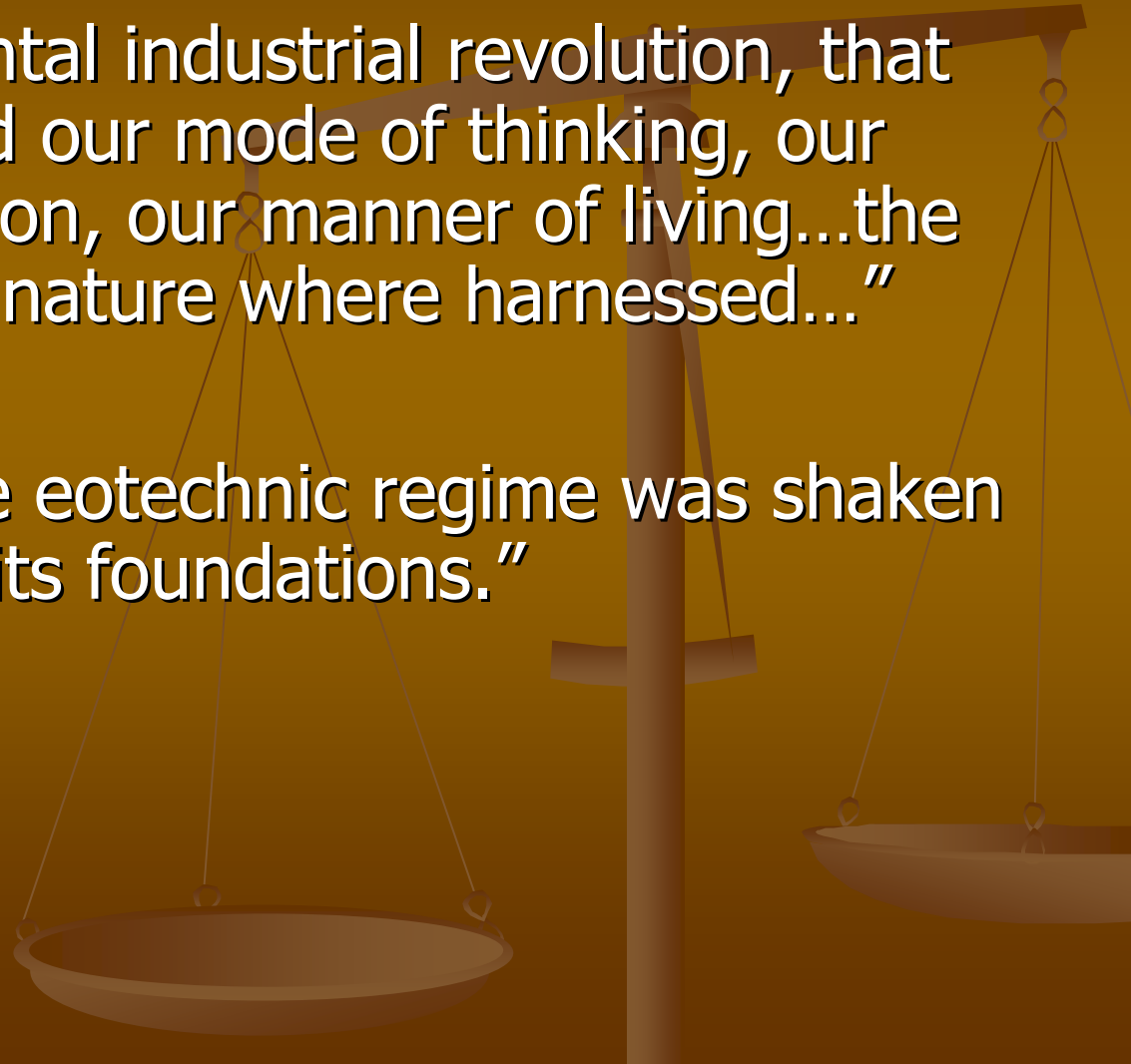
Josh
Lauren
Rebecca



The Paleotechnic Phase

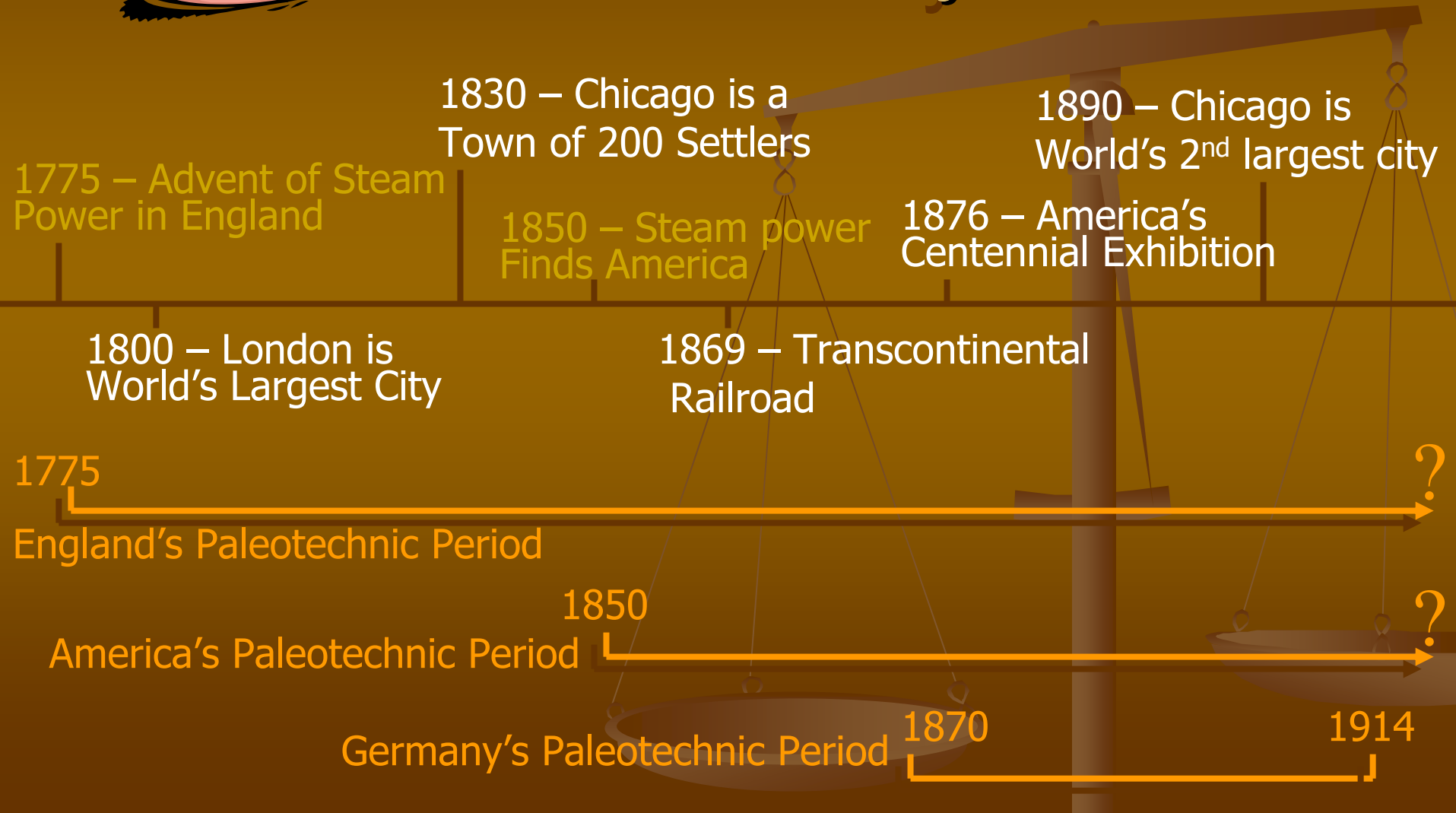
“...The fundamental industrial revolution, that which transformed our mode of thinking, our means of production, our manner of living...the external forces of nature where harnessed...”

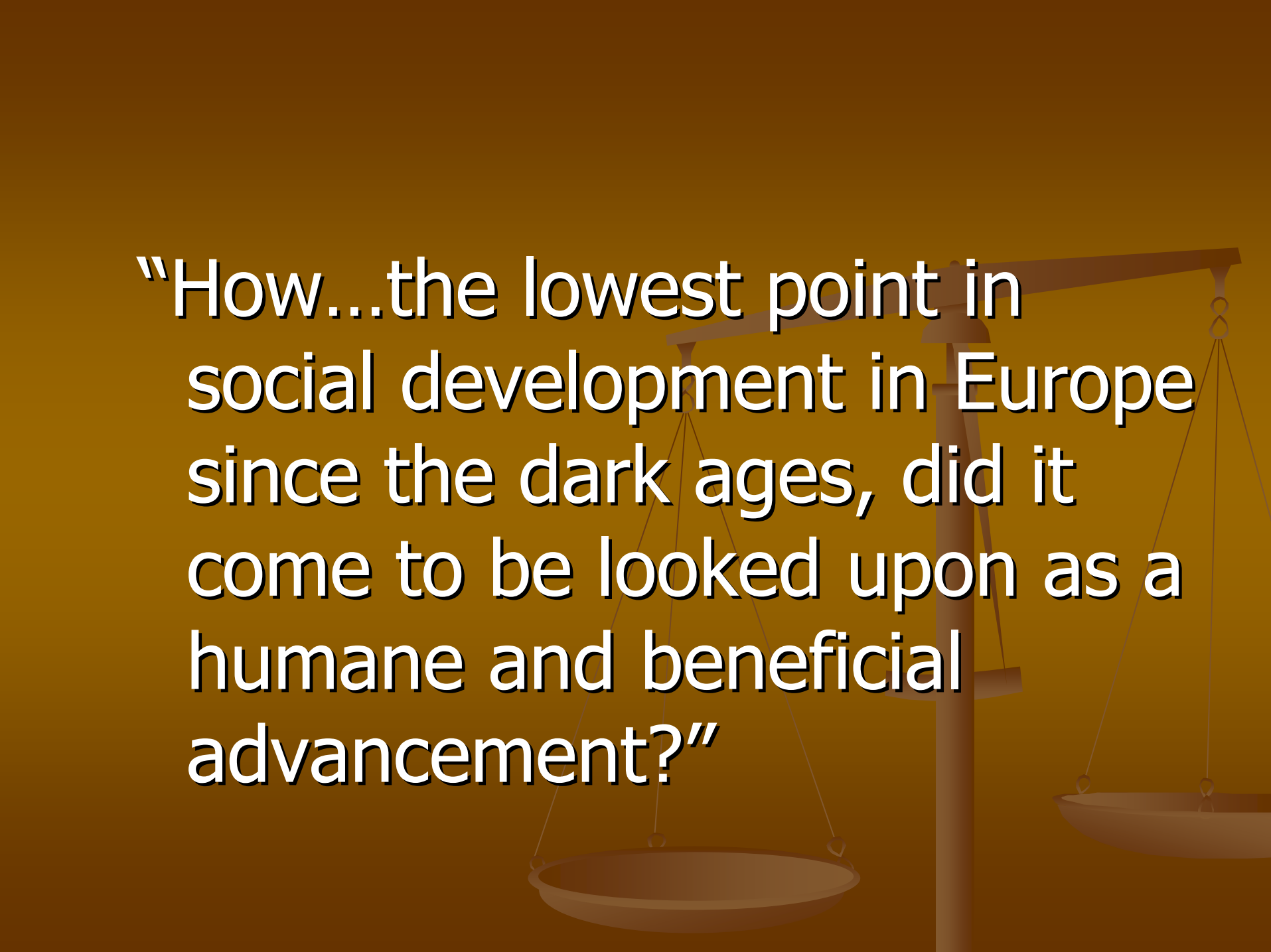
“At this moment the eotechnic regime was shaken to its foundations.”





Quick Quantification of History





“How...the lowest point in social development in Europe since the dark ages, did it come to be looked upon as a humane and beneficial advancement?”

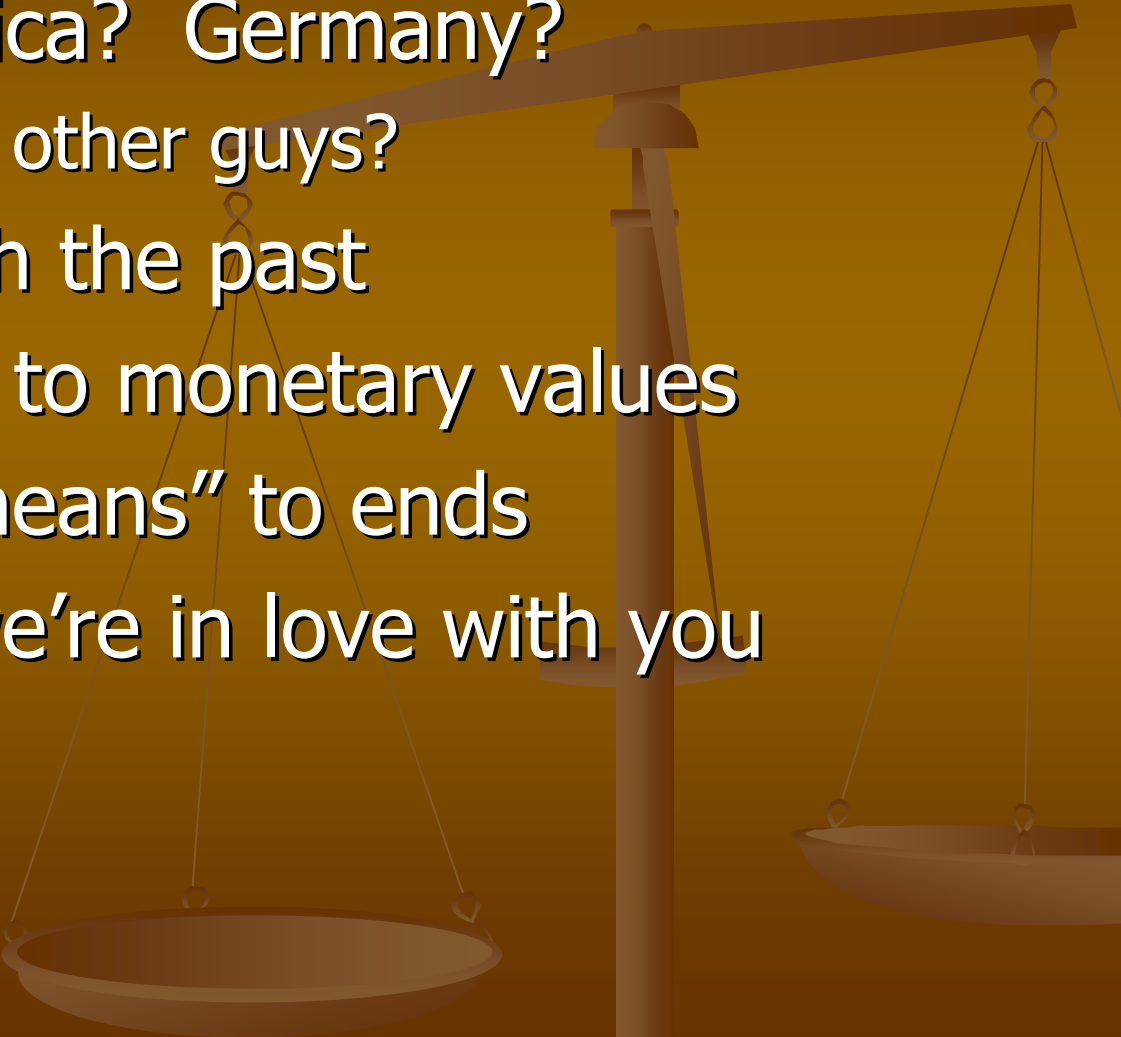
Question and Answer Time With Lewis Mumford

Q: "but while the desire for gain was perhaps the impulse uppermost in lengthening the worker's day...one must still explain the sudden intensity of the desire itself." Pg 176

A: "...the new contempt for any other mode of life or form of expression except that associated with the machine...the gospel of work."

Pg 176

We Missed the Eotechnic. Let's Make Up for It.

- England? America? Germany?
 - What about the other guys?
 - Sharp break with the past
 - From life values to monetary values
 - Shifting from "means" to ends
 - Hey suburbia, we're in love with you
- 

Suburbia



“...The environment was sordid; The life that was lived in these new centers was empty and barbarous to the last degree. Here, the break with the past was complete. People lived and died within sight of the coal pit or the cotton mill...”

pg 154

“...To be cut off from the coal mine was to be cut off from Paleotechnic civilization.”

Pg 159

What Ever Happened to Good, Old-fashioned Quality?

- “Pre-intellectual awareness”
- Quality in craftsmanship
- Neo-technic transition
 - Scientists claim foundation rights for technics
- Paleotechnic: “economic man” doesn’t need science.

“...Instead of being moved by instincts and governed by force, men were capable of being moved and governed by reason.”

pg 182

The Economic Man



“...This creature of bare rationalism.”
pg 177

“...Dominance of the new bourgeoisie, people without taste, imagination, intellect, moral scruples, general culture or even elementary bowels of compassion, who rose to the surface precisely because they fitted an environment that had no place and no use for any of these humane attributes...governing men to their own profit and advantage.”
pg 187

The New Barbarism

- Technic competition breeds wage depletion
- “Up thrust into barbarism”



Maslow?

“The mine and the battlefield underlay all the paleotechnic activities; and the practices they stimulated led to the widespread exploitation of fear.”

pg195



“...opiates became the religion of the poor.”

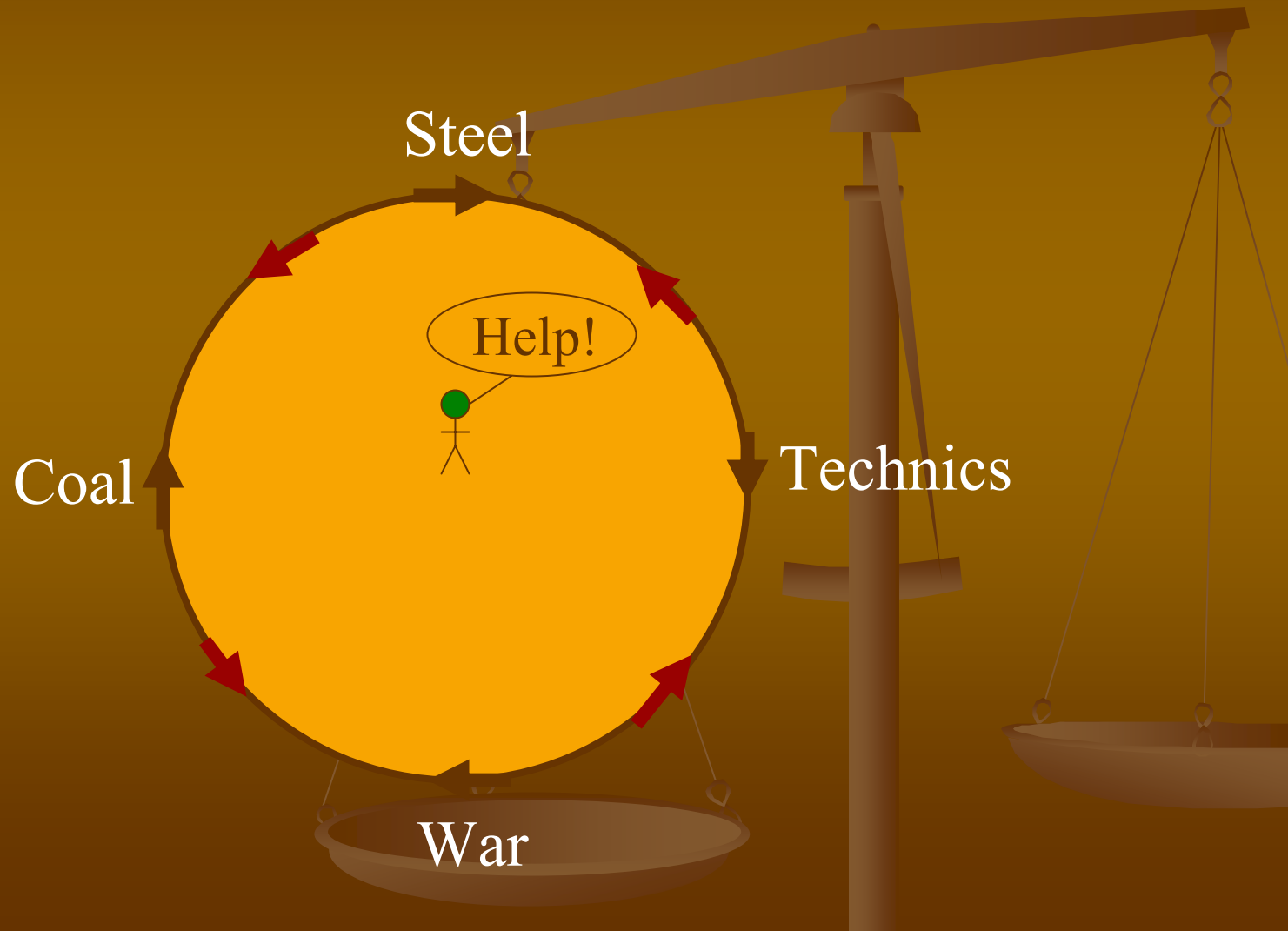
Specialization



“...The psychological and social stimulus derived from cultivating numerous different occupations and different modes of thought and living disappeared.”
pg 171

“The first requirement for the factory system, then, was the castration of skill. The second was the discipline of starvation. The third was the closing up of alternative occupations by means of land monopoly and dis-education.”
pg 173

Addiction to the Machine



Points of Origin

- Inability to live quality
- Controlled by fear
- Controlled by pleasure
- ?????





“...But in America,
where class
barriers were not
so solid.”

Other Points of Origin



- America exemplifies an attitude
 - A new generation of machine enthusiasts
- Self-actualization
- Societal-actualization
- Possibility/hope

“Man...was climbing steadily out of the mire of superstition, ignorance, savagery, into a world that was to become ever more polished, humane and rational.” Pg 182

Memorial Hall



Dome of Memorial Hall



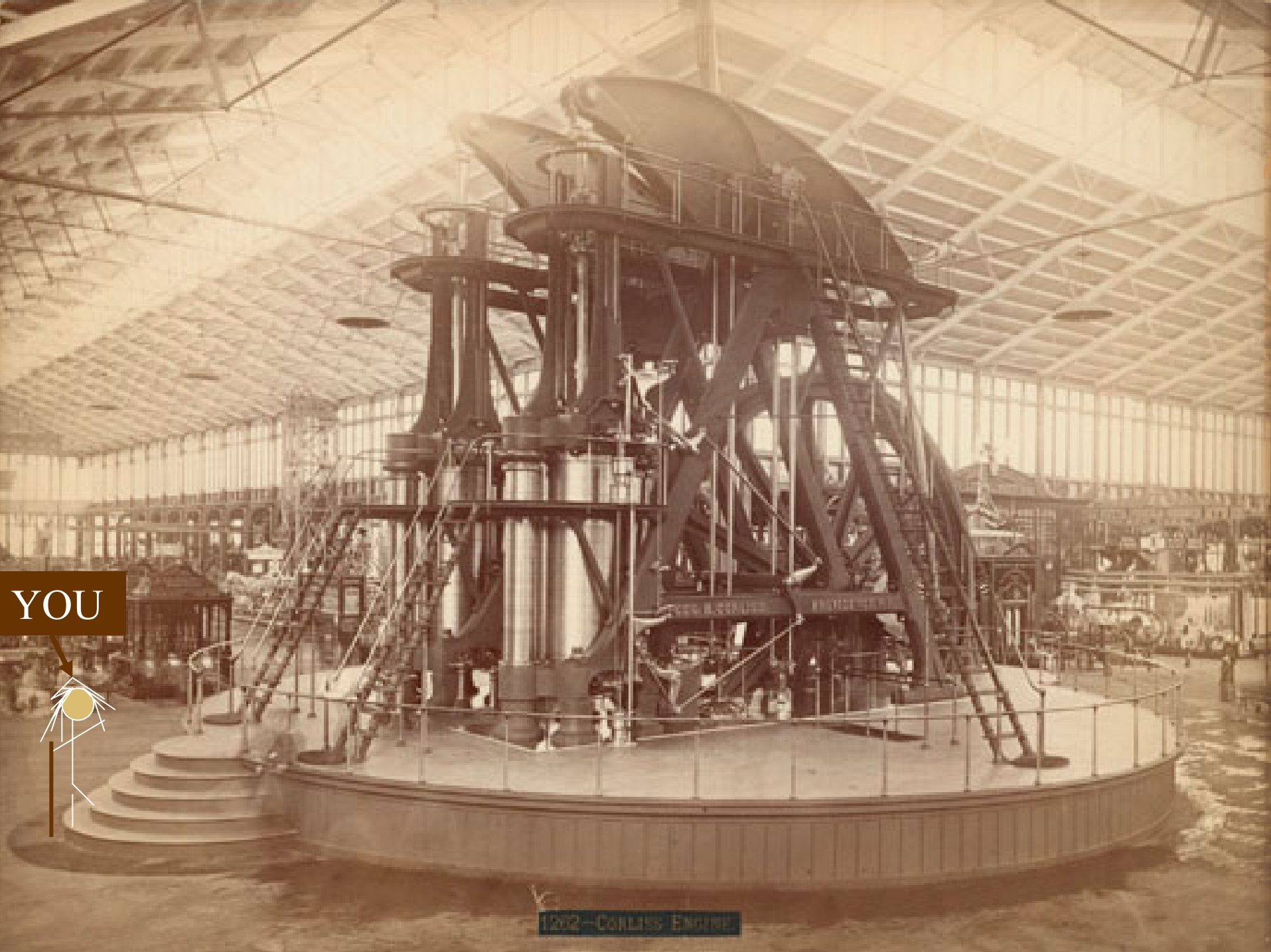
Corless Steam Engine 2520 Horsepower

YOU



1202 - Corless Engine





YOU



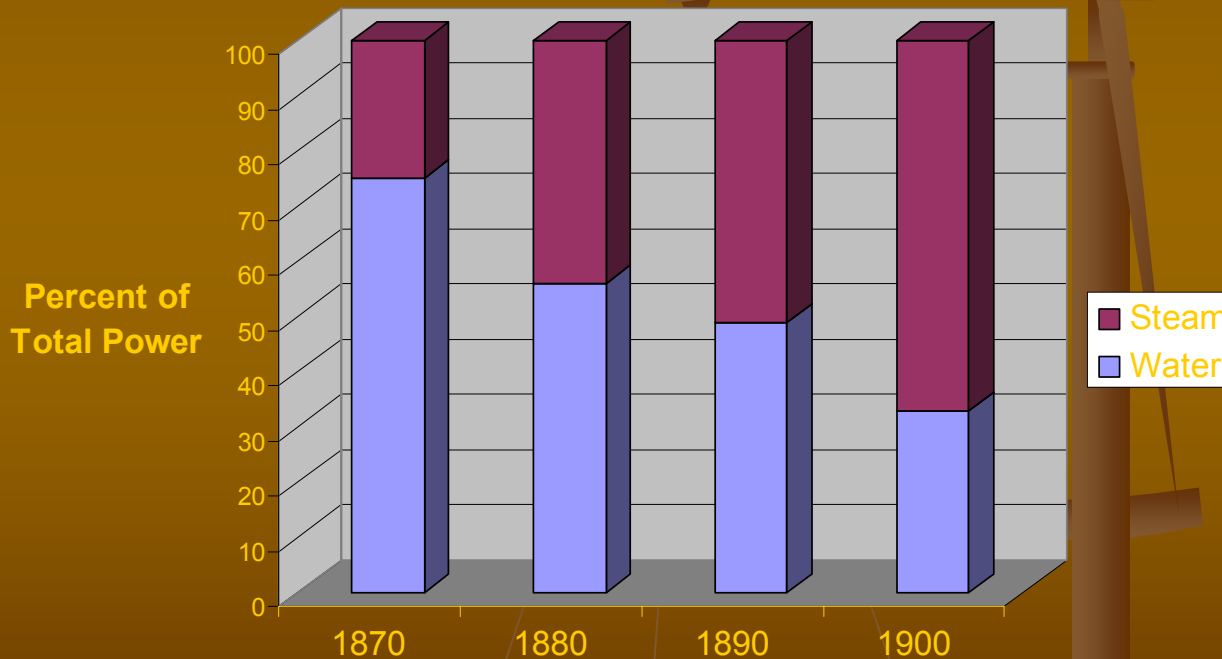
1202 - Corliss Engine

Paleotechnic Dark Ages



Water power & Steam power

Power sources: New England

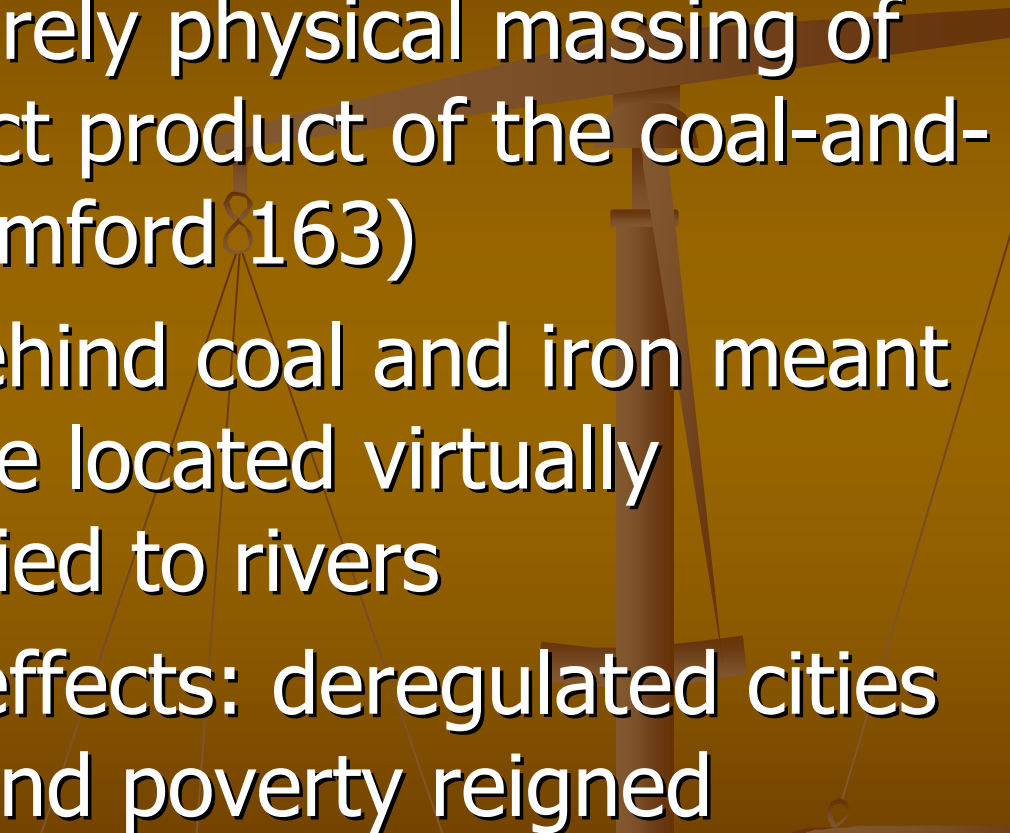


EFFICIENCY



- "...steam had won supremacy, and it remained the *symbol* of increased efficiency..."
- Steam power was more efficient in large engines: large size=efficiency
- Steam Engines were really only 10% efficient: but advancement over water mills

“Conurbation”

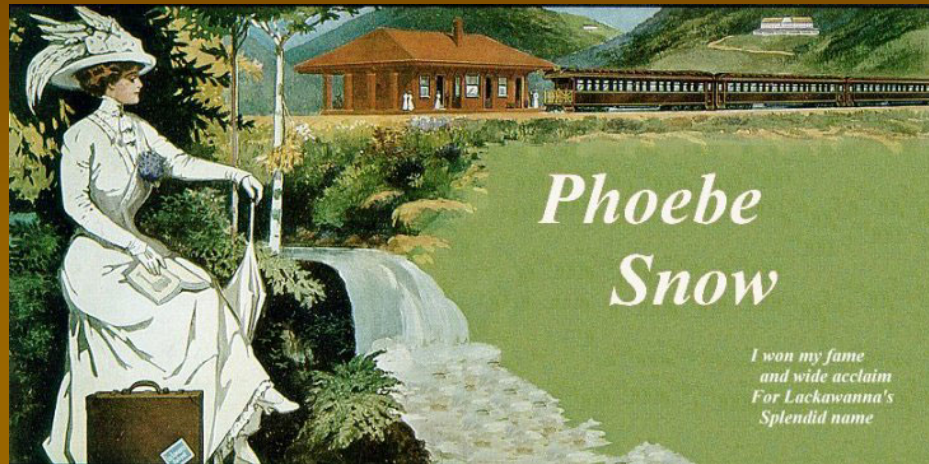
- Conurbation: purely physical massing of population, direct product of the coal-and-iron régime (Mumford 163)
 - Steam power behind coal and iron meant industry could be located virtually anywhere: not tied to rivers
 - Agglomeration effects: deregulated cities where disease and poverty reigned
- 

Steel and the Railroad



- Bessemer converter produced large quantities
- Railroads developed in England
- “Frontier” in United States: fostered spirit of conquering the land – railroads took control

Upon the road of Anthracite...



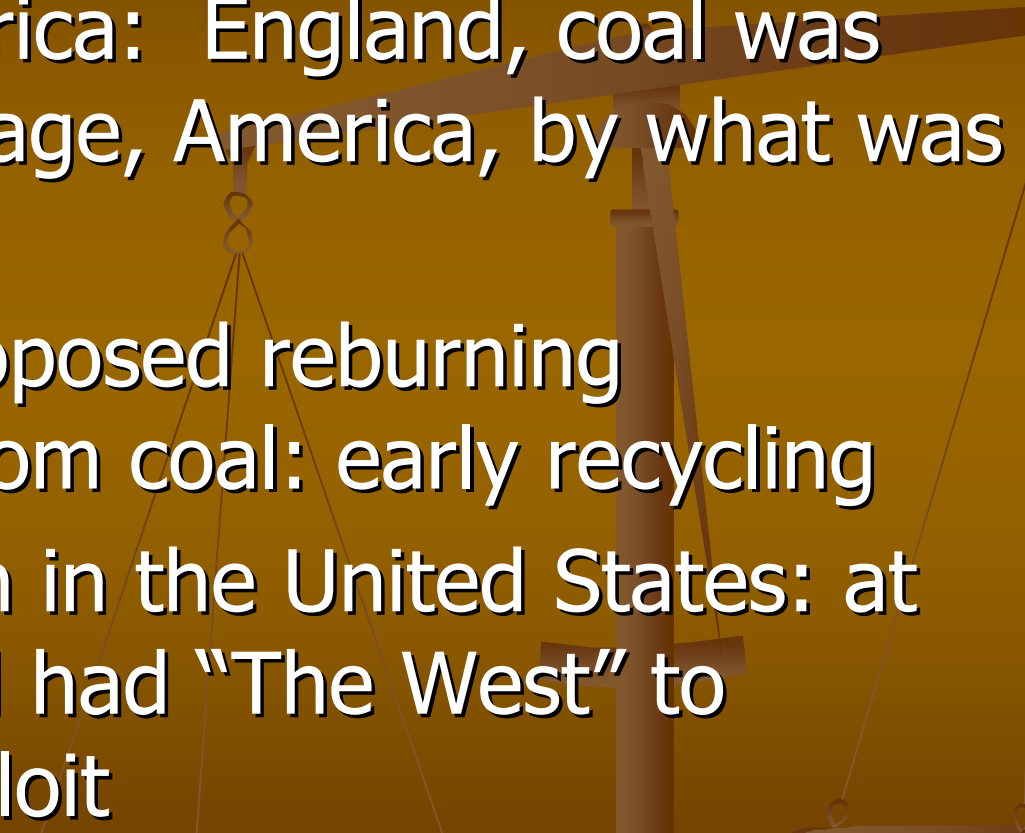
- Says Phoebe Snow about to go upon a trip to Buffalo "My gown stays White from morn till night Upon the Road of Anthracite"

Carboniferous Capitalism

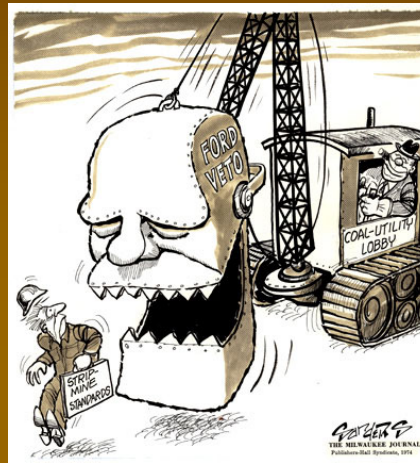


- Everything came from the mine: steampower used to pump water out of mine, steel rails to transport coal
- Cost of production: wasted resources

The Fire Next Time...

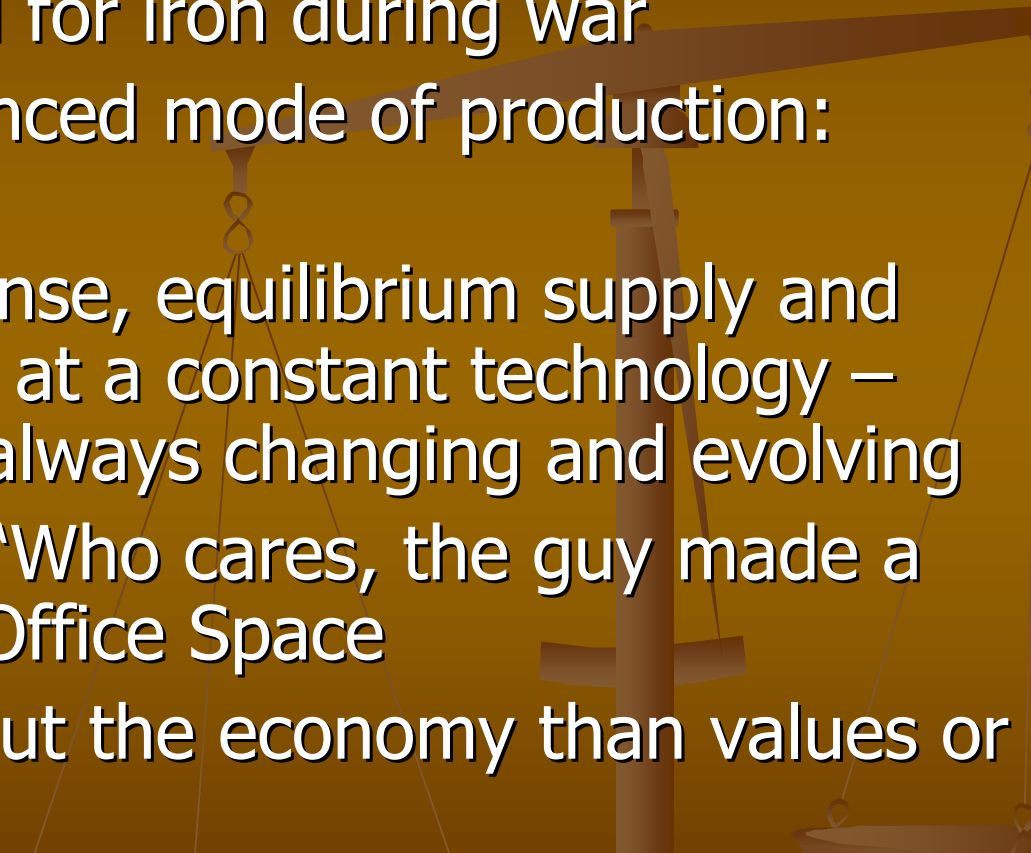
- England v. America: England, coal was paid for by acreage, America, by what was extracted
 - Ben Franklin proposed reburning hydrocarbons from coal: early recycling
 - Never caught on in the United States: at this time we still had "The West" to explore and exploit
- 

The 'Net

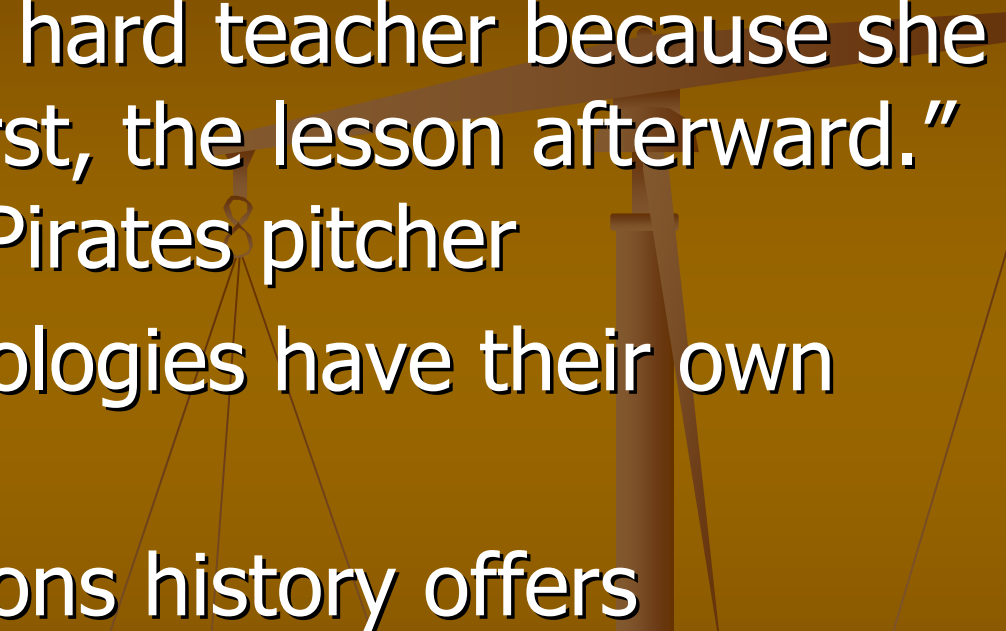


- “If I don’t profit, someone else will”
- Towns linked by railroads carried on bulk of trade: led to concentration and pollution where none had existed

Iron Dragon

- Increased demand for iron during war
 - Disregard for balanced mode of production: deterrancy theory
 - In an economic sense, equilibrium supply and demand exist only at a constant technology – but technology is always changing and evolving
 - Focus on money: “Who cares, the guy made a million dollars” ~ Office Space
 - We care more about the economy than values or sustainability
- 

New Solutions?

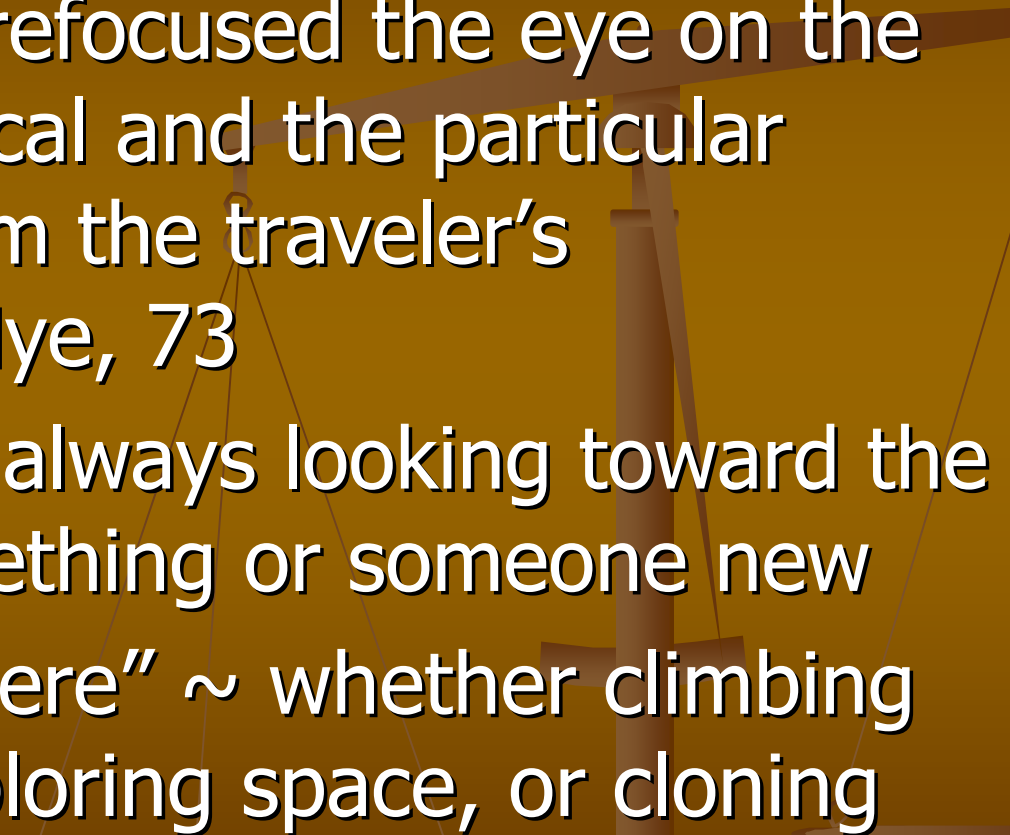
- “Experience is a hard teacher because she gives the test first, the lesson afterward.”
~ Vernon Law, Pirates pitcher
 - Emerging technologies have their own pros and cons
 - Look at the lessons history offers
- 

And so it goes....

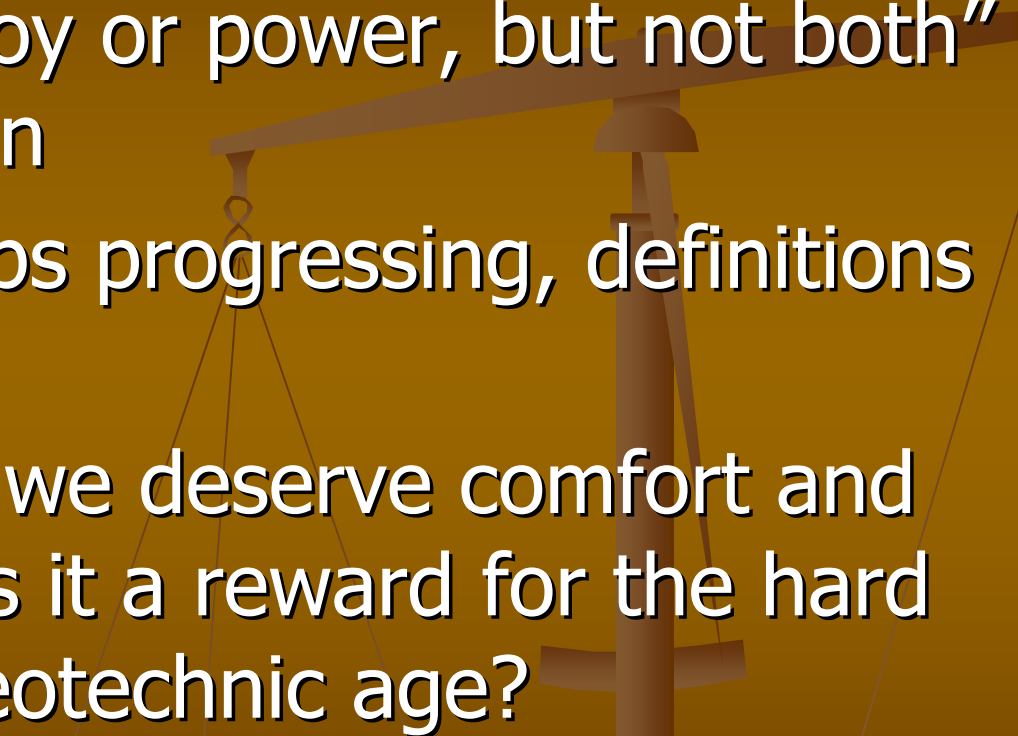


- “When He aims for something to be always a-moving, He makes it longways, like a road or a horse or a wagon, but when He aims for something to stay put, He makes it up-and-down ways, like a tree or a man.” ~ Faulkner

The view from here...

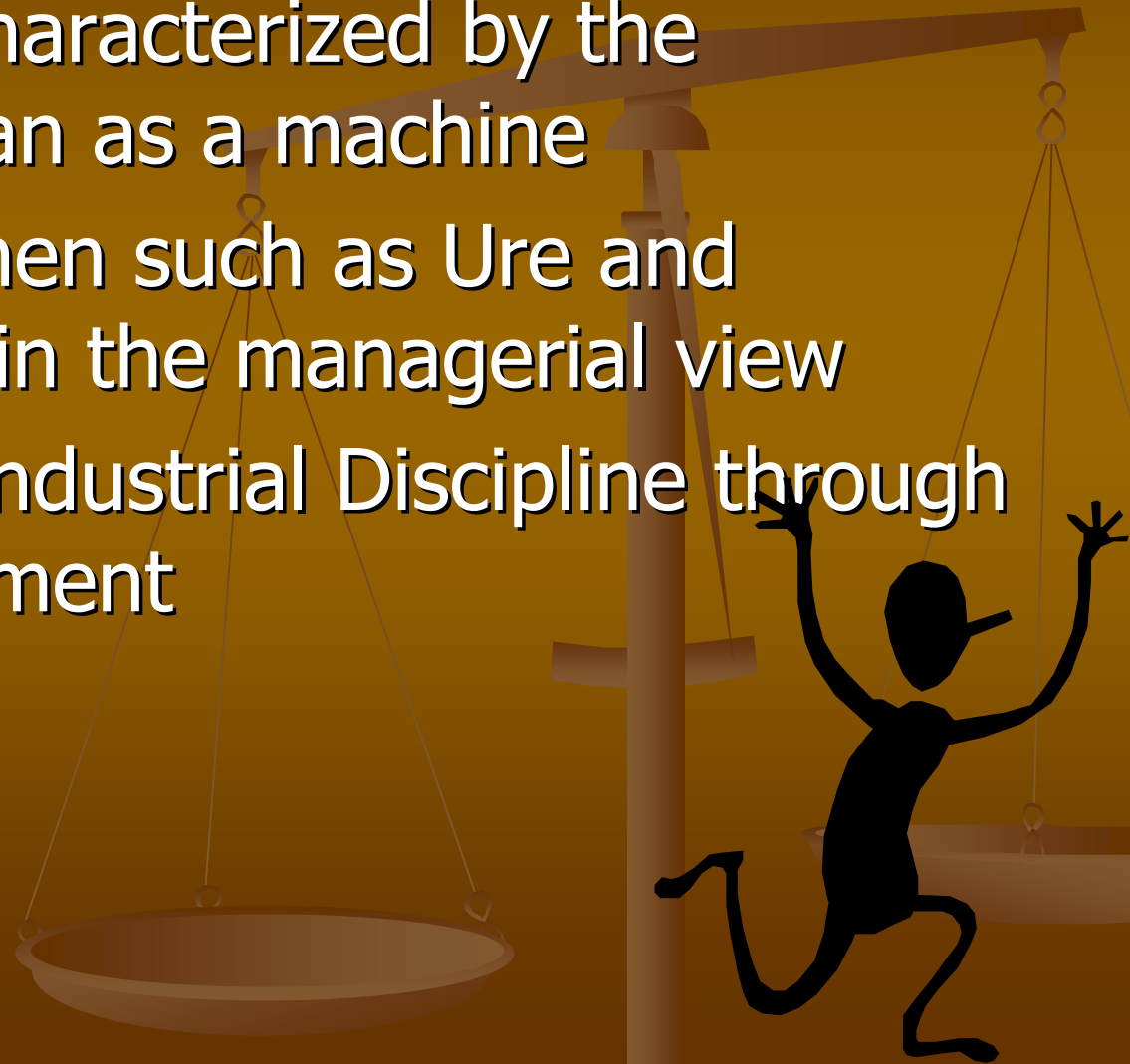
- “Railway travel refocused the eye on the distance...the local and the particular disappeared from the traveler’s experience” ~ Nye, 73
 - Never satisfied: always looking toward the horizon for something or someone new
 - “Because it is there” ~ whether climbing Mt. Everest, exploring space, or cloning
- 

The End Game

- “You can have joy or power, but not both”
~ Ralph Emerson
 - Technology keeps progressing, definitions of life change
 - Do we feel as if we deserve comfort and convenience? Is it a reward for the hard labor of the paleotechnic age?
- 

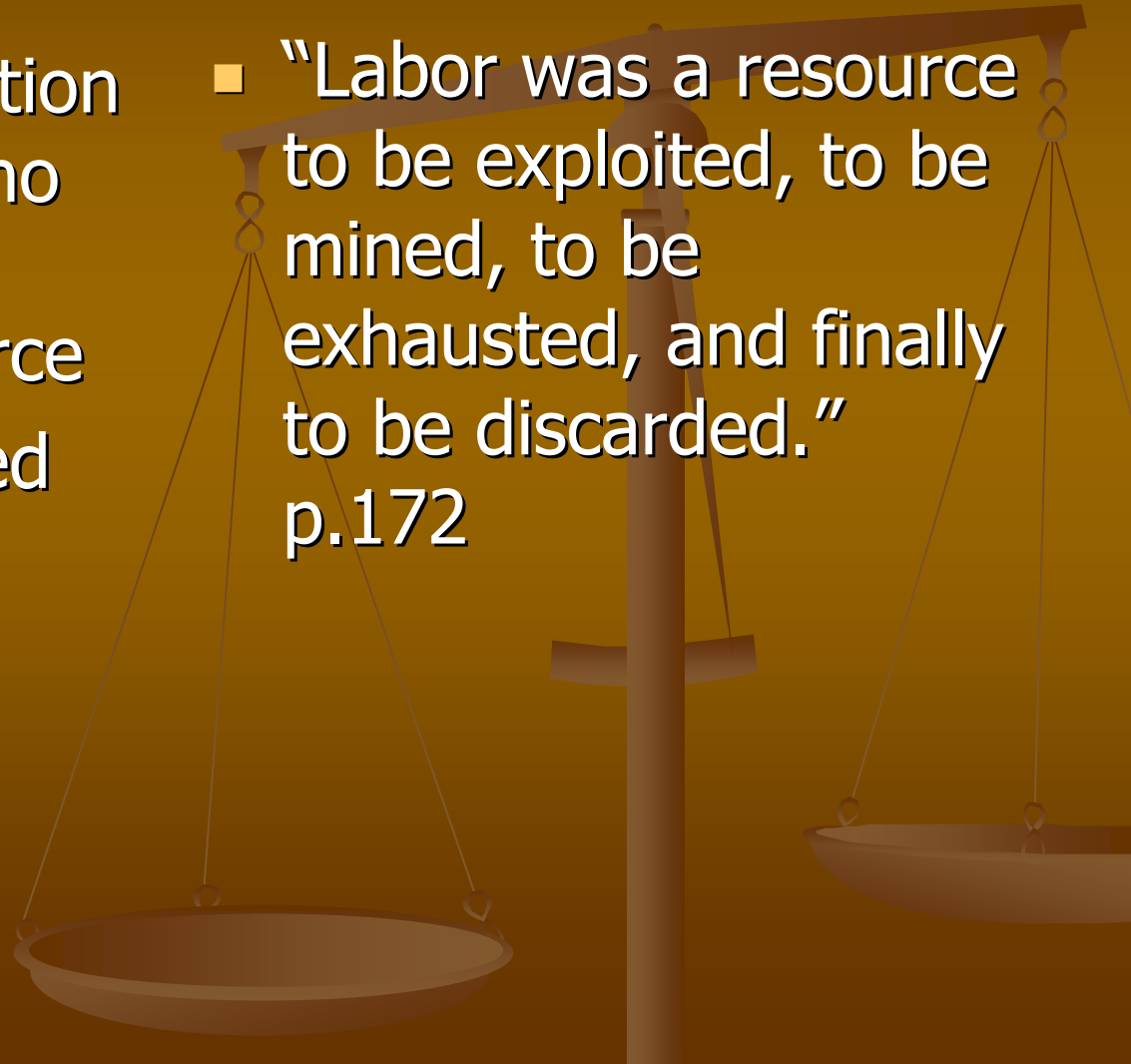
The Degradation of the Worker

- This period is characterized by the treatment of man as a machine
- Writings from men such as Ure and Arkwright explain the managerial view
- Foundation of Industrial Discipline through inhumane treatment



Human Labor

- Increase in population = human labor is no longer scarce = a new natural resource
- Child labor is valued
- “Labor was a resource to be exploited, to be mined, to be exhausted, and finally to be discarded.”
p.172



Child Labor

- In England, children were put to work in the factories from the age of five.
- In America “1/4 of the mine workers were boys” Nye p. 87



<http://www.spartacus.schoolnet.co.uk/IRages.htm>

Andrew Ure

- Ure traveled around factories in England
- Wrote *The Philosophy of the Manufacturers*, in 1835
- "masters, managers, and operatives would follow the straight paths of improvement" and hoped that it would help "prevent them from pursuing dangerous ideas"



■ "It happens that the more skillful workman, the more self-willed and intractable he is apt to become and of course the less fit and component of the mechanical system in which...he may do great damage to the whole"
p. 173

Richard Arkwright

- Textile factories
- Used the new steam engine in his factories
- Developed an "industrial army"



- Work day was 6am-7pm
- 2/3 of his 1,900 workers were children (6+)
- No one over the age of 40 was employed

Factory System

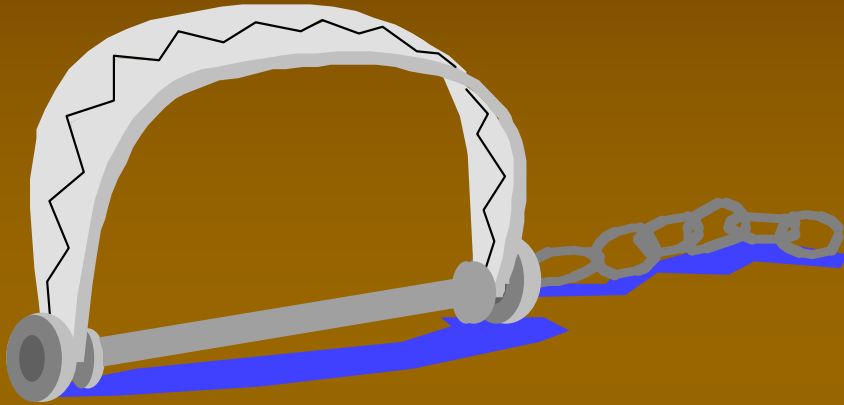
What Manager Did

- Take skill away from worker
- Discipline of starvation
- Land monopoly and dis-education

Why Manager Did It

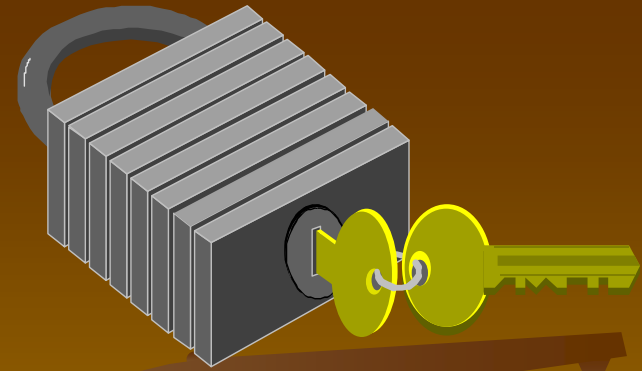
- Worker is not fit for work outside of the factory
- Poverty and monopoly kept workers from being able to migrate

The Reality of the “House of Terror”



- “It was to be a place where paupers would be confined at work for fourteen hours a day and kept in hand by a starvation diet. Within a generation, this House of Terror had become a typical paleotechnic factory.” p.175
- Like a jail and a factory combined

Results

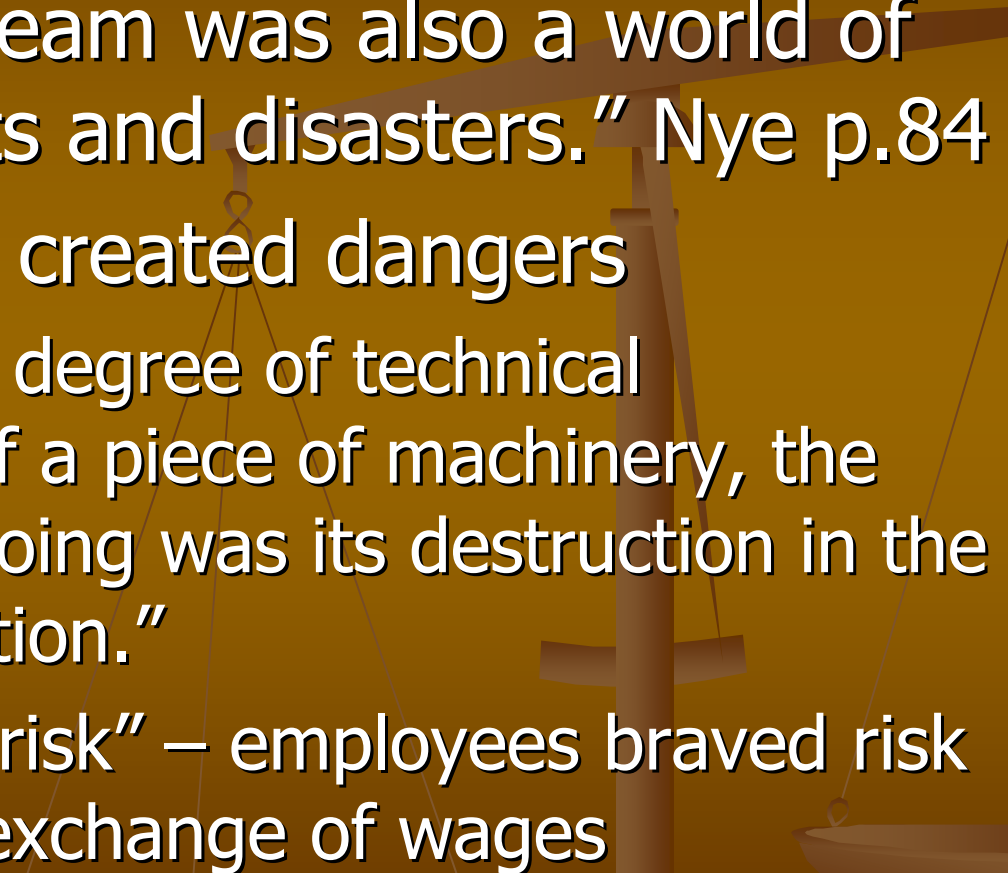


- “The new worker could not operate without being tied to the machine.”
- Machines become a threat to workers
- The machine could replace man so low wages resulted
- Created the foundation of Industrial Discipline based on fear of the machine

Factory Life

- A life with factory disease, particle inhalation, industrial poisoning and injury
- Factory man lives in fear!
- Length of workday was extended so employers could get more out of their “natural resource”
- “Economic Man” emerges
 - “These new economic men sacrificed their digestion, the interests of parenthood, their sexual life, their health most of their normal pleasures and delights of civilized existence to the untrammelled pursuit of power and money.” p.177

Factory Life

- “The world of steam was also a world of sudden accidents and disasters.” Nye p.84
 - Industrialization created dangers
 - “The higher the degree of technical intensification of a piece of machinery, the more through-going was its destruction in the case of dysfunction.”
 - “Assumption of risk” – employees braved risk of accident for exchange of wages
- 

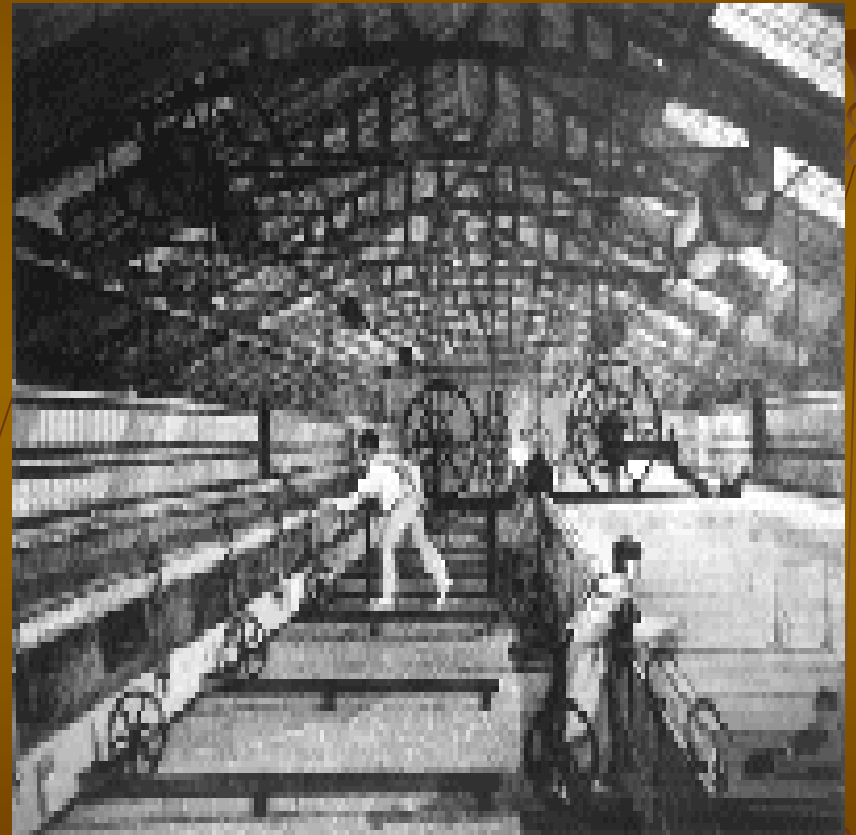
Starvation of Life

- “The laborer sold himself to the highest bidder in the labor market. His work was not an exhibition of personal pride and skill but a commodity, whose value varied with the quantity of other laborers who were available for performing the same task.” p.185
- In order to make a profit the manager
 - depressed wages
 - lengthened hours
 - speeded up motions
 - shortened the workers period of rest
 - deprived him of recreation and education

The Struggle for the market =
The Struggle for Existence

Darwinism?

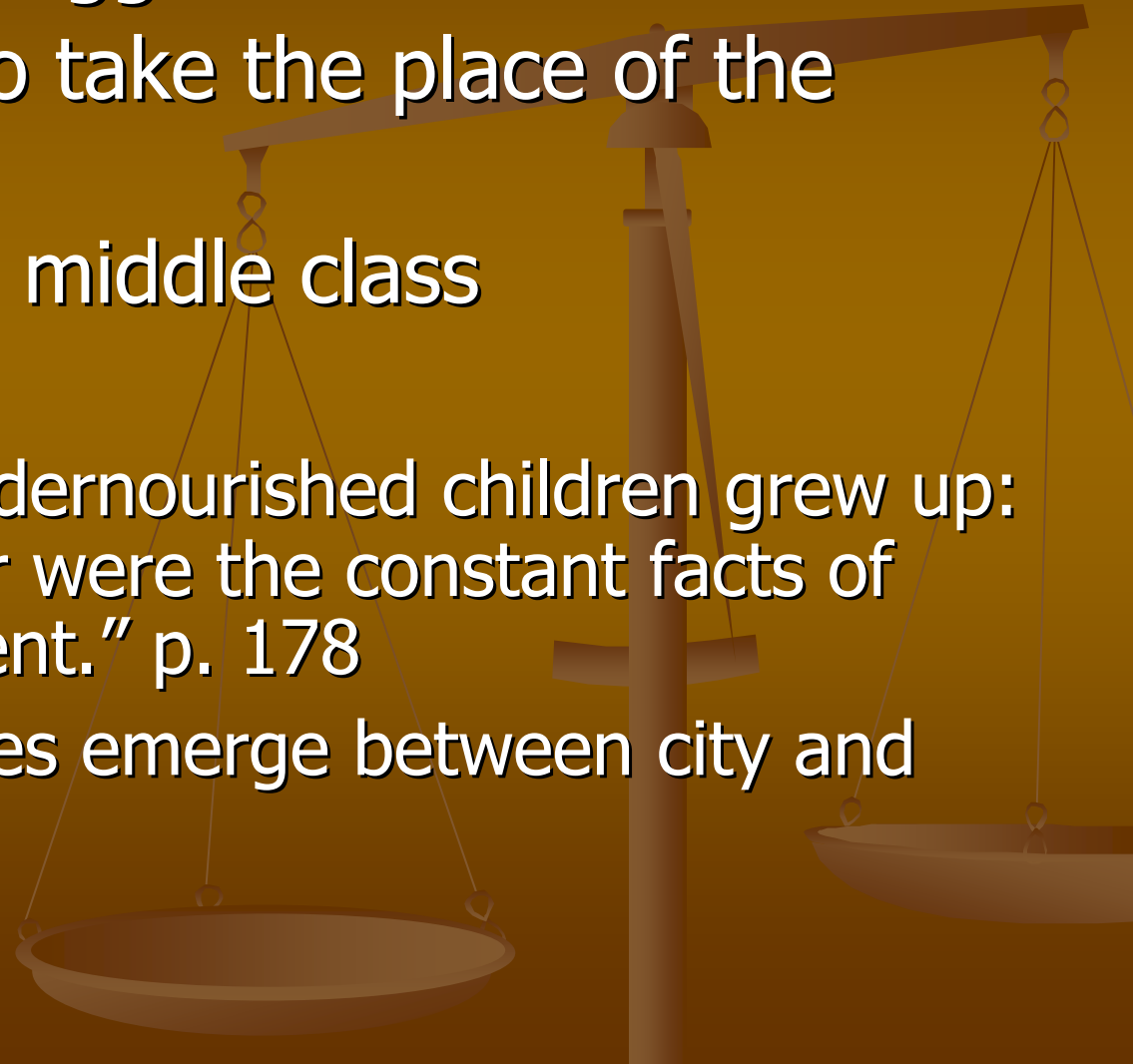
- Some applied Darwin's theory of evolution to the new factory system
- The emergence of a class system was because only people who value machines more than humans would make it to the top!



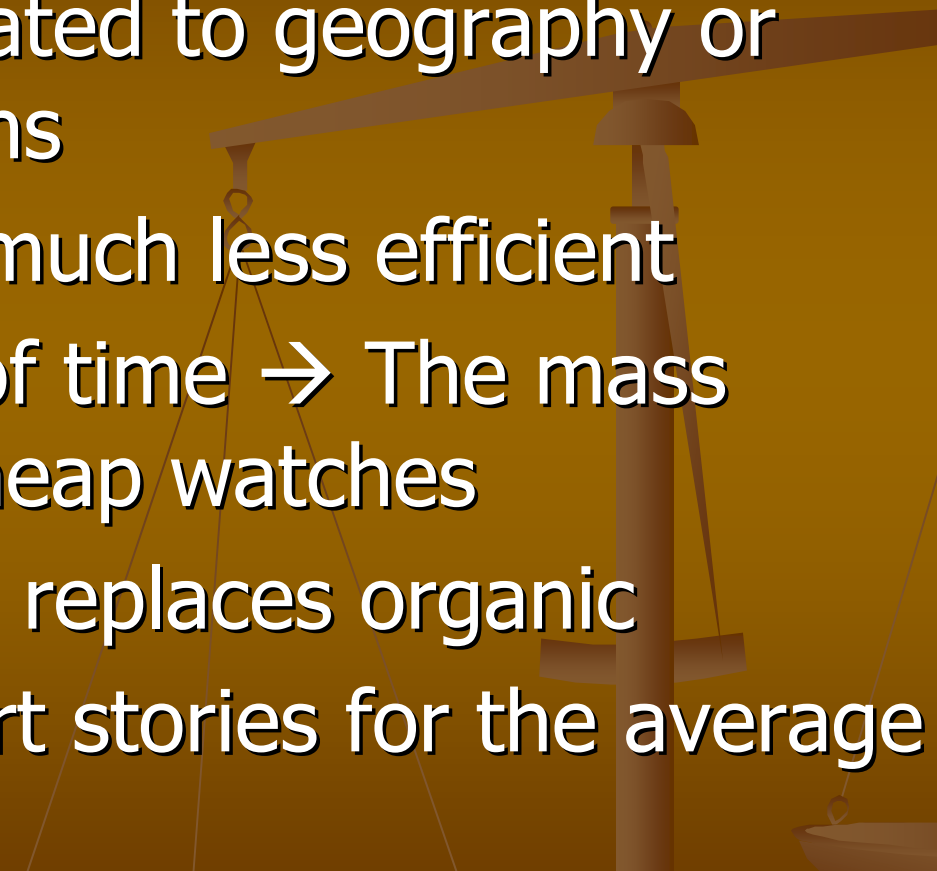
Struggle between the possessor
and the dispossessed

Class System

- A continuous struggle to better one's self
- Worker wants to take the place of the employer
- Emergence of a middle class
- Urbanization
 - "rickety and undernourished children grew up: dirt and squalor were the constant facts of their environment." p. 178
 - Major differences emerge between city and country

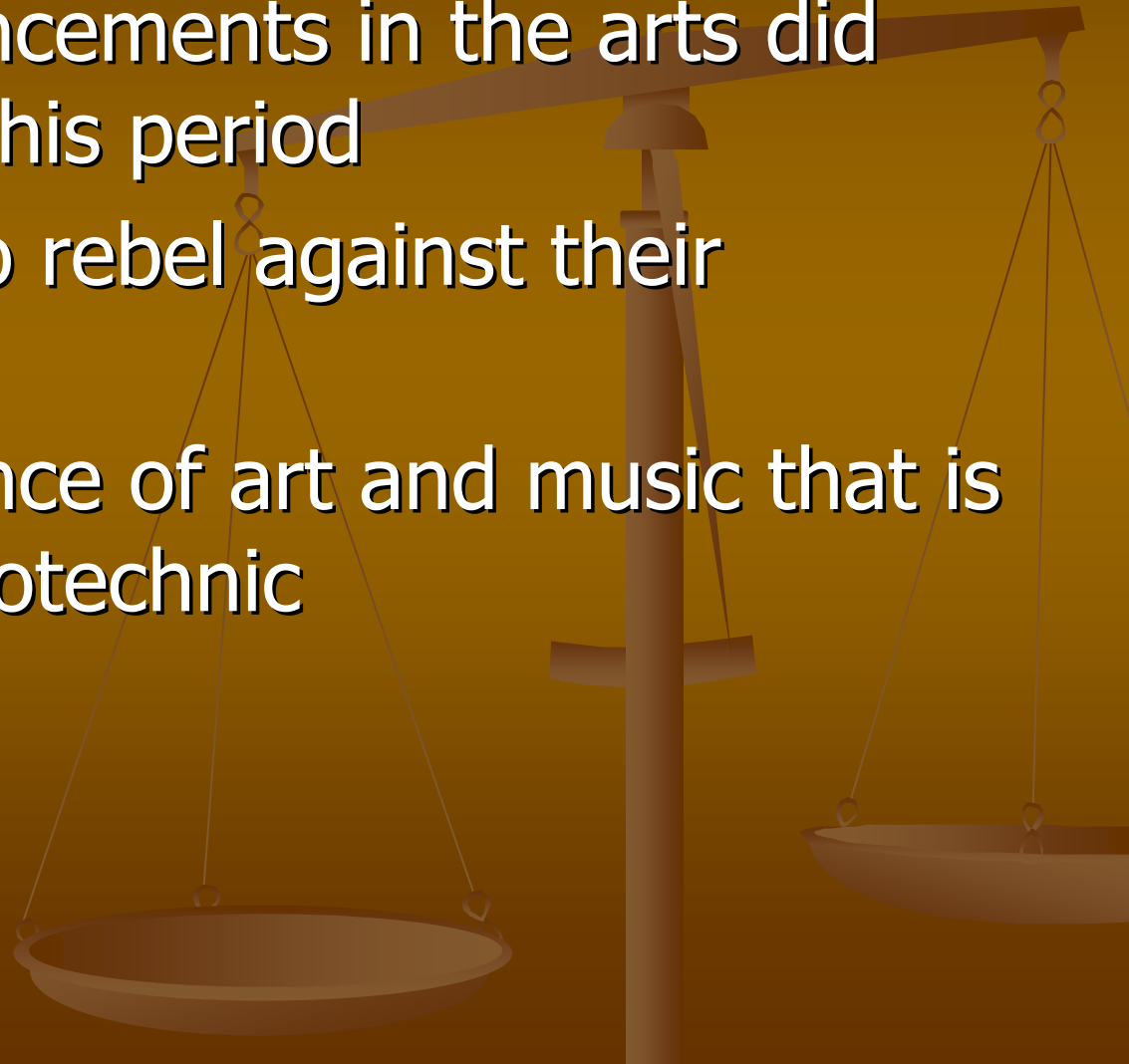


A New Concept of Time

- Power is not related to geography or human limitations
 - Work becomes much less efficient
 - Regimentation of time → The mass production of cheap watches
 - Machine rhythm replaces organic
 - Poe creates short stories for the average factory worker
- 

Esthetic Compensation

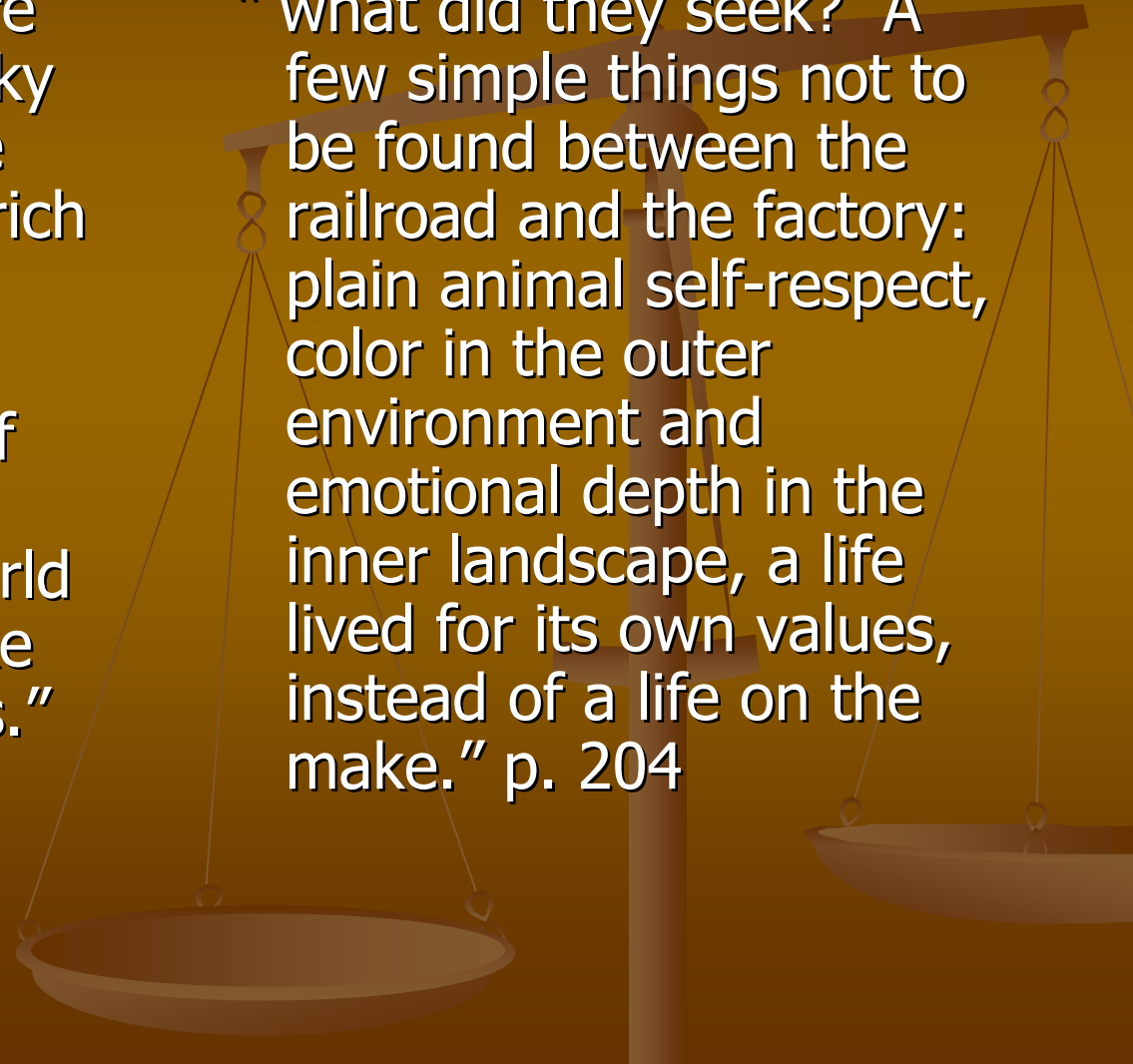
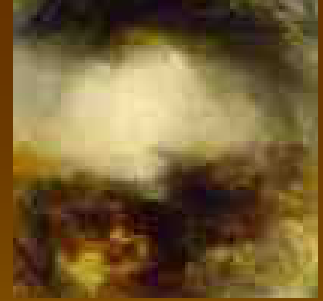
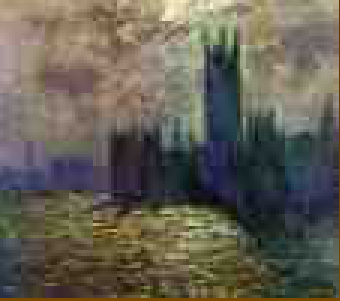
- Beneficial advancements in the arts did come about in this period
- People began to rebel against their surroundings
- See an emergence of art and music that is specifically paleotechnic



Paleotechnic Art

- “prevailing tones were dingy ones: in a murky atmosphere even the shadows lose their rich ultramarine or violet colors” p.179
- “The eye, deprived of sunlight and color, discovered a new world in twilight, fog, smoke and tonal distinctions.” p.199

“ what did they seek? A few simple things not to be found between the railroad and the factory: plain animal self-respect, color in the outer environment and emotional depth in the inner landscape, a life lived for its own values, instead of a life on the make.” p. 204



A Change in Music



Brahms



Beethoven

- Machines could perfect the instruments making the sounds predictable
- Beethoven and Brahms
- “The music gave more solid nourishment and warmth than Coketown’s spoiled and adulterated foods, its shoddy clothes, it’s jerrybuild houses.” p. 203

JMW Turner

- One of the first painters to absorb the new Industrialism
- “The finest gradations of tone disclosed and defined the barges, the outlines of a bridge, the distant shore”
- His works give rise to the class of impressionist painters



Rain, Steam and Speed
1844

Van Gogh

- Early in his career he absorbed the sinister nature of his environment
- Later, moved to France where industrialism wasn't as visible

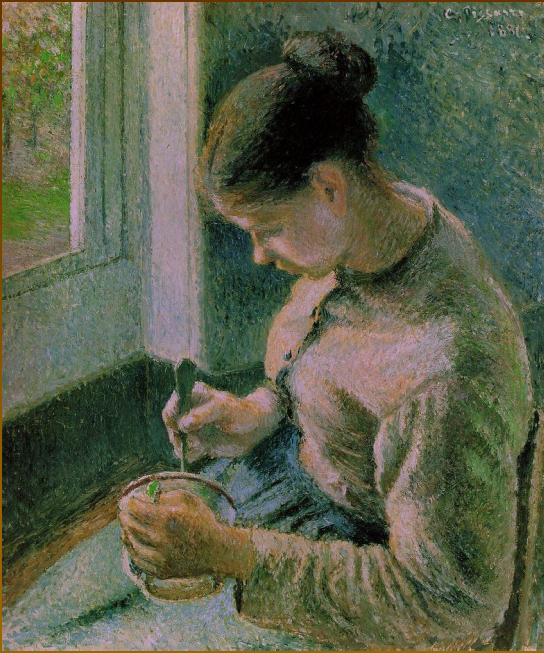


The Potato Eaters 1885



First Steps (after Millet) 1890

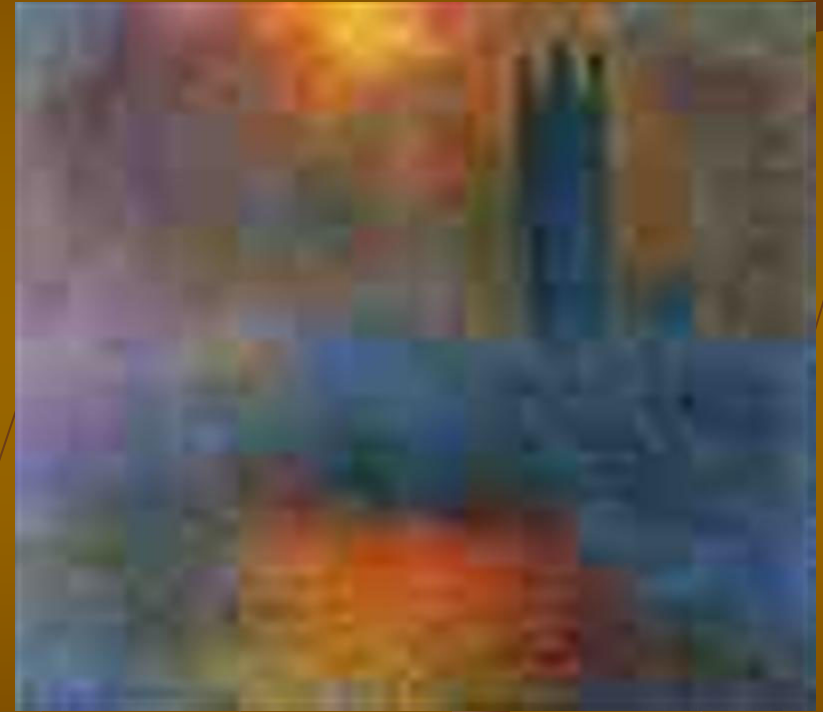
Monet, Sisley, Pissarro



Pissarro: Peasant Girl Drinking her Coffee
1881

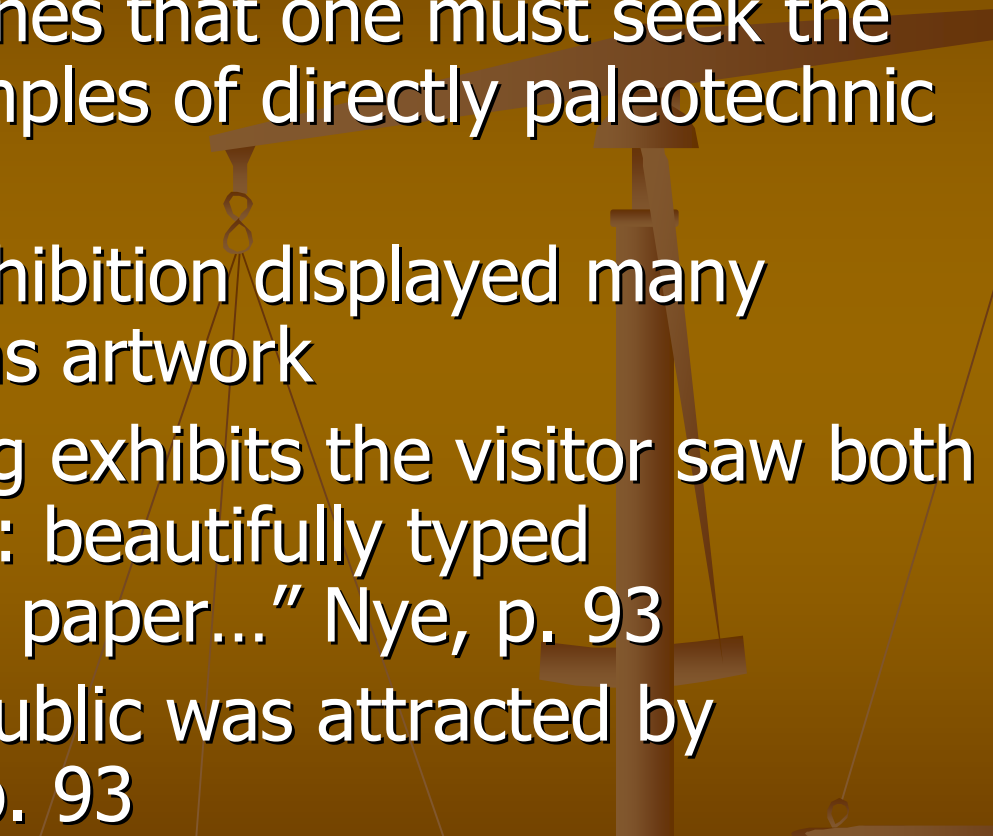


Sisley: Provencher's Mill at Moret 1883



*Monet: Houses of Parliament, London,
Sun Breaking Through the Fog*
1904

Beauty in the Machine?

- “And it is in machines that one must seek the most original examples of directly paleotechnic art.” p. 210
 - The Centennial Exhibition displayed many machines almost as artwork
 - “At these working exhibits the visitor saw both process and result: beautifully typed manuscripts, gold, paper...” Nye, p. 93
 - “The American public was attracted by movement” Nye, p. 93
- 

In Summary: Paleotechnic Phase

- A transition phase between the eotechnic and neotechnic phases
- In summary: “While humanly speaking the paleotechnic phase was a disastrous interlude, it helped by its very disorder to intensify the search for order, and by its special forms of brutality to clarify the goals of humane living. Action and reaction were equal – and in opposite directions.” p.211

