

Industrializing

Time & Space



Industry

A thick yellow arrow pointing from the right towards the left, positioned below the title 'Industry'.

Economic activity concerned with the processing of raw materials and manufacture of goods in factories.

Non-subsistence labor.

Production for commercial purposes.

Industry



**Mutations
of
Space & Time**
(like agriculture)

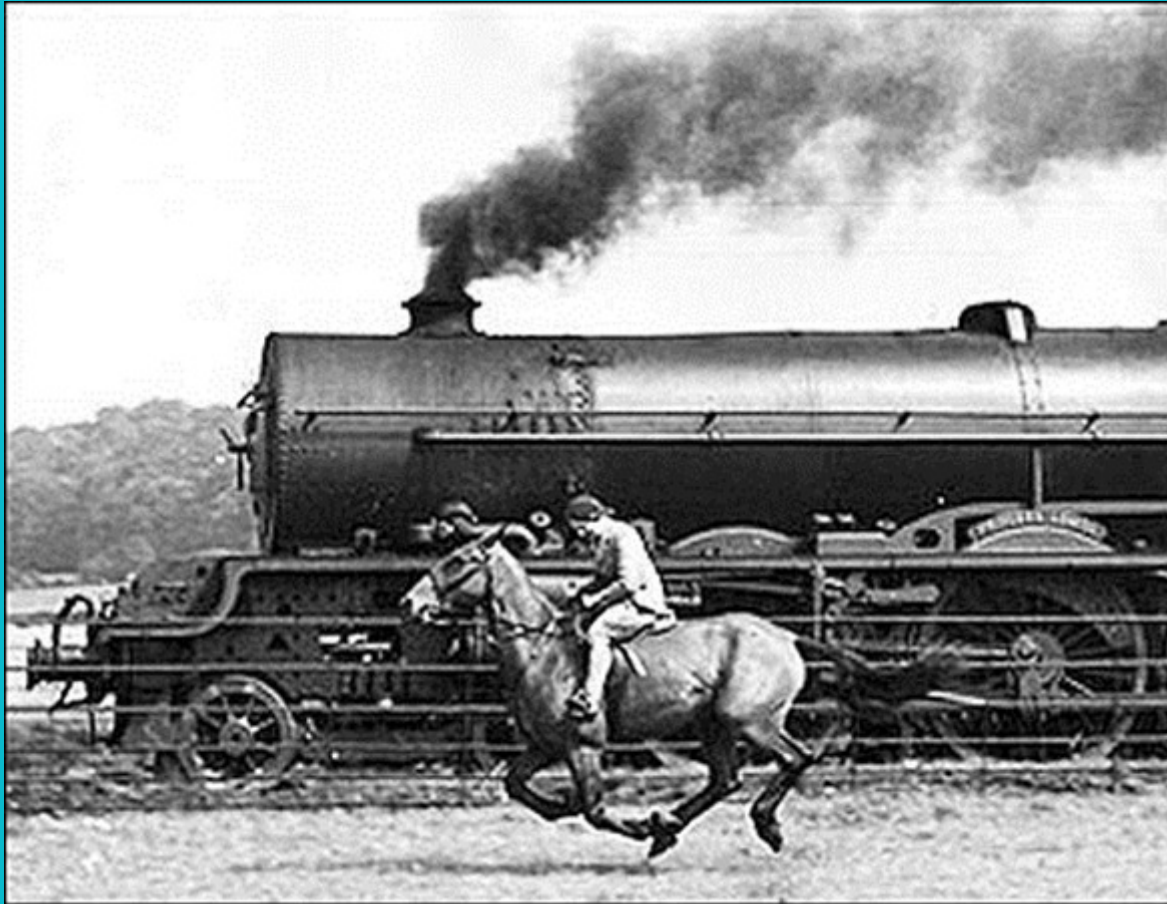
Industry



**Distances become
shorter!**

Time moves faster!

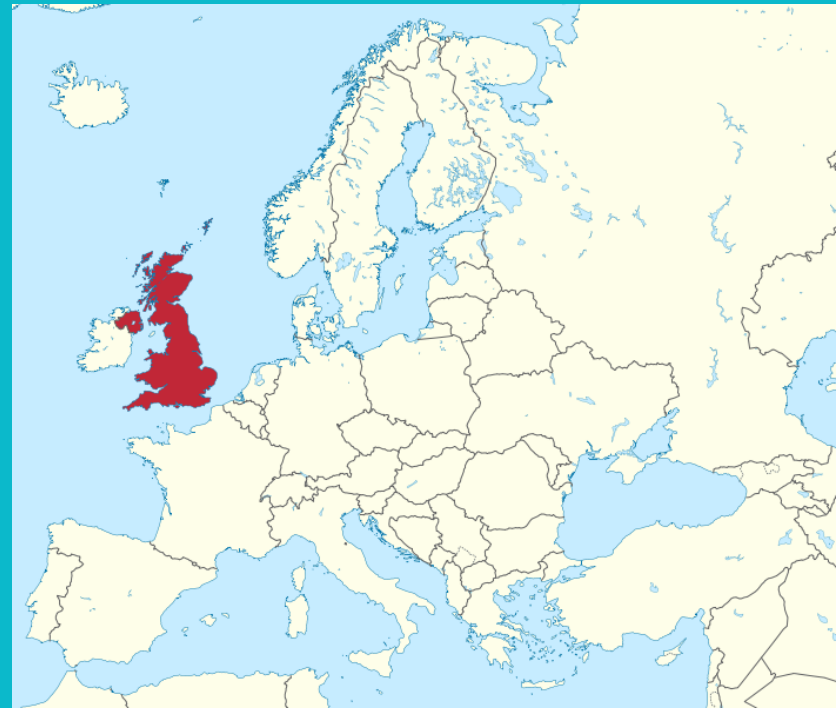
Industry



Industry

Industrial *Revolution*

- Foremost in England



Industry

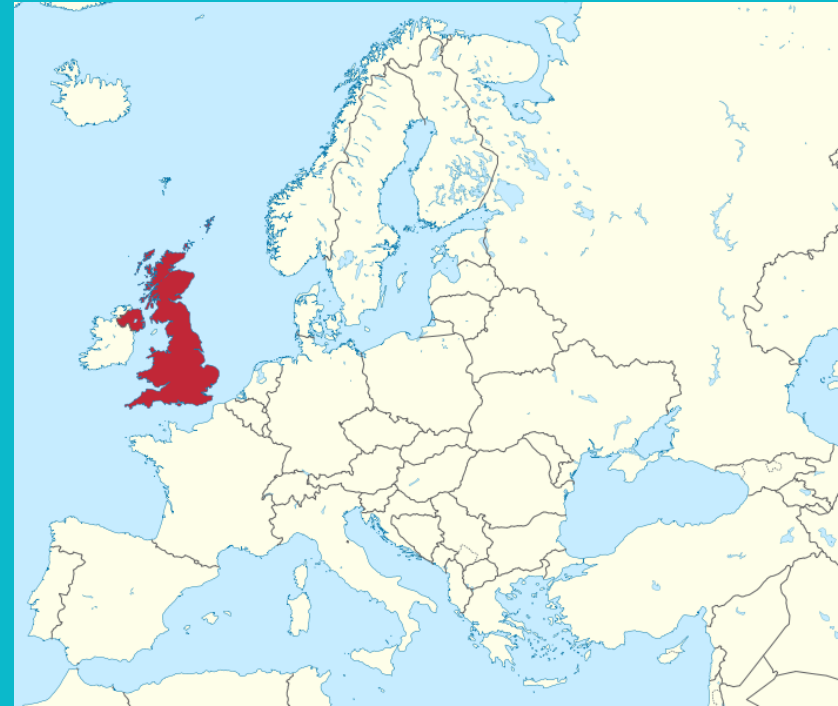
Industrial *Revolution*

- Foremost in England
- Begins circa 1781 (Steam Engine)
- Completed circa 1848 (political revolutions)



Industry

Why England?



Industry

Why England?



Industry

Why England?

**They had
lots of
cheap
coal!**



Industry

As opposed to Germany



**They had
lots of
cheap
wood... 😞**

Industry



Coal and Industry...

Fossil fuel = prerequisite for industrialization

Coal may last another 250 years

Global consumption of fossil fuels has grown a thousand fold since the 19th century.

Industry



Coal and Industry...

Annual growth rate of 3.5% per year
(remember this number!).

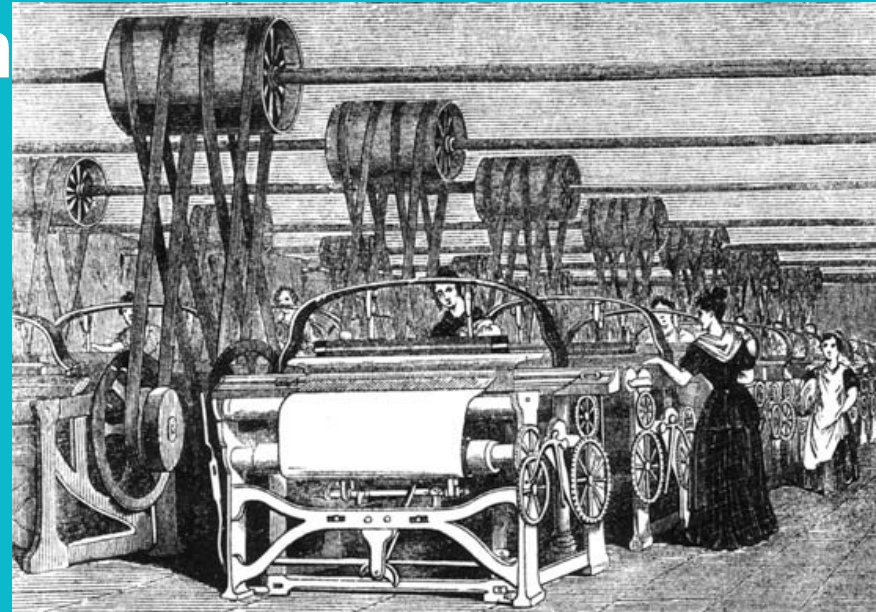
Agrarian civilizations lasted 5,000 years,
fossil civilization will not.

Ultimately we can only be in a transitional
society.

Industry

Industrial *Revolution*

- Automated production
- Machine power
- Textile industry is first to be industrialized.
- **Marks onset of unseen economic growth.**



Industry



Proto-Industrial

- Process of rural industrialization
- Pastoral farming combined with cottage industries
- Commercial farming and fishing
- Marginal and peripheral areas?
- Money payments and currency valuations.

Gufuskalar!

Industry



Industry

Gufuskalar!



Gufuskalar!

Industry

- Proto-industrial fishing village, ca. 1465
- Cod caught and processed for international markets in large numbers
- Seasonal occupation
- Lucrative

Industrial REVOLUTION



Takes place in urban areas...

But most of the people live in rural areas...

...Until

Closing of the Commons...



The Enclosures

Closing of the Commons...

**6 million acres of
land taken between
1725 – 1825.**



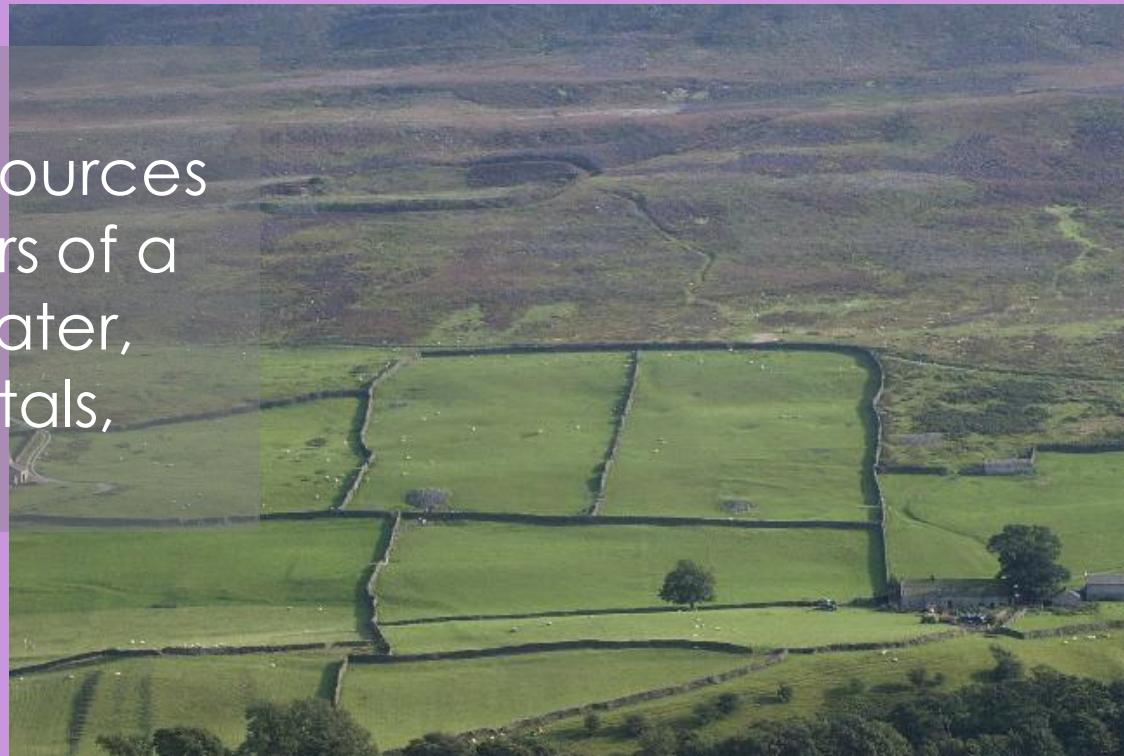
The Enclosures

Closing of the Commons...

“From 17th to 19th centuries millions of acres of open fields on which rural workers had commoner’s rights for grazing and growing were appropriated and enclosed in long series of parliamentary acts forcing the poor off the land.”

Commons:

Cultural and natural resources available to all members of a society, including air, water, wood, dirt, animals, metals, and fuels.



Closing of the Commons...

Why take the lands?

Wages were rising and rents were lowering...

The wealthy lived in constant fear of the poor uprising...

Peasant wars and lack of population had scared aristocracy...



Attack launched against all forms of collective sociality and, including farming, dances, festivals...

Closing of the Commons...

Aristocrats said that the Commons land was not being used to its fullest potential.

Greater agricultural yield could be produced if peasants were kicked off the land.



Peasants were being “inefficient”

Closing of the Commons...

Aristocrats said that the Commons land was not being used to its fullest potential.

Greater agricultural yield could be produced if peasants were kicked off the land.

Is this true?

Yes...

Peasants didn't maximize yield. They made enough to feed themselves and their families...



Peasants were being “inefficient”

Closing of the Commons...

After the enclosures landowners were able to increase the amount of food they grew.

But this actually INCREASED famine and hunger, because the food was sold.



A key to the modern world:
Things are not made to be used. They are made to be sold.

Industry



Step One:

Independent peasants/artisans sell their industrial products, produced from their own raw materials, using their own machinery. Producers control the means of production.

Step Two:

Merchant capitalists take over as middlemen in the provision of raw materials and machines and marketing, paying wages, thus separating the workers (producers) from the means of production.

Industry



Step One:

Independent peasants/artisans sell their industrial products, produced from their own raw materials and using their own machines and tools, for their own means of production.

Alienation!

Step Two:

Merchant capitalists take over as middlemen in the provision of raw materials and machines and marketing, paying wages, thus separating the workers (producers) from the means of production.

Industry

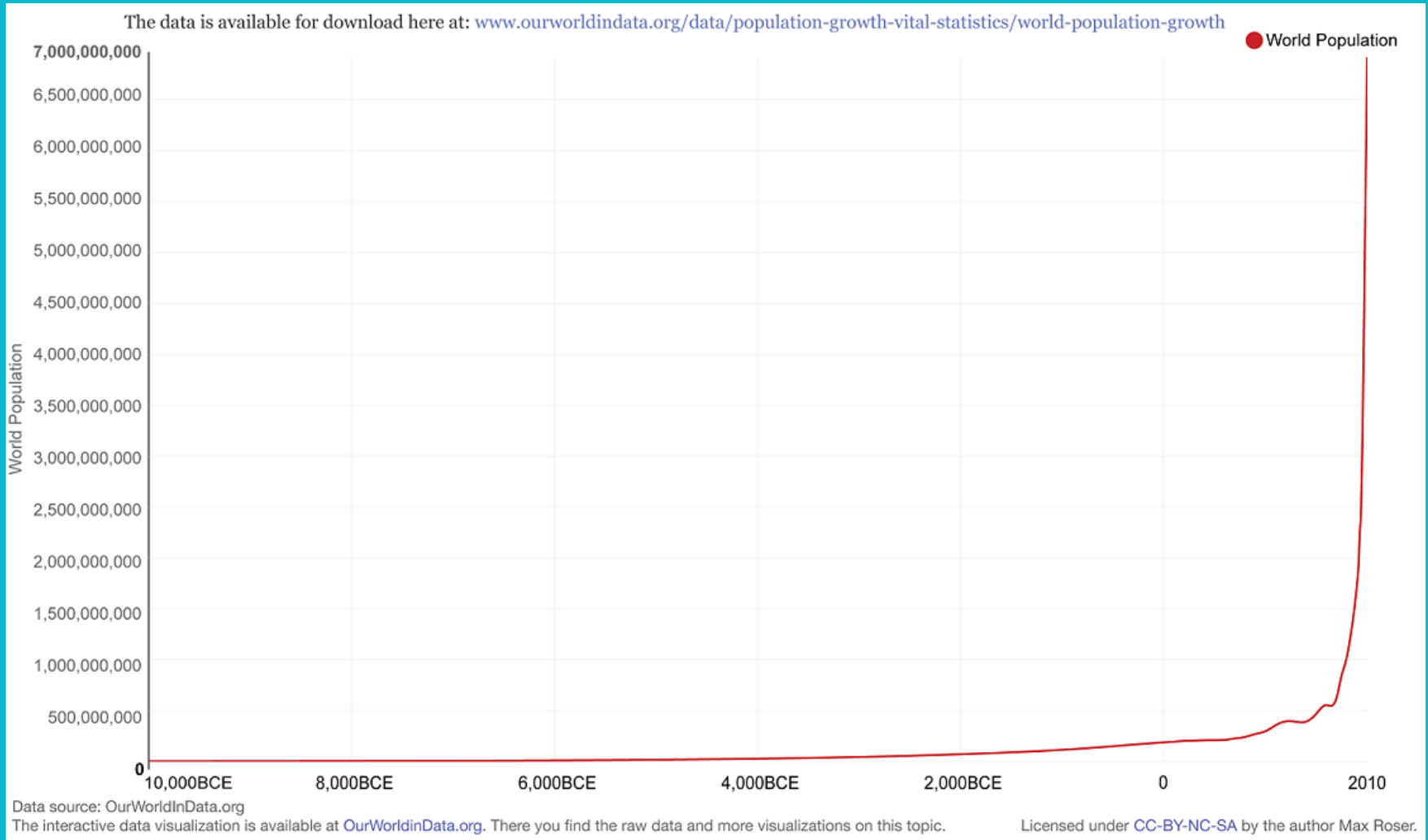


Proto-Industrialization leads to less seasonal work...

Leads to earlier marriages...

Leads to increased birth rate?

Industry



Industry



Proto-Industrialization leads less seasonal work...

Leads

One theory...

Leads to increased birth rate?

Industry



Moving away from task-oriented time (planting, harvesting, mining)...

...Toward abstract, standardized, quantified time (minutes, hours, seconds)

Industry



Moving away from task-oriented time (planting, harvesting, mining)...

Most non-industrialized populations today still observe task-oriented time

Industry



Industrialization creates new tensions between town & country (urban & rural).

Industrialization creates the proletarian class.

Industry



Industry



Proletariat:

- Workers or working-class people, regarded collectively.
- Only possession is labor-power
- Only value is labor-time
- No ownership
- Alienated from their production
- Cheap labor

Industry



Proletariat:

- Workers or working class
- reg
- On
- On
- No
- Alie
- Cheap labor

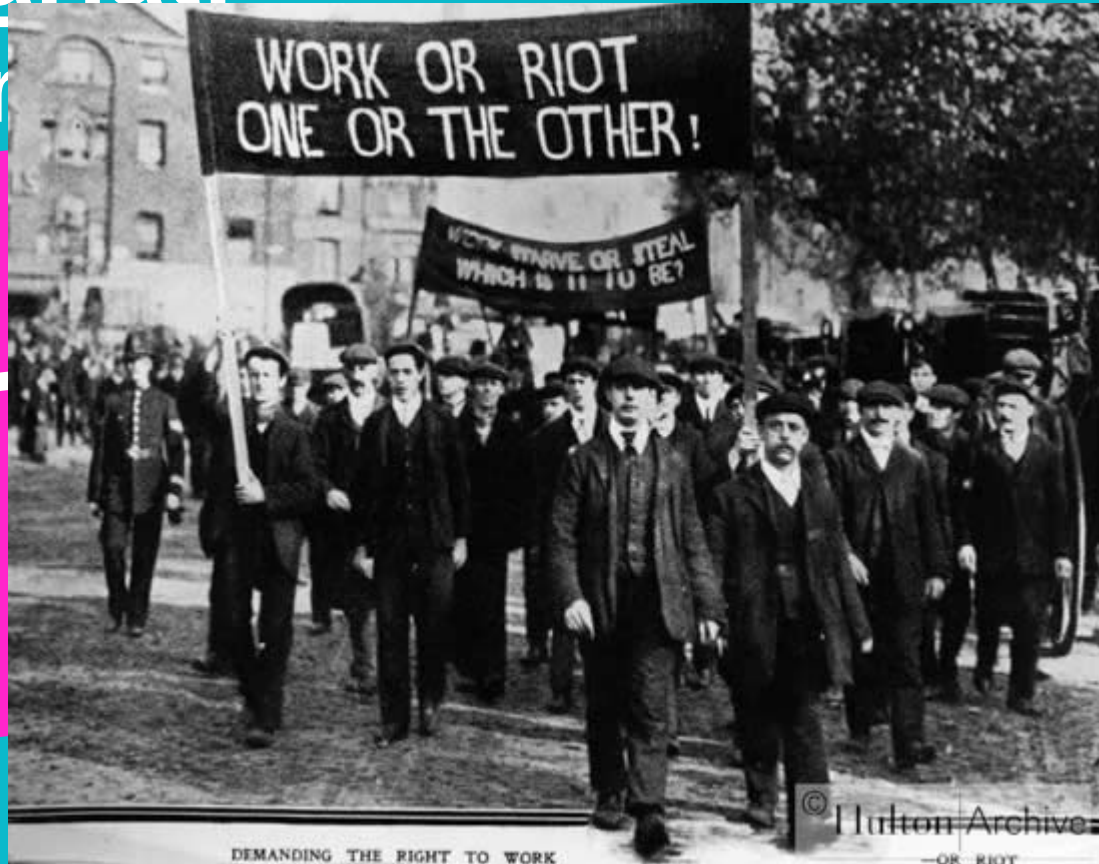
**Is this why there are
7 billion people on
the planet?**

Industry

Proletariat:

- Worker
- reg
- On
- On
- No
- Alie
- Cheap

ls



are
on

The Tragedy of the Commons

The Tragedy of the Commons

Idea that individuals acting according to their own rational self-interest will behave in detrimentally toward the common good.

Commonly shared resources will be depleted for individual gain at the cost of the collective good

The Tragedy of the Commons

Idea that individuals acting according to their self-interest will eventually deplete or destroy a common resource, even when it is clear that it is in everyone's long-term best interest to cooperate and act responsibly.

Examples:
fish stocks
Forests
Resource extraction
Wild fruit
Overhunting buffalo

cost of the collective good

The Tragedy of the Commons

Idea that individuals acting according to their own rational self-interest will behave in a way that is socially sub-optimal

The opposite of Adam Smith's "invisible hand" in capitalism?

Commonly shared resources will be depleted for individual gain at the cost of the collective good

The Tragedy of the Commons

Mývatn!



The Tragedy of the Commons

Mývatn!



The Tragedy of the Commons

Mývatn!

- Nearly 1,000 years of maintaining fruitful use of commons resources.
- Socially regulated egg poaching.
- No private ownership or government regulation.

