

**Industrial Revolution**

- No clear starting date: .....
- Why are we talking about a revolution?
  - ➔ .....
  - .....
- Started in ..... (became the leading industrial country in the 18<sup>th</sup> century)

**Why the UK?**

- Cotton from .....; cotton easier and cheaper to process than lamb's wool (most common fabric before)
  - ➔ UK tried to improve their equipment/machines in the textile industry to increase profit
  - ➔ Spinning machine & weaving loom started to be operated mechanically
  - ➔ ..... started to be used in textile factories
  - ➔ Human strength was replaced by machines ➔ .....
  - ➔ More and more textile factories were founded
- ..... became the pacemaker of the industrialization
- Why? ➔ .....
- Production of steam engine & of textile machines asked for more iron
  - ➔ new methods for iron production
  - ➔ mining of hard coal
- Economic liberalism further stimulated economy/industry
  - ➔ .....
  - .....
- Colonies as additional .....
- Protective tariffs
  - ➔ Economy boomed: textile, metal trade, construction, wood, paper & printing industry
- Similar developments in other countries
- ..... played a vital role

**Urbanization & population growth**

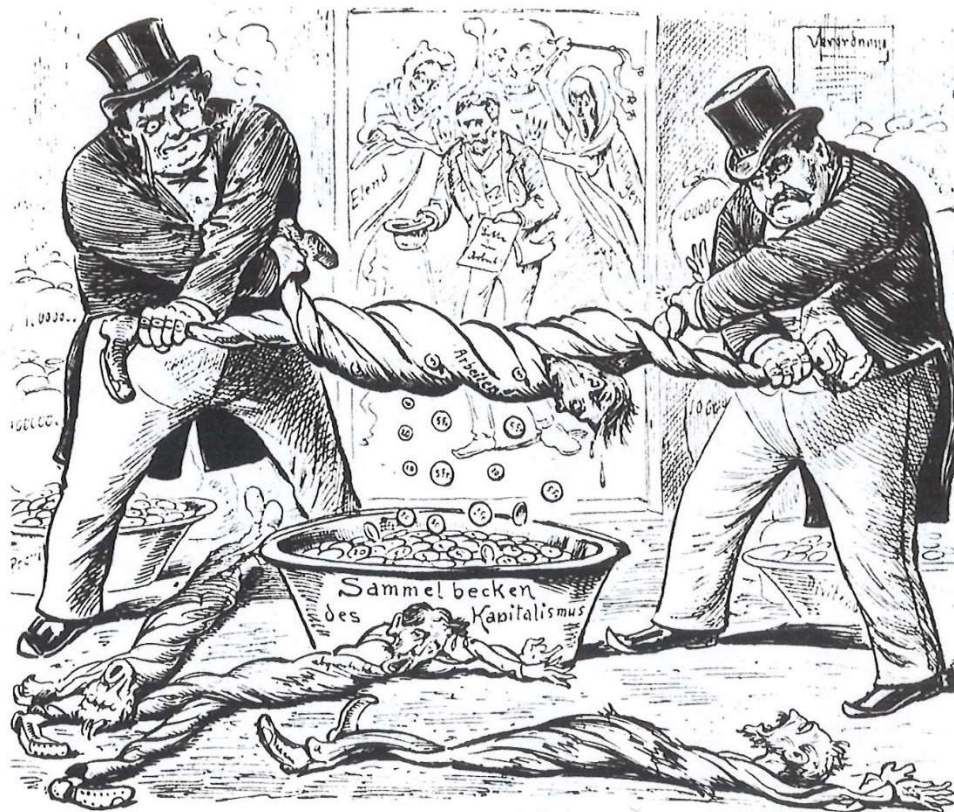
- Turning from an agricultural into an ..... society greatly changed the demographic structure
- Liberation of farmers
  - ➔ .....
  - .....
- Free choice of occupation ➔ .....

## Living conditions & the Social Question

→ see text on extra copy

### The “second” Industrial Revolution

- Further industrial and economic growth in the second part of the 19<sup>th</sup> century due to
  - ..... → vastly replaced mechanical energy → invention of the telephone (Alexander Bell), the electric light bulb (Thomas Edison) lead new electrical industry → development of the dynamo (Werner v. Siemens) revolutionized electric industry (replaced steam engine in transportation, machine construction and the construction sector)
  - invention of the combustion engine
  - ..... as a new resource
  - .....: chemists produced new substances from oil and tar, e.g. paint, gasoline, chemical fertilizer, medicine (vaccination)
- The second part of the industrial revolution moved even more quickly and brought along .....
- ..... became the economic superpowers of the time (from 1880 onwards)



*“The new relationship between workers and industrialists”  
Cartoon from “Neuen Postillon”, Switerland, 1896*

# Living Conditions in the Early Days of Industrialization

## Industrial Centres – why were cities more attractive?

Many people left the countryside to find work in urban areas. Therefore, many small towns quickly became industrial centres within a few years. New factories were built, new businesses started. Around 1830 there were only two major cities with a population of more than 100,000 inhabitants in Germany (Hamburg and Berlin), by 1850 there were three (plus Munich) and by 1880 there were thirteen. Berlin's population had even increased to more than one million. Never before was there a more rapid growth of cities than during industrialization.

The myth of a happier life in the city started. People thought they could make more money and assumed that there was more entertainment for them. Unfortunately, reality did not live up to the dream.

## Life of the Working Class – a living hell?

In the course of industrialization very few people became rich. The majority remained poor or became even poorer than before. Wages were low and *flats* were expensive, so many people often shared one room. In addition, working conditions were bad. Big factories could only grow if the production of goods stayed cheap. Therefore, most factory owners did not care about the safety of their workers. Long working hours and dirty work took its *toll*. But not only dirty work and long working hours helped diseases to spread. During urbanization too many people moved to the cities in too short a time. Therefore the flats were very crowded and the hygienic conditions extremely bad. Most of the waste landed in the streets. There were many rats and the air was polluted because of the many factories.

Things had changed a great deal, not only the living but also the working conditions. Instead of being paid for the piece of work produced, the basis for wages now was time. Therefore, at the beginning of industrialization, people worked at least fourteen hours (sometimes up to seventeen hours) a day. In addition to their working hours, some people had a two-hour walk to the factory (one way).

Wages were low. Alfred Krupp, for example, paid his workers 1.25 marks a day in 1850. In 1873 he paid 3.74 marks. Skilled workers in an industrial factory earned about double what a craftsman earned. Women and children earned least of all and were the cheapest **labour** available. In many factories workers had to pay fines if they were late, for example, or something broke. Sometimes even the repair cost of machines was taken out of a worker's wage.

Exhaustion was not the only aspect that made work dangerous. Space in the factories was limited and air conditioning still unknown. Heat, cold, damp, noise and poisonous gases or dust often made the working environment unbearable. Also, workplaces were not primarily designed for people, but for the product being made there. Designing better workplaces would have cost money, which factory owners invested in new machines rather than their workers. These machines had few safety precautions, so there were many serious accidents as well. Poor working conditions caused *disabilities*. Since there was no health care system, a family then had to feed one more person who could not *contribute* to the family income. This made it necessary for the children of a family to start working as early as possible.



## Child Labour – cheap and easily replaced

Children were more of a burden to their families than a blessing. On farms in the countryside, women and children helped in cottage industry. There they played an important role and could work at home. In the industrial centres children meant problems, starting with the mother's *pregnancy*. Because of the working conditions, about 9% of all children were dead at birth. Those who lived started working at the age of about six years. Because of their small hands they were preferred workers in the textile industry. But the mining industry, too, liked child labourers, because they could crawl or walk through very narrow tunnels. In the cities they were also often employed as chimney sweeps, because they could crawl into the chimneys. All these jobs were extremely dangerous, especially because there were hardly any safety precautions. Children had long working hours, very low pay, and many died of exhaustion or in accidents.

Because these children had to work all day, there was no time for school. This meant that the children did not learn to read or write, and therefore could not get a better job in their later life. This fact and the bad treatment of children made many people want to change things. In England, for example, a Commission of Parliament interviewed hundreds of people who worked in mills between 1831 and 1832. The results were horrible and reforms were put in a **Factory Act**, which was passed in 1833. It said that children had to be at least nine years old to work, but who could tell how old the children were? The working hours were also limited (between nine to twelve hours a day). This act also included education. But after seven hours of work, two hours of lessons seemed like a welcome break for the children, so that effective learning was hardly possible. This problem still exists in many parts of the world today.

## Attempts to Solve Social Problems

### Workers Unite

Karl Marx and Friedrich Engels, who had a **middle class** background, started a new movement called communism after having seen the suffering of workers in England and Germany. The two men claimed that the only thing workers could sell to earn a living was their working power. They did not have any money or own any productive means (such as machines, raw material or land). Those who did were **capitalists**, who determined wages. In order to earn as much profit as possible they always underpaid their workers, so working power was never valued enough.

Marx's theory states that there is a predetermined order of societies in the history of mankind. First there is a primitive society, then one based on slavery, followed by a feudal system, which in turn is replaced by a capitalistic **bourgeois society**. A revolution to overthrow the capitalistic society by a communist one would lead to a free society without a class system, a ruler, subjects, owners (capitalists) or poor people.

The idea was a revolution of all workers against all capitalists. Many leaders of **trade unions**, socialist groups and parties were influenced by these ideas. In 1847 the Communist League was founded to oppose workers' *exploitation*. The revolution of 1848 with its goal of more democratic structures supported these new ideas, too. Ferdinand Lassalle founded the **General Association of German Workers** in 1863. Six years later the **Social Democratic Workers' Party** was

founded. These two parties joined in 1875 to become the **Social Democratic Party of Germany**.