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The Industrial Economy: Crash Course US History #23

Hi, I'm John Green. This is Crash Course U.S. History, and today we're going to discuss economics and how a generation of--  
  
Mr. Green, Mr. Green, is this going to be one of those boring ones with no wars or generals who had cool last words or anything?  
  
Alright, me from the past, I will give you a smidge of great man history, but only a smidge!

#### **AMERICAN INDUSTRIALIZATION**

So, today we're going to discuss American Industrialization in the decades after the Civil War, during which time the U.S. went from having, per capita, about a third of Great Britain's industrial output to becoming the richest and most industrialized nation on earth.

Eh, you might want to hold off on that Libertage, Stan, because this happened mostly thanks to the not particularly awesome Civil War, which improved the finance system by forcing the introduction of a national currency and spurred industrialization by giving massive contracts to arms and clothing manufacturers.

The Civil War also boosted the telegraph, which improved communication, and gave birth to the Transcontinental Railway by the Pacific Railway Act of 1862, all of which increased efficiency and productivity, so thanks, Civil War!  
  
[Intro Music]

#### **IMMIGRATION & ECONOMIC GROWTH**

If you want to explain America's economic growth in a nutshell, chalk it up to GD and L, Gerard Depardieu and Lohan. No, geography, demography and law.  However, while we're on the topic, when was Gerard Depardieu and Lindsay Lohan have a baby? Stan, can I see it? Yes! YES!  
  
Geographically, the U.S. was a huge country with all the resources necessary for an industrial boom. Like, we had coal and iron and later oil. Initially, we had water to power our factories, later replaced by coal, and we had amber waves of grain to feed our growing population, which leads to the demography.

America's population grew from 40 million in 1870 to 76 million in 1900, and a third of that growth was due to immigration, which is good for economies. Many of these immigrants flooded the burgeoning cities as America shifted from being an agrarian, rural nation to being an industrial, urban one.

Like, New York City became the center of commerce and finance, and by 1898, it had a population of 3.4 million people, and the industrial heartland was in the Great Lakes region. Chicago became the second largest city by 1900, Cleveland became a leader in oil refining, and Pittsburgh was the center of iron and steel production.  And even today, the great city of Pittsburgh still employs 53 Steelers.  
  
Last but not least was the law. The Constitution and its Commerce Clause made the U.S. a single area of commerce, like a giant customs union, and as we'll see in a bit, the Supreme Court interpreted the laws in a very business-friendly way.

Also, the American Constitution protects patents, which encourages invention and innovation, or at least it used to. Despite what Ayn Rand would tell you, the American government played a role in American economic growth by putting up high tariffs, especially on steel, giving massive land grants to railroads, and by putting Native Americans on reservations.

Also, foreigners played an important role. They invested their capital and involved Americans in their economic scandals, like the one that led to a depression in 1893. The U.S. was, at the time, seen by Europeans as a developing economy, and investments in America offered much higher returns than those available in Europe.  
  
And the changes we're talking about here were massive:  in 1880, for the first time, a majority of the workforce worked in non-farming jobs. By 1890, two-thirds of Americans worked for wages, rather than farming or owning their own businesses, and by 1913, the United States produced one-third of the world's total industrial output. Now bring out the Libertage, Stan! Awesome! And even better, we now get to talk about perennially underrated railroads. Let's go to the thought bubble.

#### **THOUGHT BUBBLE: RAILROADS**

Although we tend to forget about them here in the U.S., because our passenger rail system sucks, railroads were one of the keys to America's 19th century industrial success. Railroads increased commerce and integrated the American market, which allowed national brands to emerge, like Ivory Soap and A&P grocery stores, but railroads changed and improved our economy in less obvious ways, too.

For instance, they gave us time zones, which were created by the major railroad companies to make shipping and passenger transport more standard. Also because he recognized the importance of telling time, a railroad agent named Richard Warren Sears turned a fifty-dollar investment in watches into an enormous mail order empire, and railroads made it possible for him – and his eventual partner, Roebuck – to ship watches and then jewelry and then pretty much everything, including unconstructed freaking houses throughout the country.

Railroads were also the first modern corporations. These companies were large, they had many employees, they spanned the country, and that meant they needed to invent organizational methods, including the middle managers, supervisors to supervise supervisors. And for the first time, the owners of a company were not always day to day managers, because railroads were among the first publicly-traded corporations.

They needed a lot of capital to build tracks and stations, so they sold shares in the company in order to raise that money, which shares could then be bought and sold by the public, and that is how railroads created the first captains of industry, like Cornelius “They Named A University After Me” Vanderbilt and Andrew “Me Too” Carnegie (Mellon) and Leland “I Named A University After My Son” Stanford.

The railroad business was also emblematic of the partnership between the national government and industry. The Transcontinental Railroad, after all, wouldn't have existed without congressional legislation, federal land grants, and government-sponsored bond issues. Thanks, Thought Bubble!

#### **MYSTERY DOCUMENT**

Apparently it's time for the mystery document!  
  
The rules here are simple. I guess the author of the mystery document, and if I'm wrong - which I usually am - I get shocked. Alright.

The belief is common in America that the days at hand when corporations far greater than the Erie--swaying such power as have never in world's history been trusted in the hands of mere private citizens, controlled by single men like Vanderbilt...--will ultimately succeed in direction government itself. Under the American form of society, there is now no authority capable of effective resistance.

Corporations directing government? That's ridiculous. I'm so grateful for federal ethanol subsidies, brought to you by delicious Dr. Pepper. Mmm! I can taste all 23 of the chemicals. Anyways, Dan, I'm pretty sure that is noted muckraker Ida Tarbell?

No! Henry Adams? How are there still Adamses in American history? Oh, that makes me worry we'll never escape the Clintons. Anyway, it should have been Ida Tarbell. She has a great name, she was a great opponent of capitalism. Whatever. Aah!

#### **THE ROBBER BARONS**

Indeed, industrial capitalists are considered both the greatest heroes and the greatest villains of the era, which is why they're known both as captains of industry and as robber barons, depending on whether we are mad at them. While they often came from humble origins, took risks and became very wealthy, their methods were frequently unscrupulous.

I mean, they often drove competitors out of business and generally cared very little for their workers. The first of the great robber barons and-or captains of industry was the aforementioned Cornelius Vanderbilt, who rose from humble beginnings in Staten Island to make a fortune in transportation through ferries and shipping, and then eventually through railroads, although he once referred to trains as “them things that go on land.”

But the poster boy of the era was John D. Rockefeller, who started out as a clerk for a Cleveland merchant and eventually became the richest man in the world. Ever. Yes, including Bill Gates. The key to Rockefeller's success was ruthlessly buying up so many rivals that, by the late 1880s, standard oil controlled 90 percent of the U.S. oil industry, which lack of competition drove the price of gasoline up to, like, twelve cents a gallon. So, if you had one of the twenty cars in the world, then you were mad.

#### **VERTICAL & HORIZONTAL INTEGRATION**

The period also saw innovation in terms of the way industries were organized. Many of the robber barons formed pools and trusts to control prices and limit the negative effects of competition. The problem with competition is that, over time, it reduces both prices and profit margins, which makes it difficult to become super rich.

Vertical integration was another innovation. Firms bought up all aspects of the production process, from raw materials to production to transport and distribution. Like, Philip Armour's meat company bought its own rail cars to ship meat, for instance. It also bought things like conveyor belts, and when he found out that animal parts could be used to make glue, he got into the glue making business. It was Armour who once proclaimed to use “everything but the squeal.”

Horizontal integration was when big firms bought up small ones. The best example of this was Rockefeller's Standard Oil, which eventually became so big, incidentally, that the Supreme Court forced Standard Oil to be broken up into more than a dozen smaller oil companies which, by the way, over time, have slowly reunited to become the company known as Exxon Mobile, so that worked out.

U.S. Steel was put together by the era's giant of finance, J. P. Morgan, who, at his death, left a fortune of only $68 million, not counting the art that became the backbone of the Metropolitan Museum of Art, leading Andrew Carnegie to remark in surprise, “And to think he was not a rich man.”

#### **THE WORKERS & THE UNIONS**

Speaking of people who weren't rich, let us now praise the unsung heroes of industrialization: workers. Well, I guess you can't really call them unsung, because Woody Guthrie. Oh, your guitar, and my computer! I never made that connection before! Anyway, then as now, the benefits of economic growth were shared, shall we say, a smidge unevenly.

Prices did drop, due to industrial competition, which raised the standard of living for the average American worker. In fact, it was among the highest in the world, but due to a growing population, particularly of immigrant workers, there was job insecurity and also, booms and busts meant depressions in the 1870s and 1890s, which hit the working poor the hardest.

Also, laborers commonly worked 60 hours per week with no pensions or injury compensation, and the U.S. had the highest rate of industrial injuries in the world - an average of over 35,000 people per year died on the job. These conditions and the uncertainty of labor markets led to unions, which were mostly local but occasionally national.

The first national union was the Knights of Labor, headed by Terence V. Powderly, which grew from nine members in 1870 to 728,000 by 1884. The Knights of Labor admitted unskilled workers, black workers, and women, but it was irreparably damaged by the Haymarket Riot in 1886.

During a strike against McCormick Harvesting Company, a policeman killed one of the strikers and in response, there was a rally in Chicago's Haymarket Square at which a bomb killed seven police officers. Then, firing upon the crowd, the police killed four people. Seven anarchists were eventually convicted of the bombing, and although Powderly denounced anarchism, the public still associated the Knights of Labor with violence, and by 1902, its membership had shrunk considerably, to zero.

The banner of organized labor, however, was picked up by the American Federation of Labor under Samuel L. Gompers. Do all of these guys have great last names? They were more moderate than the anarchists and the socialist international workers of the world, and focused on bread and butter issues like pay, hours, and safety.

Founded in 1886, the same year as the Haymarket Riot, the AFL had about 250,000 by 1892, almost ten percent of whom were iron and steel workers. And now we have to pause to briefly mention one of the most pernicious innovations of the era: Social Darwinism, a perversion of Darwin's theory that would have made him throw up, although to be fair, almost everything made him throw up.

#### **SOCIAL DARWINISM**

Social Darwinists argued that the theory of survival of the fittest should be applied to people and also that corporations were people. Ergo, big companies were big because they were fitter, and we had nothing to fear from monopolies.

This pseudoscience was used to argue that governments shouldn't regulate business or pass laws to help poor people. It assured the rich that the poor were poor because of some inherent evolutionary flaw, thus enabling tycoons to sleep at night. You know, on a big pile of money surrounded by beautiful women.

#### **UNIONS CONTINUED**

But despite the apparent inborn unfitness of workers, unions continued to grow and fight for better conditions, sometimes violently. There was violence at the Homestead Steel Strike of 1892 and the Pullman Rail Strike of 1894, when strikers were killed and a great deal of property was destroyed. To quote the historian Michael Lind, “in the late 1870s and early 1880s, the United States had five times as many unionized workers as Germany, at a time when the two nations had similar populations.”

Unions wanted the United States and its citizens to imagine freedom more broadly, arguing that without a more equal economic system, America was becoming less--not more--free, even as it became more prosperous. If you're thinking that this freewheeling age of fast growth, uneven gains in prosperity, and corporate heroes/villains resembles the early 21st century, you aren't alone.

And it's worth remembering that it was only 150 years ago that modern corporations began to form and that American industry became the leading driver in the global economy. That's a blink of an eye in world history terms, and the ideas in technologies of post-Civil War America gave us the ideas that still define how we – all of us, not just Americans--think about opposites, like success and failure, or wealth and poverty. It's also when people begin to discuss the ways in which inequality could be the opposite of freedom. Thanks for watching. I'll see you next week.

#### **CREDITS**

Crash Course is produced and directed by Stan Muller.  
  
Our script supervisor is Meredith Danko.  
  
The associate producer is Danica Johnson.  
  
The show is written by my high school history teacher, Raoul Meyer, Rosianna Halse Rojas and myself, and our graphics team is Thought Cafe.  
  
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