

6.3 The SECOND Industrial Revolution & Its EFFECTS

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1. 释义

So from 1870 to 1914, Europe experienced the second wave of industrialization 工业化. And the second wave was much like the first wave of industrialization, only more so 更加如此 ; 有过之而无不及. If you' re ready to get them brain cows milked, let' s get to it.

So in the last video, we talked about the beginning of industrialization in Europe /and how Great Britain was the first *mover and shaker* (重要机构中) 有权势的人,举足轻重的人物 in this respect 在这方面. We talked about the birth of the factory system 工厂制度 which changed (v.) the way 后定说明 goods were made. Like, prior to 在...之前 this, goods were made by hand, but now they were mass produced 大规模生产 in factories.

And now we need to talk about how by 1914, the factory system became the dominant (a.) 占主导地位的 mode (n.) of production 生产方式 in Europe. And let me give you a couple examples of how this develops. And look, I' m not going to lie to you, there' s a lot to digest (v.)消化;理解 ; 领会 in this video. So if you want to grab my note guides 笔记指南 that go along with 与...配套 it, then check the link in the description 描述.

So first, let me introduce you to the Krupp family in Essen, Germany. Starting in the 16th century, they began manufacturing (v.)制造 weapons 武器. And by the time of the Second Industrial Revolution, they had perfected 使完善 the process of making steel 钢铁. By 1870, states from all over Europe and the world were buying weapons from Krupp Industries, and that led the Krupp family to dominating (v.) the steel industry for a century.

Second, you need to know about the first real industrial city, namely 即 ; 也就是 Manchester, England. It was here that the first industrial park 工业园区 was created, which was a designated (a.)指定的 , 标出的 area 后定说明 built (v.) specifically for manufacturing. They specialized in 专门从事 making machines that made (v.) other machines. But the point is, Manchester was a city that was built for industry, and as a result 结果, many of its inhabitants 居民 saw their standard of living 生活水平 rise /and wealth came **pouring in** 大量涌入.

Now you also need to know some of the specific technologies that characterize 是...的特征, 是.....的典型 the second wave of industrialization. First of all, electricity 电力 revolutionized

(v.)彻底改变,使发生革命性巨变 the communications industry 通信行业. In the 1840s, an American inventor 发明家 named Samuel Morse 发明了 (v.) the telegraph 电报, which was able **to send** communication across wires 电线 **to** distant 遥远的 places using short and long signals 信号, which became known as Morse code 摩尔斯电码.

Eventually 最终 in the 1870s, the telegraph wire **was laid** 铺设 across the Atlantic, connecting Britain with the United States. And that had the effect of 产生...的效果 further linking (v.)进一步连接 the economies on both sides of the Atlantic.

Second, chemical engineering 化学工程 led to 导致 improved materials 改良材料 for manufacturing. For example, vulcanization 硫化 was a chemical process 化学过程 that **made** rubber 橡胶 **harder** and therefore more durable 持久的, 耐用的. That was a big deal 重要的事情 because rubber was used widely in factories **to make machines turn** (v.), and it became an effective coating 涂层 for electrical wires 电线 as well.

Example 1. 案例
vulcanization

硫化 (英式英语: vulcanisation) 是一系列使橡胶硬化的工艺。从而提高材料的刚性和耐久性, 并改变材料的机械和电气性能。与其他“热固性聚合物”的固化一样, 硫化通常是不可逆的。

Third, railroads 铁路 revolutionized (v.) the transportation industry 运输行业. Now railroads are beginning **to show up in significant** 重要的, 意义重大的 **ways** in the first Industrial Revolution, but at this point /they began to dominate (v.) the landscape 占据主导地位. Remember that when industrialization first took root 扎根, 主 the dominant (a.) mode of transportation 主要运输方式 both for raw materials 原材料 and finished manufacturing goods 制成品 系 was by water — **which is to say** rivers and canals 运河 and oceans.

During the Second Industrial Revolution, thousands of new miles of railroad tracks 铁轨 were laid. This increased (v.) commerce 商业 by **linking** distant parts of a country **into** a national economy 国民经济. And railroads also facilitated (v.)促进 more people moving from the country into the cities, a process known as urbanization 城市化.

Example 2. 案例
facilitate

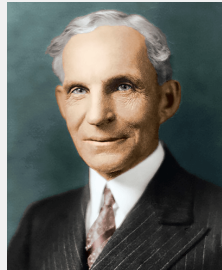
→ -fac-做,作 + -ile形容词词尾(e略) + -ity名词词尾(y略) + -ate

However, fourth, the *internal combustion* 燃烧 *engine* 内燃机 soon grew (v.) in dominance 占据主导地位 during the Second Industrial Revolution. Whereas 然而 the first revolution was mainly powered by 由...驱动 steam 蒸汽, the second revolution would be increasingly powered by gasoline 汽油, which is how *internal combustion engines* ran. Eventually this would lead to gas-powered tractors 拖拉机 for farming (v.) and automobiles 汽车 for, you know, going places.

With all these new innovations 创新 in transportation and communication technologies, new industries developed (v.) right alongside of that. 与此同时，新兴工业也随之发展起来。主 The advent 出现，到来，问世 of *the internal combustion engine* 谓 created the occasion 时机，适当的机会 for 为...创造机会 the automobile industry 汽车行业。And the most significant mover 重要人物 on that front 方面 was the American Henry Ford.

Example 3. 案例

Henry Ford



亨利·福特（1863年7月30日-1947年4月7日）。作为福特汽车公司的创始人，他被誉为通过后来被称为“福特主义”的体系，让美国中产阶级买得起汽车的先驱。1947年去世后，他将大部分财富留给了福特基金会。

Hold on a minute — this is AP European history! What you doing talking about Henry Ford? Well, **I wouldn't be /except 除...之外 to remember** Manchester, England, that bastion 堡垒；棱堡 of European manufacturing? Well, Henry Ford established an automobile manufacturing site 生产基地 there /and produced cars by the metric buttload（非正式，大量地）。

Example 4. 案例

"I wouldn't be except to remember" 是一种比较口语化和非正式的表达方式，它有点像省略了主语和谓语的从句。它的完整意思是：

"I wouldn't be [talking about Henry Ford] **except to remember** Manchester, England..."

拆解来看：

- **"I wouldn't be [talking about Henry Ford]"**：如果不是某个原因，我本来是不会谈论亨利·福特的。这里的 be 是助动词，暗示了前面被省略的动词，通常是 talking about、doing that 或 mentioning him。
- **"except to remember Manchester, England"**：除了为了提醒大家记住曼彻斯特。except to 表示“除了.....之外”，引出做某事的唯一原因或目的。

所以，这句话的整体意思是：

“我本来是不会提到亨利·福特的，除非是为了提醒大家记住英格兰的曼彻斯特。”

作者在这里用亨利·福特在曼彻斯特设厂的例子，来强调曼彻斯特作为欧洲制造业“堡垒”的地位。这是一种修辞手法，通过一个看似跑题（AP欧洲历史却提到美国人亨利·福特）的引入，来引出他真正想强调的欧洲历史中的一个点。

Additionally 此外, with the growing use of streetcars 有轨电车 to transport (v.) people through cities, which was an industry **in and of itself** (本身，就其本质而言) 本身就是一个行业, a new *leisure travel industry* 休闲旅游行业 began to rise (v.) as well. And finally, with *the*

increasing availability 可用性，可得性 of consumer goods 消费品 at low prices, the advertising industry 广告行业 was born.

And it's not hard to understand why. Prior to the Industrial Revolution, if you wanted, you know, like a chair, you just **went down to** 前往某地 Carl's house /because he was the only chair maker around. But now with so many different companies producing (v.) similar goods at massive scales 大规模地, advertising executives 广告主管 had to figure out 想出 ways /to make their chair **stand out from the rest** (脱颖而出) 从其他中脱颖而出.

So let's talk about *how they did that* for a moment. In the last half of the 19th century, industrialization **led to** a significant increase in the demand for consumer goods, a phenomenon 现象 known as consumerism 消费主义. Department stores 百货商店 **sprang (v.)** 跳，跃；突然出现，涌现 **up** 涌现, which were massive 巨大的；大而重的；结实的 stores that carried *a dizzying (a.)* 使人眩晕的；使人头昏眼花的 *amount of* 数量惊人的 clothing and furniture and toys and anything else 后定说明 a consumer might want.

Like, a person could **spend (v.) hours** in a department store 百货商店, and they often did. In this way, shopping became a leisure activity 休闲活动, especially among middle class women of the time. And advertising was a key part of keeping people shopping. And the cycle 循环 went like this: *the more* advertising went out, *the higher* the demand for consumer goods. And *the higher* the demand for consumer goods, *the more* incentive 动力 for creating even more. And that meant *more advertising was needed*. And on and on and on.

Now in the last quarter 四分之一；季度 of the 19th century, both the United States and Western Europe — two giants 巨头 of industrialization — experienced what became known as the Long Depression 长期萧条.

One of the major causes of this depression 萧条 was the scarcity 不足，缺乏,短缺 of money during that period. Paper money 纸币 was backed 以...为后盾 by gold 黄金, and that meant that governments only issued (v.) 发行 the amount of paper money that represented the gold in their national coffers 国库.

Because of wars /and the increasing amount of money demanded by consumers to buy manufactured goods, money became scarce. And that led to 导致 banks refusing to loan out 借出 money to investors who wanted to build their factories, for example. And this further led to 进一步导致 increasing unemployment 失业 and a global crisis 危机 that was long in correcting itself 长期难以自我纠正.

Example 5. 案例

investors who wanted to build their factories

这里 wanted 是否可以改成用 were wanting ?

为什么原文用 "wanted" 更合适 ?

- 简洁性：经济类文本倾向直接陈述事实（“投资者当时要建厂”），而非强调心理过程。
- 确定性：银行拒绝的是已明确计划的投资行为，而非“反复犹豫的愿望”。

- 语法惯例: "want" 作为状态动词 (stative verb), 通常不用进行时, 除非刻意强调临时变化 (如: "She was wanting to leave" 暗示"她当时突然想走")。

And that's just the context 背景 for what you really need to know, which is how corporations 公司 and governments responded to 应对 this crisis. And let's start with corporations. To address 解决 this issue, some corporations attempted to create monopolies 垄断 in their industry. That meant that 主 corporations who could afford to do so 谓 bought up 收购 all their competitors 竞争对手.

这意味着那些有能力这样做的公司, 收购了所有的竞争对手。

And when they were the last corporation standing in a given sector 行业, they could set their prices at wherever they deemed 认为, 相信 appropriate 合适的. And usually those prices were always benefiting (v.) the corporations and not consumers 消费者.

On the other hand 另一方面, governments addressed (v.) the economic crisis first with protective tariffs 保护性关税. Now a tariff 关税 is a tax on imports 进口商品, and when a country **slaps** (v.) (用手掌) 打, 拍, 掴; (尤指生气地) 啪的一声放下, 随意扔放 those **on** 强制实行; 强迫某人做 imported goods, they do it /so that foreign goods will be more expensive /and people are more likely to buy cheaper goods 后定说明 made in their home country. And that is why they're called protective tariffs—they protect the country's domestic industry 国内产业.

Example 6. 案例

'slap (v.) sth on sb/sth

(informal) to order, especially in a sudden or an unfair way, that sth must happen or sb must do sth 强制实行; 强迫某人做

- The company **slapped a ban on** using email on the staff. 公司对员工使用电子邮件发出禁令。

However, when one country puts tariffs on another country's goods, that would often lead to 导致 a trade war 贸易战 /in which protective tariffs were used in retaliation 报复. And that was never good for consumers. So some states developed **free trade agreements** 自由贸易协定 which **put the kibosh** 阻止某事发生; 挫败计划 **on** protective (a.) tariffs 保护性关税 between those two nations /and allowed them to trade (v.) without **being taxed (v.) significantly** 大幅征税.

Example 7. 案例

PUT THE 'KIBOSH ON STH

(informal) to stop sth from happening; to spoil sb's plans 阻止某事发生; 挫败计划

Now 主 **the last piece** of this second wave of industrialization we need to consider 系 is the rapid industrialization of Prussia 普鲁士. 主 The reason it's significant 重要的 系 is because the economic unification 经济统一 that occurred /because of 主 industrialization 谓 **will later lead to** 导致 the political unification 政治统一 of all the German states 德意志邦国. But we'll save that **juicy** 多汁的; 生动有趣的; 妙趣横生的; 刺激的 **bit** 有趣的部分 for unit 7.

Now remember that during this time, what we would call Germany 我们称之为“德国”的东西系 was really just a collection of 一群；一系列 hundreds of states. At this point, the most powerful of those states was Prussia. Now because of Prussia's massive deposits (地下自然形成的) 沉积物, 沉积层 of 大量的 coal and iron, it took to industrialization /like **white on rice** 像大米上的白色 and **a glass of milk** and **a paper plate** 盘, 碟 **in a snowstorm** 暴风雪中的纸盘子 (非正式, 迅速且自然地适应)。

记住, 在这段时间里, 我们所说的德国, 实际上只是数百个州的集合。此时, 这些国家中最强大的是普鲁士。由于普鲁士拥有丰富的煤炭和铁矿资源, 它搞起工业化来简直如鱼得水——就像暴风雪中的白米饭配牛奶, 再来个纸盘子那么自然。

Example 8. 案例

it took to industrialization like **white on rice** and **a glass of milk** and **a paper plate in a snowstorm**.

这个句子是由三个并列的比喻组成的美式俚语表达, 核心是强调“极其自然/必然发生”的关系。

它的核心含义是:

“非常迅速、非常彻底地适应或投入某事, 就像某种事物与其环境完美融合, 显得极其自然、毫无违和感, 甚至难以区分。”

让我们来拆解这个比喻:

- **"like white on rice" (像白米饭上的白米一样):** 这个短语本身就是一个常见的口语比喻, 形容非常紧密、粘附、迅速地依附或投入到某事。**白米饭上的白米, 是那么自然、那么紧密, 几乎难以区分。**

接下来, 作者又加入了两个额外的元素, 来加强和延伸这个比喻, 使它更具画面感和夸张效果:

- **"and a glass of milk" (和一杯牛奶):** 牛奶也是白色的, 与白色背景 (雪暴) 进一步呼应。
- **"and a paper plate in a snowstorm" (和暴风雪中的纸盘):** **纸盘也是白色的, 在暴风雪 (白色背景) 中, 它会迅速被雪覆盖, 或融入其中, 变得几乎看不见, 或者说, 它属于那个白色环境, 适应得“天衣无缝”。**

所以, 当把这些组合在一起时, 它的意思是:

普鲁士对工业化的投入和适应是如此地迅速、彻底和自然, 仿佛工业化就是为其量身定做的, 两者完美契合, 发展得势不可挡。

They got busy building railroads and **metric buttloads of** factories. Trade throughout the German states suffered (v.) because of political tension 紧张局势 between them. So in order to rectify (v.)纠正 that situation, Prussia engineered 策划 something called **the Zollverein** (德) 关税同盟; 商业同盟 **agreement** 关税同盟协定 in 1834.

他们忙于修建铁路和大量的工厂。德国各州之间的政治紧张关系, 使贸易受到影响。为了扭转这种局面, 普鲁士在1834年制定了关税同盟协议。

The effect of this agreement was to lower (v.) barriers to trade 贸易壁垒 — barriers like tariffs and customs 关税和海关 — and thus to unite (v.) German states economically. Well, I'm happy to report **it worked fantastically** 极好地. And with the lowering of barriers, the wealth of industrialization only increased 只增不减.

The Prussian government also **put in place** 实施, 落实好 something called the national system 国家体系, which was engineered (v.)设计, 建造; 策划 by an economist 经济学家 named Friedrich List. The idea here was that /the nascent 新生的; 萌芽的; 未成熟的 German

industry needed to be protected from competition 竞争 from those stanky 发臭的，恶臭的 Brits across the channel (俚语，带有轻蔑意味，指海峡对岸的英国人) 。

They did this /by imposing tariffs on 对...征收关税 imported goods. But there was a caveat 警告；告诫,附加条件: those tariffs would only remain in place 保持原位 /until 直到.....为止 their manufacturing sector 制造业 could **compete** (v.) *on equal footing* (基础；立足处)在平等的基础上 **with** 与...平等竞争 Britons. And by the early 20th century—spoiler alert 剧透警告—they did.

这些关税只有在他们的制造业能够与英国人平等竞争之前, 才会生效。

Example 9. 案例

caveat

(n.)(formal) (from Latin) a warning that particular things need to be considered before sth can be done警告；告诫

footing

(n.) the position or status of sb/sth in relation to others; the relationship between two or more people or groups 地位；人际关系

- The two groups must meet *on an equal footing* . 这两个集团必须以平等地位会谈。
- They were demanding to be treated *on the same footing* as the rest of the teachers. 他们要求得到和其他老师同等的待遇。

All right, click [here](#) to keep reviewing for unit 6 of the AP Euro curriculum 课程. Click [right here](#) to grab my AP Euro review pack, which is everything you need to get an A in your class and a five on your exam in May. I’ ll catch you on the flip-flop. I’ m Laura.

2. 中文释义

所以在1870年到1914年期间，欧洲经历了“第二次工业化”浪潮。第二次工业化浪潮和第一次工业化浪潮很相似，而且在很多方面有过之而无不及。如果你准备好充实自己的知识，那我们开始吧。

在上一个视频中，我们谈到了欧洲工业化的开端，以及英国在这方面如何成为了率先行动并产生重大影响的国家。我们谈到了工厂制度的诞生，它改变了商品的生产方式。在此之前，商品是手工制作的，但现在它们在工厂里被大规模生产。

现在我们需要谈谈到1914年时，工厂制度如何成为了欧洲占主导地位的生产模式。我会给你举几个例子来说明它是如何发展的。听着，我不会骗你，这个视频里有很多内容需要消化。所以如果你想获取与之配套的笔记指南，那就查看描述中的链接。

首先，让我给你介绍一下德国埃森 (Essen) 的克虏伯 (Krupp) 家族。从16世纪开始，他们就开始制造武器。到第二次工业革命时期，他们完善了钢铁制造工艺。到1870年，欧洲乃至全世界的国家都从克虏伯工业公司 (Krupp Industries) 购买武器，这使得克虏伯家族在钢铁行业占据主导地位, 长达一个世纪之久。

其次，你需要了解第一个真正意义上的工业城市，也就是英国的曼彻斯特 (Manchester) 。在这里，第一个工业园区被创建，这是一个专门为制造业设立的区域。他们专门制造用于生产其他机器

的机器。关键在于，**曼彻斯特是一个为工业而建的城市**，结果是，这里的许多居民看到他们的生活水平提高了，财富也大量涌入。

现在你还需要了解一些**"第二次工业化"浪潮的标志性特定技术**。首先，**电力彻底改变了通信行业**。19世纪40年代，一位名叫塞缪尔·莫尔斯（Samuel Morse）的美国发明家**发明了电报**，它能够通过电线，使用长短信号，将信息发送到遥远的地方，这种信号后来被称为莫尔斯电码（Morse code）。

最终在19世纪70年代，电报线被铺设横跨大西洋，连接了英国和美国。这进一步加强了大西洋两岸的经济联系。

其次，**化学工程带来了更好的制造材料**。例如，硫化是一种化学过程，它使橡胶变得更硬，因而更耐用。这很重要，因为橡胶在工厂里被广泛用于使机器运转，而且它也成为了电线的有效涂层。

第三，**铁路彻底改变了运输行业**。在第一次工业革命时期，铁路就开始以重要的方式出现，但在这个时期，它们开始占据主导地位。记住，**在工业化刚刚起步时，原材料和制成品的主要运输方式是水路运输——也就是通过河流、运河和海洋运输**。

在第二次工业革命期间，数千英里的新**铁路轨道**被铺设。这通过将一个国家遥远的地区连接起来，**形成全国性经济，促进了商业发展**。铁路也促使更多的人从农村搬到城市，这个过程被称为**城市化**。

然而，第四点，**在"内燃机"在第二次工业革命期间逐渐占据主导地位**。**第一次工业革命主要由"蒸汽"(蒸汽机)驱动，而第二次工业革命越来越多地由"汽油"驱动，内燃机就是靠"汽油"运转的**。最终，这导致了用于农业的汽油驱动拖拉机吗和供人们出行的汽车的出现。

随着运输和通信技术的这些新创新，新的行业也随之发展起来。**内燃机的出现，为汽车行业创造了契机**。在这方面最具影响力的人物是美国的亨利·福特（Henry Ford）。

等一下——这可是美国大学预修课程"欧洲历史"！为什么要谈到亨利·福特呢？嗯，如果还记得英国的曼彻斯特，这个欧洲制造业的堡垒，就知道原因了。亨利·福特在那里建立了一个汽车制造基地，生产了大量的汽车。

此外，随着"有轨电车"在城市中用于运送人们的使用越来越多，这本身就成为了一个行业，**新的休闲旅游行业也开始兴起**。最后，随着**低价消费品的供应日益增加，广告行业诞生了**。

这其中的原因不难理解。在工业革命之前，如果你想要一把椅子，你会去卡尔（Carl）家，因为他是附近唯一的椅子制造商。但现在，**有这么多不同的公司大规模生产类似的商品，广告主管们不得不想出办法让他们的椅子脱颖而出**。

所以让我们谈谈他们是怎么做的。在19世纪后半叶，工业化导致对消费品的需求大幅增加，这种现象被称为消费主义。百货商店如雨后春笋般涌现，这些大型商店里摆满了令人眼花缭乱的衣服、家具、玩具，以及消费者可能想要的任何其他商品。

比如说，一个人可以在百货商店里逛上几个小时，而且他们经常这么做。这样一来，购物变成了一种休闲活动，尤其是在当时的中产阶级女性当中。广告是让人们持续购物的关键部分。这个循环是这样的：广告投放得越多，对消费品的需求就越高。对消费品的需求越高，就越有动力生产更多的商品。这就意味着需要更多的广告。如此循环往复。

在19世纪最后25年里，美国和西欧——两个工业化的巨头——经历了所谓的长期经济萧条（Long Depression）。这场萧条的一个主要原因，是那个时期货币的短缺。纸币以黄金为后盾，这意味着政府发行的纸币数量，只能代表其国库中的黄金数量(黄金有多少，纸币就只能发行多少。金本位制)。

由于战争，以及消费者购买制成品所需的资金，不断增加，货币变得稀缺(产品多，货币少，货币就相对升值了，相当于产品价格下跌了)。这导致银行拒绝向想要建造工厂的投资者贷款。这进一步导致失业率上升，并且引发了一场长期难以自我纠正的全球危机。

这只是你真正需要了解的内容的背景，也就是企业和政府如何应对这场危机。让我们从企业开始说起。**为了解决这个问题，一些企业试图在其所在行业建立垄断。这意味着有能力的企业会收购所有的竞争对手。**

当它们成为某个特定行业中唯一幸存的企业时，它们可以将价格设定在它们认为合适的水平。而且通常这些价格总是对企业有利，而不是对消费者有利。

另一方面，**政府首先通过保护性关税，来应对经济危机。**关税是对进口商品征收的税，当一个国家对进口商品征收关税时，**这样做是为了让外国商品变得更贵，人们更有可能购买本国生产的更便宜的商品。**这就是为什么它们被称为“保护性关税”——它们保护国家的国内产业。

然而，当一个国家对另一个国家的商品征收关税时，往往会引发一场贸易战，各国会以保护性关税进行报复。这对消费者来说从来都不是好事。所以一些国家制定了“自由贸易协定”，取消了两国之间的“保护性关税”，使它们能够在不受重大税收影响的情况下，进行贸易。

现在，关于“第二次工业化”浪潮，我们需要考虑的最后一点是普鲁士（Prussia）的快速工业化。它之所以重要，是因为**由于工业化而实现的经济统一，后来导致了所有德意志邦国的政治统一。**但我们会把这个有趣的部分留到第七单元来讲。

记住，**在这个时期，我们所说的德国，实际上只是几百个邦国的集合。在这个时候，其中最强大的邦国是普鲁士。由于普鲁士拥有大量的煤炭和铁矿石，它迅速实现了工业化，就像白雪落在大米上，牛奶盛在纸盘子里（这里形容其工业化的迅速和紧密）。**

他们忙着修建铁路和大量的工厂。**德意志各邦国之间的贸易，因为它们之间的政治紧张局势，而受到影响。所以为了纠正这种情况，普鲁士在1834年策划了所谓的“关税同盟（Zollverein）”协定。**

这个协定的效果，是降低了贸易壁垒——比如关税和海关方面的壁垒——**从而在经济上统一了德意志各邦国。**嗯，我很高兴地告诉你，这个协定非常成功。随着贸易壁垒的降低，工业化带来的财富不断增加。

普鲁士政府还实施了一个由经济学家弗里德里希·李斯特（Friedrich List）设计的国家体系。其理念是，**新生的德国工业，需要免受海峡对岸那些可恶的英国人的竞争。**

他们通过对进口商品征收关税，来实现这一点。但有一个附加条件：这些关税只会在其制造业能够与英国人平等竞争之前一直存在。到20世纪初——剧透一下——他们做到了。

好的，[点击这里](#)继续复习美国大学预修课程欧洲历史第六单元。[点击这里](#)获取我的美国大学预修课程欧洲历史复习资料包，这是你在课堂上得A并在五月份的考试中得5分所需要的所有内容。我们下次再见。我是劳拉（Laura）。

3. pure

So from 1870 to 1914, Europe experienced the second wave of industrialization. And the second wave was much like the first wave of industrialization, only more so. If you're ready to get them brain cows milked, let's get to it.

So in the last video, we talked about the beginning of industrialization in Europe and how Great Britain was the first mover and shaker in this respect. We talked about the birth of the factory system which changed the way goods were made. Like, prior to this, goods were made by hand, but now they were mass produced in factories.

And now we need to talk about how by 1914, the factory system became the dominant mode of production in Europe. And let me give you a couple examples of how this develops. And look, I'm not going to lie to you, there's a lot to digest in this video. So if you want to grab my note guides that go along with it, then check the link in the description.

So first, let me introduce you to the Krupp family in Essen, Germany. Starting in the 16th century, they began manufacturing weapons. And by the time of the Second Industrial Revolution, they had perfected the process of making steel. By 1870, states from all over Europe and the world were buying weapons from Krupp Industries, and that led the Krupp family to dominating the steel industry for a century.

Second, you need to know about the first real industrial city, namely Manchester, England. It was here that the first industrial park was created, which was a designated area built specifically for manufacturing. They specialized in making machines that made other machines. But the point is, Manchester was a city that was built for industry, and as a result, many of its inhabitants saw their standard of living rise and wealth came pouring in.

Now you also need to know some of the specific technologies that characterize the second wave of industrialization. First of all, electricity revolutionized the communications industry. In the 1840s, an American inventor named Samuel Morse invented the telegraph, which was able to send communication across wires to distant places using short and long signals, which became known as Morse code.

Eventually in the 1870s, the telegraph wire was laid across the Atlantic, connecting Britain with the United States. And that had the effect of further linking the economies on both sides of the Atlantic.

Second, chemical engineering led to improved materials for manufacturing. For example, vulcanization was a chemical process that made rubber harder and therefore more durable. That was a big deal because rubber was used widely in factories to make machines turn, and it became an effective coating for electrical wires as well.

Third, railroads revolutionized the transportation industry. Now railroads are beginning to show up in significant ways in the first Industrial Revolution, but at this point they began to dominate the landscape. Remember that when industrialization first took root, the dominant mode of transportation both for raw materials and finished manufacturing goods was by water—which is to say rivers and canals and oceans.

During the Second Industrial Revolution, thousands of new miles of railroad tracks were laid. This increased commerce by linking distant parts of a country into a national economy. And railroads also facilitated more people moving from the country into the cities, a process known as urbanization.

However, fourth, the internal combustion engine soon grew in dominance during the Second Industrial Revolution. Whereas the first revolution was mainly powered by steam, the second revolution would be increasingly powered by gasoline, which is how internal combustion engines ran. Eventually this would lead to gas-powered tractors for farming and automobiles for, you know, going places.

With all these new innovations in transportation and communication technologies, new industries developed right alongside of that. The advent of the internal combustion engine created the occasion for the automobile industry. And the most significant mover on that front was the American Henry Ford.

Hold on a minute—this is AP European history! What you doing talking about Henry Ford? Well, I wouldn't be except to remember Manchester, England, that bastion of European manufacturing? Well, Henry Ford established an automobile manufacturing site there and produced cars by the metric buttload.

Additionally, with the growing use of streetcars to transport people through cities, which was an industry in and of itself, a new leisure travel industry began to rise as well. And finally, with the increasing availability of consumer goods at low prices, the advertising industry was born.

And it's not hard to understand why. Prior to the Industrial Revolution, if you wanted, you know, like a chair, you just went down to Carl's house because he was the only chair maker around. But now with so many different companies producing similar goods at massive scales, advertising executives had to figure out ways to make their chair stand out from the rest.

So let's talk about how they did that for a moment. In the last half of the 19th century, industrialization led to a significant increase in the demand for consumer goods, a phenomenon known as consumerism. Department stores sprang up, which were massive stores that carried a dizzying amount of clothing and furniture and toys and anything else a consumer might want.

Like, a person could spend hours in a department store, and they often did. In this way, shopping became a leisure activity, especially among middle class women of the time. And

advertising was a key part of keeping people shopping. And the cycle went like this: the more advertising went out, the higher the demand for consumer goods. And the higher the demand for consumer goods, the more incentive for creating even more. And that meant more advertising was needed. And on and on and on.

Now in the last quarter of the 19th century, both the United States and Western Europe — two giants of industrialization — experienced what became known as the Long Depression. One of the major causes of this depression was the scarcity of money during that period. Paper money was backed by gold, and that meant that governments only issued the amount of paper money that represented the gold in their national coffers.

Because of wars and the increasing amount of money demanded by consumers to buy manufactured goods, money became scarce. And that led to banks refusing to loan out money to investors who wanted to build their factories, for example. And this further led to increasing unemployment and a global crisis that was long in correcting itself.

And that's just the context for what you really need to know, which is how corporations and governments responded to this crisis. And let's start with corporations. To address this issue, some corporations attempted to create monopolies in their industry. That meant that corporations who could afford to do so bought up all their competitors.

And when they were the last corporation standing in a given sector, they could set their prices at wherever they deemed appropriate. And usually those prices were always benefiting the corporations and not consumers.

On the other hand, governments addressed the economic crisis first with protective tariffs. Now a tariff is a tax on imports, and when a country slaps those on imported goods, they do it so that foreign goods will be more expensive and people are more likely to buy cheaper goods made in their home country. And that is why they're called protective tariffs — they protect the country's domestic industry.

However, when one country puts tariffs on another country's goods, that would often lead to a trade war in which protective tariffs were used in retaliation. And that was never good for consumers. So some states developed free trade agreements which put the kibosh on protective tariffs between those two nations and allowed them to trade without being taxed significantly.

Now the last piece of this second wave of industrialization we need to consider is the rapid industrialization of Prussia. The reason it's significant is because the economic unification that occurred because of industrialization will later lead to the political unification of all the German states. But we'll save that juicy bit for unit 7.

Now remember that during this time, what we would call Germany was really just a collection of hundreds of states. At this point, the most powerful of those states was Prussia. Now because of Prussia's massive deposits of coal and iron, it took to industrialization like white on rice and a glass of milk and a paper plate in a snowstorm.

They got busy building railroads and metric buttloads of factories. Trade throughout the German states suffered because of political tension between them. So in order to rectify that situation, Prussia engineered something called the Zollverein agreement in 1834.

The effect of this agreement was to lower barriers to trade — barriers like tariffs and customs — and thus to unite German states economically. Well, I' m happy to report it worked fantastically. And with the lowering of barriers, the wealth of industrialization only increased.

The Prussian government also put in place something called the national system, which was engineered by an economist named Friedrich List. The idea here was that the nascent German industry needed to be protected from competition from those stanky Brits across the channel.

They did this by imposing tariffs on imported goods. But there was a caveat: those tariffs would only remain in place until their manufacturing sector could compete on equal footing with Britons. And by the early 20th century — spoiler alert — they did.

All right, [click here](#) to keep reviewing for unit 6 of the AP Euro curriculum. [Click right here](#) to grab my AP Euro review pack, which is everything you need to get an A in your class and a five on your exam in May. I' ll catch you on the flip-flop. I' m Laura.
