Slouching Towards Utopia?:
An Economic History of the Long Twentieth Century

IX. The Roaring Twenties

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Meanwhile, back at the ranch, in the United States, across the ocean to the west from the troubled European continent that had been the locus of innovation before 1850 or so and that had still been the heart of the world economy as well as the industrial global north, the *Belle Époque* had not yet come to an end.
The period between the two world wars also saw much of the development of the technologies and organizations that were to make economic growth during the post-World War II watershed part of twentieth century so very very strong. And between World War I and World War II at least, most of the action at the world's leading edge as far as economic organization and technology was concerned took place in North America. The seeds of many things that were to flower later on were planted during America's so-called "roaring twenties."

But first, America's withdrawal from "globalism"

9.1: American Isolationism
9.1.1: Retreat at the Palace of Versailles
The end of World War I saw the United States retreat into isolation.

The first step backward was taken by Woodrow Wilson himself, at the Versailles peace conference. At the Versailles conference Wilson was in a uniquely strong position: he had the moral authority from having entered the war not to gain national territorial or political advantage but to spread peace and democracy, and

he had the only effective army. As events in the 1920s and 1930s were to prove, neither Britain nor France had the military power—or, more important, the military confidence—to impose their political will on anyone, let alone a potentially recalcitrant near-superpower like Germany. Woodrow Wilson did not use his potential military power and his potential moral prestige to shape the peace of Versailles along the lines of his Fourteen Points that he had proclaimed as the principles for an end to World War I. Instead, he bowed to Lloyd George and Clemenceau, backing their demands for isolating, weakening, and attempting to impoverish Germany to a degree that outran even Lloyd George's calculations, and frightened him. John Maynard Keynes stared in amazement at:

> the disintegration of the President's moral position and the clouding of his mind… [as] he allowed himself to be persuaded that the expenditure of the Allied Governments on pensions and separation allowances could be fairly regarded as "damage done to the civilian population of the Allied and Associated Powers by German aggression by land, by sea, and from the air," in a sense in which the other expenses of the war could not be so regarded.

At least the Treaty of Versailles contained a forum—the League of Nations—in which arguments for revisions and readjustments could be made. But then the U.S. Senate, with opposition led by Massachusetts anti-immigrant nativist Republican Senator Henry Cabot Lodge, refused to ratify what did emerge from Versailles—refused to even think about committing America in any way to an internationalist foreign policy, to a concern with collective security, to even a commitment to get together with other nations periodically to talk about how to deal with threats to world peace.

9.1.2: The Absence of a Hegemon

Perhaps in the years 1850-1914 Britain's international political role as the arbiter of the European balance of power and the controller of the greatest empire the world had ever seen was far advanced beyond its economic role. Certainly from 1919-1943 America's international political role lagged far behind its economic role. The American government after World War I was a creditor nation: other allied governments owed it enormous sums that they had borrowed and used to purchase American-made munitions during World War I. And the American private sector was a net creditor as well: it had turned from a sink to a source of funds, and so had an interest in the successful and peaceful development of regions in which American investors had placed their money. In normal times, the state whose citizens play the largest role in the world economy—who ship the most exports,

consume the most imports, and lend and borrow the most capital—winds up playing the leading role in the management of the international economy. Its citizens have the most at stake in the successful management of the global economy.

The goods of general prosperity, stable financial calm, and rapid and balanced growth are what economists call public goods—all benefit from them without having to take individual steps to provide them—countries tend to try to "free ride," and to concentrate on achieving their own national advantage in the belief that someone else will take care of the system as a whole. But for the largest actor the share of the benefits that its citizens receive is the largest and its power to affect the state of the world economy is largest. So if the international economy is to be managed at all, it will be managed by the state that has the largest economy—or by a group of states with the largest acting as first mover and informal leader—or it will not be managed at all. The world economy needs what Charlie Kindleberger termed a *hegemon.* And the power with the largest role is the best candidate, and often the only candidate, for the role. The U.S. did not undertake it.

9.1.3: Raising Tariffs

U.S. isolationism was not limited to an avoiding of foreign diplomatic and military entanglements. The U.S. also raised tariffs early in the 1920s. The tariff increases were nowhere near large enough to bring America's tariff rates back to the avowedly protectionist levels of the early 1800s, and were not even large enough to bring tariff rates back to the revenue-raising-cum-protectionist levels of the late nineteenth century. But the increases were large enough to be noticed by those who shipped goods to the United States. And they were large enough to give some pause to any producers outside the U.S. who thought that they could rely on uninterrupted access to the American market. And the U.S. was to raise tariffs again when the Great Depression started.

9.1.4: The Closing-Off of Immigration

Most important, perhaps, the 1920s saw the end of free immigration into the United States. Migration from Asia had been restricted for several generations: the Chinese Exclusion Act. Migration from Africa and Latin America had not been large enough to become an issue. But up until the mid-1920s migration from Europe had been unrestricted.

There had been resistance to free immigration and open borders before World War

I. Republican Senator Henry Cabot Lodge—a WASPy Boston-Brahmin professional-politician Donald Trump-analogue of his day—had long beaten the drum, calling for erasing Emma Lazarus's "give me your tired…" poem from the Statue of Liberty, and keeping more non-northwestern European non-Germanic language-speaking riff-raff from coming to America.

Most Italian immigrants, Lodge said, were good, hard-working people. But some were members of the Mafia, like those who had been justly killed by a New Orleans mob. And so it was desirable to exclude Italians because of the bad apples in their midst.

Most Polish immigrants, Lodge said, were good, hard-working people. But there were the terrorists of the Secret Polish Avengers of the Shenandoah Valley. And so it was desirable to exclude Poles because of the bad apples in their midst. Remember: that second-generation Polish immigrant anarchist Leon Czolgosz had murdered President McKinley.

Anarchists were a danger—and while few Jews were anarchists, many anarchists were Jews. The desire of Democrats to gain the Jewish vote was, Lodge claimed, already distorting American politics: witness Woodrow Wilson's nominating a man Lodge claimed as underqualified and dangerously radical—Louis Brandeis—to a seat on the Supreme Court. (And a few years later Woodrow Wilson's former Attorney General, James MacReynolds, would counsel Herbert Hoover against nominating Republican Benjamin Cardozo to the Supreme Court because the Court already had one kike.)

Most Irish, Lodge said, who were third-, second- and first-generation immigrants were good people. But among the more recent immigrants were those socialist-anarchist bomb-placing Molly McGuires. And so, Lodge said… actually he did not say: too many Irish-Americans were citizens of Massachusetts, and they voted voted for the state representatives who then elected senators—

More than 1.2 million immigrants had come to the U.S. in 1914. But once the immigration restrictions of the 1920s took effect, the overall total was fixed at only 160,000 or so. Moreover, different nations had different quotas. The quotas for immigrants from northern and western Europe were more than ample for the demand. The quotas for immigrants from southern and eastern Europe were very small.

9.2: Mass Production

The inward-looking United States of the 1920s had plenty to do. It became a middle-class economy of radios, consumer appliances, automobiles and suburbs. Nearly thirty million motor vehicles were on the road in 1929: one for every five residents of the country. Assembly lines powered by electric motors in factories arranged for the convenience of workers and work-in-process flow rather than for the convenience of belts, pulleys, and driveshafts made the post-World War I United States the richest society the world had ever seen. Aldous Huxley's dystopian novel, *Brave New World*, is set in a future society in which Henry Ford is a worshipped founder—people make the "sign of the T," and speak in reverent terms. In Huxley's dystopia, the power of mass production has so far outstripped the needs of the people that the government's biggest problem is to persuade the citizens to consume: if it does not persuade its citizens to buy mounds of useless stuff, the power of mass production confined to making what people actually need will idle much of the labor force, and eliminate even the pretense that people have useful jobs to do.

Hence the importance in *Brave New World* of the propaganda and advertising campaign to get people to buy the expensive sporting gear to play the leisure-time game of Centrifugal Bumble Puppy.

The fact that the power of mass production could be projected forward to outstrip the native material needs and desires of humanity (even if only in Aldous Huxley's mind) is one index of how much of a mental shock the tremendous apparent productivity of mass production. And it is an index of how Europeans (or, at least, cultured Englishmen who saw themselves as members of the intelligentsia) regarded the rude, brash, highly-productive consumer-oriented civilization that seemed to be growing across the Atlantic.

But what, exactly, was "mass production"? What was "Fordism"?

9.2.1: The American System of Manufactures

Begin with the "American system of manufactures." In the middle of the nineteenth century English engineers viewing production on the Western side of the Atlantic Ocean noticed some regularities in the way Americans seemed to do things:

- American manufacturing industries made simpler and rougher goods.

- American manufactures used much less skilled labor.
- American manufactures used up—the British would say "wasted"—lots of raw materials.
- American manufacturers paid their workers—even their unskilled workers—much better than did British.
- American manufactures seemed to incorporate much more of the knowledge needed to run the process of production into machines and organizations—leaving much less in skilled workers' brains and hands.

Much of this was simply economizing on the obvious margin. In America skilled workers were exceedingly scarce, and it seemed worthwhile to follow production strategies that used skilled workers as little as possible. Some of this was finding new and more productive ways of doing things: ways that would have been profitable for British, or other manufacturers, even facing lower costs for skilled labor, to adopt.

The founder of the "American system" was Eli Whitney, inventor-promotor famous for inventing the cotton gin that made American short-staple cotton practical as an input for textile spinning. Truth be told, Eli Whitney was little more than a "visionary" promotor: one-quarter inventor, one-quarter salesman, one-quarter maniac, one-quarter fraud. The idea was that American manufacturers could make the pieces of their goods to better, tighter specifications in order to make their parts *interchangeable*—so that the barrel of one firearm would not have to be filed so that it would fit the trigger mechanism of another. That idea turned out that the idea was a very good one. The diffusion of American-system techniques played a substantial part in the late-nineteenth century growth of American manufacturing. Through the intermediation of the machine tool industry, companies like Singer (making sewing machines), McCormick (making reapers and other agricultural machinery), and the Western Wheel Works (making bicycles) all adopted the strategy of aiming to make interchangeable parts, and so to economize on their materials handling, fitting, and finishing costs that took up so much of the time of workers in nineteenth century metalworking and woodworking manufacturing.

9.2.2: Quality and Throughput

But more was needed. Nineteenth-century manufacturers aimed at economizing on costs, certainly. But they aimed more at producing a high-quality product. Their vision was that the techniques of the "American system" could be used to produce a higher-quality product than would otherwise be possible, and that they could then

sell this higher-quality product for a premium price. It was the combination with the high-throughput manufacturing operations that had grown up in the late nineteenth century—that led to mass production as we know it today. The key to the creation of the modern business enterprise was the realization by firm owners and managers that there were potentially enormous economies of scale that could be realized by a large, vertically-integrated organization that was able to plan the flow of raw materials into the factor and the flow of finished goods out into distribution channels.

The first manufacturing industries to take advantage of these economies—and to develop the managerial expertise to successfully realize them—were found in industries processing liquids where the flow of goods-in-process was naturally continuous and even: for example, crude oil and John D. Rockefeller's Standard Oil Company. A second wave was made up of industries in which one key invention or innovation allowed for continuous-process manufacture: Aflred Chandler's favorite example is the Bonsack cigarette machine, "thirty [of which] could have saturated the 1885 market" for cigarettes in the United States. But tobacco was not alone: Diamond Match Company, Procter and Gamble, Kodak, and many many more. All of these companies followed the same basic business strategy: use your economies of scale to lower your costs, and sell to as much of the market as you can. Follow a strategy of making your price as low as possible in order to sell to as large a market as possible: as the old joke goes, "we lose a dollar on each item, but we make it up on volume."

9.2.3: The Ford Motor Company

9.2.3.1: Ford's Focus

The key difference between Ford and his predecessors in using the "American system" for metalworking—between Ford and his competitors abroad—was that Ford's focus was always not on making a superior product (to sell to rich men with chauffeurs) but on making a low-priced product to sell to as many people as possible.

Henry Ford had planned large scale production as early as 1905, with his Model N, to reduce expensive skilled work to as small a part of production as possible: the "American system" reduced the amount of skilled fitting and filing required. Henry Ford simply tried to push this reduction in the fraction of work that had to be carried out as far as possible.

Ford minimized his costs by building a capital intensive plant that was very good

at building automobiles, and not for building anything else. The increase in capital intensity increased the potential risk. The productivity and profitability of the Ford plant depended on a high rate of production. Anything that threatened the pace of production—whether union strike or anarchist sabotage—threatened to be very expensive. Ford could employ unskilled workers in jobs that had previously required highly skilled craftsmen, but only if he kept his workforce happy.

But there was more: in "moving the work to the men" by means of the assembly line (which became another fundamental tent of mass production), the Ford engineers found a method to speed up the slow men and slow down the fast men. This was, originally, an unintended benefit of mass production: the factory considered as a machine would monitor the progress of its human elements, and immediately signal where a unit was not accomplishing its job satisfactorily by the buildup of work by that station—a process undergone by Charlie Chaplin in Modern Times. The pace of work could be increased. Unskilled workers could be substituted for skilled labor. The task of management was made much simpler: the assembly line forced the pace of the slower workers and made it obvious where bottleneks were occurring. Fixed overhead costs were spread out over larger and larger volumes of production, thus lower and lower prices became possible.

9.2.3.2: Economies of Scale and Scope

The same set of forces were at work elsewhere. Theodore N. Vail, newly installed as President of American Telephone and Telegraph, argued in the 1908 AT&T Annual Report that the telephone business exhibited enormous economies of scale: "The particular circuit connecting any subscriber with the exchange is what might be termed a convenience to that particular subscriber, but a necessity to all other subscribers. It is the ability to communicate with others that makes the exchange valuable." The realization of these economies of scale required the highest output, and the lowest practicable prices to make sure that the output could be sold. Vail distinguished two different competitive strategies: "Net revenue can be produced in two ways: by a large percentage of profit on a small business, or a small percentage of profit on a large business." And in America the second was best:

> With a large population with large potentialities, the experience of all industrial and utility enterprises has been that it adds to the permanency and undisturbed enjoyment of a business, as well as to the profits, if the prices are put at such a point as will create a maximum consumption at a small percentage of profits.
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> This strategy—invest heavily in fixed capital, try to produce the maximum output

> at low prices, and use the productive expertise gained to forge technological leadership and lowest cost positions—was to become characteristic of American industry throughout the twentieth century. It was made possible because half of North America was the single economic unit of the United States. With no obstacles to shipping commodities off of state lines, the possibilities of benefitting from a low price-high volume strategy were much greater than in Europe, especially in the interwar years of active trade restrictions.

9.3.4: "Deskilling"

In the labor history literature, the adoption of the American system is often called deskilling. Knowledge of how to run the factory and the production process is taken out of the hands of skilled craftsmen and put into the hands of the managers and the machine makers. Jobs become more boring and more alienating. And wages fall. Historians' accounts of American industrialization often see the coming of mass production as a fight between the process of deskilling, tending to lower wages and make the distribution of income more unequal, and the process of unionization and collective solidarity, which is seen as powerful enough in the end to keep wages from falling.

But high wages for skilled craftworkers who have relatively low productivity implies high prices—and relatively low standards of living--for everyone else. By contrast, "deskilling" opens jobs that are relatively high-paid (albeit not as high-paid as the original craftwork jobs) to people who were outside the magic circle beforehand: unskilled farm laborers, immigrants, minorities, and women now have more options on the production side. Most important, higher productivity leads to lower product prices—massively expanding options on the consumption side as well.

And the deskilled, repetitive, assembly-line jobs were not low-paying jobs.

Henry Ford would have been happy if he could have found qualified workers for his assembly lines at low rates of pay. But he could not. Work on Ford's emerging assembly line was brutal. Workers paid the standard wages for unskilled labor at Ford's Detroit factory—a little less than $2.00 a day--quit at astonishing rates. In one year, 1913, Ford had an average annual labor force of 13,600 and yet 50,400 people quit or were fired.

Ford's workers—sped-up, automated, short-term, alienated, and about to quit—seemed obvious fodder for recruitment into the International Workers of the World,

and Ford's profits were very vulnerable to IWW-style wildcat action.

Ford's solution was a massive increase in wages: to $5.00 a day for unskilled workers whose family circumstances and deportment satisfied Ford. By 1915 annual turnover was down to 16%, from 370% before the raise. Many to whom Ford jobs had not been worth keeping at $1.75 a day found the assembly line more-than-bearable for $5.00 a day. Many more linedup outside the Ford factory for chances to work at what appeared to them to be (and, for those who did not mind the pace of the assembly line much, was) an incredible boondoggle of a job.

Ford became a celebrity, and a symbol: using the extraordinary productivity of modern manufacturing not (or not just) to make a fortune for himself, but to instantly raise his unskilled employees into the comfort of the middle class. Mass production, as some nameless publicist began to call it, offered the prospect of a ride to utopia via technology alone.

9.4: Consequences and Challenges

9.4.1: Towards Utopia

But Henry Ford's more-than-doubling of Ford workers' wages had another effect, a symbolic effect. It seemed to show that modern industry (at least modern American industry) was approaching utopia.

On the eve of World War I, a nominal wage of $5 a day for a working year of 300 days amounted to a nominal income $1,500 a year—within striking distance of what Professor G.H.M. had been earning a decade before (although, adjusting for inflation, only about 60 percent of the purchasing power). A Ford assembly-line operative—a semi-skilled worker with, perhaps, a year or two of secondary school—was all of a sudden no longer a member of the working class but of the middle class, and perhaps of the upper middle class.

In the highly-unequal, class-divided society of America in the teens and twenties, the idea that a high-paid blue-collar semi-skilled worker could be well in the upper half of the income distribution seemed radical. Yet it was happening in Detroit. And social commentators envisioning the spread of mass production to the rest of the economy could imagine its becoming the rule rather than the exception. Henry Ford was—as Aldous Huxley made him out to be—a legend, a mythical figure, a near-Moses to the world between the world wars. He kept his celebrity status even

as his ideas became wilder, crankier, and crueller.

9.4.2: Mass Distribution

The automobile and other products of mass production quickly diffused throughout America. Manufacturers then faced a problem: once the market had been saturated, replacement demand was lower than demand during the rapid expansion of the market. Producers faced the problem of figuring out how to add value to the product, so that consumers would not simply "replace" but would "upgrade." Since you can't sell them the good a second time, you have to to figure out some way to sell customers an improved good. Otherwise, if you manufacture a durable good, you are trapped in a losing competitive battle with your own installed base.

This was a big problem for Ford. Henry Ford adhered to changelessness for ideological as well as production-based reasons. This became an especially knotty problem because consumers did, it turned out, want novelty. They were willing to pay a premium to have a car, not of their own, but a car not identical to every other car on the street.

As the twentieth century passed, U.S. manufacturing turned its skill to making differentiated products—not all the same—using mass production. The first to do this was the management team, headed by Alfred P. Sloan, at General Motors. Make the guts of the cars the same—that is, sell to everyone as many Chevrolet parts, made in extraordinarily long production runs to take full advantage of economies of scale. Put the guts in differently colored boxes, and change the boxes—so that someone who wants to stay up to date has to buy a new car relatively rapidly. Rely on advertising to create different images and different auras surrounding the different lines of cars.

Aldous Huxley had believed that it would require all of the psychological armament of a sophisticated civilization in order to persuade people to buy what mass production could produce: in his dystopia sleep-learning, propaganda, cultivated struggles for status, and a host of other psychological mechanisms are needed in order to push consumption up high. In the real world things have proven much simpler: make it, and tell people you've made it (with some pictures of people using it having more fun than you will ever have in your lifetime), and they will buy—as long as they can take home the illusion that they are getting something special.

It is natural to be of two minds about this surge of product differentiation, monopolistic competition, and advertising-generated symbolic links of commodities to happiness. . It seems wasteful and deceptive: Coca-Cola never "added life". Wearing celebrity athlete-brand sneakers does not "really" bring one closer to the lifestyles of rich and famous and to athletic excellence, does it? In the 1930s George Orwell had complained that the cheap luxuries of the modern world created the illusion that you have gotten something valuable and worthwhile for your money, and staved off socialism as women who ought to have been on the barricades demanding silk settled for nylons, and men who ought to have been on the barricades demanding Saville Row settled for ready-to-wear.

Yet product differentiation, monopolistic competition, even the advertising that makes the symbolic links—they are genuinely popular. Given the immense wealth of the industrial economies, why not use some of it to create more color and variety? The anti-utopias of the twentieth century, from *Modern Times* to *We*, *Brave New World*, to *Nineteen Eighty Four*, terrify readers in large part because of the sameness of the identical blue overalls: a colorless grey inhumanity in which individual difference is removed.

9.4.3: Mass Consumption

The flip side of mass production was mass consumption: the creation of America as a middle-class society, made up increasingly of people living in suburban houses, and commuting and shopping using automobiles. It was not just automobiles, but also washing machines, refrigerators, electric irons, electric and gas stoves--a whole host of inventions and technologies that greatly transformed that part of economic life that takes place within the household. For one of the major consequences of mass production was the building-up of the stock of capital goods for within-the-home production.

Key was electricity. The incandescent light bulb was invented by Thomas Edison in 1879. By 1882 New York city had its first central generating station. By 1910 the alternating-current electric motor had become a low-cost provider of mechanical power that could be made small enough to run a fan (or large enough to power a locomotive). Eight percent of American households were wired for electricity in 1907; 35 percent were wired by 1920; 80 percent were wired by the beginning of World War II.

9.4.4: Global Spread

The diffusion of high-productivity "mass production" industries from the rich industrial core to the poor periphery—indeed, from the United States to other economies that had been leading-edge like Britain, Germany, and France—took place surprisingly slowly. One would have thought that mass production industries should have been vulnerable to foreign competition from other, lower wage countries. If Ford can redesign production so that unskilled assembly line workers do what skilled craftsmen used to do, why can't Ford also—or someone else—redesign production so that it can be carried out by low wage Peruvians or Poles or Kenyans, rather than by Americans? Yet Ford's plants in Britain had difficulty obtaining even half the labor productivity of Ford plants in the United States. There were even difficulties within the United States. Only one firm—General Motors—could even come close to matching Ford's productivity levels in the 1920s and the 1930s. And General Motors found its transition to mass production eased by its ability to hire the production management team that had invented mass production at Ford's Highland Park plant as its individual members, one after the other, fell out of favor with Henry Ford.

9.5: Incipient Feminism

Historian Ruth Schwartz Cowan wrote:

> Kitchens are as much a locus for industrialized work as factories and coal mines are, and washing machines and microwave ovens are as much a product of industrialization as are automobiles and pocket calculators. A woman who is placing a frozen prepared dinner into a microwave oven is involved in a work process that is as different from her grandmother's methods of cooking as building a carriage from scratch difers from turning bolts on an automobile assembly line; an electric range is as different from a hearth as a pneumatic drill is from a pick and shovel…

One consequence of the consumer durables revolution was to turn doing laundry from a task that took up nearly one full day a week to a task that took up a considerably smaller share of time. But the biggest changes in within-household production appear to have been the result of the dishwasher and the modern stove, on the one hand, and the growth of the food processing industry, on the other. They have cut the amount of time spent on food preparation and cleanup by roughly two-thirds over the past century. The consumer durables revolution together meant

that keeping a household running is no longer a more-than-fulltime task for an adult.

Consider what women's work and women's lot was back in the Malthusian era. To have slightly more than two children survive to reproduce—to simply maintain the human population—requires that the typical mother have three children survive to adulthood, which requires perhaps seven live births, which means perhaps nine pregnancies. Formula and other baby-milk substitutes are not readily available before industrialization: figure on 2.5 years of nursing in addition to nine months of pregnancy. That means that the typical pre-industrial mother spent more than 20 years of her life eating for two. Breastfeeding kept women very close to their children, and impelled a concentration of female labor on activities that made that easy: gardening and other forms of within-and-near-the-dwelling labor, especially textiles.

Plus she may have spent much of her time raising other women's children: Queens of England between the Norman Conquest of 1066 and the mid-1800s suffered a one-in-seven death rate in childbed, and they were the most well-nourished and cosseted women on the island of Britain. And death rates from mothers and aunts caring for sick children were perhaps one-in-fourteen.

Thus biology under Malthusian pressure has consequences. Consider one of the most prominent and articulate women in America before industrialization, Abigail Smith. At the age of 20 in the year 1764 in the town of Braintree half a day's journey south of Boston, Abigail Smith married 30-year old up-and-coming aggressive whippersnapper John Adams. Their daughter Nabby was born the following year, in 1765. There followed John Quincy (1767), Suky (1768, who died at the age of 2), Charles (1770, who died at the age of 10), Thomas (1772), with high probability a couple of miscarriages, and then the stillborn Elizabeth (1777), after which they stopped. That's eight pregnancies. She ran their Boston-Braintree household and property operations while he played his role on the large political-intellectual stage, becoming second president of the United States. Death and disease were omnipresent. In one famous letter to her husband in 1776 she writes of:

- "Our Neighbour Trot… strip[p]ed of two lovely children in one week…",
- "Becky Peck they do not expect will live out the day…",
- "The Mumps… Isaac is now confined with it…",
- "Your Brothers youngest child lies bad with convulsion fitts…"

Her letters tell us that she badly wanted to know what was going on in the world outside her household and the Boston-Braintree circle. And her letters tell us that Abigail Smith Adams was unhappy about the position of women in society:

> In the new Code of Laws… do not put such unlimited power into the hands of the Husbands. Remember all Men would be tyrants if they could…. Put it out of the power of the vicious and the Lawless to use us with cruelty and indignity…. Regard us then as Beings placed by providence under your protection and in immitation of the Supreem Being make use of that power only for our happiness."

Her husband John Adams thought this was a great joke:

> Depend upon it, we know better than to repeal our masculine systems.… We dare not exert our power…. You know we are the subjects… [with] only the name of masters…. [Against] the despotism of the petticoat, I hope General Washington and all our brave heroes would fight."

From twenty years of eating for two down to four—that had an impact. Add in teh massive substitution of machines for hard female labor within the household, and modern feminism becomes not just possible but inevitable.

However, the modern industrial world could have further economized on "housework," but did not. Turn-of-the-century feminists and utopians had anticipated communal kitchens; communal laundries; cleaning done in an organized way by collective teams. Over the course of the twentieth century a few steps were to be taken in that direction: restaurants flourished, as did services that offered one or two days a week of cleaning. But laundromats were reserved for those living in small apartments. And restaurant meals remained a small part of meals eaten at home.

More and more over the twentieth century, people in rich industrial societies chose —or others in their households chose for them—private life.

9.6: Those Whom America Started to Leave Behind

9.6.1. Farmers

A large part of the American agricultural depression of the 1920s was a comedown from the boom of World War I. During World War I Europeans were killing each other, not farming—and importing food on a large scale from America. American

farmers had reacted by mortgaging land, borrowing money, and mechanizing their farms to produce more so that they could sell at higher prices to European consumers. The end of World War I and the immediate postwar depression that followed saw a crash in farm prices that reduced nominal farm incomes to some 35 percent of what they had been at their World War I peak.

Farm products had low price elasticities, so that increases in farm-sector production—as farmers attempted to make up for lower prices by growing more—brought with them further declines in prices that together educed farm-sector incomes. Farm products had low income elasticities as well, so that growing incomes during the 1920s did not translate into increased demand for farm prices. 1920 saw the census peak of the farm population in the United States. Thereafter the number of farms, and the farm population, would decline in almost every decade.

9.6.2: African-Americans

The Civil War had ended slavery, but it had not permanently gained the vote for African-Americans in the south, nor had it gained African-Americans the tolerance by whites necessary for African-American populations to be able to migrate to opportunity within the United States in the same way that other immigrant and non-immigrant populations did.

Thus between the Civil War and the Great Depression, the United States's African-American population was trapped: they were trapped in a low-wage, depressed region—America's south—and within that region they were trapped by Jim Crow, Judge Lynch, and the distaste of their white neighbors into the lowest-skilled, worst-paid occupations.

The south remained a low-wage, depressed region in large part because of discrimination against African-Americans. Public education was abysmal in the segregated south. Education was financed by property taxes—levied on landowners—and of principal benefit to the children of laborers because it increased their earnings potential and opportunities. White landlords had no incentive to vote for better schools for the children of their African-American sharecroppers.

In Gavin Wright's view, African-Americans in the south remained concentrated in agriculture because racial prejudice kept them there. Very limited numbers of African-Americans could win supervisory or even skilled-worker positions in

industry because of white racism, The agricultural sector provided a little breathing space, because there you were your own boss—at least to a limited extent. But low levels of capital intensity, high interest rates on loans, and the fact that the overall destiny of the farm sector was downward from the end of World War I meant that the African-American concentration in the southern farm sector was little better as a road to upward mobility.

Large numbers of African-Americans did not find an escape from the economic and poverty traps of the Jim Crow south until large-scale migrations north began in the 1930s and 1940s. And then northern cities turned out to contain other economic and poverty traps—some of them pre-existing, many others a racist political-economy response to the African-American great migration north.

9.6.3: Welfare Capitalism

In the United States the rising concentration of wealth provoked a widespread feeling that something had gone wrong with the country's development. The rich (and many of the native-born not-so-rich) blamed foreigners: aliens born in China, Japan, Italy, Spain, Poland, and Russia who were incapable of speaking English, or understanding American values, or contributing to American society. Many of the middle class, especially the farmers, blamed the rich, the easterners, and the bankers. The Populists of the 1890s blamed the eastern bankers and the gold standard. The Progressives sought reforms to try to diminish the power of what they saw as a wealthy-would be aristocracy.

But the Populists were broken in the 1890s by the hammer of the political mobilization of anti-Black prejudice on the anvil of an increased sense that inequality was regional, and poverty was rural. And the Progressive tide ebbed as moderates embraced only moderate reforms, Teddy Roosevelt stole the thunder from the more radicals, and the taste of a regional and a cultural war remained. Poet Vachel Lindsay wrote of William Jennings Bryan's campaigns for the presidency in 1896, 1900, and 1908 as not so much the people vs. the powerful as "Oh, the longhorns of Texas/The jay hawks from Kansas/The plop-eyed bungaro and giant gassicus/The varmint, chipmunk, bugabo/The horned-toad, prarie-dog, and ballyhoo/From all the newborn state arow" against "the dour and the old/The mean and the cold…./Mean paternalism/Making their mistakes for them,/ Crucifying half the West,/Till the whole Atlantic coast/Seemed a giant spider's nest."

Thus the Populists and the Progressives remained minority political currents in

America until the coming of the Great Depression. In the meantime, the voters continued to elect Republican presidents who were more-or-less satisfied with American economic and social developments, and who believed that "the business of America is business." The United States did very well at business in the 1920s. Industrial production in 1929 was nearly twice what it had been in 1913.

But the managers who ran Americas firms and the politicians who got elected were not oblivious to the Progressive challenge. Scared of what unionization or a shift to left-wing politics might bring, and concerned about the welfare of their workers, American business in the 1920s developed welfare capitalism. Social-work professionals employed by the firm provided counseling and visited the homes of workers. Businesses offered stock-purchase plans to help workers save for retirement, and insurance: sickness, accident, and life insurance.

Welfare capitalism appears to have worked as long as relative prosperity continued: the welfare of workers covered rose. Welfare capitalism appears to have worked for the bosses as well: the 1920s saw rapid erosion of union membership in the United States.

But when the Great Depression came, the availability of the Populist and Progressive agendas made the shift in American politics in response to the depression rapid and substantial.

9.7: Frenzied Finance

9.7.1: New technologies and leading sectors

At the end of 1928 President Calvin Coolidge sent his last state of the Union message to Congress: "No Congress of the Unied States ever assembled, on surveying the state of the union, has met with a more pleasing prospect than that which appears at the present time," in which all should "regard the present with satisfaction and anticipate the future with optimism." And, as John Kenneth Galbraith noted, nearly everyone in America in the 1920s had very good reason to be optimistic: the United States appeared to be riding a wave of innovation and invention that was carrying the country towards higher prosperity more rapidly than any previous generation would have believed.

First among the leading sectors of American industry in the 1920s were the automobiles. Before World War I the automobile had been largely a toy for the rich

and a tremendous convenience for doctors making housecalls. After World War I the abundance of newly-minted Model-Ts called forth a political demand for roads on which they could be driven without getting stuck in the mud. Better roads led to the building of the first suburban housing developments. And better roads and houses in the suburbs turned the automobile from a luxury or a tool of business confined to a few select occupations into a nationwide necessity.

Second among the leading sectors of American industry in the 1920s were the other consumer durables: the appliances and household "white goods" that held such promise for lessening the burden of keeping private life functioning at a middle-class standard of prosperity and hygiene. The expansion in demand for these goods was fueled by an extremely important financial innovation: consumer credit—by now, pay later. The ability to accelerate the pleasure of purchase and use and to defer the pain of payment proved a very good selling point for all kinds of durable products, and the fact that the loan could be easily secured by the commodity purchased—a commodity that was durable, reliable, and that depended for most of its value not on its utility but on its newness—diverted much spending into the channels of durable purchases for the home.

Third among the leading sectors was a sector that supplied not consumers but factories, the spread of the electric motor—of electricity as the prime mover in industrial production. The electric motor offered an enormous increase in the flexibility of the factory. One could put stations where one wanted—not where the belts and drives connected to the great central steam engines required them to be placed. One no longer had to turn on the whole factory—the great central steam engines and the entire apparatus of belts and drives—in order to accomplish even a single task.

Fourth among the leading sectors were utilities. Potential demand for the services provided by utilities was immense, and was rapidly growing. The potential for realizing economies of scale to deliver utilities—particularly electric power—seemed very large. And utilities appeared able to borrow from banks at very attractive terms: their plant was fixed, and demand for their products appeared to be easily predictable and constantly growing. The clear strategy was to use the underlying soundness of the industry as collateral to borrow money from banks, use that money to purchase more utilities, and then take advantage of engineering economies of scale to lower costs and reap the profits. Samuel Insull was only the most powerful of a number of utility promoters all seeking to follow this same strategy—and none of them expecting the Great Depression that would destroy the economic foundations of their industry for a decade and turn them from public

benefactors into shady confidence men.

Fifth and last was a leading sector with which we have become very familiar: electronics—in this case radio. It was not clear how one was supposed to make immense profits from electronics in the 1920s. After all, you could not charge customers who received radio broadcasts, so there was no source of income from selling programs to those who liked to hear them. It was not yet clear that the government would fail to extract a price for use of the valuable public resource—the electromagnetic spectrum—that radio stations used. And it was not yet completely clear that advertising could provide the financial underpinnings for a complete communications medium.

On the manufacturing side it was clear that you could make money by building radio receivers. But how much money could you make? The basic physical principles were well known, and a competitive industry with open technology is not a sector in which profits are usually high.

Nevertheless radio—especially the Radio Corporation of America, RCA, the FAANG of its day—was the focus of many hopes and dreams in the 1920s in a manner analogous to today's internet. It was new technology. It was important. It gave us as a species new powers and capabilities. Therefore, people thought, there must be some way to extract a large profit flow from it.

9.7.2: A Permanent and High Plateau?

As the 1920s proceeded, Americans forgot about the deep recessions of the pre-World War I period and began to accept that they were living in a "New Era" of faster economic growth and general prosperity. The monarchs of the old world—Kaisers and Czars and Emperors and such—were gone, or were symbolic constitutional monarchs, and so the traditional source of war in the dynastic greed of kings was absent. The recently-established Federal Reserve had the tools to calm the business cycle. The systematic application of science to technology in the manner of the research laboratories pioneered by Thomas Alva Edison, the benefactor of humanity (and by the explosive-making chemists of DuPont, whose claim to be public benefactors is not as strong), was generating an ever-accelerating and constant stream of new inventions.

Why shouldn't people in America in the 1920s have expected prosperity to continue, and economic growth to continue to accelerate?

If World War I truly had been a watershed, and if the elimination of the independent power of dynasties had been an elimination of the major causes of war, and if the founding of the Federal Reserve had marked the taking of rational control over the total flow of spending in the economy, and if the systematization of research and development had increased the rate of technological progress, then there was every reason to expect that the new era would be permanent.

If the new era was permanent, then there were several natural consequences:

First, Florida land became a good investment. A richer society would be a more-leisured society with earlier retirement. The beaches of Florida provided ideal places for a permanent leisure class fleeing the northern winters.

Second, financial asset prices should rise. You calculate the true, warranted value of financial assets by taking the current level of dividends or coupons that is being paid out, and dividing it by the difference between the rate of return that you require to be comfortable holding assets of that risk class and your expectation of the long-run rate of growth of the cash payments flowing from the asset. A new era means faster long-run economic growth, and so higher stock market and real estate market values. A new era means a stock market boom.

Thus monetary economist (and Prohibition enthusiast) Irving Fisher ruined his reputation as an economic forecaster for all time with his late-1929 declaration that "stock prices have reached what looks like a permanently high plateau." We today are much more skeptical of "New Eras" and "fundamental changes in the bases of valuation" than they were back then. But from their standpoint, at least some recognition that a better world had come to be—at least in North America—seemed far from unreasonable.

9.7.3: Speculation

It is hard to say exactly when the American stock market went off its rails, but off the rails it went. It is hard to say when things went awry, and when a stock market rise that reflected reasonable estimates of strong fundamentals turned into a frenzy of speculation in which each fool buying overvalued stocks could justify the purchase only by resorting to the belief that the future held still a greater fool who would enthusiastically pay an even greater volume of overvaluation.

That the American stock market did go off its rails is clear. Any who claim that patterns of stock prices reflected reasonable estimates of discounted future

profitability is ignoring a host of anomalies in stock market values that indicate that those who were paying for stocks in the summer and early fall of 1929 had not the slightest rational clue of what they were doing.

Consider the closed-end investment fund. A closed-end investment fund is a pure holding company. Moreover, it has not even a holding company's ability to make sure that firm managers are to its liking because it does not hold a controlling interest in anything. Investors were supposed to pool their resources and limit their risk by buying stock in this holding company, this closed-end investment fund, which would then buy and hold for them the stock of one hundred or more individual operating companies. The theory was that the management of the fund would be better able to pick stocks and manage risk than individual investors.

Thus the only assets of a closed-end investment fund were its financial assets: the stocks and bonds that it held. By elementary principles of rational finance, therefore, the fundamental value of a closed-end investment fund is easy to calculate: its fundamental value is nothing more than the fundamental value of the stocks and bonds that make up its portfolio. If the current stock market price of a closed-end investment fund is different from its so-called net asset value, then something is wrong: either there is a gap between the market price and the fundamental value of the fund, or the stocks that make up the fund are not selling for their fundamental values themselves.

My own calculations (with Andrei Shleifer) suggest that by the fall of 1929 something like 40% of the value of the American stock market was a pure bubble. The market values of closed-end investment funds were selling at a sufficient premium relative to their net asset values to be consistent with a 40% overvaluation of the market in general relative to fundamental values.

Where had this overvaluation come from? Friedrich Hayek and Lionel Robbins blamed the Federal Reserve which had (at the request of the Reichsbank and the Bank of England) cut its discount rate from 4 to 3.5 percent in the spring of 1927. They claimed that this shift in the discount rate was clearly inflationary, that it made money available on much too cheap terms to the economy, and was the cause of the inflationary boom that led to the speculative mania of 1929.

We today have the benefit of knowing what an excessively inflationary monetary policy looks like: it looks like the U.S. between 1965 and 1973. When the Federal Reserve cuts interest rates and keeps them too low, prices begin to accelerate first as too much money chases too few goods and second as people begin to

incorporate expectations of price inflation into their baseline expectations. The late 1920s look nothing at all like the late 1960s: overall prices remained constant. The goods and product markets show no sign of too much money chasing too few goods. Price rises were confined to the asset markets.

Those who claim that the Federal Reserve was not too expansionary but too contractionary in the runup to the 1929 stock market crash have a better case. From 1928 on the Federal Reserve began to worry that stock prices too high, that they might end in a crash, and that such a crash might bring on a depression. So step by step they took measures to try to choke off stock market speculation by making it more expensive to borrow money in so-called "brokers' loans" secured by stocks.

They failed. The Federal Reserve's measures had next to no impact on the increase in stock market leverage and the flow of money into the stock market. The Federal Reserve did, however, finally raise interest rates significantly. It is more likely than not that in trying to curb the stock market boom the Federal Reserve triggered a recession: those who were borrowing money and investing it in the stock market did not much care that interest rates were higher; those who borrowed money for investment in plant and equipment did. It looks as if the Federal Reserve's attempts to keep stock market overvaluation from growing large enough that a crash could trigger a recession were counterproductive: they triggered a recession all by themselves.

The U.S. economy entered this—Federal Reserve-caused—cyclical downturn in June of 1929. The German economy had already been in recession for almost a year. The Great Depression had begun.