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

IX. The Roaring Twenties & the Coming of the Great Depression

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9.1. Global Order and Governance

9.1.1. The Absence of a Hegemon

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.

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.

9.1.2. The Closing-Off of Immigration

U.S. isolationism was not limited to an avoiding of foreign diplomatic and military entanglements. 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.

9.1.3. Abandoning the League of Nations

At the Versailles conference U.S. President Woodrow 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. 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. Instead, he bowed to Britain's Lloyd George and France's Clemenceau to a degree that outran even Lloyd George's calculations, and frightened him. John Maynard Keynes wrote 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.

Woodrow Wilson did get one thing out of the Treaty of Versailles: a forum—the League of Nations—in which international agreements could be reached, and in which arguments for revisions and readjustments could be made.

But then Massachusetts anti-immigrant nativist Republican Senator Henry Cabot Lodge showed up again. He led the opposition to joining the League of Nations in the U.S. Senate. He and his Republican peers—who ruled America in the 1920s—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.

9.1.4. Raising Tariffs

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.

9.2. Mass Production

Turning inward did not alarm many Americans. The 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.

Where did this "mass production", this "Fordism"—after Ford Motor Company CEO Henry Ford—come from?

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.

Eli Whitney could never quite make it work. But it 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. The Ford Motor Company

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 key difference between Ford and his predecessors in using the "American system" for metalworking—and 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. 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. 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 the movie "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 bottlenecks were occurring. Fixed overhead costs were spread out over larger and larger volumes of production, thus lower and lower prices became possible.

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 lined up 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.

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 in his ambiguously dystopian novel *Brave New World*—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, crueller, and more prejudiced

9.2.3. Economies of Scale and Scope

The same 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…

9.2.4. Mass Distribution

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. 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 *Brave New World* the dystopian elements of 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. 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. 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.

9.3. 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. 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. 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. Socialism and social democracy were unneeded and un-American. American companies would see that their long-run interest was to take care of their workers—as Henry Ford showed with his $5/day wage, and as the Pullman Company had with its company-sponsored housing.

Welfare capitalism appears to have worked as long as relative prosperity continued: the welfare of workers covered did rise, and more workers were covered by social democracy in one corporation as the 1920s advanced.. 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 it fell apart. And then the availability of the Populist and Progressive agendas made the shift in American politics in response to the depression rapid and substantial.

9.4. Frenzied Finance

9.4.1. 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 United 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." A 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.

The leading sectors were: automobiles, other consumer durables, radio, the spread of the electric motor—of electricity as the prime mover in industrial production—and interlinked was the fourth sector, utilities utilities. With electrification, especially, potential demand for the services provided by utilities was immense and rapidly growing. The potential for realizing economies of scale seemed very large. And utilities appeared able to borrow from banks at very attractive terms: their plant was fixed. Demand for their products appeared to be easily predictable.

Demand constantly growing. And nearly all utilities had near monopolies.

The clear utilities strategy was to use the underlying soundness of the industry as collateral to borrow money from banks, use that money to purchase more utilities, take advantage of engineering economies of scale to lower costs, reap the profits, and make sure the profits were shared with the right people to keep potential regulators sweet on the industry. Samuel Insull was only the most powerful of a number of utility promoters all seeking to follow this same strategy—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.

And then there was the leading sector that was our first taste of electronics: 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.

9.4.2. 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 recently-established Federal Reserve had the tools to calm the business cycle. The systematic application of science to technology in the research laboratories was generating an everaccelerating 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 the "new era" was permanent, then there were several natural consequences: First, Florida swampland was a good investment, for a richer society would be a more-leisured society with earlier retirement seeking beaches. Second, financial asset prices should rise in price. 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 dividends. A permanent "new era" and low risks and interest rates produced by successful macroeconomic stabilization meant very high stock market price indeed. 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."

9.4.3. Speculation

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 nothing more than the current value of the stocks and bonds that make up its portfolio. Yet by the fall of 1929 closed-end investment funds were selling at a 40% premium relative to their net asset values.

Where had this overvaluation come from? After the fact economists Friedrich von 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 too much money chases too few goods and people begin to incorporate expectations of further money growth into their baseline expectations price inflation starts. 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.

Those like Milton Friedman 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.

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.

9.5. The Industrial Business Cycle

9.5.1. Jean-Baptiste Say's Law

Back when market economies emerged, there was great worry that things would not necessarily fit together: Might not the farmers be unable to sell the crops they grew to the artisans because the artisans could not sell the products they made to the merchants who would be unable to make money carrying artisans products to the farmers because the farmers would not purchase anything? Back at the beginning of economics it was Jean-Baptiste Say who wrote that such an idea of a "general glut"—of economy-wide "overproduction" and consequent mass unemployment—was incoherent. Nobody, Say argued, would ever produce anything for sale unless they expected to use the money they earned in order to buy something else.

Thus, "by a metaphysical necessity", as subsequent-generation economist John Stuart Mill outlined Say's argument in 1829, there can be no imbalance between the aggregate value of planned production-for-sale, the aggregate value of planned sales, and the aggregate value of planned purchases. This is "Say's Law".

Producers could certainly guess wrong about what consumers wanted—an economy could easily have an excess of washing machines and a shortage of yoga classes, if producers had mistaken what consumers wanted and so assembled white goods rather than learning how to do the Downward-Facing Dog. Excess demand for and high profits in making commodities in short supply and excess supply of and losses in making commodities in surplus was not a bug but a feature: the market gave incentives to quickly shift resources to erase such imbalances. But an excess supply of well-nigh everything? That, Say said, was impossible. But what if you wanted to buy before you had sold—if the artisan wanted to buy food before the merchant had come around to buy the textiles? That, said Say, was what banks and trade credit were for: "merchants know well enough how to find substitutes for the product serving as the medium of exchange".

9.5.2. Say and the Panic of 1825

Karl Marx dismissed this as the "childish babbling of a Say". One did not just sell in order to buy: one might be forced to sell in order to pay off an old debt if credit that had been extended by some bank was withdrawn. In that case, the demand for goods was in the past, and could not in the present balance out your supply. If everyone was trying to sell in order to pay off old debts, there would indeed be a "general glut". And if those who were calling in loans saw businesses collapsing into bankruptcy around them, they would be unlikely to be wiling to provide "substitutes for the product serving as the medium of exchange".

As John Stuart Mill put it:

> Those who have... affirmed… [the possibility of] an excess of all commodities, never pretended that money was one…. Persons in general, at that particular time… liked better to possess money than any other commodity. Money,

> consequently, was in request, and all other commodities were in comparative disrepute.... There would seem… no particular impropriety in saying that there is a superabundance of all or most commodities, when all or most of them are in this same predicament…

And if all or nearly all goods and services save money are at one moment in excess supply, factories will be shut and workers will be jobless—and the fact that shareholders then have no dividends, lenders have no interest payments, and workers have no wages will further widen the gap between the aggregate-supply productive potential of the economy and the current level of aggregate demand.

Say came to recognize that Marx and Mill were correct after the British Canal Panic of 1825 Led by the Bank of England, the banks and merchants of England decided in late 1825 that they had made too many loans to too many counterparties whose investments were not turning out well. Therefore they ceased to be willing to discount as many bills—to advance cash in return for being given title to promises to pay that merchants had received from customers. Thus, Say wrote: “commerce found itself deprived at a stroke of the advances on which it had counted…” The consequence, Say wrote, was financial and economic collapse: a true “general glut” as “businessmen… finding no more advances from the bankers… use[d] up all the resources at his disposal. They sold goods for half what they had cost… a multitude of workers were without work… bankruptcies… among merchants and among bankers… individuals… bankrupt…”

What of Say’s 1803 declaration that when there is a shortage of money in an economy, merchants “know well enough how to find substitutes for the product serving as the medium of exchange”? Money and credit are, in the last analysis, liquid trust. And if there is not trust that your counterparty is solvent, the money and credit will not be there.

9.5.3. Central Banking and Other Expedients

There is one organization that always—or almost always—is trusted to be good for the money. The government accepts the money that it itself issues as payment for taxes, and so everybody who owes taxes will be willing to sell what they have in return for the money the government has printed up. Whenever the economy freezes up due to a shortage of demand and of income, the government can fix it—as long as its own finances are trusted over the long term—by boosting the amount of government-issued cash in the hands of the public. People who then needed to buy but could not afford to buy because they would not sell will be able to buy.

Their purchases then become extra income for others. Those others will then be able to scale up their purchases. And so the economy will unwedge itself. What if the government's finances are not trusted over the long term? Then the government itself may need a financial rescue: that is what we, today, have an International Monetary Fund to do.

There are a number of ways the government can get extra purchasing power into the hands of the public to cure a depression:

1. It can have its functionaries throw bundles of cash out of helicopters—an arresting image coined originally by Milton Friedman, a reference to which earned former U.S. Federal Reserve Chair Ben Bernanke his nickname of "Helicopter Ben".
2. The government can hire people, set them to work, and pay them.
3. The government can simply buy useful stuff.
4. The government can have an arm—a central bank—that trades financial assets for cash.

This last is the dominant expedient. In response to the Canal Crisis of 1825, the Bank of England took major steps to boost the cash holdings—and thus the spending—of the banks, businesses, and individuals of England, trying to relieve the "general glut". As Jeremiah Harman, then one of the Directors of the Bank of England, wrote:

> We lent [cash] by every possible means and in modes we had never adopted before; we took in stock on security, we purchased Exchequer bills, we made advances on Exchequer bills, we not only discounted outright, but we made advances on the deposit of bills of exchange to an immense amount, in short, by every possible means consistent with the safety of the Bank, and we were not on some occasions over-nice. Seeing the dreadful state in which the public were, we rendered every assistance in our power…

There was a depression: 16% less cotton was spun into yarn in England in 1826 than had been in 1825. But the depression was short: 1827 saw 30% more cotton spun into yarn than 1826 had.

There is good reason to fear that the downturn would have been considerably worse had the Bank of England behaved like the U.S. Treasury and Federal Reserve were going to behave in the early 1930s, and washed their hands of the situation.

9.5.4. The Art of Monetary Policy

The rescue that the Bank of England had undertaken in its own in 1825 had been at the behest of the British government. In the runup to the crisis, the Chancellor of the Exchequer—the Finance Minister—had warned banks that in his opinion they were extending loans to shaky and overspeculative enterprises, and they should not expect to be bailed out by the Treasury: they should not think that they could play the game of "heads we profit, tails the government bails us out". But, of course, when the commercial crisis came and the prospect of many bankruptcies, large scale unemployment, and riots against the government on the streets of London threatened, the Chancellor gave his blessing to the Bank of England's stepping in to do what the Chancellor had promised and threatened that the Exchequer had not.

In 1844 the time came around to reexamine and recharter the Bank of England. In the end, then-Prime Minister Robert Peel decided:

1. The Bank of England should definitely not be authorized by Parliament to print unlimited amounts of money to support the banking system in a financial crisis —in fact, it should be illegal for the Bank of England to print extra banknotes. Thus bankers would be on notice that they should not expect a bailout. That would create too great a risk of substantial losses from "moral hazard", as the game of heads-we-profit-tails-the-government-bails-us-out was just too tempting to expect bankers to resist.

2. In the event of a real financial emergency, the government could and would request that the Bank of England print as many banknotes as needed to fix the financial crisis.

The reason for (1) was very clear. Bankers confident that in the last analysis they were gambling with the public's money would do what bankers tend to do in such situations: the only question, as financier Bill Janeway of Warburg Pincus likes to say, is against which wall bankers will do it. Hence, Robert Peel and his majority in the Parliament thought, it was very important to establish the principle that the Bank of England could *not* be relied upon. And, Peel thought, the best way to establish that principle would be to make it *illegal* for The Bank of England to do so.

Thus, Peel said, "we have taken all the Precautions which legislation can prudently take up against the Recurrence of a pecuniary Crisis". But what if such a

"Pecuniary Crisis" did nevertheless occur? Then, Peel said, "it be necessary to assume a grave responsibility for the purpose of meeting it, I dare say men will be found willing to assume such a responsibility. I would rather trust to this than impair… those measures by which one hopes to control evil tendencies in their beginning…" What did he mean? That if a financial crisis did occur, the Chancellor of the Exchequer—the British Finance Minister—should write a "suspension letter", telling the Bank of England that, as its regulator, he was suspending those provisions of the law that prohibited it from printing additional money. And the Chancellor would then ask the Bank of England to expand the money supply by whatever amount was needed to stabilize the economy. Thus men at the Bank of England were then found willing to act *ultra vires*—beyond their [legitimate] strength—under the principle that in the end—*salus populi suprema lex*—the well-being of the people is the highest law.

As my teacher Charlie Kindleberger liked to say, that the British government had made Bank of England lender-of-last-resort operations in a financial crisis illegal did not mean that they should not or would not be undertaken. Kindleberger agreed that: "if the market is sure that a lender of last resort exists, its self-reliance is weakened", and hence it is needed more often, and the real resources thrown down the toilet in the course of what are speculations on a future bailout are increased. This led Kindleberger to the conclusion that:

> The lender of last resort... should exist... but his presence should be doubted.... This is a neat trick: always come to the rescue in order to prevent needless deflation, but always leave it uncertain whether rescue will arrive in time or at all, so as to instill caution in other speculators, banks, cities, or countries.... some sleight of hand, some trick with mirrors... [because market] fundamentalism has such unhappy consequences for the economic system…

Central banking is indeed a Black, Mysterious, and Magical Art.

Karl Marx loathed Robert Peel: "His speeches… consist of a massive accumulation of commonplaces, skillfully interspersed with a large amount of statistical data". He loathed him not least for the Bank Recharter: "Sir Robert Peel's much vaunted Bank law… adds in difficult times a monetary panic created by law to the monetary panic resulting from the commercial crisis; and… must be suspended by Government interference." And how he did rage! He asked, how it could dare be that:

> the Committee has contrived to simultaneously vindicate the perpetuity of the law and the periodical recurrence of its infraction? Laws have usually been designed

> to circumscribe the discretionary power of Government. Here, on the contrary, the law seems only continued in order to continue to the Executive the discretionary power of overruling it. The Government letter, authorizing the Bank of England to meet the demands for discount and advances upon approved securities beyond the limits of the circulation prescribed by the Act of 1844, was issued on Nov. 12.

Marx did not understand that the suspension was the point—that what was needed to both control moral hazard and avoid deep depressions was Kindleberger's "neat trick... sleight of hand... trick with mirrors" that made the "lender of last resort... exist… [and] come to the rescue…" but "always leave it uncertain whether rescue will arrive in time or at all…" One problem with central banking is that many central bankers have found themselves as puzzled as Marx when they find themselves on the spot, confused about what to do, and hence fail to do their job. The most destructive recent example was the failure of the Federal Reserve to impose on orderly resolution on Lehman Brothers in the fall of 2008.

9.6. The Slide into the Great Depression

9.6.1. 1929-1933

It is straightforward to narrate the slide of the world into the Great Depression. The 1920s saw a stock market boom in the U.S. as the result of general optimism: businessmen and economists believed that the newly-born Federal Reserve would stabilize the economy, and that the pace of technological progress guaranteed rapidly rising living standards and expanding markets. The U.S. Federal Reserve feared continued stock speculation would produce a huge number of overleveraged financial institutions that would go bankrupt at the slightest touch of an asset price drop. Such a wave of bankruptcies would then produce an enormous increase in fear, a huge flight to cash, and the excess demand for cash that is the flip side of a "general glut". The U.S. Federal Reserve decided that it needed to curb the stock market bubble to prevent the growth of such speculaThe Federal Reserve's attempt to head off a depression in the future brought one on in the present.

Falls in prices—deflation—during the Depression set in motion bankruptcies which set in motion further contractions in production, which triggered additional falls in prices. With prices falling at ten percent per year, investors could calculate that they would earn less profit investing now than delaying investment until next year when their dollars would stretch ten percent further: excess demand for cash went up even more, and excess supply of goods and services. Banking panics and the collapse of the world monetary system cast doubt on everyone's credit, and reinforced the belief that now was a time to watch and wait. The slide into the Depression, with increasing unemployment, falling production, and falling prices, continued throughout then newly-elected Herbert Hoover's Presidential term.

At its nadir, the Depression was collective insanity. Workers were idle because firms would not hire them to work their machines; firms would not hire workers to work machines because they saw no market for goods; and there was no market for goods because workers had no incomes to spend. Orwell's account of the Great Depression in Britain, *The Road to Wigan Pier,* speaks of "...several hundred men risk[ing] their lives and several hundred women scrabbl[ing] in the mud for hours... searching eagerly for tiny chips of coal" in slagheaps so they could heat their homes. For them, this arduously-gained "free" coal was "more important almost than food." All around them the machinery they had previously used to mine in five minutes more than they could gather in a day stood idle.

9.6.2. Why Was It so Large?

9.6.2.1. Bad Luck or Vulnerable Structure?

There is no fully satisfactory explanation of why the huge Depression happened when it did. If such huge depressions were always a possibility in an unregulated capitalist economy, why weren't there two, three, many Great Depressions in the years before World War II? Milton Friedman and Anna Schwartz argued that the Depression was the consequence of an incredible sequence of blunders in monetary policy. But those controlling policy during the early 1930s thought they were following the same gold-standard rules of conduct as their predecessors. Were they wrong? If they were wrong, why did they think they were following in the footsteps of their predecessors? If they were not wrong, why was *the* Great Depression the *only* Great Depression?

A number of pieces of bad luck all came together. The cutoff of immigration in 1924 meant a great deal of American construction was undertaken in the middle 1920s for people who, it turned out, did not exist—or, rather, existed elsewhere. The Empire State Building was the most financially catastrophic construction enterprise for its investors that America had ever seen. The rapid expansion of financial markets, and participation in them, had made them even more vulnerable than usual to overspeculation and panic. The shortage of monetary gold as increasing demands for it as a shock absorber due to higher post-World War I prices ran into France and America's desire to lock it, useless, in their vaults played a role. The reliance of the international monetary system not just on gold but on other assets—assets also subject to runs—played a role as well.

Back in the first drafts of this book, before 2008, I used to have much longer "structural" explanations for why things were so different in 1929-1933 from how they usually are in the capitalist financialized world economy. But in 2008 we skated to the edge of another Great Depression. So now I think not that 1929-1933 were uniquely vulnerable, but rather that for the rest of the time since 1825 we have been remarkably lucky to have seen only one Great Depression.

But there was another factor: absolutely awful policy. Elites doubled down on the austerity that they had committed themselves to in the 1920s

9.6.2.2. Even a Panic Is Not Altogether a Bad Thing

The first instinct of governments and central banks faced with this gathering Depression began was to do nothing.

Businessmen, economists, and politicians (memorably Secretary of the Treasury Mellon) expected the recession of 1929-1930 to be self-limiting. Earlier recessions had come to an end when the gap between actual and trend production was as large as in 1930. They expected workers with idle hands and capitalists with idle machines to try to undersell their still at-work peers. Prices would fall. When prices fell enough, entrepreneurs would gamble that even with slack demand production would be profitable at the new, lower wages. Production would then resume.

Throughout the decline—which carried production per worker down to a level 40 percent below that which it had attained in 1929, and which saw the unemployment rise to take in more than a quarter of the labor force—the government did not try to prop up aggregate demand. The Federal Reserve did not use open market operations to keep the money supply from falling. Instead the only significant systematic use of open market operations was in the other direction: to raise interest rates and discourage gold outflows after the United Kingdom abandoned the gold standard in the fall of 1931.

The Federal Reserve thought it knew what it was doing: it was letting the private sector handle the Depression in its own fashion. It saw the private sector's task as the "liquidation" of the American economy. And it feared that expansionary monetary policy or fiscal spending and the resulting deficits would impede the necessary private-sector process of readjustment.

The unwillingness to use policy to prop up the economy during the slide into the Depression was backed by a large chorus, and approved by (some of) the most eminent economists around.

For example, from Harvard Joseph Schumpeter argued that there was a "presumption *against* remedial measures which work through money and credit. Policies of this class are particularly apt to produce additional trouble for the future." From Schumpeter's perspective, "depressions are not simply evils, which we might attempt to suppress, but forms of something which has to be done, namely, adjustment to change." This socially productive function of depressions creates "the chief difficulty" faced by economic policy makers. For "most of what would be effective in remedying a depression would be equally effective in preventing this adjustment."

From London, Friedrich von Hayek found it:

> still more difficult to see what lasting good effects can come from credit expansion. The thing which is most needed to secure healthy conditions is the most speedy and complete adaptation possible of the structure of production.If the proportion as determined by the voluntary decisions of individuals is distorted by the creation of artificial demand resources [are] again led into a wrong direction and a definite and lasting adjustment is again postponed.The only way permanently to "mobilise" all available resources is, therefore to leave it to time to effect a permanent cure by the slow process of adapting the structure of production…

Von Hayek and company believed that enterprises were gambles which sometimes fail: a future came to pass in which certain investments should not have been made. The best that could be done in such circumstances is to shut down those production processes that turned out to have been based on assumptions about future demands that did not come to pass. The liquidation of such investments and businesses releases factors of production from unprofitable uses; they can then be redeployed in other sectors of the technologically dynamic economy. Without the initial liquidation the redeployment cannot take place. And, said Hayek, depressions *are* this process of liquidation and preparation for the redeployment of resources.

As Schumpeter put it, policy does not allow a choice between depression and no depression, but between depression now and a worse depression later:

> Inflation pushed far enough [would] undoubtedly turn depression into the sham prosperity so familiar from European postwar experience, [and]... would, in the end, lead to a collapse worse than the one it was called in to remedy…

For:

> recovery is sound only if it does come of itself.… Any revival which is merely due to artificial stimulus leaves part of the work of depressions undone and adds, to an undigested remnant of maladjustment, new maladjustment of its own which has to be liquidated in turn, thus threatening business with another [worse] crisis ahead…

9.6.2.3. Herbert Hoover Wished That His Own Administration Had Listened to Him

Contemplating from the 1950s the wreck of his country's economy and his own political career, Herbert Hoover wrote bitterly in retrospect about those in his administration who had advised inaction during the downslide:

> The "leave-it-alone liquidationists" headed by Secretary of the Treasury Mellon felt that government must keep its hands off and let the slump liquidate itself. Mr. Mellon had only one formula: "Liquidate labor, liquidate stocks, liquidate the farmers, liquidate real estate". He held that even panic was not altogether a bad thing. He said: "It will purge the rottenness out of the system. High costs of living and high living will come down. People will work harder, live a more moral life. Values will be adjusted, and enterprising people will pick up the wrecks from less competent people"…

This ruling doctrine—that in the long run the Great Depression would turn out to have been good medicine for the economy, and that proponents of stimulative policies were shortsighted enemies of the public welfare—was, to put it bluntly, complete bats---. John Stuart Mill had nailed the analytical point back in 1829: an excess demand for money was what would produced a "general glut", and if the economy's money supply were matched to money demand, there would be no depression. Practical central bankers had developed a playbook for what to do. Yet it was not followed.

Why was it not followed? Perhaps it was because in previous downturns the excess demand for money had triggered a scramble for *liquidity*: people desperate to have more cash they could spend immediately dumped other assets onto the market, including the government bonds they held; as government bonds fell in price the interest rates they paid rose; central bankers saw such sharp spikes in government bond interest rates as a signal that the economy needed more cash. In this downturn the excess demand for money was so broad and fear was so great that it triggered a scramble for *safety*: people were desperate not just for more cash now but for assets that they would be able to easily turn into cash in the future, for it seemed likely that the troubles would last for quite a while; so they dumped other assets on the market and scrambled for both cash and government bonds. With the government-bond interest-rate spike absent, central bankers were not sure what was going on.

Thus governments strained their muscles to balance their budgets—thus further depressing demand—and to reduce wages and prices—in order to restore competitiveness and balance to their economies. In Germany the Chancellor—the Prime Minister—Heinrich Bruening decreed a ten percent cut in prices, and a ten to fifteen percent cut in wages. But every step taken in pursuit of financial orthodoxy made matters worse. As Keynes had written, once banks realize that deflation had significantly impaired the value of their collateral:

> They become particularly anxious that the remainder of their assets should be as liquid and as free from risk as it is possible to make them. This reacts in all sorts of silent and unobserved ways on new enterprise. for it means that banks are less willing than they would normally be to finance any project.

In looking at the tracks of interest rates in the Great Depression, you can see a steady widening of the gap between safe interest rates on government securities and the interest rates that borrowing companies had to pay. Even though credit understood as *liquidity* was ample—in the sense that borrowers with perfect and unimpaired collateral could obtain loans at extremely low interest rates—the businesses in the economy (few of which had perfect and unimpaired collateral) found it next to impossible to obtain capital to finance investment.

Thus the banking system froze up. It no longer performed its social function of channeling purchasing power from savers to investors. Private investment collapsed; falling investment produces more unemployment, excess capacity, futher falls in prices, and more deflation; and further deflation renders the banking system even more insolvent.

Morever, not only past deflation but also expected future deflation depressed investment. Why invest now if you expect deflation, so that everything you might buy this year would be ten percent cheaper next year?

In the end the spiral of deflation continued to depress the economy until something was done to restore solvency to the banking system, and broke the anticipations of further falls in prices. A few economists understood this process at work during the Great Depression. But they did not walk the corridors of power.

9.6.2.4. The Croakings of Cassandras

Thus the ruling "liquidationist" doctrine—that in the long run the Great Depression would turn out to have been good medicine for the economy, and that proponents of stimulative policies were shortsighted enemies of the public welfare—overroad the anguished cries of dissent from those less hindered by their theoretical blinders.

British economist Ralph Hawtrey scorned those who, like Robbins and Hayek, wrote at the nadir of the Great Depression that the greatest danger the economy faced was inflation. It was, Hawtrey said, the equivalent of "Crying, 'Fire! Fire!' in Noah's flood." John Maynard Keynes also tried to bury the liquidationists in ridicule.

Later on Milton Friedman would recall that at the Chicago where he went to graduate school such dangerous nonsense was not taught—but that he understood why at Harvard-where such nonsense was taught-bright young economists might rebel, reject their teachers' macroeconomics, and become followers of Keynes. Friedman thought that Keynesianism was wrong—but not crazy.

However, the "liquidationist" view carried the day. Even governments that had unrestricted international freedom of action—like France and the United States with their massive gold reserves—tended not to pursue expansionary monetary and fiscal policies on the grounds that such would reduce investor "confidence" and hinder the process of liquidation, reallocation, and the resumption of private investment. But sure the "liquidationists" believed that something could be done: what? To restore confidence by balancing the government's budget.

9.6.3. The Absent Hegemon

As Eichengreen has pointed out, once countries had cast off the golden fetters of the interwar gold standard, the crisis was transformed into an opportunity. Policies to expand demand and production no longer required international cooperation once the gold standard framework had been abandoned. But as he has also pointed out, "liquidationism"—and fears of financial and political chaos—kept governments from beginning to fight the Depression in a serious manner for much of the 1930s.

The Great Depression is the greatest case of self-inflicted economic catastrophe in the twentieth century. As Keynes wrote at its very start, in 1930, the world was:

> as capable as before of affording for every one a high standard of life.... But today we have involved ourselves in a colossal muddle, having blundered in the control of a delicate machine, the working of which we do not understand…

Keynes feared that "the slump" that he saw in 1930 "may pass over into a depression, accompanied by a sagging price level, which might last for years with untold damage to the material wealth and to the social stability of every country alike." He called for resolute, coordinated monetary expansion by the major industrial economies to "restore confidence in the international long-term bond market... restore [raise] prices and profits, so that in due course the wheels of the world's commerce would go round again." Charles Kindleberger has pointed out that such action never emerges from committees, or from international meetings. Before World War I everybody knew that Britain was the "hegemon", and so everyone adjusted their behavior to conform with the rules of the game and the expectations of behavior laid down in London. Similarly, after World War II the "hegemon" for more than a full generation was the United States. And once again, the existence of a dominant power in international finance—a power that had the capability to take effective action to shape the pattern of international finance all by itself if it wished—led to a relatively stable and well-functioning system. But during the interwar period there was no hegemon. So the action was not forthcoming. And Keynes's fears came to pass.