FINANCIAL HISTORY

The magazine of the Museum of American Finance

Ladies of the Ticker

The Poverty of Slavery

The Origins of Taxation in America

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MUSEUM OF AMERICAN FINANCE

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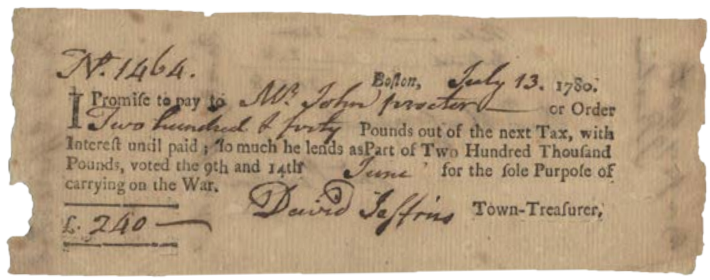
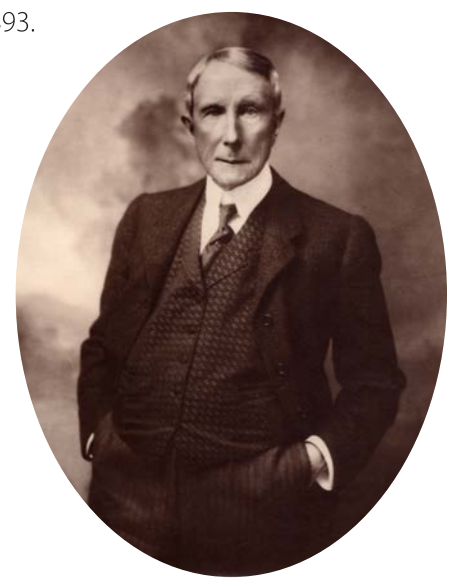
IN THIS ISSUE FEATURES


No. 1464. Boſton, July 13. 1780.
I Promiſe to pay to Mr. John Procter or Order Two hundred & forty Pounds out of the next Tax, with Intereſt until paid; so much he lends as Part of Two Hundred Thouſand Pounds, voted the 9th and 14th June for the ſole Purpoſe of carrying on the War.
David Jeffries Town-Treaſurer.
£. 240



IN THIS ISSUE DEPARTMENTS

ON THE COVER

Portrait of an unidentified woman, a smile on her face, as she reads a stock ticker, early 20th century. See related article, page 20.

Vintage Images/Getty Images

Finding the "Fun" in Financial History

Message to Members

David J. Cowen | President and CEO

Summer greetings from the Museum! It has been peak tourism season here in New York, and we continue to welcome a steady stream of visitors from around the world who come to learn about American finance and financial history through our exhibits, tours and classroom programs. One of my favorite recent thank you notes came from a student named Shia, who said, "Thank you for letting us visit your Museum. It was fun to learn how much debt our society is in!"

Although "fun" is not a word often associated with our national debt, we did recently pay tribute to the creator of that debt, as we honored Alexander Hamilton on July 12 (the anniversary of his death), with a talk by Hamilton scholar Robert Wright on "Hamilton's Blessed Debt." There was a full house to hear Bob speak about Hamilton's conception of excessive debt and how the national debt, as reformed and revitalized by Hamilton, served to cement our young nation and spur economic growth. The program will soon air on C-SPAN's American History TV.

We have several other engaging programs lined up for the coming months, and we'll be launching our Fall Lunch and Learn Series on September 7 with a program featuring Fidelity fund manager Joel Tillinghast on his new book, *Big Money Thinks Small.*

The following week, on September 12, we will launch our Fall Evening Lecture Series with a talk by award-winning Harvard Business School professor Mihir Desai on *The Wisdom of Finance: Discovering Humanity in the World of Risk and Return*. This event will be live streamed on our YouTube channel (www.youtube.com/FinanceMuseum/live) in partnership with Bloomberg for Education, in order to reach a global audience of students and professors, in addition to our live audience. For a complete list of upcoming events, visit our website at www.moaf.org/events.

Also in September, stay tuned to our YouTube channel for the launch of our CEO video series, which will feature monthly videos of finance executives speaking on the topic of "Why Wall Street Matters" from a variety of perspectives.

And, finally, I would like to welcome to our Board of Trustees Ranch Kimball, who brings to our Museum a vast amount of knowledge and experience in both the for-profit and non-profit sectors, including as the Chairman of the Board of Overseers at the Museum of Science, Boston. We are excited to work with Ranch as we continue to develop our vision for the future of our Museum.

Financial historian Robert Wright's talk on "Hamilton's Blessed Debt" was filmed for C-SPAN and will air later this year.

AUG 2 1909 The Indian Head cent that was minted from 1859 to 1909 is replaced by the Lincoln cent, making the Indian Head cent a popular collector's item.

AUG 7 1794 Pennsylvania farmers rebel against the Whiskey Tax, prompting George Washington to call for volunteer federal troops to suppress the "Whiskey Rebellion."

Museum of American Finance Collaborates with Cheddar on CEO Video Series: "Why Wall Street Matters"

On September 6, the Museum will announce a new monthly video series featuring 10 CEOs from across the financial industry discussing "Why Wall Street Matters" from their individual perspectives. The CEO Series is a collaboration between the Museum and Cheddar, a live and on-demand news network covering technology, media and entertainment, which broadcasts daily from the floor of the New York Stock Exchange.

The first CEO video in the series will be released on September 7 via the Museum's website, YouTube channel and social media outlets. Each month, the featured CEO will appear on Cheddar's Opening Bell show as well. The CEOs participating in this series are:

- Jon Stein, CEO of Betterment
- Ellen Alemany, CEO of CIT
- Michael Corbat, CEO of Citi
- Paul Taylor, CEO of Fitch Ratings
- Ralph Hamers, CEO of ING
- David Siegel, CEO of Investopedia
- Adena Friedman, CEO of Nasdaq
- Tom Farley, CEO of the NYSE
- Art Steinmetz, CEO of Oppenheimer-Funds
- Joseph Tarantino, CEO of Protiviti

The video release schedule will be available on the Museum's website in September.

Follow us each month as we explore "Why Wall Street Matters" with some of the most prominent figures in the industry. $

The CEO Video Series will be available at YouTube.com/FinanceMuseum.

UPCOMING EVENTS

Sep 7 Lunch and Learn Series: Joel Tillinghast on *Big Money Thinks Small.* 12:30 – 1:30 p.m. Talk followed by Q&A and book signing. $5 includes Museum admission; members and students free.

Sep 12 Evening Lecture Series: Mihir Desai on *The Wisdom of Finance: Discovering Humanity in the World of Risk and Return.* Talk followed by Q&A, book signing and reception. 5:30 – 7:00 p.m. $15 admission; members and students free.

Sep 19 Lunch and Learn Series: Aron Gottesman and Michael Leibrock on *Understanding Systemic Risk in Global Financial Markets.* 12:30 – 1:30 p.m. Talk followed by Q&A and book signing. $5 includes Museum admission; members and students free.

Oct 12 Lunch and Learn Series: John Wasik on "Lightning Strikes: Nikola Tesla, New York Finance and the History of Everything." Talk followed by Q&A and book signing. 12:30 – 1:30 p.m. $5 includes Museum admission; members and students free.

Oct 20 Lunch and Learn Series: John Herzog on *A Billion to One.* 12:30 – 1:30 p.m. Talk followed by Q&A and book signing. $5 includes Museum admission; members and students free.

All events are held at the Museum (48 Wall Street, NYC) unless otherwise noted.
For more information or to register online, visit www.moaf.org/events.

AUG 8 1932 In the depths of the Great Depression, the Dow Jones Industrial Average closes at 41.22 — its lowest point since June 1897. It has lost 89.2% of its value since its peak on September 3, 1929.

AUG 14 1784 The earliest known advertisement by an American broker appears in the *Massachusetts Centinel.* The broker, Joshua Eaton of Boston, announces "Public Securities of every denomination negotiated."

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- Wells Fargo
- Kendrick R. Wilson, III
- Anthony Yoseloff

► For more information about supporting the Museum, please contact Mindy Ross at mross@moaf.org.

AUG 16 1841

President John Tyler vetoes the third Bank of the United States, leading to a riot at the White House. This violent incident led to the formation of the District of Columbia police force.

AUG 24 1814

The Main Treasury Building in Washington is burned down by the British.

New Acquisition: Argentinian Inflationary Currency

By Sarah Poole, Collections Manager

This summer the Museum received a donation of two Argentinian 500 australes bank notes. Issued from 1985–1991, the austral was a new currency issued as part of a plan to stabalize Argentina's economy. According to the donor, Andrew Oh, who collected the notes while living in Argentina, the color discrepancy between the two notes (shown here) was caused by the printers literally running out of ink as the government rapidly printed money during a period of high inflation. While the Museum has not yet been able to definitively confirm this to be the true cause of the color misprinting, the austral nevertheless is an interesting story from Argentina's decades-long battle with inflation.

Raúl Alfonsín was elected president of Argentina in October 1983 and inherited a nation with a number of economic issues. At the end of 1982, Argentina owed $43.5 billion in foreign debt and had narrowly avoided sovereign default with emergency loans from the International Monetary Fund (IMF). That same year, Argentina's GDP fell 5.6%, manufacturing profits dropped 55%, unemployment climbed above 10% and inflation reached an estimated 310%. By the time of the election at the end of 1983, the foreign debt had grown to $45 billion and the already high inflation rates doubled.

Alfonsín tasked Economics Minister Bernardo Grinspun with implementing a recovery plan. Rather than taking the traditional approach of spending cuts and devaluations, Grinspun announced that Argentina would sponsor wage increases and increased employment. The government would also maintain funding for social programs and support for provincial governments. These efforts failed to produce results, and Grinspun refused to compromise with Argentina's creditors' attempts to persuade him to adopt more customary methods for the nation's economic rehabilitation. In May 1985, the IMF suspended all new loans to the country and demanded a schedule for the repayment of existing debts, effectively forcing Grinspun's resignation.

Alfonsín appointed Juan Sourrouille to replace Grinspun, and Argentina adopted his "Austral Plan" in June 1985. The Austral Plan consisted of four parts: a new currency, the austral, would replace the peso; firm wage and price controls would be set by the government; a series of budget cuts and revenue increases would be implemented with the intention of reducing the federal deficit; and new regulations would limit the government's ability to issue currency for the purpose of meeting expenses.

The plan saw initial success in lowering inflation, but it failed to sustain these decreases. After a year of the program, inflation rose to pre-austral levels and grew to hyperinflation by 1989, topping out at 5000%. The fixed pricing of goods and set wages also led to price gouging and labor conflicts, while cuts in spending led to public frustration as benefits and support programs declined. The government also started printing money again, despite the limitations set by the Austral Plan, as export prices dropped and Argentina's international debt grew.

Alfonsín did not run for re-election in 1989 and his party's candidate, Eduardo Angeloz, was defeated by Carlos Menem. Rioting over hyperinflation and food shortages led Alfonsín to resign the presidency and turn the government over to Menem in July 1989, five months early. Under Menem, Argentina returned to the peso as its currency in 1991 with a new Convertibility Plan. $

These Argentinian 500 australes bank notes were recently donated to the Museum. The note on the left shows the correct color scheme, while the one on the right is much lighter, possibly due to the printers running out of ink as the government rapidly printed the money during a period of high inflation.

SEP 7 1979

After announcing it would post record-breaking pre-tax losses for the year, Chrysler asks the federal government for $1 billion in loan guarantees to avoid bankruptcy.

SEP 20 1873

The stock market crashes. Western Union falls from 75 to 54½ and the NYSE Board of Governors closes the exchange.

Winning Without Subsidies: Planes, Steamships and Automobiles

By Brian Grinder and Dan Cooper

The object of the statement, concerning which you made inquiry, was to make it clear that we stood on quite different ground from Prof. Langley, and were entirely justified in refusing to make our discoveries public property at this time. We had paid the freight, and had a right to do as we pleased. The use of the word "any," which you underscored, grew out of the fact that we found from articles…and…correspondence that there was a somewhat general impression that our Kitty Hawk experiments had not been carried on at our own expense, &c. We thought it might save embarrassment to correct this promptly.

— Wilbur Wright to Octave Chanute, January 18, 1904

David McCullough, paraphrasing Orville Wright, highlights the brothers' accomplishments at Kitty Hawk: "Their flights that morning were the first ever in which a piloted machine took off under its own power into the air in full flight, sailed forward with no loss of speed, and landed at a point as high as that from which it started." However, from a financial perspective, the next paragraph in his biography of the Wright brothers is much more interesting.

In that paragraph, McCullough notes that the Wright brothers spent less than $1,000 in total to develop their flying machine. In contrast, competitor Samuel Pierpont Langley spent 70 times that amount, much of it financed by the government, in his failed attempt to be the first to fly a manned heavier-than-air craft.

The brothers used profits from their bicycle business to fund their experiments in flight. The Wright brothers' authorized biographer, Fred Kelly, commented on the surprising smallness of their expenses, noting that most of the costs involved mechanical labor, which the Wrights did themselves. Kelly goes on to address the legends of where the brothers procured that $1,000. Many of Dayton, Ohio's wealthy businessmen claimed to have funded them. The money, some claimed, came from the sale of an Iowa farm owned by the family or from a mortgage on the family home. Katherine Wright, Wilbur and Orville's sister, was amused by claims that she provided the funds from her schoolteacher's salary. She found that to be about as laughable as the rumor that her brothers relied on her mathematical skills to build their airplane.

According to Kelly, "Their bicycle business had been giving them a decent income, and at the end of the year 1903 they still had a few thousand dollars in a local building and loan association."

Langley was a professor of astronomy and physics at the Western University of Pennsylvania and the director of the Allegheny Observatory when he became interested in aviation. His work in Pennsylvania enabled him to show that Isaac Newton was wrong when he theorized that motorized flight was impossible. His reputation as one of the foremost scientists of his time led to a position as Assistant Secretary of the Smithsonian Institution in 1887. He became Secretary of the Smithsonian a few months later upon the death of then-Secretary Spencer Baird. In 1896, with friend Alexander Graham Bell as witness and photographer, Langley conducted the first unmanned mechanical flight with two flying machines he dubbed "aerodromes."

Some among early aviation enthusiasts believed that manned flight was achievable only with government funding. Of course, aviation's potential usefulness in times of war attracted the interests of governments around the world. Thus, anyone with a credible and convincing plan to build a heavier-than-air flying machine would find government funding readily available.

Langley believed it would cost at least $50,000 to build an aerodrome that could carry a man, but he was reaching the end of his career and doubted he would be involved in making manned flight a practical and commercial reality. However, increased tensions between the United States and Spain that eventually culminated in the Spanish-American War renewed the US military's interest in the possibilities of manned flight.

Langley was not politically astute, but his associates in the scientific community who had important political connections quickly brought his experiments in flight to the attention of President William McKinley. Langley soon found himself meeting with representatives from the Army and the Navy. This led to an agreement with the War Department's Board of Ordinance and Fortification (BOF) to finance Langley's experiments. The BOF agreed to advance Langley $25,000 with the promise of an additional $25,000 when Langley could demonstrate substantial progress to the board.

By late 1900, Langley had assembled a staff that included chief engineer Charles Manly, seven machinists and three carpenters. The monthly payroll ballooned to $800 not including Manly's salary, the cost of building the engine or the cost of building the houseboat that would serve as a launch pad for the aerodrome. Langley burned through the initial $25,000 allotment in no time and nearly ran out


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American Stock/Getty Images

Brothers Wilbur (left) and Orville (right) Wright spent less than $1,000 in total to develop their flying machine.

of money before the BOF sent the next $25,000 installment. When that money ran out, he tapped into funds given to the Smithsonian by Bell and Dr. Jerome H. Kidder to continue the work.

Finally, in October of 1903, the manned aerodrome was ready for its first test. Launched from the top of a houseboat on the Potomac River, the craft piloted by Manly immediately plummeted into the water. Langley blamed the failure on a flaw in the launching system. After making repairs to the aerodrome, Manly took a second bath in the Potomac on December 8 — a few days before the Wright brothers' first successful manned flight at Kitty Hawk. The Wright brothers' success was witnessed by very few. In contrast, an increasingly skeptical press eagerly covered Langley's failures and heaped scorn on the crazy professor with wild ideas about flight.

Langley returned to the BOF to ask for additional funding, but he was denied. His experiments in manned flight were finished. Two self-taught entrepreneurs spending their own hard-earned money had bested the brightest scientific minds government funding could buy.

A similar thing had happened before, in the mid-19th century, when competition began to heat up in the trans-Atlantic trade wars between several American steamship companies. A 10-year annual subsidy of $385,000 granted to the Collins Line in 1847 for delivering mail between New York and Liverpool appeared to give the firm an advantage. Many felt the subsidy was patriotic, since it allowed Collins to compete on a more even playing field with the British-subsidized Cunard Line.

Collins built luxurious steamships that far exceeded the minimum standards set by the federal government. The four ships Collins built to fulfill its agreement with the Post Office each cost an average of $730,000. Moreover, these ships burned twice as much coal as other ships and, according to historian Michael W. Summers, "…cost more in repairs after six years than the original outlay for construction." The increased repair costs came about partially because Collins ran the ships at full bore in the interests of speed.

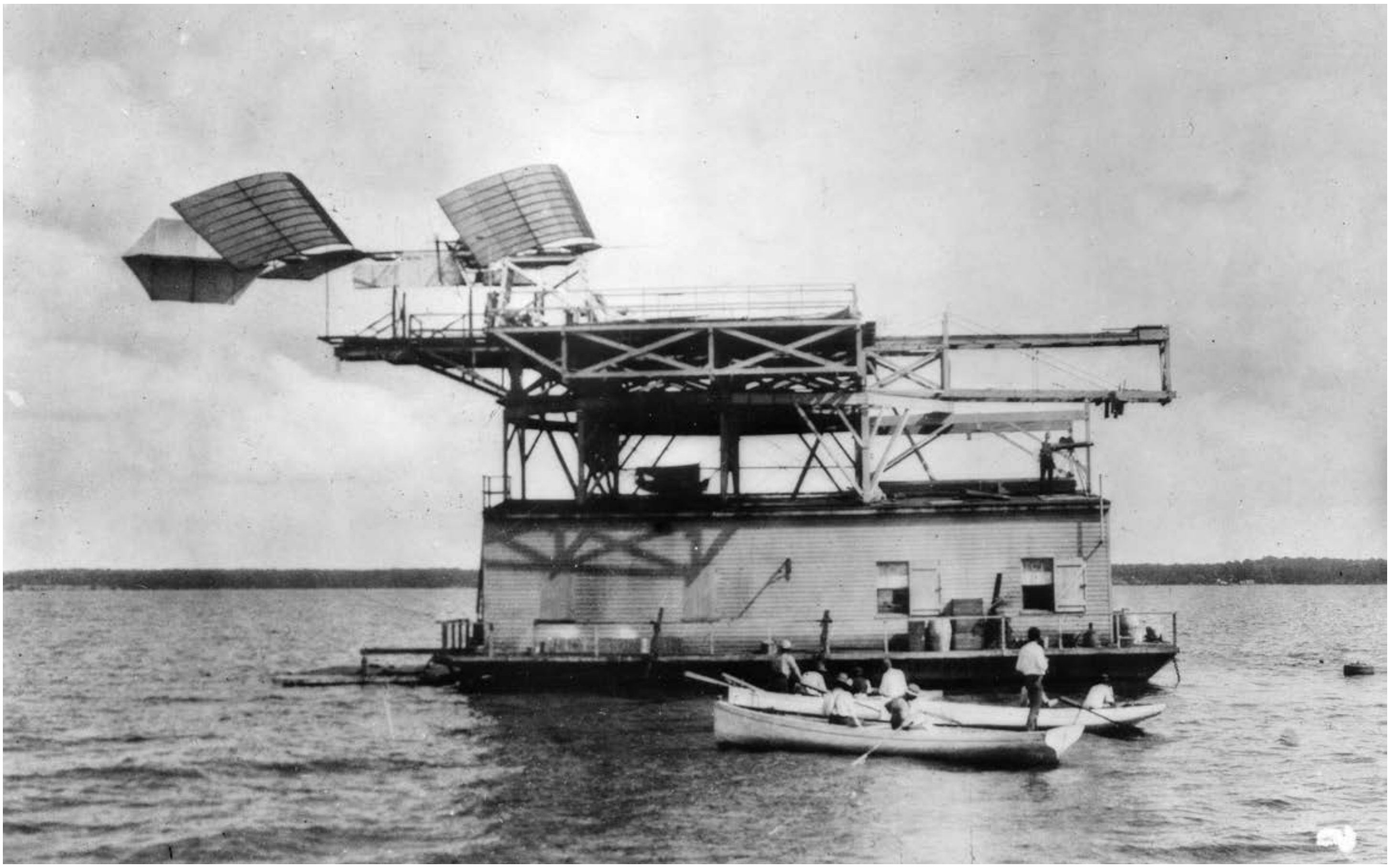
Unfortunately, the Collins Line was unable to make a profit given its high expenses. In 1852, company head Edward K. Collins decided to lobby Congress for more money instead of cutting costs. In spite of a veto by President Franklin Pierce, Collins was successful in increasing the subsidy to $858,000 annually, but there was a catch. Opponents of the subsidy increase included an option in the appropriations bill that gave Congress the right to cancel the subsidy with six months' notice.

Cornelius Vanderbilt was one of Collins's fiercest competitors. His very public fight against the Collins subsidy increase led to accusations that Vanderbilt bribed the President to veto the increase. Undaunted, the unsubsidized Vanderbilt Line competed aggressively against the subsidized Collins Line by cutting costs and slashing rates.

A series of disasters struck the Collins Line beginning in 1854, when its steamship the *Arctic* struck a smaller vessel and sank. Many of the passengers on board the *Arctic* perished, including Edward Collins's wife, Mary, and two of their children. Then, in January of 1856, the Collins steamship the *Pacific* left Liverpool bound for New York. The ship disappeared without a trace, never arriving at its destination. The final blow came in August of 1856, when Congress notified the firm that its subsidy would be withdrawn six months hence. In early 1858, the Collins Line ceased operations.

Vanderbilt received a contract to deliver transatlantic mail after the termination of the Collins agreement. Victory was his, but by now he was already directing his attention toward more lucrative opportunities in the railroad business.

Today, electric vehicles (EVs) are all the rage. The rollout of the Tesla Model 3 has raised hopes that inexpensive, high quality EVs will soon be available to the masses. However, a recent study from Edmunds.com indicates that once government subsidies are exhausted, the market for EVs will probably fall dramatically. EV sales in Hong Kong slumped earlier this year, when a dramatic reduction in the tax break for EVs went into effect. This also happened in Georgia with the repeal of a



Hulton Archive / Stringer

Samuel Pierpont Langley's "aerodrome," ready to be catapulted from a houseboat on the Potomac River, 1903.
Langley spent 70 times as much as the Wright Brothers in his failed attempt to be the first to fly a manned heavier-than-air craft.

state tax credit for EVs.

According to *The Wall Street Journal*, the federal government currently provides a tax credit of up to $7,500 each for the first 200,000 electric vehicles sold by a manufacturer. Tesla will likely hit the 200,000 mark in early 2018. When this happens, it will take about a year to phase out the tax credit. As the tax credit phases out, a subsequent reduction in Tesla sales is likely to follow.

Perhaps government-subsidized Tesla will be able to overcome all of the obstacles in its path and dominate the automotive industry with its EVs. Wouldn't it be great, though, if somewhere a couple of obsessed, bicycle-shop-owning siblings, in their spare time and at their own expense, were at this moment perfecting an inexpensive EV with a single charge capacity of 1,000 miles or more? Maybe it will even be capable of flight! $

Brian Grinder is a professor at Eastern Washington University and a member of Financial History*'s editorial board. Dr. Dan Cooper is the president of Active Learning Technologies.*

Sources

Butler, John A. *Atlantic Kingdom: America's Contest with Cunard in the Age of Sail and Steam*. Washington, DC: Brassey's, Inc. 2001.

Cummings, Steve. "GM vs. Tesla: Who Will Reach 200,000 US Electric Car Sales First?" *Clean Technia*. September 23, 2016.

Elimination of Federal Tax Credits Likely to Kill US EV Market. *Edmunds.com*. 2017.

Goldstone, Lawrence. *Birdmen: The Wright Brothers, Glenn Curtiss, and the Battle to Control the Skies*. New York: Ballantine Books. 2014

Ip, Greg. "Electric Cars Are the Future? Not So Fast." *The Wall Street Journal*. July 13, 2017.

Kelly, Fred C. *The Wright Brothers: A Biography*. New York: Dover Publications. 1989.

Langley, S P. "The Flying-Machine." *McClure's Magazine*. IX, 647–660. 1897.

McCullough, David G. *The Wright Brothers*. New York: Simon & Schuster. 2015.

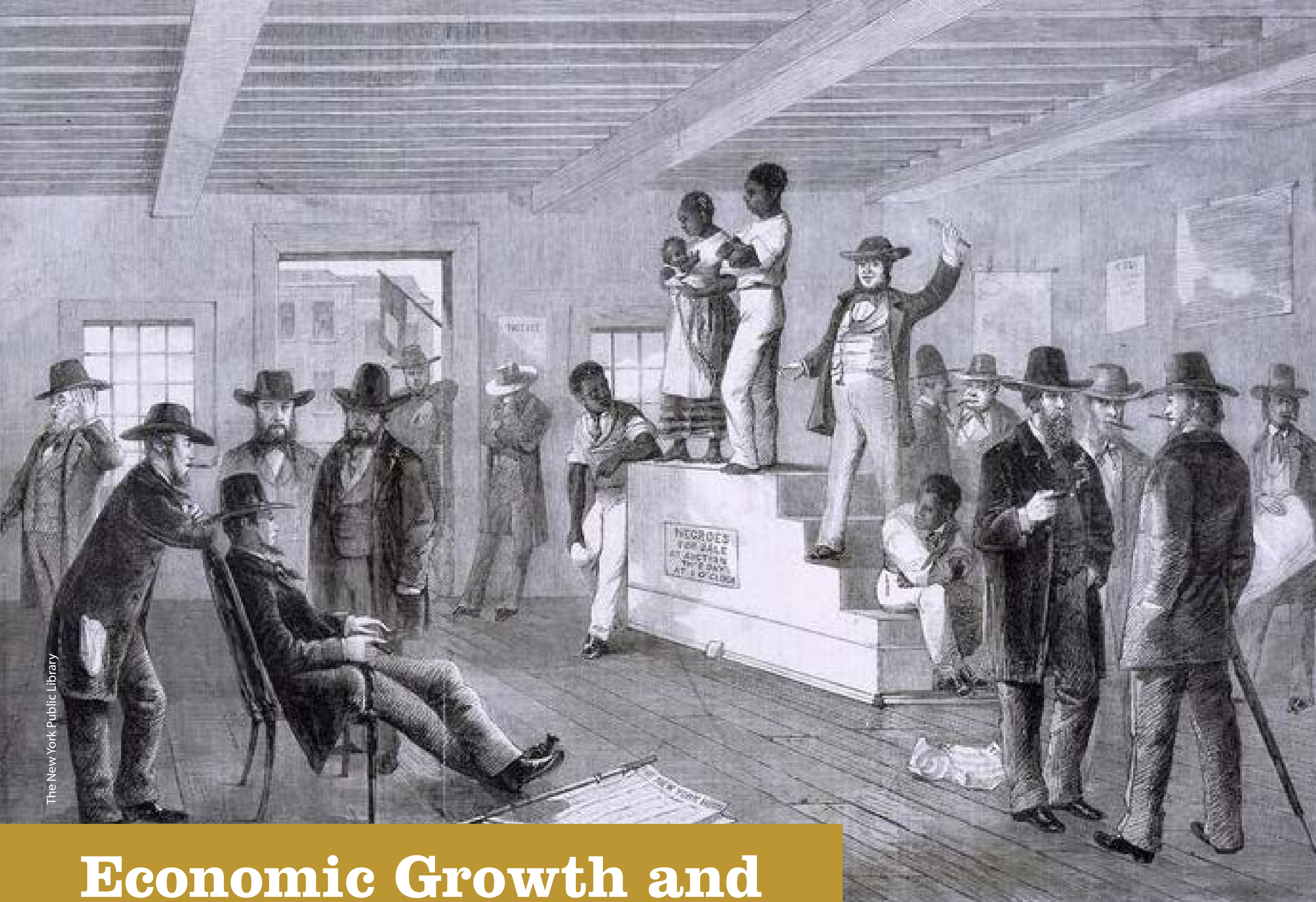
McFarland, Marvin W., ed. *The Papers of Wilbur and Orville Wright*. New York: McGraw-Hill. 1953.

Stiles, TJ. *The First Tycoon: The Epic Life of Cornelius Vanderbilt*. New York: Alfred A. Knopf. 2009.

Summers, Mark W. *The Plundering Generation: Corruption and the Crisis of the Union, 1849–1861*. New York: Oxford University Press. 1987.

Tobin, James. *To Conquer the Air: The Wright Brothers and the Great Race for Flight*. New York: Free Press. 2003.

Whitney, Ralph. "The Unlucky Collins Line." *American Heritage*. 8, 48–53, 100–102. 1957.



The New York Public Library

Illustration of a slave auction in Virginia, 1861.

Economic Growth and Slavery, Then and Now

By Robert E. Wright

As the third decade of the Third Millennium AD approaches, about 40 million people worldwide are enslaved. Slavery is not meant metaphorically here; it does not refer to people voluntarily working long hours for low wages. It refers to individuals who are *de facto* owned by other people (or businesses), human beings who have no say about the work they do. Most receive no remuneration other than enough water, food, clothes and sleep to keep them on task. They don't control where they live, what happens to their children (or parents) or even, in many cases, their own names. Many are worse off than chattel slaves (like Toby/Kunta Kinte from *Roots*) because they cost so little, much less — in nominal terms even — than African slaves in the New World in the 19th century. They are, as antislavery scholar Kevin Bales has called them, disposable people.

The good news is that 40 million slaves out of a total global population of 7.5 billion is perhaps the lowest percentage figure in human history, literally. The first writings almost all mention slavery as a well-developed institution, so it must have evolved during pre-history. Slavery's roots, in fact, probably extend all the way back to the domestication of animals because many of the same technologies used to tame wild beasts were used to physically control humans as well. Of course, in many instances human beings can be controlled psychologically far more easily and cheaply than they can be controlled physically. A horse, cow or dog cannot be made to understand that if they run away their offspring, siblings, friends or parents will be killed, but a human will immediately get the picture, either through language or example.

The bad news is that 40 million people is a lot of people, probably the most people, in absolute terms, ever enslaved at one time throughout world history. (It was only in 1927, after all, that the global population reached even two billion.) But the worst news of all is that the world supposedly ended slavery in the 19th and 20th centuries, when the largest slave societies — including Britain, the United States and Brazil — outlawed the institution.

Of course, it was more than a little naive to believe that mere laws abolishing such a hoary and ubiquitous institution would actually obliterate it. Why would slavery

The New York Public Library

Prisoners in New Hanover County, North Carolina, preparing road materials, 1927.

be any different from the manufacture and sale of drugs or guns or the making of usurious loans? Outlawing lucrative practices does not stop them; it merely drives them underground.

After emancipation in the United States, slavery manifested itself anew in two ways. One, the so-called "White Slavery" scare of the late 19th and early 20th centuries, was, in retrospect, the foundation for today's "sex trafficking" networks. The other took advantage of the loophole created by the 13th Amendment, which outlawed slavery "except as a punishment for crime whereof the party shall have been duly convicted," and led to the enslavement of millions of African Americans, American Indians, Hispanics and poor whites in various prison work systems throughout the nation.

Enslaved criminals appeared in popular culture — in movies like *Cool Hand Luke*; *O Brother, Where Art Thou?* (chain gangs) and *Shawshank Redemption* (convict-lease system), and in dramatic series like *Orange Is the New Black* (in-prison factory system) and *Boardwalk Empire* (chain gangs) — but convicts never quite registered as modern slaves because of the presumption of guilt and the seeming justice of the 13th Amendment's loophole.

Doug Blackmon, Dennis Childs, Talitha LeFlouria, David Oshinsky and other scholars, however, have shown that many of those caught up in America's prison system complex were convicted wrongly, subjected to trumped-up charges or convicted of "crimes," like loitering, deliberately enacted to ensnare young black males and other "undesirables" who lacked the money or education to resist.

In the world's poorer corners, like Africa, Latin America and South Asia, the abolition of slavery often did not even create substantive changes in the structure of bondage, only changes in nomenclature. Slaves became indentured or bonded laborers and the ultimate owners hid behind layers of contractors, some of them enslaved themselves. As Siddarth Kara, the Director of the Program on Human Trafficking and Modern Slavery at Harvard University's Kennedy School of Government has shown, apathy and bribes keep millions of Indians in open slavery, rolling bidis (filter-less cigarettes), breaking boulders for construction, baking bricks, weaving carpets and so forth. Millions more, mostly children, find themselves working as forced beggars or prostitutes in Mumbai or other South Asian megacities.

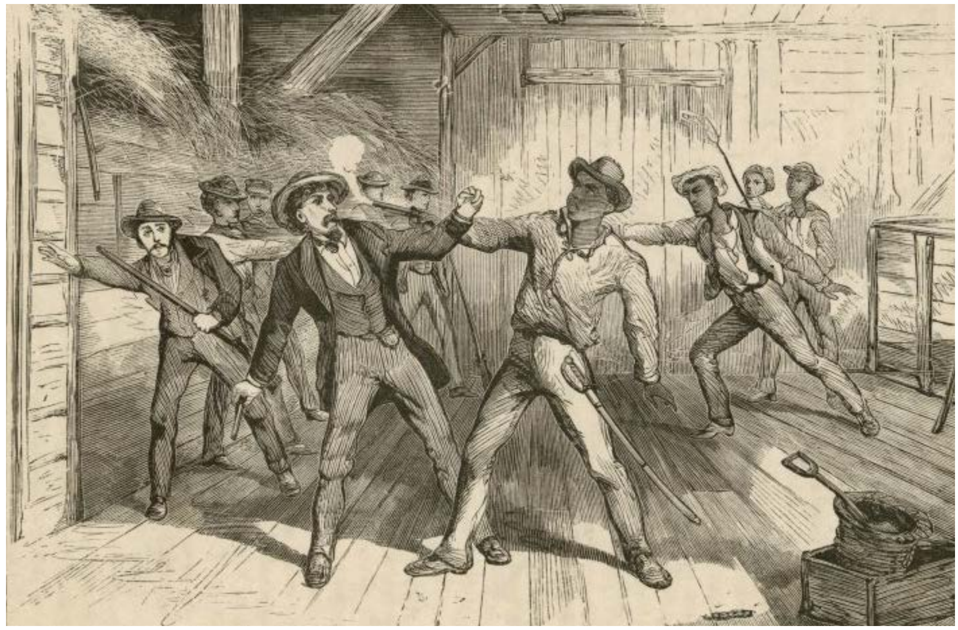
Americans are just beginning to awaken to the realities of modern slavery as sordid stories of sex trafficking, especially underage prostitution, repeat themselves throughout the country. Even in God-fearing places like South Dakota, sex trafficking runs amok every year during the state's huge Sturgis motorcycle rally and its much-vaunted pheasant hunting season. Non-sex slavery also occasionally makes the news, usually when illegal domestic helpers are kept under lock and key for years but sometimes when agricultural workers are discovered to have been enslaved in open sight, as in Florida's tomato fields.

Most Americans are rightly upset to hear stories like those related in gripping detail in *The Slave Next Door: Human Trafficking and Slavery in America Today,* by Kevin Bales and Ron Soodalter. The United States eventually abolished slavery, they learned in school, because it was beyond immoral; it was an abomination unto the Lord and/or natural rights. How dare anyone (except the government) enslave anybody (not duly convicted of a crime)!

Meanwhile, in the Ivory Towers of the Ivy League, some historians have been hard at work re-writing US economic history to make it appear that slaves were the root cause of US economic growth and development. Led by Cornell University's Ed Baptist, those historians are trying to establish a case for reparations for the descendants of 19th-century chattel slaves. In other words, they want the US government (and hence ultimately taxpayers) to give African Americans money to compensate for the enslavement of their ancestors. Reparations have hitherto faltered politically because they seem patently unfair to taxpayers, few of whom are descended from enslavers. (In fact, a higher percentage of African Americans are descended from slave masters than the population at large because many slave masters regularly raped one or more of their female slaves.) If the new scholarship is correct, however, all Americans are materially better off due to slavery because it induced the Industrial Revolution and so forth, so taxpayers should have no problem paying a gratuity to the descendants of slaves.

Economic historians have been quick to criticize the work of Baptist and those who followed the main gist of his 2014 book, *The Half Has Never Been Told: Slavery and the Making of American Capitalism*. The whole genre, they have shown, makes numerous claims that cannot be substantiated empirically, much less econometrically. Only one critique, however, has gone to the root of the matter, my own *The Poverty of Slavery: How Unfree Labor Pollutes the Economy* (2017), which shows that slavery has never, anywhere, been a net benefit to an economy because the institution invariably creates massive negative externalities, or costs borne by non-slaveholders. Slavery, in other words, is akin to a huge smokestack or a large sewage pipe. While the factory owners (enslavers) benefit from the production of pollution (the negative externalities created by enslaving others), the rest of the world suffers from it.

The fact that slavery created huge social costs was so well understood as recently as the 1970s-80s that it rarely came up in the great slave debates of the era touched off by the publication of Robert Fogel and Stan Engerman's *Time on the Cross* (1974). Instead, the debates centered on enslaver profitability and slave efficiency. Many historians were outraged to learn that Fogel, Engerman and other economic historians believed that slavery could be profitable and that in some situations, like on cotton plantations utilizing the gang system, slaves could be more efficient (more output from a given input) than free laborers. The economists eventually won the debate, and historians scampered off to study how slaves resisted their bondage.


The New York Public Library

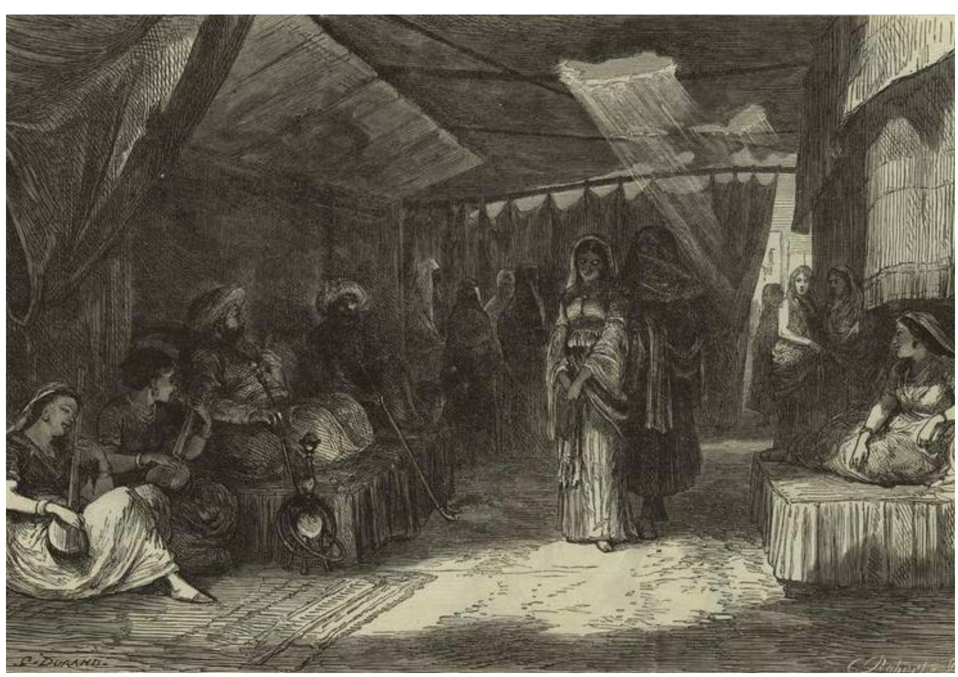
"Desperate Conflict in a Barn," an illustration of escaped slaves fighting for freedom, 1872.

Today, historians of capitalism, like Baptist, minimize the impact of slave resistance in order to maximize exploitation and hence profit and hence, in their minds, investment available to spark the Industrial Revolution. As Richard Sylla and other scholars have shown, however, America's economic growth spurt was not touched off by mid-19th century industrialization, but rather by the financial revolution masterminded by Alexander Hamilton in the 1780s and 1790s.

By the time Hamilton's reforms were made law, the new United States of America had a Constitution that was strong enough to create a government that was energetic enough to protect Americans from foes foreign and domestic, but yet internally checked enough to prevent tyranny. Aided by the Mint Act (which defined the US dollar unit of account in terms of gold and silver), funding and assumption of the Revolutionary War debt (which brought America and its constituent states out of bankruptcy), the Bank of the United States (which solidified the new nation's credit standing) and corporation formation (which allowed entrepreneurs excited by the new system of political economy to pool their resources to start banks, insurers, transportation infrastructure concerns, manufacturers, utility companies and even service companies), the US economy began to grow at modern rates starting in 1790, not the antebellum period.

The other major problem with the new history of capitalism's claim that slavery induced economic growth is that its adherents forgot about (or, more likely, never learned about) slavery's negative externalities. Throughout the 1850s and 1860s, writers like Cassius Clay, Hinton Helper and J.E. Cairnes catalogued the huge costs that slavery imposed on non-slaveholders. Their claims were so compelling that it gave rise to a second reason, after immorality, for abolishing slavery. Many Americans stirred against slavery for the first time not in response to a religious or humanitarian calling, but because they saw, for the first time, that enslavers were stealing from everybody, not just their slaves.

To keep their slaves hard at work, enslavers had to enlist poor Southern whites to patrol at night, Northerners to return runaway slaves, Northern mail users to subsidize the US Postal Service (which ran a profit in the North but a deficit in the infrastructure-poor South) and Northern taxpayers to maintain armed services sufficient to put down slave rebellions and to win new territories for enslavers to master.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"White Slavery in the East — Exposed for Sale," 1875.

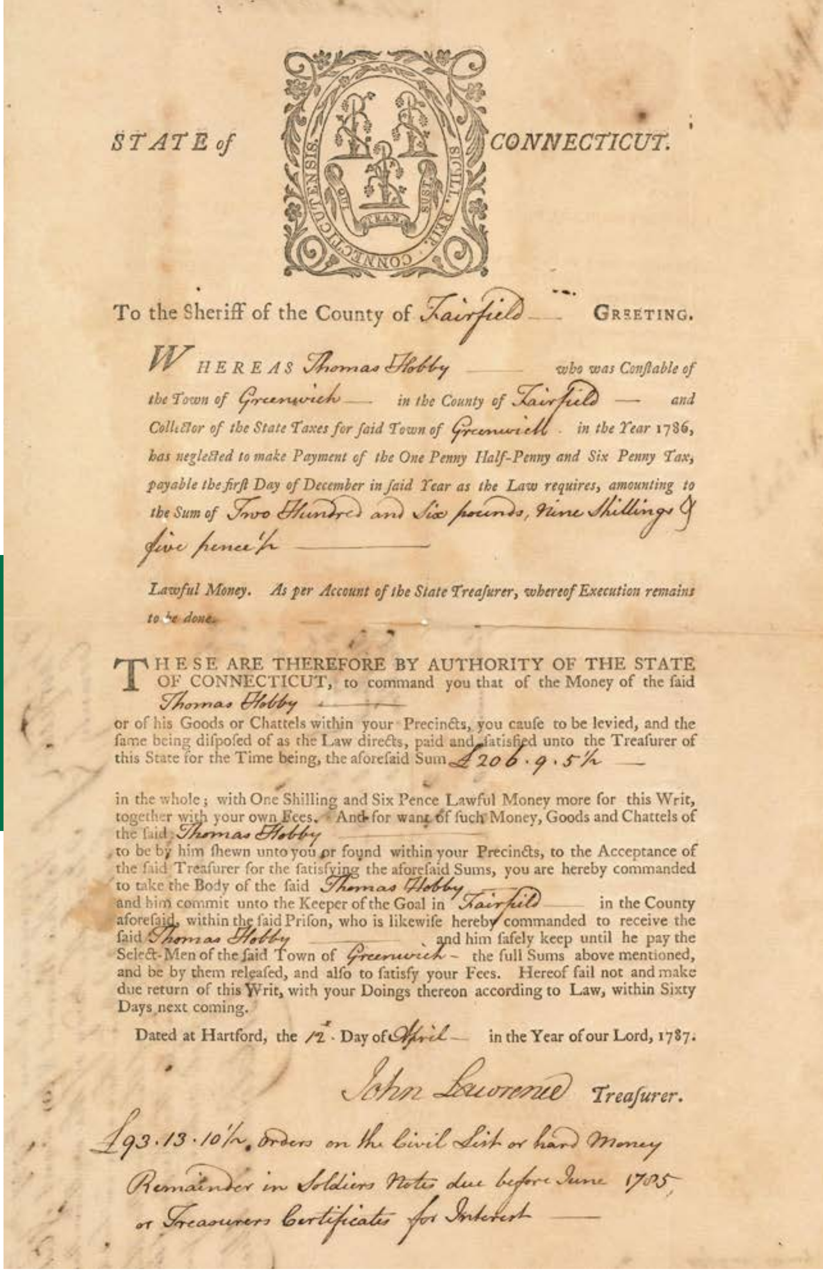
Secession erupted not when the North moved to abolish slavery, but merely when its candidate for President, Abraham Lincoln, hinted that he would eliminate federal subsidies for slavery. Aware that those subsidies were what made slavery profitable, enslavers faced the real possibility of slavery unwinding rather quickly, certainly at a great loss to themselves, or instigating a war that they just might win. They of course chose the latter.

Throughout history, enslavers have received massive public subsidies in order to be able to afford to keep people enslaved. Not even so-called voluntary slaves, those who enslaved themselves in times of famine in order to survive, wanted to be slaves. Slaves almost constantly resisted their bondage in ways large and small. Some, like Aesop (of fable fame), perplexed their masters at every turn. Others played the dutiful servant until an opportune time to escape presented itself. Still others joined Spartacus or other slave rebels. Yet others leveraged knowledge of their masters' affairs (amorous or business) to gain advantages. Slaves were a most troublesome property, as evidenced by the large, complex legal codes that applied to them wherever their legality remained sacrosanct.

Today, slavery is illegal, but it still creates large negative externalities. Its illegality encourages corruption, ranging from payoffs to border guards and police officers to the wholesale purchase of judges and other local administrators. As Kevin Bales shows in his most recent book, *Blood and Earth: Modern Slavery, Ecocide, and the Secret to Saving the World* (2016), today's slaves are at the literal cutting edge of deforestation, on deck for over-fishing and adding fuel to the fires of pollution-spewing brick kilns and other dirty manufacturing ventures. The economic metaphor of slavery as pollution has become reality as illicit activities like drug, arms and sex trafficking reinforce and strengthen each other.

Bales hopes that painting enslavers as polluters will help add some green momentum to the modern antislavery movement. The fact that slavery is a moral abomination and bad for economic growth and development has thus far not proven sufficient motivation for most people to donate to Free the Slaves or other antislavery NGOs. Some governments, though, are waking up to the fact that despite what some historians of capitalism argue, allowing slavery to persist in their nations or other jurisdictions is not about to stimulate growth. For growth, they need to look to the policies of Alexander Hamilton, who was a major critic of slavery. $

Robert E. Wright is the Nef Family Chair of Political Economy at Augustana University, where he has taught courses in business, economics, government and history since 2009. He is the co-author or co-editor of more than 20 books, including most recently The Poverty of Slavery: How Unfree Labor Pollutes the Economy *(Palgrave Macmillan, 2017), from which this article has been adapted. He is on the editorial advisory board of* Financial History *magazine and has served on the board of Historians Against Slavery, an antislavery NGO, since 2012.*



STATE of CONNECTICUT.

To the Sheriff of the County of Fairfield GREETING.

WHEREAS Thomas Hobby who was Constable of the Town of Greenwich in the County of Fairfield and Collector of the State Taxes for said Town of Greenwich in the Year 1786, has neglected to make Payment of the One Penny Half-Penny and Six Penny Tax, payable the first Day of December in said Year as the Law requires, amounting to the Sum of Two Hundred and Six pounds, nine Shillings & five pence ½

Lawful Money. As per Account of the State Treasurer, whereof Execution remains to be done.

THESE ARE THEREFORE BY AUTHORITY OF THE STATE OF CONNECTICUT, to command you that of the Money of the said Thomas Hobby or of his Goods or Chattels within your Precincts, you cause to be levied, and the same being disposed of as the Law directs, paid and satisfied unto the Treasurer of this State for the Time being, the aforesaid Sum £206.9.5½ in the whole; with One Shilling and Six Pence Lawful Money more for this Writ, together with your own Fees. And for want of such Money, Goods and Chattels of the said Thomas Hobby to be by him shewn unto you or found within your Precincts, to the Acceptance of the said Treasurer for the satisfying the aforesaid Sums, you are hereby commanded to take the Body of the said Thomas Hobby and him commit unto the Keeper of the Goal in Fairfield in the County aforesaid, within the said Prison, who is likewise hereby commanded to receive the said Thomas Hobby and him safely keep until he pay the Select-Men of the said Town of Greenwich the full Sums above mentioned, and be by them released, and also to satisfy your Fees. Hereof fail not and make due return of this Writ, with your Doings thereon according to Law, within Sixty Days next coming.

Dated at Hartford, the 12 Day of April in the Year of our Lord, 1787.

John Lawrence Treasurer.

£93.13.10½ Orders on the Civil List or hard Money
Remainder in Soldiers Notes due before June 1785
or Treasurers Certificates for Interest

Collection of the Museum of American Finance

Part printed tax circular ordering the collection of taxes by the Sheriff of Fairfield County, Connecticut, dated April 12, 1787 and signed by John Lawrence.

Taxing to Build a Commonwealth

Public Finance in America, 1607–1861

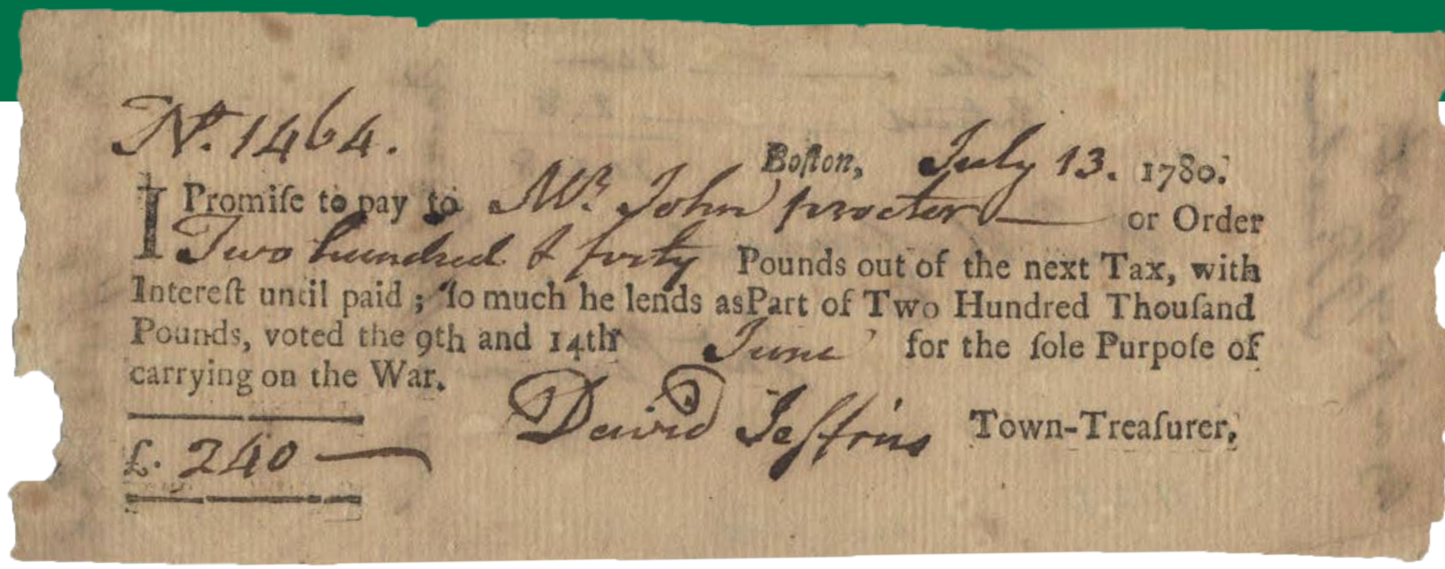
By W. Elliot Brownlee

Histories of taxation in early America often give center stage to the era of the American Revolution. The usual story is one of social crisis and resolution: oppressive British taxes, fierce American resistance to taxation, a revolution that contained powerful tax revolt ("Tea Party") elements, the writing of a Constitution that limited taxation and the formation of an early republic of modest government and low taxes.

There is something to recommend this approach, but beneath the drama was a more profound social trend, or a long swing, as I call it. The swing encompassed far more history than the American Revolution, involved more elements of public finance than just taxation and produced higher rather than lower taxes. The long swing of taxation and public finance in general was toward creating and sustaining an American "commonwealth," to use a term employed by historians Oscar and Mary Handlin. By this, they meant a society that was republican, capitalist and expansionist. The swing began very early during the colonial period, continued for more than a century and accelerated during the formation of the new republic and the building of a powerful nation by the time of the Civil War.

The "commonwealth" swing originated in the process of transplanting and adapting the fiscal system of England (and Britain) to America and adapting it to American conditions. The fiscal system had emerged following the crisis of the English Civil Wars in 1642 and constituted the world's first modern fiscal state. In this new fiscal state, the crown and Parliament relied on taxing domestic consumption and international trade, collected taxes indirectly (through third parties) and leveraged their new tax revenues in undertaking long-term lending.

The taxes on colonial trade raised revenue that funded most of the routine costs of governmental administration in the American colonies and helped finance the loans that the British floated to fight its colonial wars. The taxes also served as a means for regulating economic activity according to mercantilist principles. The current consensus of historians is that this regulatory taxation proved only moderately burdensome to the colonial economy. Moreover, powerful commercial and agricultural elites in the colonies understood that the benefits of membership in the


No. 1464.

Boſton, July 13. 1780.

I Promiſe to pay to Mr. John Proctor ——— or Order Two hundred & forty Pounds out of the next Tax, with Intereſt until paid; ſo much he lends as Part of Two Hundred Thouſand Pounds, voted the 9th and 14th June for the ſole Purpoſe of carrying on the War.

£. 240 —

David Jeffries Town-Treaſurer.

Collection of the Museum of American Finance

Boston Town Treasury Certificate issued to Oliver Brewster on July 13, 1780 for £390 with interest due in 1786, payable "out of the next tax…for the sole Purpose of carrying on the War."

empire, especially naval power exerted on behalf of trade expansion, outweighed the costs of the mercantile system that penalized trade with other empires and nations.

In numerous colonial wars, including three with the French between 1739 and 1763, the government of Britain demonstrated that it had the economic and financial strength to conduct transatlantic warfare on an unprecedented scale on both land and sea. For the aggressive and acquisitive settler class in North America, the wars presented enormous opportunities to expand their command of landed resources. In 1763, the Treaty of Paris, following the eight-year French and Indian War, gave the British possession of virtually all of French Canada and most of the territory the French had claimed in the valleys of the Ohio River and the Mississippi River.

The Treaty, however, did not secure the newly-acquired lands. Powerful Native American groups still controlled most of the North American interior. Massive new public resources — tax revenues and the additional financial resources they could leverage — were required to exploit the new conquests.

In 1763, to acquire those resources, to reduce the burden of the debts that accumulated from the French and Indian Wars and to moderate increases in excise and land taxes within Britain, Britain launched a major expansion of its tax effort in the colonies. The result was a new tax regime for the colonies — one that was more ambitious, centralized and tightly administrated. New tax measures included the Stamp Act of 1765, which placed a levy on legal and commercial papers, newspapers and pamphlet literature, as well as playing cards and dice; the Townshend Acts of 1767, which taxed consumption of paper, glass, lead, paints and tea imported from Britain; and, in 1773, the Tea Act, which provided favorable tax treatment in America for the British East India Company.

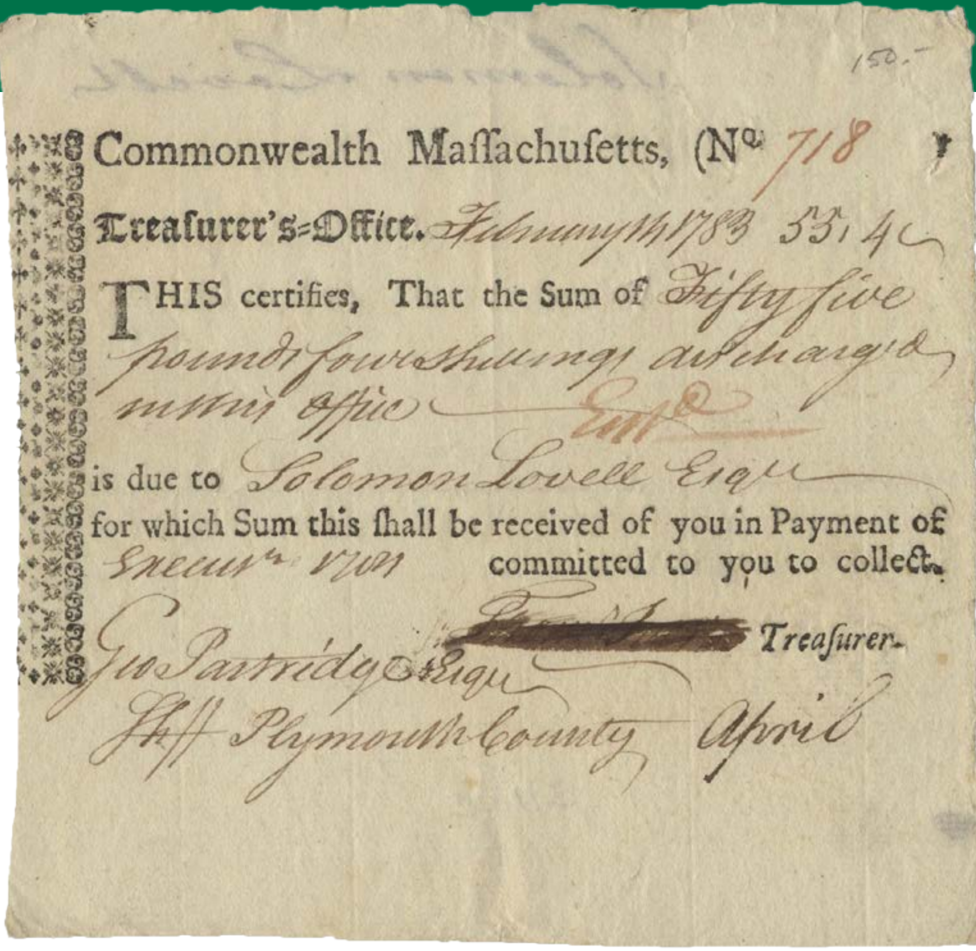
The new regime prompted a crisis of tax consent in the colonies. To many Americans, the new taxes threatened their regime of internal taxation that they had developed informally and incrementally over the decades. When the British government had previously expanded its spending on behalf of its American colonies, it had left them relatively free to develop their own internal systems of self-governance and fiscal autonomy. The colonies had used their discretionary fiscal space within the British Empire to expand their taxation of property and internal trade. They used these taxes to administer justice, fund modest programs of road building, schooling and welfare, and help prosecute colonial wars.

In response to the Stamp Act, a congress of nine colonies called for repeal of the act, declaring that it was "essential to the freedom of a people, and the undoubted right of Englishmen, that no tax should be imposed on them, but with their own consent." Riots followed, and colonists responded to the Townshend duties with nonimportation boycotts. By the time of the Boston Tea Party in 1773, the crisis of tax consent was clearly contributing to a crisis of confidence in the legitimacy of British rule, and that much larger crisis yielded the American Revolution.

The successful Revolution ended any obligation of Americans to share in Britain's financing of the French and Indian War. But the new nation had to finance its revolution. As a percentage of national product, it was probably the most expensive war in American history. Moreover, the newly-acquired lands offered promise for vast expansion of the commonwealth, but controlling them posed the same fiscal problems that the British had found daunting. In meeting these two challenges, the Americans had to replace the British fiscal regime from which they had just exited.

Between 1775 and the early 1790s, the 13 former colonies puzzled their way through the process of forming a fiscal state that would live up to the aspirations of the new society. In 1775 and 1781 (under the Articles of Confederation), the Americans replaced the British fiscal regime with weak alternatives. Under these temporary regimes, the central government had to rely most heavily on both inflation and outright confiscation, thus forcing ordinary Americans to make great economic sacrifices on top of the huge personal losses they had endured in wartime violence. In addition, taxation made less of a contribution to war finance during the Revolution than in any other major American war. At the end of the war, the outstanding debt of the Congress and the states was huge — probably larger, relative to national product or income, than at the conclusion of any other war in US history.

In order to manage this large debt, the central government eventually settled on


150.-

Commonwealth Maſſachuſetts, (No 718

Treaſurer's-Office. February 14 1783 55:4

THIS certifies, That the Sum of Fifty five pounds four shillings

is due to Solomon Lovell Esqr

for which Sum this ſhall be received of you in Payment of

committed to you to collect.

Treaſurer.

Geo Partridge Esqr

Shff Plymouth County April

Collection of the Museum of American Finance

Commonwealth of Massachusetts, Plymouth County, Tax Collector's Certificate #718, dated February 1783 and issued to Solomon Lovell.

the model of the British fiscal state. The fiscal transitions between the end of the Revolution and the early 1790s seemed prolonged and painful at the time, but the new nation actually created its modern fiscal state rather quickly. This was primarily because America's financial leaders, especially Secretary of the Treasury Alexander Hamilton and Robert Morris, had acquired intimate familiarity with the British fiscal state. The most dramatic and influential steps came with the enactment of Hamilton's financial program during the first administration of President George Washington.

Hamilton and the other architects of the fiscal state made taxation its lynchpin. As in Britain, taxes would fund important national projects directly and also pay the interest required to support national debt. Also as in Britain, national taxation would draw most heavily on customs duties. Hamilton intended that the central government would keep the duties at relatively low levels by spreading the costs of the federal government, primarily the management of the federal debt, over a broad base of taxation.

The new American fiscal state was a worthy successor to the British fiscal state. Moderate tariffs, helped by generally strong economic growth and dynamic exports, paid off the national debt, including the money borrowed by President Thomas Jefferson to fund the Louisiana Purchase. In addition, the tariff revenues, supplemented at times by excises and special property taxes, funded the military expenses of the republic.

As Noah Webster declared in 1790, Americans now had "an empire to raise and support." The new nation went to war with numerous Native American nations over several generations, France in an undeclared naval war in the 1790s, the Barbary States during the next two decades, the British in the War of 1812 and Mexico in the 1840s. Until the 21st century, the Mexican War (1846–48) was the only major war funded without any wartime tax increases. In addition, tariffs funded subsidies for roads, canals, lighthouses, river and harbor improvements, assistance for internal improvements by the Army engineers, the Postal Service, construction of public buildings and grants-in-aid to the states.

From the beginning of the new nation, however, two important differences distinguished the American fiscal system from its British counterpart. The effects of those differences remain significant even today.

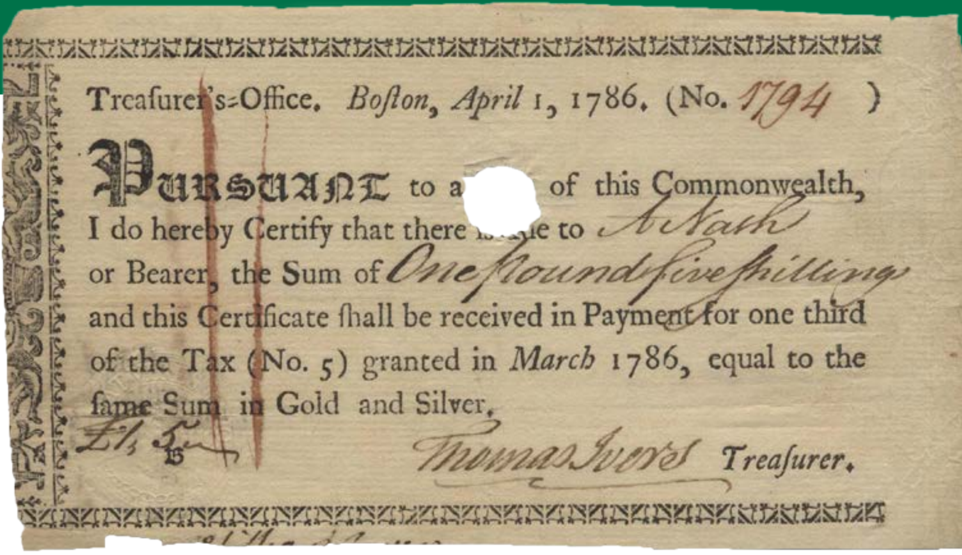
The first major difference with the British system was that the fiscal capacity of the new nation included the ability not only to tax and borrow, but also to exploit the ownership of vast expanses of land. The federal government held enormous tangible assets in trust for its owners, the American people.

Consequently, the new government was an "asset state," as well as a fiscal state that taxed and borrowed. The ownership of massive assets gave the federal government a great deal of political flexibility in developing social programs because the assets often relieved the central government of the onus of seeking tax increases.

Between the Revolution and the Civil War, the landed assets of the nation expanded to include the lands ceded by the original 13 states to the federal government and lands acquired in the Louisiana Purchase and the war with Mexico. By 1850, the United States held about 1.2 billion acres in trust for its citizens.

The federal government used the lands in three ways. Most important, the government offered public lands for sale at low and increasingly favorable terms to those who would settle, develop and pay state and local property taxes. The government also used land to finance education at the state and local levels. It began doing so in 1785 for the benefit of public local schools and added support for colleges in 1802. Expanded by the Morrill Acts during and after the Civil War, educational grants to the states totaled nearly 150 million acres of public land by World War I.

The federal government also used land to subsidize infrastructure projects, primarily components of the nation's transportation system, reducing the potential burden on the state and local tax system. Over the decade of the 1850s, Congress granted about 22.5 million acres of federal


Treasurer's-Office. Boston, April 1, 1786. (No. 1794)

Pursuant to a of this Commonwealth, I do hereby Certify that there is due to A. Nash or Bearer, the Sum of One Pound five Shillings and this Certificate shall be received in Payment for one third of the Tax (No. 5) granted in March 1786, equal to the same Sum in Gold and Silver.

£1, 5

Thomas Ivers Treasurer.

Collection of the Museum of American Finance

Massachusetts Treasury Certificate #1794, which "shall be received in Payment for one-third of the Tax (No. 5) granted in March 1786."

land to 10 states for the benefit of about 45 railroads.

The second difference was a more limited reliance in the United States on internal taxation by the national government, and much heavier use of internal taxes by state and local governments. In other words, the intergovernmental compact over taxation in the United States was substantially different than that in Britain.

The key element of the compact in the United States was a strong commitment to the fiscal prerogatives of state and local government. The British efforts to impose internal taxation had only strengthened the traditional commitment of the colonies to state autonomy. Funding state militias during the Revolution and paying off war debts of the states during the 1780s had produced further expansion of state taxes. Within the New England and Middle Atlantic states, reformers embraced "ability to pay" and succeeded in moving away from deeply unpopular poll taxes and shifting to taxes on wealth as measured by the value of property holdings.

Successes in reforming and expanding the capacity of the states to tax increased their reluctance to relinquish taxing powers to a central government. In part to protect the states' tax base, the Constitution constrained the ability of the central government to tax internally. Article 1, Section 9 required that "direct" taxes (taxes levied directly on individuals), which included property taxation, be allocated to the states according to the distribution of population rather than wealth.

Motivations to maintain or expand state fiscal autonomy, however, varied greatly by region. The differences between the northern and southern states were powerful and tragic.

In the North, state governments assumed a wide range of economic and social responsibilities, financing canals and railroads, building state hospitals and prisons, and establishing colleges. To fund these programs, northern states increased property taxes that piggy-backed on local property taxes and expanded the scope of property taxation in order to tax all forms of wealth rather than just land and buildings.

In addition, states imposed special taxes on corporations. Between 1830 and 1860, Massachusetts, for example, raised between one-half and three-fourths of its general revenue from a tax of 1% on the capital stock of banks. In 1854, Wisconsin adopted a tax on gross corporate receipts, and this state tax became a model for federal corporate taxation during the Civil War. Meanwhile, local governments spent heavily on schools and roads and, during the 1840s and 1850s, industrializing cities like New York, Philadelphia and Boston expanded property taxation to pay for water and sewer systems, paved streets, hospitals and police and fire departments. Beginning in the 1840s, local governments collectively spent and taxed on a scale that almost equaled that of the federal government. Between the Revolution and the Civil War, state and local governments together spent more than the federal government.

In the southern states, the attachment to state fiscal autonomy was also strong. But state and local governments in the region were far less interested in major expenditure programs for education or improved transportation. Consequently, these states could rely heavily on random fees, licenses, poll taxes and poorly-assessed property taxes. Southern states taxed slave owners lightly, often through poll taxes that the slave owners preferred to taxes on the market value of their slaves.

At the federal level, slave owners blocked the federal government from applying property taxes to slaves. If it had not been for the determination of southern slaveholders to shield slavery from federal taxation, the framers of the Constitution probably would have softened the restriction of federal property taxation established by Article 1, Section 9. By including this provision in the Constitution, the founders were interested not only in protecting state and local tax revenues, but also in accommodating the political power of slave owners and, thereby, holding the new union together.

The result was a tragic compromise of republican ideals and a serious, long-term limitation on the development of the fiscal capacities of the federal government. Without this protection, the federal government might well have begun a gradual assault on slavery, just as the slave owners feared, and also attempted to expand national-level spending programs for infrastructure, education and even welfare. The federal government might have funded those programs in part on the models created by innovative state governments, perhaps by piggybacking a federal property tax on the property taxes assessed by state and local governments. Without the Constitutional constraint on property taxation by the national government, the commonwealth ideal — a combination of capitalism with government promotion of both economic development and social cohesion — might have found fuller expression at the federal level.

By the 1860s, the modern financial state rested on three legs: buoyant federal revenues kept strong by vigorous foreign trade; a rich domain of federal lands; and a vibrant partnership among all levels of government. However, the prospect of the expansion of slavery and the division of the Union over slavery threatened all three legs. To defeat the forces of slavery, the leaders of the Union expanded the fiscal capacity of the state they had inherited from the early republic. In the process, they strengthened each of the three legs and established the means to finance ambitious American governments well into the 20th century. $

W. Elliot Brownlee is Emeritus *Professor of History at the University of California, Santa Barbara. His most recent book is* Federal Taxation in America: A History, Third Edition. *Cambridge, UK: Cambridge University Press, 2016.*

Sources

Becker, Robert A. *Revolution, Reform, and the Politics of American Taxation, 1763–1783*. Baton Rouge: Louisiana State University Press. 1980.

Brewer, John. *The Sinews of Power: War, Money and the English State, 1688–1783*. New York: Alfred A. Knopf. 1989.

Brown, Roger H. *Redeeming the Republic: Federalists, Taxation and the Origins of the Constitution*. Baltimore: Johns Hopkins University Press. 1993.

Brownlee, W. Elliot. *Federal Taxation in America: A History*, Third Edition. Cambridge. United Kingdom: Cambridge University Press. 2016.

Edling, Max. *A Hercules in the Cradle: War, Money, and the American State, 1783–1867*. Chicago: University of Chicago Press. 2014.

Einhorn, Robin. Americ*an Taxation, American Slavery*. Chicago: University of Chicago. 2006.

Ferguson, E. James. *The Power of the Purse: A History of American Public Finance, 1776–1790*. Chapel Hill: University of North Carolina Press. 1961.

Handlin, Oscar and Mary Flug Handlin. *Commonwealth: A Study of the Role of Government in the American Economy: Massachusetts, 1774–1861*, Revised Edition. Cambridge: Harvard University Press. 1969.

Legler, John B., Richard Sylla and John J. Wallis. "US City Finances and the Growth of Government, 1850–1902." *Journal of Economic History*. Vol. 48, pgs. 347–356. 1988.

Rabushka, Alvin. *Taxation in Colonial America*. Princeton: Princeton University Press. 2008.

Sylla, Richard. "Long-Term Trends in State and Local Finance: Sources and Uses of Funds in North Carolina, 1800–1977," in *Long-Term Factors in American Economic Growth*, ed. Stanley L. Engerman and Robert E. Gallman, National Bureau of Economic Research, Studies in Income and Wealth, Vol. 51, pgs. 832–35. Chicago: University of Chicago Press. 1986.

Sylla, Richard. "Shaping the US Financial System, 1690–1913: The Dominant Role of Public Finance," in Richard Sylla, Richard Tilly and Gabriel Tortella, eds., *The State, the Financial System and Economic Modernization*, pgs. 249–270. United Kingdom: Cambridge University Press. 1999.

Wright, Robert E. *One Nation Under Debt: Hamilton, Jefferson and the History of What We Owe*. New York: McGraw Hill. 2008.

Ladies of the Ticker

Pioneering Women Stockbrokers from the 1880s to the 1920s

By George Robb

During the late 19th century, a growing number of women were finding employment in banking and insurance, but not on Wall Street. Probably no area of American finance offered fewer job opportunities to women than stock broking. In her 1863 survey, *The Employments of Women*, Virginia Penny, who was usually eager to promote new fields of employment for women, noted with approval that there were no women stockbrokers in the United States. Penny argued that "women could not very well conduct the business without having to mix promiscuously with men on the street, and stop and talk to them in the most public places; and the delicacy of woman would forbid that."

The radical feminist Victoria Woodhull did not let delicacy stand in her way when she and her sister opened a brokerage house near Wall Street in 1870, but she paid a heavy price for her audacity. The scandals which eventually drove Woodhull out of business and out of the country cast a long shadow over other women's careers as brokers.

Histories of Wall Street rarely mention women brokers at all. They might note Victoria Woodhull's distinction as the nation's first female stockbroker, but they don't discuss the subject again until they reach the 1960s. This neglect is unfortunate, as it has left generations of pioneering Wall Street women hidden from history. These extraordinary women struggled to establish themselves professionally and to overcome chauvinistic prejudice that a career in finance was unfeminine.

When Mrs. M.E. Favor opened the Uptown Stock Exchange on West 24th Street in 1880, established brokers and financial commentators treated her with great suspicion. Favor's newspaper advertisements and circulars, sent to "prominent ladies" inviting them to entrust their money to "a lady of standing who had a long and successful experience in stock speculation," were condemned as lures to trap unsophisticated women. One businessman feared that the ads would entice "many a woman to pledge her diamonds, or to compromise

Portrait of an unidentified woman, a smile on her face, as she reads a stock ticker, early 20th century.

her settlements or her husband's financial standing, with the vague promise of a fortune thus held out to her."

Favor responded that her circular was no different from those routinely distributed by male brokers and that her transactions "were conducted upon strictly business principles." She did not endanger the savings of the poor, as she "took no orders for less than 100 shares," and she provided a valuable service to women investors who were otherwise at a disadvantage, "because their facilities for information were not equal to those of men."

Another woman, Mary Gage, also opened a brokerage business for women in 1880 which was championed by the women's rights movement. Gage, the daughter of prominent suffragist Frances Dana Gage, was previously employed as a clerk for the Equal Rights Association and the US Treasury Office in New York City. Mary Gage established her "ladies' exchange for railroad and mining stocks" at 71 Broadway in Lower Manhattan because she had personally experienced "much inconvenience and annoyance in transacting her own operation" with male brokers.

According to the official *History of Woman Suffrage* (1886), "after Miss Gage was fairly settled, other women who had labored under the same disadvantages began to drop in, their numbers increasing daily." That Gage was clearly following the example and mission of Victoria Woodhull was not mentioned, as the suffrage movement has jettisoned Woodhull as a liability.

Most women who tried their hand at stock brokering received a chilly reception on Wall Street. Such was the case of Sophronia Twitchell, a women's rights activist turned businesswoman. She worked as an agent for the Equitable Life Insurance Company in San Francisco and speculated heavily—and successfully—in mining shares. She moved to New York in 1880, where at the age of 50, she opened a business on lower Broadway as a broker in mining securities.

Although she ran "a genuine stock business" and sometimes made "a great deal of money," she was very unpopular with other brokers. They may have resented her success, and they certainly resented her manner, which for a woman was unusually forthright and outspoken. She was a familiar figure on Wall Street, tall and energetic, hurrying along at an "unladylike" pace, and barging into brokers' offices, where she was not always welcome. Once, when a businessman ordered her out of his office, she struck him with her umbrella and was arrested for assault.

Collection of the Museum of American Finance

Print advertisement for "Duke's 'Preferred Stock' Cigarettes," featuring a woman reading ticker tape.

Twitchell's combination of brokerage with women's rights no doubt reminded some people of Victoria Woodhull. Yet, while Woodhull was depicted as a beautiful siren seducing the likes of Cornelius Vanderbilt out of stock tips, Twitchell was mocked as an outlandish old woman. She was described at different times as a "crazy crank," a "nuisance," a "human curio" and "the Galloping Cow from Frisco."

In 1888, the *New Haven Register* provided an unflattering portrait: "She is a woman almost six feet tall and very masculine in build and manner. Her hair is almost white and she is well along in years, but you see her rushing around at a lively pace on Wall Street in all sorts of weather, looking for tips and watching an opportunity to play the market to her advantage."

Twitchell was clearly an intimidating and bewildering presence, and male brokers did not know how to deal with her. They tried variously to freeze her out and to discredit her as an unwomanly freak.

Another eccentric, but decidedly more glamorous, broker was Marie Antoinette Nathalie Pollard, a Virginia woman who for many years combined an interest in stock speculation with public performance. She had been arrested by the Confederacy for buying federal money during the Civil War and later pieced together a living by lecturing, acting and speculating in the stock market. She dabbled in "wild cat" mining shares in California and later appeared on the stage in Washington, DC in the character of Princess Mui Qui, "the educated Chinese lady." Frequently described as beautiful and accomplished, Pollard clearly had a flair for the dramatic.

In 1890, Pollard moved to New York, where she opened an "attractively fitted up" brokerage office "for the accommodation of ladies who want to deal in stocks." She claimed to have several customers, many of whom preferred to "speculate on the quiet," since their husbands objected to this behavior. Never one to do things by halves, Pollard also announced her intention to apply for a seat on the Consolidated Stock Exchange, which would have made her "the first woman in the world to become a member of a stock exchange." If the application was ever made, it was not successful. Nor was Pollard's brokerage business long-lived, as she was performing her Chinese princess act again in 1892.

Press accounts of eccentric, and marginal, Wall Street characters like Pollard and Twitchell reinforced conventional views of women's financial incapacity and probably discouraged other women from seeking employment as stock brokers. The very idea of a woman broker struck many people as absurd. A 1912 Broadway musical, *The Wall Street Girl*, treated the escapades of a woman broker as a comic diversion. The play was a light-hearted romp in which a "brokeress" saves her father from bankruptcy through a lucky investment and then happily gives up the stock exchange to marry her sweetheart.

Humorous musical reviews and censorious newspaper stories about failed women brokers overshadowed the examples of many anonymous women quietly and honestly toiling away in brokerage houses. Wall Street had long employed numerous women clerks, stenographers and typists, but by the early 20th century it had also begun employing a few women

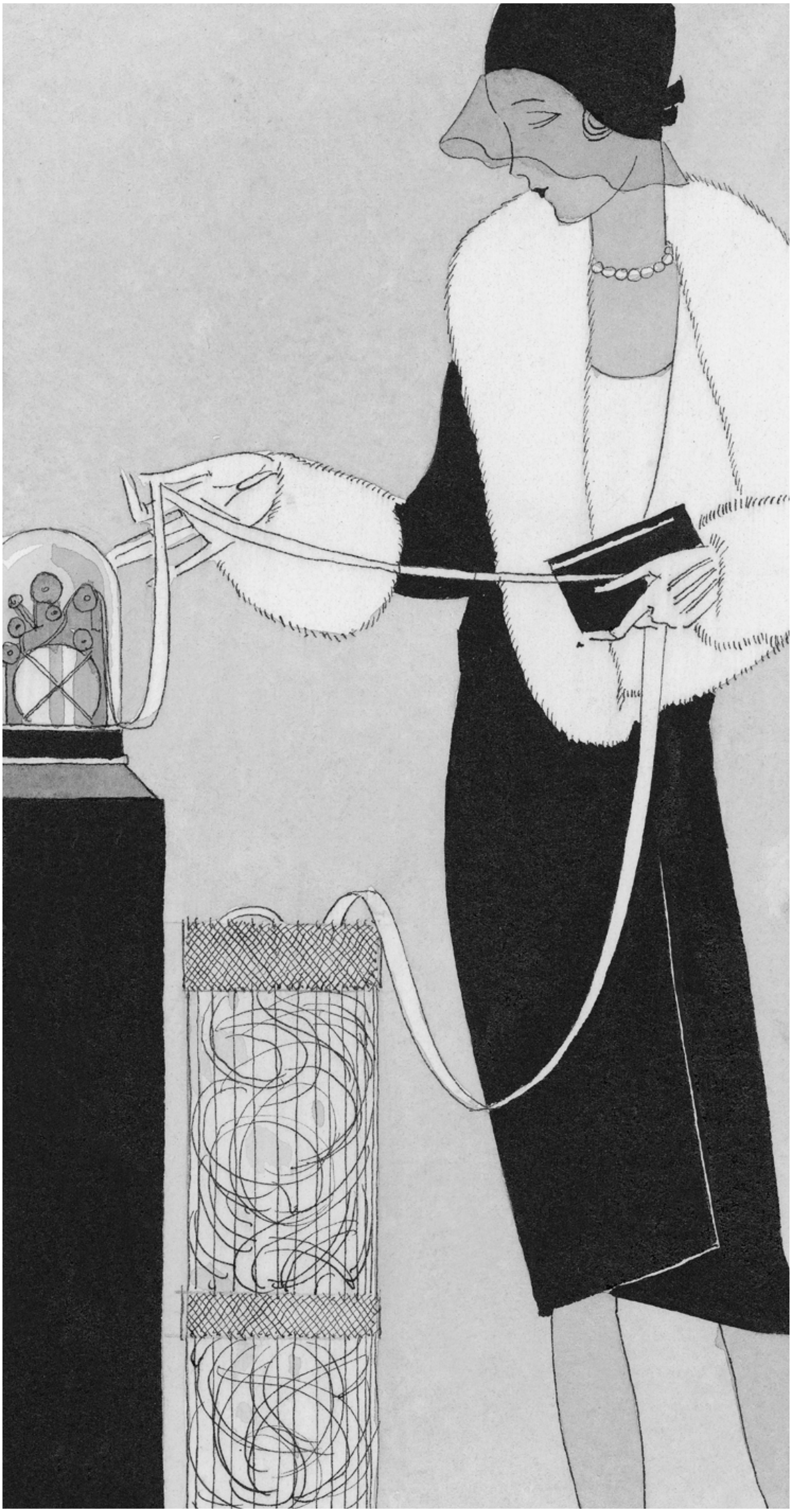


Illustration by Jean Pages/Condé Nast via Getty Images

Illustration of an elegantly dressed woman examining a length of ticker tape to check on her stock prices, *Vogue* magazine, 1929.

in better paying, professional positions as office managers, librarians, statisticians and advertising agents. One estimate, from 1914, had "about 200 women in the Financial District filling posts of these kinds." Working behind the scenes, they lacked the visibility and glamour of stockbrokers, but earned good money, with annual salaries of $2,000 or more.

The New York Times profiled one such woman, the college-educated Beatrice Carr, who was the manager of the financial statistics and mailing departments at the investment house of Fisk and Robinson. Carr had risen during eight years on Wall Street from a $14-a-week position as an assistant librarian to her current post. She believed that new opportunities were opening up in financial firms for college educated women, and she encouraged such women to "turn to Wall Street." Her optimism was somewhat tempered by the fact that, however well women like her were paid, men were paid from 30-50% more "for the same work." She hoped that this disparity, which she characterized as "a relic of barbarism," would soon disappear.

Despite Carr's optimism, Wall Street did not rush to create workplace equality. Some brokerage firms, however, did begin establishing women's departments "to capitalize on the investment needs of women, some of whom were both independent and well-heeled." Women were frequently hired to staff those departments, creating new opportunities for careers in finance.

The first woman to manage a women's department at a brokerage house was Alice Carpenter, a Boston native and Smith graduate who was active in the suffrage movement and settlement work. She managed her own substantial inheritance so effectively that in 1914, William P. Bonbright and Company, an international bond house, asked her to organize a women's department at their New York Office.

Bonbright believed "that probably women would prefer to deal with other women in making their investments, that they possibly considered the investment of money a confidential matter and that they would talk more freely with a woman than with a man." So successful was this endeavor that Bonbright opened another women's department in Boston in 1916, under the direction of Margaret Stackpole, a Radcliffe graduate with coursework in Economics and Psychology. Bonbright extensively advertised its women's departments and published a series of pamphlets on investments for women. Other pioneering directors of women's departments include Catherine Taylor at John Muir and Company in New York and Eleanor Hall at S.W. Stearns and Company in Chicago. Mary Riis, widow of social investigator Jacob Riis, later headed Bonbright's women's department in New York.

The 1910 Census lists 207 women as "stockbrokers," four of whom were African American. By 1920, the number of women stockbrokers had grown to 376, all of whom were white. As a cohort, they were mostly young and single; 79% were unmarried and 61% were between the ages of 25 and 44. 98.7% of the nation's stockbrokers were still male. Most of the pioneering women brokers and financial advisors avoided the spotlight, fearful of the ridicule so often heaped on Wall Street women in the past. They kept a low profile in the office, trading by mail or phone and never "in the street."

Rosalind W. Alcott, who worked as a broker in the 1920s, even disguised her voice on the telephone, "so that others thought she was a man." Elizabeth Cook sold bonds for Harris and Forbes by mail, an approach she endorsed for women since outside sales required "continual travel and staying in country hotels, which for the most part, are very bad." Cook doubted whether many women were suited to such rigors, but she believed that they possessed both the patience and the social skills necessary for carrying on extensive and protracted correspondence. In 1921, Cook founded the Women's Bond Club as a professional organization for women employed in financial services.

By the late 1920s, at the height of the speculative mania, many more stock exchange firms hired women, some of whom were "rated as among the best brokers in Wall Street," according to *The New York Times*. By 1929, at least 22 New York Stock Exchange firms had women partners. That same year, financial writer Eunice Fuller Barnard profiled the women of Wall Street for the *Times*. She noted that "saleswomen's desks are ranged indiscriminately, if still sparsely, among the desks of 'the boys' in many a big investment house." Experienced women brokers were said to earn as much as $20,000 a year, while beginners might make $6,000. Barnard praised these brokers as "women of intelligence, ambition and tact," many of whom were also "college graduates."

One such woman, Irma Eggleston, had been hired by the brokerage house C.F. Childs and Company as an "experiment" in 1917 to sell Liberty Bonds. A decade later, she had set a national sales record by selling $30 billion worth of bonds. *The New York Times* celebrated her achievement in April 1927, although its story concluded with the sentence: "She has no children." In spite of her business success, or because of it, she had failed in her most vital duty. The number of women stockbrokers more than quadrupled during the 1920s, from 376 to 1,793, but still only represented 2.5% of the nation's brokers. In 1930, more than 160,000 American women were employed in banking and brokerage services, although 92.5% of them were still engaged in clerical work.

Women brokers usually oversaw the accounts of women customers, whom brokerage houses were assiduously cultivating at the time. The *North American Review* mentioned one woman broker in 1929 who "personally handles 300 accounts" of business and professional women. The *Times* profiled another woman broker, Marjorie Sweet, who had been hired by the Wall Street firm of Throckmorton and Company in 1928 to recruit women customers in New Jersey. In her first year she acquired 150 new accounts from "working girls" in the Garden State. As Sweet matter-of-factly explained, "I have a little car and I drive around nights after the girls get home from work and talk securities to them." This "petite, blue-eyed" broker with "bobbed hair" was depicted as a kind of Wall Street flapper. The press account of Miss Sweet was rather patronizing, and, as such, typified the amused, flippant attitude often employed when discussing women's "invasion" of Wall Street.

Whatever modest, and contested, inroads some women had made as brokers on Wall Street, the New York Stock Exchange remained an exclusively male club, its floor "better protected against women members than that of Congress." No official rule barred women from membership, but the sexist traditions of the Exchange were not easily overcome. In January 1927, the press reported that negotiations were underway by a brokerage firm to purchase a seat on the Exchange for a woman. Neither the firm nor the woman was named, and no formal application was ever made to the Stock Exchange's Admissions Committee. The story may have been circulated to test the waters as to whether the Admissions Committee was receptive to a woman's application. If so, the answer must have been negative, as no woman was to join the Exchange until 1967, when Muriel Siebert purchased a seat.

The first generation of women stockbrokers faced great resistance, but they chipped away at the old boys' network on Wall Street that sought to exclude and marginalize them. They carved out a niche for themselves as advisers and liaisons to women investors. They helped break barriers to women's employment in brokerage firms, and they made it possible for women today to have greater financial opportunities. $

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Sources

Barnard, Eunice Fuller. "Women in Wall Street Wielding a New Power." *The New York Times*. June 23, 1929.

Hill, Joseph A. *Women in Gainful Occupations, 1870–1920*. Washington, DC: US Government Publishing Office. 1929. Pgs. 178–79.

"Ladies as Stock Speculators." *The New York Times*. February 3, 1880.

"Mrs. Pollard's Business." *Chicago Herald*. October 15, 1890.

"Mrs. Sophronia Twitchell Dead: She Was a Well Known Figure on Wall Street and a Female Suffragist." *New York Herald*. August 4, 1893.

"Radcliffe Girl is Bond Salesman." *Boston Herald*. July 11, 1915.

"Wall Street Offers Good Chances to College Women." *The New York Times*. March 1, 1914.

"Woman Seeks a Seat on the Stock Exchange." *The New York Times*. January 14, 1927.

"Working Girls Buying Wall Street Securities." *The New York Times*. January 5, 1928.

Published in *The Telegraph in America and Morse Memorial*, by James D. Reid, 1886.

Business Journalism Pioneer, 1845–1893

John J. Kiernan

By Rob Wells

John J. Kiernan was a little-known but key transitional figure in business journalism in the 19th century, a journalist and business owner who operated at the dawn of electric news dissemination. Kiernan and his Wall Street Financial News Bureau are best known for training three younger reporters — Charles Dow, Edward Jones and Edward Bergstresser — right before they launched the Dow Jones News Service and then *The Wall Street Journal*. Kiernan, however, deserves more than a footnote in the Dow Jones company histories. Several accounts identified Kiernan's operation as the leading financial news agency on Wall Street in the two decades following the end of the Civil War.

A focus on Kiernan's business dealings shows the entrepreneurial energy and evolution of early business journalism, a dynamic post-Civil War era where significant changes in technology, the economy and markets were creating a new demand for business news. In this period of disruptive technology — the expansion of the telegraph — Kiernan adapted by using a combination of messenger boys and ticker tape machines to serve Gilded Age clients such as JP Morgan and Jay Gould. Kiernan thrived through this blend of physical news gathering and electric-powered news distribution to serve stockbrokers and the market, his core audience. Kiernan's office was also a social gathering spot for a growing corps of financial journalists who were beginning to form an identity and separate genre in this era.

Kiernan was a popular Wall Street figure who transitioned from finance to politics, a move that led to his downfall as he lost focus and later control of his news agency. Kiernan was elected to the New York State Senate in 1881 and was mentioned as a possible mayor of Brooklyn. Yet during his time in Albany, Kiernan's business began to unravel, and he was surpassed by Dow Jones and the reporters he once trained.

Business Journalism History

Kiernan's Wall Street Financial News Bureau[1] fit comfortably within the notion that business journalism enjoyed a symbiotic relationship with the markets and was partly a servant to business. His news agency began in 1869, about 30 years into the growth of modern business journalism, a genre that evolved with the new industrial society and a related demand for advertising. Specialized commercial publications expanded significantly after the Civil War to meet a demand from industrial firms and brokers.

Historian Frank Luther Mott described the late 19th century as the rise of the independent press, a period when more than 9,000 periodicals launched. Prior to Kiernan, significant business journalism included *The Economist* in 1843 and William Buck Dana's *Commercial and Financial Chronicle* in 1861, as well as trade publications such as the *American Railroad Journal,* founded in 1826, which historian Alfred Chandler called "one of the most influential business journals of the day."

John J. Kiernan, a fixture on Wall Street and the financial news business in the late 19th century.

Kiernan and His Wall Street Financial News Bureau

Kiernan's Wall Street Financial News Bureau distributed breaking news on shipping, railroad and construction, as well as information from the New York Stock Exchange, to clients around the country. Kiernan launched the business using his own savings and borrowing from family and friends. The news agency's office was in the heart of the Financial District at 12 Broad Street and known as "Kiernan's Corner," a hub of socializing and gossiping for journalists and brokers.

"John J. Kiernan was one of the best known men in Wall Street, and one of the most popular. He knew every bank president, every trust company official and every member of the Stock Exchange," noted *The (*New York) *World*, which also provided this description of Kiernan:

> He was about five feet in stature, with a ponderous girth, making him look as broad as he was long. His face was florid and overspread with a genial sunny smile. He was dressed in the height of fashion and was known as a bon vivant and clever raconteur.

Kiernan was born on February 1, 1845, and was the eldest of six children. Prior to starting his news bureau, he worked in all aspects of the business. As a teenager, he was a messenger boy for the Magnetic Telegraph Company and then worked in the foreign news division of *The Associated Press,* where he rowed out in the harbor to greet ships arriving from Europe. Once on board, Kiernan reviewed European newspapers, interviewed passengers and crew and was able to deliver news to the AP's subscribers a day before the competition. He also worked in financial advertising with the Albery Frank & Co.

Kiernan's news business at first distributed handwritten financial news bulletins, known as "flimsies;" they were produced with a stylus written on books of tissue paper sheets and carbon paper that would produce about 24 copies simultaneously. These bulletins, generally 200 words or less, were rushed to brokerage offices by a small army of messenger boys. News developments drove the production schedule, and the Kiernan bulletins were sent out "hourly, half-hourly or oftener, as the development of financial news might dictate."

The Kiernan bulletins included items such as London stock quotations an hour ahead of the New York Stock Exchange opening, a weekly statement of banking financial conditions, railway company earnings and changes in freight rates. With this method in hand, the Kiernan News Agency was known as the leading financial news provider. "For years, his Wall street news agency was the standard of its kind," *The World* newspaper reported in 1893.

Kiernan was popular and well-known among the leading financial capitalists of the era. J.P. Morgan read Kiernan's reports closely and had a set delivered to his desk. Former *Wall Street Journal* reporter Henry J. Alloway, in a 1932 history of Dow Jones, described such an encounter. Alloway

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Stock certificate for the Kiernan News Company, 1888.

NO MORE TICK.

Some Facts Relating to Ex-Senator Kiernan.

He Denies That He Has Had a Quarrel With His Son and Charges Mismanagement on the Part of the Officers of the Company Which He Organized.

The subscribers to the Kiernan's financial news ticker service were surprised yesterday to receive a printed notice reading as follows:

Please take notice that at the close of business to-day, May 24, we shall discontinue the service of our special financial news on the "ticker" which now conveys the service to you.

We shall, however, continue the publication and service to subscribers of such news by printed bulletins or "slips," just as we have done for many years past, at the rate of $15 per month instead of at $20 per month charged for the same news served by the ticker.

Kiernan's news ticker service has been for years one of the institutions of Wall street. It was organized by ex-Senator John J. Kiernan of this city, principal stockholder of the company, and who was the originator of this peculiar system of supplying telegraph and local news to brokers and Wall street operators. His son, Frank Kiernan, was employed as a reporter in the service. Both father and son are as well known in this city as in New York, and the announcement of the disruption of this service was a surprise to all who read it. There was talk to the effect that father and son had quarreled and that young Frank had made disclosures to the Western union telegraph company which resulted in shutting out his father from further use of the tickers. When an EAGLE reporter saw the ex-senator this morning he laughed at the report and said there was no more truth in the statement than there would be in a statement that he had quarreled with his wife.

According to ex-Senator Kiernan it appears that the company owes $23,000 to the Western union telegraph company for maintaining the tickers and the company has refused to run the tickers any longer. The telegraph company will begin suit for the recovery of its claim.

Following close upon the above card comes the announcement that the Western union has made an arrangement to continue the ticker service through the Foreign and domestic news company, a new concern just organized by Frank Kiernan, with offices at 16 Broadway, New York, where the Western union company has its home. The organization of the new company is the result of dissensions in the Kiernan news company. Ex-Senator Kiernan got into financial difficulties about four years ago and three trustees were appointed by the creditors to manage the business. Since that time the ex-senator has had no voice in the Kiernan company's affairs. He claims that as a consequence there has been mismanagement, resulting in the inability of the company to pay the Western Union its claim.

Ashley W. Cole has been the manager of the Kiernan news company for four years. He stated that the ticker service has proved unprofitable because of the severe exactions of the Western union.

At the office of the Foreign and domestic news company Mr. Frank Kiernan's representative stated that there was no quarrel between father and son, and that the statement of the ex-senator was in accord with that which would have been made by the son had he been present.

A headline from *The Brooklyn Daily Eagle,* May 25, 1892.

wrote of an episode when Morgan sent a message to Kiernan asking how he was able to get earnings for a railroad company ahead of public distribution.

Kiernan went to Morgan's office, prepared to apologize if the report was wrong. Morgan replied, "The figures are right—but ahead of time. What's happened to you?" Kiernan responded he hired a new reporter. Morgan replied, "Well, John, maybe he's got a brother. If I were you, I'd hire him too. Anyhow, send an extra set of the bulletins along hereafter for my personal desk."

Lloyd Wendt, author of a well-regarded history of Dow Jones and *The Wall Street Journal*, described Kiernan's eye for talent. He would hire reporters "to cover the stock exchanges who could obtain the earnings statements early, who knew traders, callers, brokers and customers, and who could provide relatively accurate reports on the condition of the markets and transactions at any time."

Railroad mogul Jay Gould and Kiernan tangled on at least one occasion. *The Brooklyn Daily Eagle* describes a market "pandemonium" in June 1887 when one of Gould's companies, Manhattan Elevated Railroad, fell 36.5 points amid rumors that Gould had a falling out with his business partners and was seeking loans. Gould issued a statement to Kiernan:

> The bulletin you are putting out that my Manhattan stock is in loans is a malicious falsehood. Not a share of my Manhattan is in loans or has had my name on the back, nor do I owe a dollar in the world. You should promptly contradict.

The Ticker

Development of new printing and engraving technology, as well as the telegraph, advanced business journalism in this era. News agencies moved to adopt the telegraph shortly after its commercial development in the 1830s, and it fit well in the growing market for financial news in Europe and the United States. By the end of the 1860s, there was general demand by brokers and others in the investment community for a stock ticker service. This marked a critical time in the history of global communications: in 1866, a transatlantic telegraph cable first became operational, ushering in an era of transnational information transmission. Kiernan struck an arrangement with an early pioneer in transmission of financial news, Gold and Stock Telegraph, to supply Wall Street with news about foreign markets. Kiernan had a redistribution agreement where he would transmit foreign financial news gathered by the Associated Press exclusively to his customers over telegraph lines a half hour before its general transmission.

Kiernan operated during a period of intense competition between rival telegraph services. Even in this horse-and-buggy era, minutes mattered in news distribution. Kiernan successfully sued rivals for breaking a 15-minute exclusive embargo on his telegraphed news bulletins. Another Kiernan legal victory against Manhattan Quotation Company established a notable legal precedent of a property right and the time value of wire service reporting. The 1876 decision in New York State Supreme Court said that despite the information being generally in the public domain, "There is a right of property in telegraphic news collected in Europe and forwarded here by wire, because of the labor and expense thereon bestowed."

Dow, Jones and Bergstresser

Kiernan's office was a gathering point for roving financial reporters of the daily newspapers, and it is likely that Charles Dow joined these gatherings at "Kiernan's Corner" when he moved to New York from Providence, RI, in 1879. Wendt describes some details of the relationship between Kiernan, Dow, Jones and Bergstresser. Kiernan hired Dow, then an expert in mining companies, as an editor. "Whether his mining knowledge was of much benefit in his new job is doubtful, for Kiernan's bulletins generally were entirely confined to crisp news developments and factual statements. Few clients at the time were looking for financial guidance from a messenger service," wrote Wendt. Edward Jones joined Kiernan around this same period of time. Jones covered the New York Stock Exchange, "quickly becoming a favorite with traders, bankers and customers." Jones was also popular at the bar at the Windsor Hotel on 5th Ave and 46th Street, a watering hole known as the "All Night Wall Street."

Wendt described Jones as having a drinking problem. "There were hints from time to time that he continued to be too friendly with the bottle, but he always appeared sober on the job."

Meanwhile, another founder of Dow Jones, Charles Bergstresser, joined Kiernan in 1881. The young reporters began to chafe at the confines of Kiernan's limited news reports. Dow proposed a daily news report on business, "but Kiernan, an extroverted man who was busy with his politics and advertising interests, wasn't really interested. Kiernan simply wanted Dow to provide good, readable news copy in a hurry, and if he possessed extra energy, he could go out to solicit new clients."

By several accounts, Kiernan grew wealthy during this period. Aliah O'Neill, writing for the website Irish Central, observes, "At only 35 years old, Kiernan had amassed a fortune of about $250,000," an amount that would be worth about $5.5 million in 2016 dollars.

Kiernan's growing involvement with politics came at the time that Dow, Jones and Bergstresser worked at the news agency. Kiernan, an alderman in Brooklyn, was elected as a delegate to the Democratic National Convention in 1880 and then as a New York State Senator representing Brooklyn for two terms until 1883. Kiernan moved to Albany to serve in the state senate, a time that marked his departure from close engagement with the news service. "He soon found that politics would require most of his time and gradually withdrew from the active management of the news department."

Kiernan was noted for his expensive lifestyle in Albany, as *The World* reported, "for he entertained on a royal scale and was fully $100,000 poorer at the end of his second term. He always was a contributor to every deserving charity." In 2017 dollars, that would amount to about $2.4 million. Based on this figure, Kiernan may have lost as much as 40% of his fortune during his time in Albany.

Dow, Jones and Bergstresser would leave Kiernan in November 1882 to start Dow, Jones & Co. Later, the relationship between the new Dow Jones and Kiernan news agencies turned testy. In 1887, Dow Jones accused the Kiernan agency of stealing its dispatches concerning a coal handlers' strike in Hoboken, NJ. Kiernan's company president at the time, William P. Sullivan, said he was considering a libel suit against Dow Jones for falsely accusing his company of stealing news.

Politics & Downfall

During this period of political activity, Kiernan brought Sullivan on board to run the daily operations of his news bureau. The two soon clashed over control of the firm, a dispute that wound up in court. Kiernan's business began to collapse and legal troubles mounted. In 1887, he was arrested in a securities fraud case involving the Columbia Rolling Mill Company of New Jersey, which accused him of deceit concerning ownership of real estate and bonds. *The World* reported, "Mr. Kiernan was arrested, but the whole matter ended in his favor."

The late 1880s were a period of financial trouble, and Kiernan lost control of his business. Another fraud case arose in 1888. The Bank of Montreal sued him for a fraudulent transfer of ownership interest in his company, John Kiernan & Co., to outside parties, a move designed to prevent the bank from collecting on a debt.

By 1892, Kiernan discontinued his ticker news service, although delivery of the printed bulletins still remained. Effectively exiled from his news agency and facing a backdrop of persistent legal troubles, Kiernan died at his home, 56 First Place, Brooklyn, on November 29, 1893.

Although he had lost his business and was out of office, his funeral was a major event and at least five newspapers carried his obituary. As *The Brooklyn Daily Eagle* reported, St. Stephen's Roman Catholic Church "was packed to the doors and hundreds of people were unable to gain admission."

To this point, Kiernan has been relegated to footnote status in the Dow Jones corporate histories, or overlooked altogether, due to two developments. First, Kiernan became infatuated with politics and drifted away from journalism in the early 1880s. Second, his news of the market was ephemeral — bulletins on tissue paper and ticker tape — so there is little surviving record of his work. By contrast, his proteges — Dow, Jones and Bergstresser — established a newsletter and then a newspaper, which lend themselves to historical examination.

One enduring lesson of Kiernan's life, however, was his ability to evolve with the changes in news gathering and production, from messenger boys with flimsies to ticker tape machines. He did this by keeping the market's needs close to his sights, consistent with the normative practices of business journalism then and now. "He knew, by constant interaction with the Street, what news was most likely to be relished — a failure, a race, a death, a good lively rumor — and it rushed all over his ticker tape." $

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Note

1. The literature has several different names for Kiernan's news business: The Wall Street Financial News Bureau, The Kiernan News Company, John J. Kiernan & Co. and J.J. Kiernan & Co. Towards the end of the 1880s, press accounts more consistently called it The Kiernan News Company. During its first ventures with the Western Union Telegraph Company in the 1870s, press accounts and histories referred to it as The Wall Street Financial News Bureau.

Sources

Alloway, Henry. "Wall Street News Gathering A Half Century Ago." *The Wall Street Journal*. June 27, 1932.

Hoffman, Deborah. "Email with Deborah Hoffman, Dow Jones Corporate Archivist." March 4, 2017.

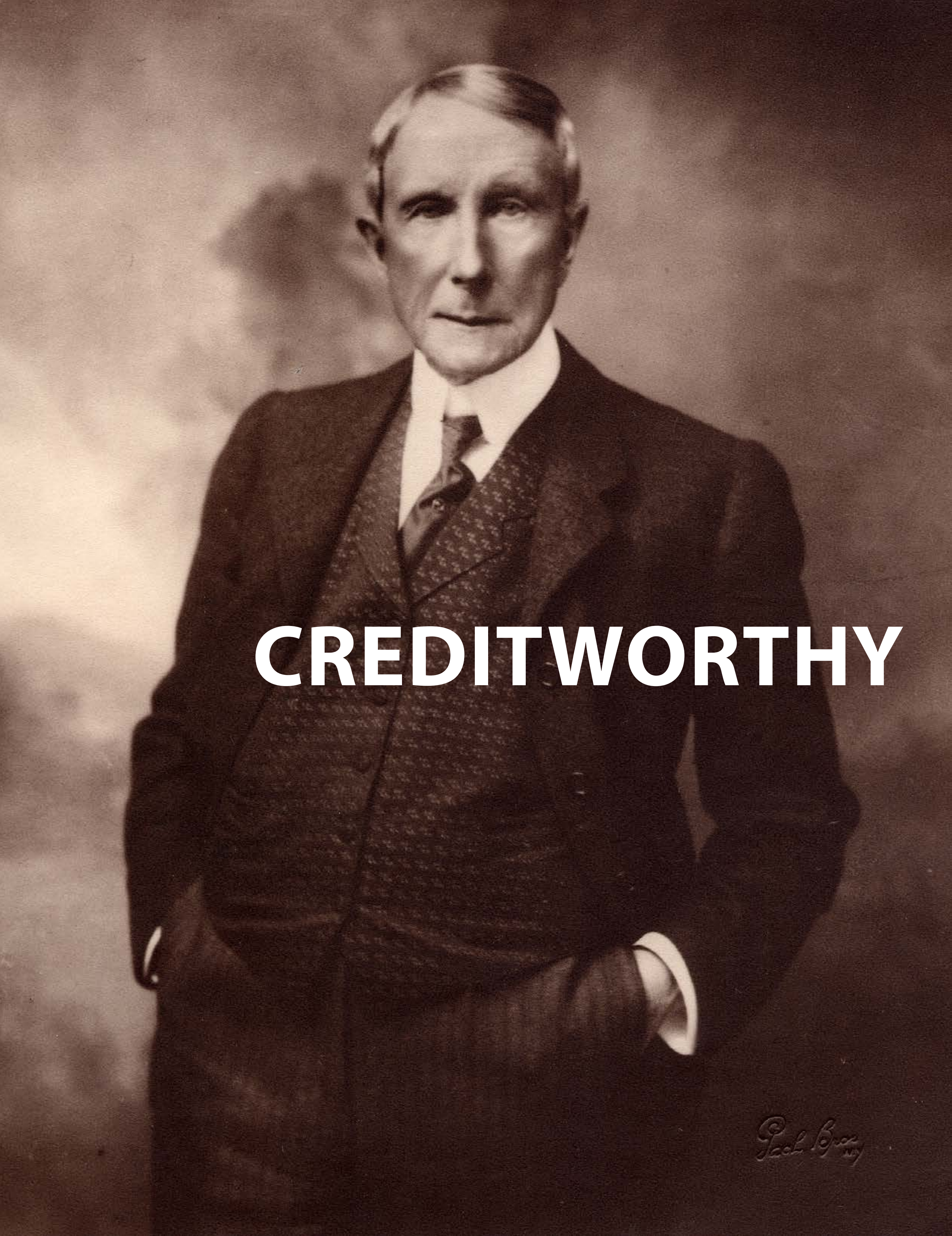
O'Neill, Aliah. "John J. Kiernan: The Pioneer of Wall Street." *Irishcentral.com*. July 19, 2010. www.irishcentral.com.

Quirt, John. *The Press and the World of Money: How the News Media Cover Business and Finance, Panic and Prosperity, and the Pursuit of the American Dream*. Byron, CA: Anton/California-Courier. 1993.

Schwartz, Colleen. "Email from Colleen Schwartz, Dow Jones Corporate Communications." February 23, 2017.

Tofel, Richard J. *Restless Genius: Barney Kilgore, the Wall Street Journal, and the Invention of Modern Journalism*. New York: St. Martin's Press. 2009.

Wendt, Lloyd. *The Wall Street Journal: The Story of Dow Jones and the Nation's Business Newspaper*. Rand McNally & Company. 1982.


CREDITWORTHY

A History of Consumer Surveillance and Financial Identity in America

By Josh Lauer

In late November 1913, a dapper old man stopped into a Cleveland department store to do some shopping. On his way out, he gave a young female clerk his name and instructed her to charge several items to his account. The clerk, who did not know the man, insisted on calling the credit department to authorize his purchases. Perhaps the stranger's wig and lack of eyebrows aroused her suspicion. The 74-year-old man suffered from generalized alopecia, a condition that had caused him to lose all of his body hair. After the credit department confirmed the customer's identity and creditworthiness, his charged goods were approved, and he left without incident. This exchange would be completely unremarkable except that the stranger was no average consumer. He was John D. Rockefeller, literally the richest man in the world. The multimillionaire oil baron had been denied access to credit, "at least until the clerk learned that he was 'good.'"

One hundred years later this story still resonates. Twenty-first century Americans are accustomed to having their identities and creditworthiness tested, often multiple times each day, to see if they are "good." Indeed, whenever we use a bank card to pay for something, we enter into an invisible surveillance network that confirms our identity, records the details of our transaction and instantly updates our status and legitimacy as a paying consumer. All of this happens in the few seconds that it takes to swipe a plastic card — or just as commonly, in the time it takes for an online purchase to be confirmed. Such speed and ease are hard to argue with. Why fool around with cash when the whole thing can be settled with a signature or code?

Rockefeller and many of his fellow Americans would have agreed. For someone like Rockefeller, a charge account was largely a matter of convenience. He had piles of money sitting in the bank. But for many Americans who did not, credit accounts allowed them to walk out of stores with all sorts of things — from furniture and appliances to clothing and food — all on the thin promise of future earnings. Credit was not just a frivolous indulgence, as its critics have long insisted. In many cases, it was a necessary bridge between income and paychecks.

The absurdity of the Rockefeller incident was comic fodder for newspapers throughout the nation. The retired titan of industry took it in stride and even commended the embarrassed clerk for her "caution." He had bigger concerns, such as founding some of the nation's most venerable philanthropic organizations and caring for his ailing wife. Yet the story, for all of its populist mirth, reveals something else: consumer credit surveillance was an established fact of life. It was funny that Rockefeller's credit standing had been questioned, but it was taken for granted that systems for interrogating one's identity and creditworthiness already existed. Rockefeller, like millions of Americans from all walks of life, had a second self, a disembodied financial identity that inhabited the vast files of retail credit departments and local credit bureaus. No one, not even the wealthy or famous, could escape the gaze of this unseen surveillance apparatus.

How did this happen? How did Americans become faceless names and numbers in an enigmatic network of credit records, scoring systems and information brokers? How did financial identity become such an important marker of our personal trustworthiness and worth? It is easy to mistake consumer credit surveillance and financial identity for new technological developments, products of late 20th century databases and algorithms. The importance of financial identity and credit risk has become a topic of serious public debate. The scourge of so-called identity theft and the 2008 subprime mortgage crisis illustrate the high stakes of credit information in contemporary life.

However, systems for monitoring consumer credit identities and for judging one's creditworthiness are not new at all. They were central to the ascent of consumer capitalism in the United States. Long before credit cards filled mailboxes in the 1960s, before Americans bought refrigerators on the installment plan or the first mass-produced and mass-financed Model Ts rolled off assembly lines, consumer credit surveillance systems were already in place. This was the surveillance system that Rockefeller stumbled into when his financial identity — his hidden record of prompt payment and trustworthiness — temporarily trumped his identity as the world's richest man in the flesh.

At the center of this story is the consumer credit bureau. The modern credit bureau is

Portrait of John D. Rockefeller. Even the world's richest man was subject to credit checks during his lifetime.

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Rock, Clarence A, purch agt, r 6907 Quinby ave..2EP FP
Rock, Henry A, watchman, r 7921 Jones rd.......2EP ES
Rock, Herman A, 2d vice-pres Dan Dorn Iron Wks, r 2179 E 89th..........................CP 2DP ES
Rock, Herman A (Mrs), r 2179 E 89th..............2EP
Rock, James J, ticket agt, r 2737 E 55th.............2FP
Rock, Joe, 2707 Church ave.........................EP
Rock, John, ret, r 5603 Kinsman rd..........AP DP 2EP
Rock, N, r 44 Champa ave...........................FP
Rock, S E, r 1610 Ansel rd.........................FP
Rock, Wm, engr, r 2329 E 100th.................DP 2EP
Rock, Wm C, fire dept, r 1415 W 81st............EP ES
Rock, W S, r 1415 W 81st...........................FP
Rockefeller, The, 5105 Woodland ave.............CP DP
Rockefeller, A N (Miss), r Wickliffe, O.............2EP
Rockefeller, Frank, 1007 Garfield bldg, Wickliffe, O.. ....AP CP 3DP 2EP
Rockefeller, Frank (Mrs), r Wickliffe, O..........DP EP
Rockefeller, H D, 1052 Euclid.......................AP
Rockefeller, H E (Miss), r 1020 Prospect.............2EP
Rockefeller, John D, r Forest Hill E C.............. ....2AP 5CP 3DP 2EP FP
Rockefeller, R N, The St Regis......................EP
Rocker, Henry A, lawyer, r 2546 E 43d..DP DS 2EP 2FP
Rocker Printing Co (Sam'l Rocker), r 1924 Woodland ave..............................2DP 2EP ES

John D. Rockefeller and his family received consumer credit ratings like everyone else. Their names and ratings appeared beside those of fellow citizens, as shown here in *The Credit Rating Book for Cleveland,* 1909.

one of the most powerful surveillance institutions in American life, yet we know almost nothing about it. The industry is currently dominated by three major bureaus — Equifax, Experian and TransUnion. Together these private firms track the movements, personal histories and financial behavior of nearly all adult Americans.

Until the late 1960s, when the reporting industry suddenly became a lightning rod in debates over database surveillance and privacy, credit bureaus worked in quiet obscurity. They seemed to come from nowhere during the late 20th century and to exemplify the frightening new realities of computerized surveillance. Yet many of these bureaus have been around since the 1920s or earlier. In fact, two of the nation's leading bureaus, Equifax and Experian, have roots dating to the 1890s.

The consumer credit bureau was a vital information infrastructure upon which American consumer capitalism was built. These surveillance systems supported new consumer lending and financing industries that emerged during the first half of the 20th century, as automobile makers, department stores, mortgage companies and banks learned how to turn personal debt into corporate profits. Without this infrastructure, the modern credit economy and today's digital commerce would be inconceivable. More than any other institution, the consumer credit bureau formalized financial identity as an integral dimension of personal identity and established a technological framework for predicting credit risk and extracting debts.

While we know quite a bit about the history of consumer culture in the United States — its advertising, its spectacular commodification, its desires and deceits— we know much less about how all of this consumption, much of it done on credit, was even possible to transact. This is no trivial detail. The ascent of consumer capitalism, after all, is inextricably linked to the growth of institutional credit at the turn of the 20th century. It was nothing new for a local grocer or tailor to trust his well-known customers to pay later. This kind of informal open book credit was pervasive in 19th-century America.

But how could new institutional lenders — department stores, mail order houses, installment dealers, finance companies and, later, banks — trust total strangers, hundreds or thousands of them, to repay a debt? The answer is that they could not. But neither could local grocers or tailors. As eastern cities and upstart interior towns filled with unfamiliar faces after the Civil War, the problem of judging creditworthiness was a problem for everyone, including small shopkeepers who allowed their neighbors to run up debts. In this new world of anonymity and transience, consumers who looked "good" — well dressed, professional occupation, well connected — often turned out to be the worst deadbeats. And just as troubling, some who looked "bad" — shabby clothes, low-skilled job, no references — often turned out to be entirely reliable and loyal customers. How could a merchant identify the "good" consumers and avoid the "bad" ones?

This problem, the confounding task of deciding whom to trust and whom to invest in, led to the development of systematic credit surveillance in the United States. The first organizations devoted to monitoring the creditworthiness of American consumers appeared in New York around 1870. The idea quickly spread. By 1890 consumer reporting organizations could be found in cities and towns across the nation, from New York to San Francisco. These early ventures were a motley array of private agencies and voluntary protective associations. While some produced little more than blacklists of debtors and delinquents, others developed complex identification and rating systems that monitored the lives and fortunes of entire city populations. The most ambitious published annual reference books in which the names, addresses, occupations, marital status (for women) and credit ratings of more than 20,000 individual consumers were listed.

From the beginning, credit bureaus and credit departments were eager adopters of new office technologies, from vacuum tube and teletype systems to multiline telephone banks and mechanical filing devices. The most probing and comprehensive credit information was useful only if it could be quickly located and communicated. Speed was crucial when credit managers or sales clerks requested credit checks, often with the customer waiting anxiously nearby.

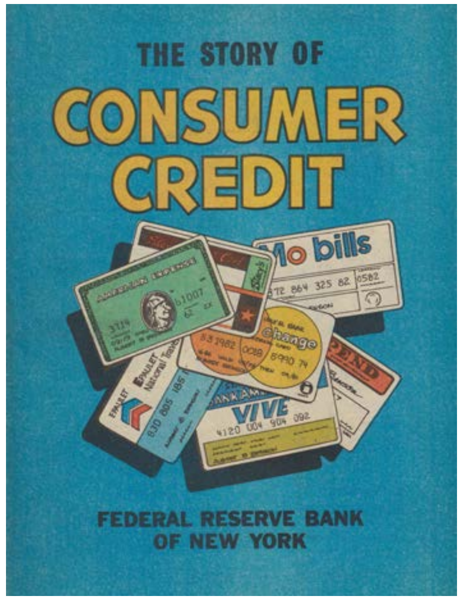
The machinery of credit surveillance was typically operated by women, often rooms full of them, tethered to headsets and switchboards among columns of filing cabinets. In the early 1950s, *Life* magazine marveled at the scale and efficiency of the modern credit bureau, ranking its intelligence-gathering capacity alongside that of the Federal Bureau of Investigation (FBI) and the Soviet KGB. Postwar credit bureaus would add new elevator filing systems, document conveyers and photoduplicating devices to their array of information-handling technologies.

All of this was soon overshadowed by another machine: the computer. During the 1970s and 1980s the credit reporting industry was completely reshaped by mergers, as a handful of computerized bureaus bought out hundreds of small local bureaus. While computerization accelerated credit surveillance and consolidated the reporting industry's national reach, it also opened the door to new technologies of consumer discipline, most importantly statistical scoring. During the closing decades of the 20th century, the leading national bureaus became deeply involved in the development of risk scoring and database marketing programs that did more than simply calculate credit risk. They drew upon massive datasets to predict the behaviors, interests and commercial value of Americans.

Looking back at the history of American credit surveillance, it is easy to understand why systems of organized credit reporting were created in the first place. As the nation's population became more numerous and mobile, one was more likely to transact with strangers. And as impersonal market relationships — relationships based on contracts, prices and monetary exchange — displaced traditional bonds of obligation, human interactions became more abstract.

"In the complex march of modern affairs, business has become more mechanical," the author of a credit textbook remarked in 1895. "We have lost the personal equation of our customers, or get it only at second-hand. The name of the debtor or creditor on our books is only a symbol which might as well be represented by a number."

New "mechanical" ways of knowing one's fellow citizens — via credit reports, credit records and, later, credit scores — were disturbing because they suggested that economic relationships were losing their human scale and personal touch. Americans were not just estranged from their neighbors and community in everyday life. They were becoming faceless accounts and dollar signs in the ledgers of corporate employers, creditors, insurance companies, retailers and other business concerns. This, ultimately, was the darker subtheme beneath the comedy of Rockefeller's department store interrogation. When it came to judging creditworthiness, a quality rooted in trust and integrity, no one was beyond the objectifying gaze of capitalism. It was doubly ironic, and poetic justice perhaps, that the iconic industrialist was temporarily an anonymous cog in the capitalist machine he had helped to build.



Collection of the Museum of American Finance

Comic book published by the Federal Reserve Bank of New York Public Information Department in 1980 entitled *The Story of Consumer Credit*.

Until the late 1960s, the American public was untroubled by credit reporting. Contrary to sensational press coverage of the time, credit surveillance was no dark conspiracy unmasked by Congress in 1968. Americans had always known that their lives were held under a microscope when they applied for credit. They just did not care. Consumer groups had long fought for safer products, better labeling and ethical advertising, but the one thing they did not demand was privacy. Such silence on the issue is difficult to fathom from the vantage of our own privacy-conscious age. In the absence of evidence, we can only speculate as to why. Perhaps the lingering stigma of borrowing and the uncertain legitimacy of "the consumer," a new concept in the early 20th century, was enough to keep dissent at bay. More realistically, consumers probably acquiesced then for the reason they do today: they wanted the borrowed goods or money more than they cared about their privacy. Even the famously reserved Rockefeller accepted this tradeoff as the price of convenience.

The modern freedom to buy now and pay later would be a dubious one, to say the least. Surcharges and interest payments were not the only hidden costs. In return for the trust of retail creditors and institutional lenders, Americans surrendered the intimate details of their lives. This exchange, personal information for access and convenience, may have seemed a fair trade to credit-hungry Americans during the early 20th century, but it set a precedent with profound implications for the future of commercial data gathering and privacy. When asking for a merchant's trust, credit customers relinquished their right to withhold information about their personal and financial circumstances. Mass credit not only trapped Americans in the bondage of debt; it also ensnared them in bonds of institutional surveillance. Applying for credit was the original sin of modern consumer surveillance.

A century after Rockefeller exchanged his privacy for credit in a Cleveland department store, consumer surveillance had crept into nearly every facet of everyday life. It is embedded in the technologies we depend upon for communication, work, commerce and entertainment. No digital presence goes untracked; no digital profile goes unmined. This is by design.

In our data-driven economy, personal information is the coin of the realm. It is the commodity we use to pay for "free" content, memberships and services. This *quid pro quo* — information for access — has fueled innovation and built new industries, but it has also eroded the boundaries of privacy and, more significantly, opened the doors to new forms of social classification and economic objectification. The history of credit surveillance is the history of this Faustian bargain and the starting point for understanding the monetizing logic of digital capitalism in our own time. $

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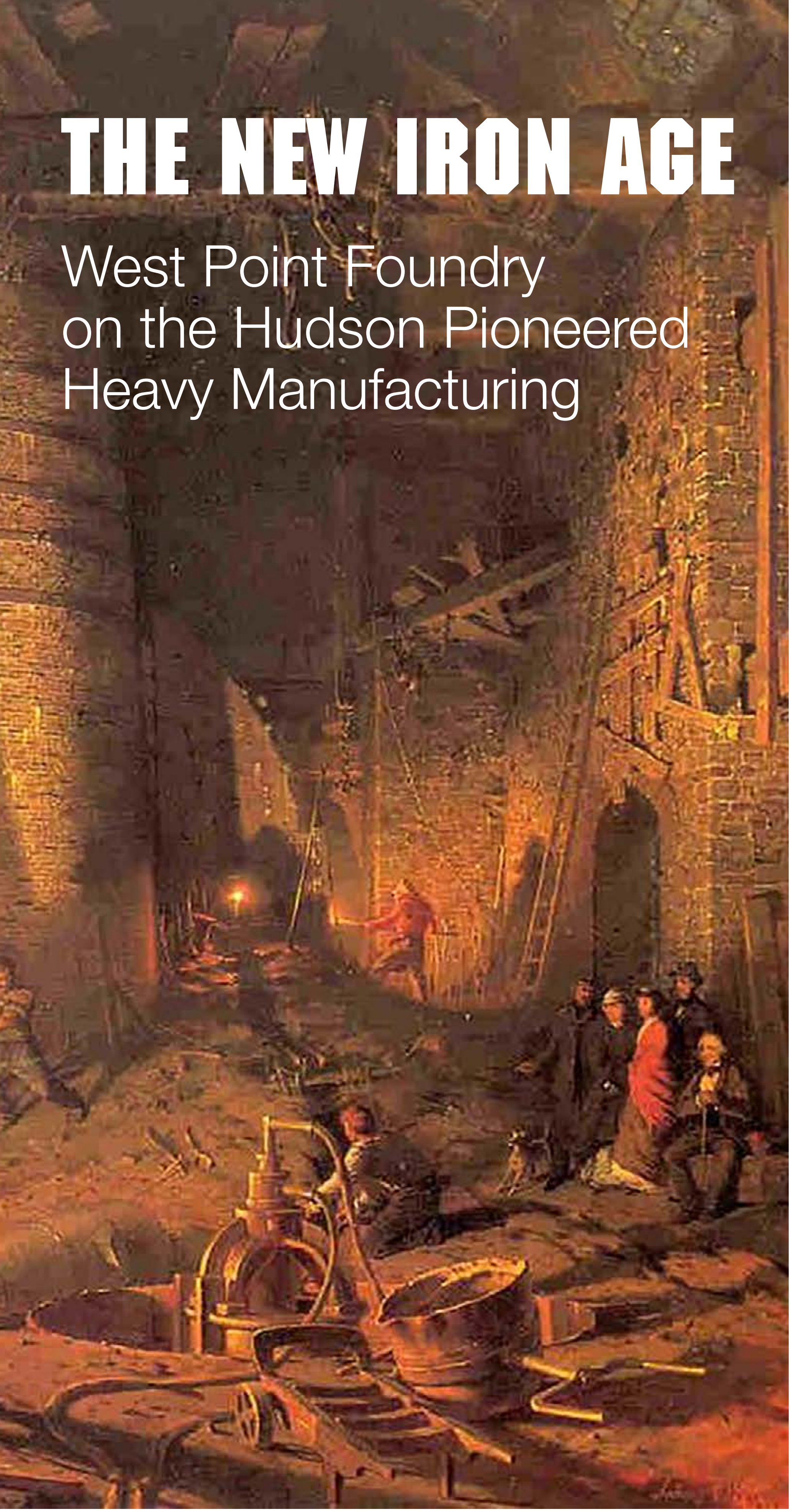
THE NEW IRON AGE

West Point Foundry on the Hudson Pioneered Heavy Manufacturing



By Gregory DL Morris

Two hundred years ago, the industrial age in the United States got off to an early start along a brook in a ravine tumbling into the Hudson River opposite the Military Academy at West Point, New York. The West Point Foundry (WPF), actually in Cold Spring, grew to be a major manufacturing complex, vertically integrated from raw materials to finished goods, the likes of which would not become common in North American heavy manufacturing for decades.

Very little is left today on the site of the once-mighty WPF, but that which remains has been conscientiously preserved by a coalition led by the Scenic Hudson Land Trust. And while the WPF site makes for a charming and informative day trip by train from New York City, its wider legacy comprises a historical diaspora:

- WPF made the first locomotive manufactured in the United States, the Best Friend of Charleston, in 1831, as well as many other early locomotives.
- Both combatants in the epochal Battle of Hampton Roads during the American Civil War, the first-ever clash of ironclads, used WPF manufactured materials. The company made the engines for the steam frigate *USS Merrimack* that was rebuilt by the Confederacy as the *CSS Virginia*. WPF also made the XI-inch Dahlgren guns in the turret of the revolutionary *USS Monitor*. (Roman numerals are used to designate smoothbore naval artillery; rifled guns are designated in Arabic numerals.)
- WPF made many of the building fronts in New York City's historic Cast Iron District.
- WPF made cast-iron components for several surviving historic lighthouses, including Cape Canaveral, Florida; and Bodie Island, Cape Hattaras, North Carolina.

Ground was broken for WPF at the ravine outside Cold Spring in 1817; operations began in 1818. That was 34 years after the end of the War of Independence and just two years after the end of the War of 1812. All of the big guns in North America had been brought by colonizers, primarily

"The Gun Foundry," painted by John Ferguson Weir in 1864, is a Romantic-style amalgam of several processes at the West Point Foundry.

Mark Forlow Collection

This Bank of New York stamped receipt, dated May 4, 1818, is believed to be for one of the original start-up contributions for the foundry from one of the 10 members of the newly-formed West Point Foundry Association. The signature is that of Gouverneur Kemble, the association's first president.

British and French. Indeed, Parliamentary prohibitions on manufacturing in the colonies were one of the grievances that led to the revolution.

The second conflict, notably the invasion of Washington, DC and the burning of the Executive Mansion (called the White House after the smoke damage was painted over) were painful lessons that the young republic needed a well-organized and robust armaments industry. To that point it had relied upon a scattering of government and commercial foundries — none very large or standardized — that had sprung up during and after the revolution.

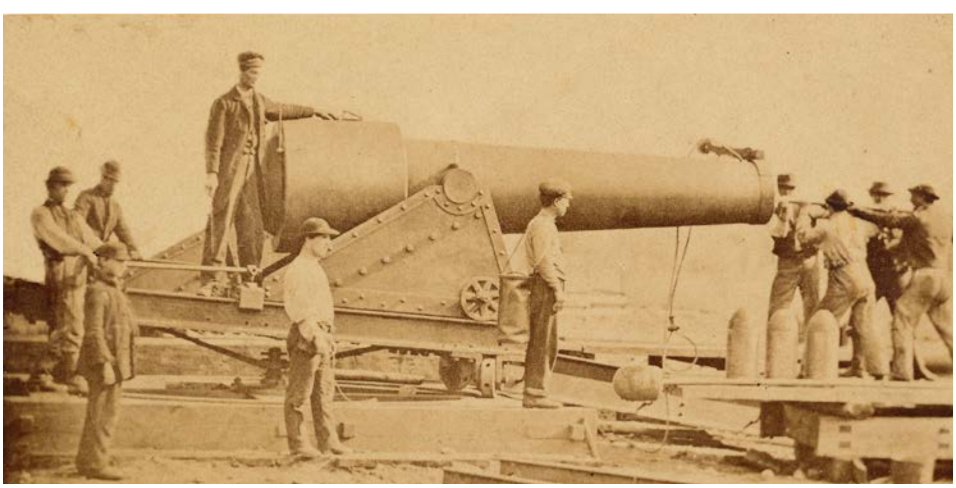
Three existing foundries — in Pittsburgh, Pennsylvania; Georgetown, near Washington, DC; and Richmond, Virginia — were put under War Department supervision. The fourth, WPF, was an entirely private commercial venture.

According to Mark Forlow, historian for the Village of Cold Spring and the Town of Philipstown, "there was an association of 10 men, led by Gouverneur Kemble, a successful businessman. They raised start-up capital of $100,000, which was a big chunk of money in those days. It was an early example of a collaborative effort to organize and fund a business. That makes it compelling."

On a strictly inflationary adjustment, that capital would be worth close to $2 million today, but liquidity was extremely rare in those days. Indeed, the lack of seed capital to start new businesses led to the rise of the shares system and stock markets to trade them.

Still, the initial stake was not quite long-shot venture capital. First there was the stated federal need for hardware. The initial partners included munitions expert Brigadier General Joseph G. Swift. There was also the location, with ample supplies in the region of iron ore, coal and wood for fuel and construction. There was a fast-running stream for water power and sand in the lagoon for making molds. River transport for large, heavy objects made shipping easy in an era of bad roads. Rail access came by 1848.

WPF flourished with government contracts, as well as supplying commercial machinery, engines, consumer goods and tools. It expanded in volume and complexity to fill most of the ravine. In 1836, Kemble hired Robert Parker Parrott, the

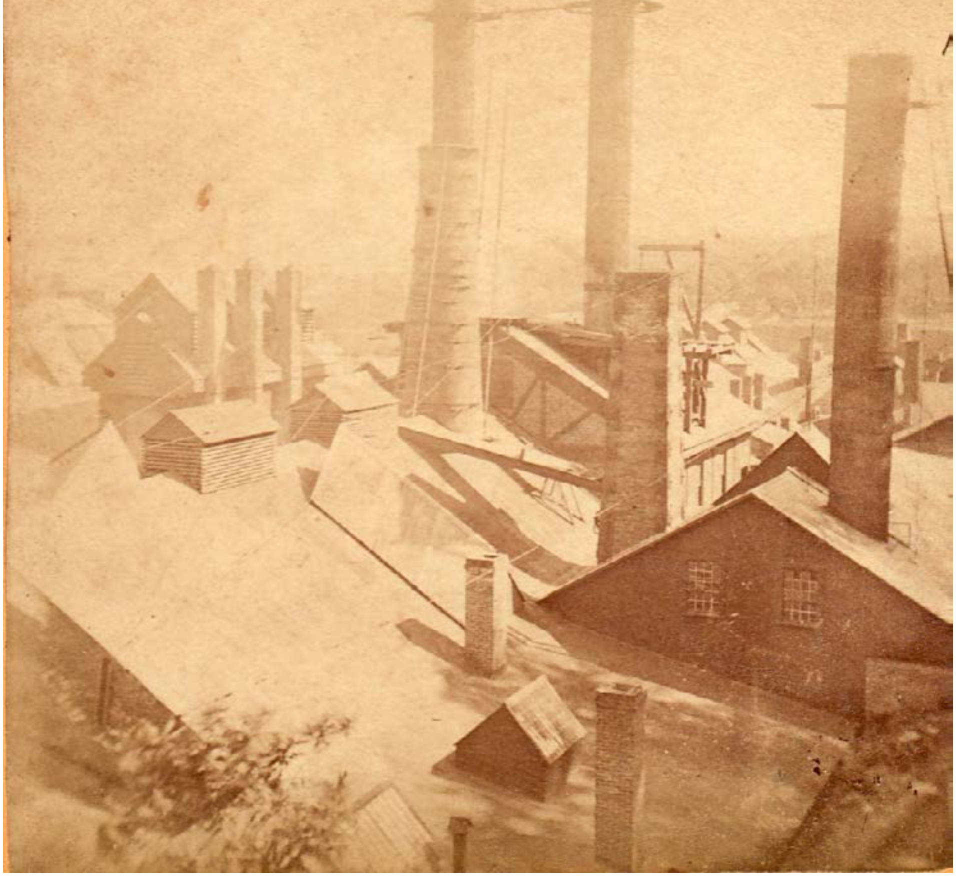


Mark Forlow Collection

This carte de viste of the largest of the Parrott guns is seen at the foundry during the Civil War, in May 1864. The gun crew loads the massive shell during the proving of the gun before shipment. Such trials usually involved firing the weapon over 100 times.

Courtesy of Scenic Hudson

One of the historic cast iron buildings in Manhattan, many of which were made by the West Point Foundry.



Mark Forlow Collection

The main masonry chimney for the original 1818 reverberatory air furnace is seen in this photograph of the West Point Foundry Casting House amid a sprawling complex of buildings. In these shops, thousands of smoothbore and rifled cannons were cast from 1818 through the Civil War.

inspector of ordnance at the military academy across the river, as the superintendent for WPF. It was a propitious move.

Several artillery designers were experimenting with ways to give big guns better range and hitting power. The focus was on ways to strengthen the breach of the gun to allow for more powerful charges without bursting the barrel. Rear Admiral John A. Dahlgren developed the beautiful and effective "soda-bottle" shape. In 1860, Parrott developed a method of forming a strong band of iron and fitting it over the breach of a rifled cannon. The Parrott gun became the defining artillery piece of the war.

"Other designers worked with several different foundries," said Forlow, "but the Parrott process was proprietary to WPF. The Confederates captured Parrotts whenever they could and tried to duplicate the process. But they did not have the technology or facilities."

WPF was able to supply quantities of Parrott guns and shells to the US Army almost from the outbreak of war. According to Forlow, WPF was delivering 25 Parrott rifles and 7,000 projectiles a week by September 1861.

President Abraham Lincoln visited WPF in June 1862 and watched a demonstration firing of big 100- and 200-pound Parrotts (Artillery in those days was rated by the weight of the projectile). By the end of the war, WPF had delivered more than 2,700 Parrotts of all sizes and more than 1.3 million projectiles.

The end of hostilities in 1865 naturally brought a sharp reduction in military orders, but WPF soldiered on for several decades.

"WPF was an iron foundry," said Forlow. "They also operated a small brass foundry and worked with some soft steels. But the Bessemer process took hold in industry to make large quantities of steel that were lighter and stronger than cast or wrought iron. WPF did not have the space or the capital to rebuild as a steel works. The owners proposed to the ordinance bureau that they and one other ironworks be kept operating, but that was declined, severing their relationship with the government."

Ironically, it had been weight and poor performance of iron cannon in the Crimean War (1853–56) that led Sir Henry Bessemer and others to develop improved steelmaking. So rather than being mourned as a victim of progress, WPF should rather be lauded for taking iron cannon-making to its highest point, even after the presence of better materials. They were like the last great clippers that persisted decades after steamships asserted primacy, or the Lockheed Constellation and Douglas DC-6 that served well into the jet age.

Courtesy of Scenic Hudson

West Point Foundry office building with cupola.

Fate was not kind to the WPF site. It went through a series of owners, some in ironwork and some in other forms of manufacturing. Eventually the site fell to looting and ruin. The ravine became a dumping ground, and it is rumored that several brick buildings in the area are built partially from bricks scavenged from the WPF site. An electric battery factory was built on an adjacent site, contaminating the lagoon with heavy metals. In 1983, the Environmental Protection Agency (EPA) added the "Marathon Battery Corp." site to its priorities list for superfund remediation.

The site was taken off the list in 1996 and acquired by Scenic Hudson the following year. The Industrial Archaeology Program at Michigan Tech University collaborated on the excavation and restoration. Several foundations remain, as well as parts of the millrace. The only complete building is the 1865 headquarters, built at the high-water mark for WPF.

The restored park is open to the public. Scenic Hudson runs organized tours, some of them led by Mark Forlow. $

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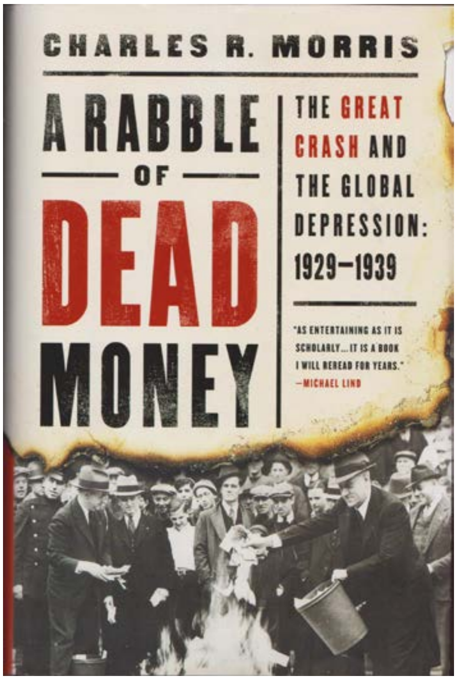
BY GREGORY DL MORRIS



A Rabble of Dead Money: The Great Crash and the Global Depression 1929–1939

By Charles R. Morris
Public Affairs Press, New York, 2017, $30
389 pages, with photographs, charts, tables, appendices, notes and index

Charles Morris (no relation) is a polymath, which will be a delight to most readers but will vex a few. His prose is animated, and he manages to deliver all but the most dense economics with vigor. The research is broad and deep. Serious students of the period and of financial history will find plenty of substance. More casual readers will be impressed with the way Morris can summarize important, if recondite, research and communicate its relevance clearly.

This book, which is substantively a financial history, starts with an excellent, concise 16-page summary of World War I and the Treaty of Versailles. The premise is that the devastation of the war, which was highly concentrated in France and Belgium, led to cross purposes in the peace. Those conflicting national agendas magnified the biases of conventional wisdom about money supply and economic stimulus. Those, in turn, were underpinned by political, social and religious tenets.

There is a focus on the growth of the automobile, both as a new technology and as the defining consumer good of the period. Steel and appliances, as well as real estate, are touched upon, but Morris hangs his hat on the Ford Model T, its competitors and successors. There is also discussion of how religion and politics color views of economics and social mobility. There are more than a few unsettling parallels to current events.

Morris is hardly the first to explain that the Great Depression was not an immediate or inevitable consequence of the Great Crash. But Morris has done an excellent job of putting the two cataclysms in context. They were inter-related, not strictly as cause and effect as is widely believed, but as results of the same greater economic, political and social events. That is what Morris does so well. He puts events into context locally, nationally and globally. He takes pains to demonstrate that while the Wall Street collapse was a classic bubble and painful correction, it was unemployment and a liquidity crisis that transmogrified the situation into a national and global catastrophe.

In particular, Morris cites Yale economist Irving Fisher. Unfortunately, Fisher's most famous pronouncement was that the stock market in 1929 had reached "a permanently high plateau." Such a howler should not be allowed to taint the greater body of Fisher's work, which was spot on, Morris relates:

"The worst possible reaction to a deflationary depression, Fisher continues, is to 'balance the budget,' because that always entails reducing spending and/or raising taxes, either of which worsens the deflation since it is extracting spending power from the economy."

The book goes on to specify an incisive indictment by Fisher. "A 1932 Hoover tax increase came 'when each dollar was already 60 percent more burdensome to the debtor than in 1929.'" Morris details that if the Federal Reserve had "actively supplied new reserves to the system it could [have] generate[d] up to 30 times that much in new economic activity."

Morris is unsparing of Hoover. In a chapter about the brilliant young mining engineer and savior of starving Belgium, he seems to be taking the path of the revisionists who try to excuse Hoover for his inaction. But in the end the fault is all the more glaring. The man who built a legend as relentless and resourceful in getting things done in the end becomes hopelessly hesitant.

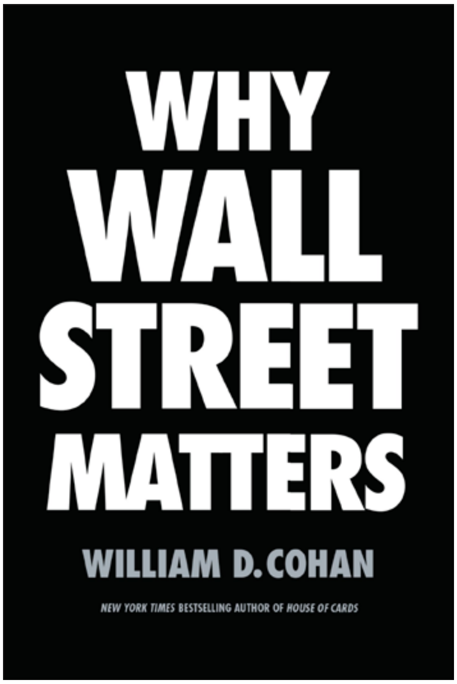
"Hoover's grasp of the potential power of government spending to off-set business downturns was proto-Keynesian, well before all but a narrow elite had heard of Keynes," Morris writes dolefully. "His economic instincts, however, were waylaid by his scruples against expanding the federal government, his fear of inflation and his emotional attachment to the gold standard."

It has been said that an economist is someone who, upon seeing that something works in practice, wonders if it will also work in theory. That would be funny except for the real and lasting suffering. "To the average person, the central reality of the Depression was the collapse of the job market," Morris writes. "Despite the haunting images of the Dust Bowl, he notes, "cities were particularly hard hit since construction employment fell by more than 40%, and hours worked were cut by 60%."

The toll was especially grim among blue-collar workers. "In Chicago, a Census Bureau study found that 30.7% of male workers were unemployed in 1931; 40.7% of skilled workers, 36.6% of semi-skilled workers and 57.2% of unskilled workers… Detroit was particularly hard hit because of its dependence on the automobile industry. The Ford payroll alone shrank from 128,000 in March 1929 to 37,000 by the summer of 1931." A plunge of 71%.

"Hoover's response was to set up the President's Emergency Committee on Employment," Morris states. "The committee comprised a number of talented and sincere people, but it had no appropriation except for a small staff budget, and could do little more than be a cheerleader for local efforts."

The last few chapters of the book return to Europe. There is a solid review of how negotiations over war reparations were wholly confounded by cross purposes. Into that toxic ground came first the stock market collapse, then the Depression then the slide into totalitarianism. $



Why Wall Street Matters

By William D. Cohan
Random House, 2017
192 pages

In *Why Wall Street Matters*, author and former investment banker William Cohan takes a hard look at what "Wall Street" means. The book can be described as a historical primer and a "counterintuitive defense" of Wall Street.

Cohan's primary objective is to explain why an absence of financial markets would severely limit the ability of the world (and, more specifically, the United States) to allocate capital efficiently in order to grow the economy and protect our standard of living.

In Cohan's words, the book is also "meant to serve as a starting point for a long-overdue, non-hysterical national debate about how to retain the best of Wall Street while eliminating the incentives that tend to foster the basest instincts of human nature that lead Wall Street bankers, traders and executives to misbehave on a regular basis."

Cohan has written extensively on investment banking, with books including *Money and Power*, *House of Cards* and *The Last Tycoons,* and his insights come from years of working on "The Street" at Lazard Frères, Merrill Lynch & Co. and as a managing director at JP Morgan Chase.

In the introduction and second chapter of *Why Wall Street Matters*, Cohan defines "Wall Street" and explains how that definition has changed over the years. While in the early days, it meant a physical location — Wall Street from Broadway to the East River in Lower Manhattan — today it is synonymous with the global financial system.

The first chapter is a whirlwind history of American finance, beginning with the early development of New York's Financial District on Wall Street.

In chapters three through five, Cohan gives the reader lessons on crises, central banking and the importance of what can be learned from the Crash of 1929 and the Great Depression that followed. Here he gets into the discussion of the Banking Act of 1933 — more commonly known as the Glass-Steagall Act — which was responsible for breaking up banks into commercial banks (deposit institutions) and investment banks (capital formation institutions). The Act was repealed in 1999.

We heard much about Glass-Steagall after the 2008 Crash, and Cohan says many people inside and outside of government wrongly attributed the crash to the Act's repeal. According to Cohan, "politicians who should know better… are profoundly wrong to think that what worked in the 1930s, when Wall Street was a collection of undercapitalized private firms, would work again today, when Wall Street is the supreme force dominating global finance… The fact that commercial banks are in the investment banking business and investment banks are in the commercial banking business had almost nothing to do with the causes of the financial crisis of 2008."

He does state, however, that "intelligent reform" of Wall Street is a must.

Chapter six is particularly strong, as Cohan covers the decades-long process of Wall Street firms transitioning from private partnerships — in which owners took few chances and operated their firms with discretion — to public entities, by selling stock in their firms to outside investors. He writes that this "new culture on Wall Street was one that encouraged swinging for the fences — taking risks with other people's money — in the hope of getting a big annual bonus."

Why Wall Street Matters includes serious ideas about where the problems are and what should be done in the future. It is a book that people who work on Wall Street and those who know little about finance can equally read and understand. $

Bart Ward is CEO of the Investment Advisory firm of Ward & Company, Ltd. Since 1993 he has written the weekly Wall Street history and market-oriented column, "The Corner." He has his degree in history from UCLA.

HOW MUCH DO YOU KNOW ABOUT FINANCIAL HISTORY?

TRIVIA QUIZ

1. Who is considered the financier of the American Revolution?

2. What historical business leader and philanthropist said, "I believe that every right implies a responsibility; every opportunity, an obligation; every possession, a duty."

3. In what year was "In God We Trust" added to US paper money?

4. Who invented the first stock ticker in 1863?

5. How many times can you fold a dollar bill back and forth before it tears?

6. What is the world's heaviest currency?

7. The 1951 US silver half dollar features two Black Americans. One is George Washington Carver. Who is the other?

8. Who vetoed the third Bank of the United States?

9. Who said, "A national debt, if it is not excessive, will be to us a national blessing?"

10. What city housed the nation's first bank?

1. Robert Morris **2.** John D. Rockefeller
3. 1957 **4.** Edward A. Calahan
5. Approximately 4,000 times
6. The Rai stone, found on the Island of Yap, which can weigh up to 7.6 tons
7. Booker T. Washington **8.** President John Tyler **9.** Alexander Hamilton
10. Philadelphia

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