

Sound Money and Life of Empires

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Purpose: Understand the role of money in the society, the problem of world economy today, life of an empire (hegemonic nation), and think about what to do. Understand the need for a new form of sound money in the era of digital economy expansion.

Contents:

1. Short Intro to The Scandal of Money
2. Important Definitions
3. Restoring Real Money (Chapter 14)
4. The Changing World Order
5. Homework #1

References: The Scandal of Money (by George Gilder), The Changing World Order (by Ray Dalio)

I. SHORT INTRO TO THE SCANDAL OF MONEY

George Gilder was born in New York City, U.S., Nov. 19, 1939. He is an investor, author, economist, techno-utopian advocate. He is the author of 1981 international best seller, *Wealth and Poverty*.

*“Over the last four decades, George Gilder has been one of the most influential writers on economic growth and prosperity, and technology’s key creative role in them. In 1981 Gilder’s book, *Wealth and Poverty*, hit all the bestseller lists and helped define the “supply-side,” low-tax economic revolution that characterized the eight years of Ronald Reagan’s presidency. Reagan himself frequently cited *Wealth and Poverty*. In the late 1980s Gilder turned his attention to technology and wrote several books predicting tech’s future impact, including *Microcosm* (1989), *Life After Television* (1990), *Telecosm* (2000) and *The Silicon Eye* (2006), as well as *The Scandal of Money* (2009). Gilder is presently wrapping up his next book, *Life After Google*, which will publish later this year.”* Appear in [Why Technology Prophet George Gilder Predicts Big Tech’s Disruption](#), By Rich Karlgaard.

Scandal of Money

- Chapter 1 The Dream and the Dollar
- Chapter 2 Justice before Growth
- Chapter 3 Friedman and Enigma of Money
- Chapter 4 The Chinese Challenge
- Chapter 5 The High Cost of Bad Money
- Chapter 6 Money in Information Theory
- Chapter 7 What Bitcoin can Teach
- Chapter 8 Where “Hayeks” Go Wrong
- Chapter 9 The Piketty-Turner Thesis
- Chapter 10 Hypertrophy of Finance
- Chapter 11 Main Street Pushed Aside
- Chapter 12 Wall Street Sells Its Soul
- Chapter 13 A Wrinkle in Time
- Chapter 14 Restoring Real Money

II. IMPORTANT DEFINITIONS

These definitions are useful in understanding the Scandal of Money.

Monopoly money: Money issued by sovereign states that block all competitive moneys in their domains, whether by regulation or by taxes not imposed on the sovereign currency. It's what we have in America and the rest of the world. Friedrich Hayek, the author of *The Road to Serfdom*, declared that "the source and root of all monetary evil [is] the government monopoly on the issue and control of money." Like most state-run monopolies, the money monopoly serves the interests of politicians rather than entrepreneurs, power rather than knowledge, old wealth rather than new ideas. Gold and bitcoin are the chief alternatives to monopoly money.

Hypertrophy of finance: The growth of finance beyond the rate of growth of the commerce it intermediates. For example, international currency trading is seventy-three times more voluminous than all global trading in goods and services and an estimated one hundred times as voluminous as all stock market transactions. Oil futures trading has risen by a factor of one hundred in some three decades, from 10 *percent* of oil output in 1984 to ten *times* oil output in 2015. Derivatives on real estate are now

nine times global GDP. That's not capitalism, that's hypertrophy of finance.

Information theory: Based on the mathematical theories of Claude Shannon and Alan Turing, an evolving discipline that depicts human creations and communications as transmissions across a channel, whether that channel is a wire or the world. Measuring the outcome is its "news" or surprise, defined as entropy and consummated as knowledge.

Entropy is higher or lower depending on the freedom of choice of the sender. The larger the available alphabet of symbols-that is, the larger the set of possible messages-the greater the composer's choice and the higher the entropy and information of the message. Since these creations and communications can be business plans or experiments, information theory provides the foundation for an economics driven not by equilibrium or order but by falsifiable entrepreneurial surprises.

Information theory both enables and describes our digital world.

Noise: Distortion of content by its conduit. A high-entropy message (full of surprise) requires a low-entropy channel (with no surprises). Surprises in the signal are information; surprises in the

channel are noise.

Wealth: Tested knowledge. Physical law dictates that matter is conserved: material resources have not changed since the Stone Age. All enduring economic advances come from the increase of knowledge through *learning*.

Economic growth: *Learning tested by falsifiability or possible bankruptcy.* This understanding of economic growth follows from Karl Popper's insight that a scientific proposition must be framed in terms that are falsifiable or refutable. *Government guarantees prevent learning and thus thwart economic growth. All expanding businesses and industries follow a learning curve that ordains a 20 to 30 percent decrease in costs with every doubling of total units sold.*

Classical learning curves are MOORE'S LAW in SILICON VALLEY and METCALFE'S LAW in networking. Raymond Kurzweil generalized the concept as a "law of accelerating returns."

Moore's law: *Cost-effectiveness in the computer industry doubles every two years.* This pace corresponds closely to a faster pace in the number of transistors produced, signifying a learning curve. Formulated by Intel founder Gordon Moore and inspired by Caltech professor Carver Mead's research, Moore's Law was originally based on the biennial doubling of the density of transistors on a silicon chip. It now chiefly relies on other vectors of

innovation, such as parallel processing, multi-threading, lower voltages, and three-dimensional chip architectures. Moore's Law has become an important principle of INFORMATION THEORY.

Metcalf's law: The value and power of a network grows by the square of the number of compatible nodes it links. Named for the engineer Robert Metcalfe, a co-inventor of Ethernet, this law is a rough index and deeply counterintuitive. (It would be preposterous to claim that the Internet is worth the square of its six billion connected devices.) But the law applies to smaller networks, and it explains the vectors of value creation of companies such as Facebook, Apple, Google, and Amazon, which now dominate stock market capitalization. Metcalfe's Law may well apply to the promise of new digital currencies and ultimately assure the success of a new transactions layer for the Internet software stack.

Wall Street: The symbol of the financial industry, from investment banks to insurance companies, from credit card vendors to payday lenders, from brokers to hedge funds. Today Wall Street is gorging itself on the HYPERTROPHY OF FINANCE. Ideally, finance *intermediates* transactions across time through interest rates and across space through currency-exchange rates. But today both these functions are falsified by government manipulation. They

face disintermediation by gold, by a new transactions layer in the Internet software stack, and by new cryptographic blockchain currencies. In the hypertrophy of finance, Wall Street was bloated by MONOPOLY MONEY created by the Federal Reserve and channeled to the U.S. Treasury by banks, never touching MAIN STREET.

Main Street: The symbol of the real economy of workers paid hourly or monthly and sealed off from the circular loops of WALL STREET moneymaking. Perhaps the street where you live, Main Street is the site of local businesses and jobs.

Silicon Valley: A symbol of the high-tech entrepreneurial economy, centered in Santa Clara County, California, and largely funded by venture capital from SAND HILL ROAD in Palo Alto and Menlo Park. The high-tech economy is increasingly based on INFORMATION THEORY, which governs its infrastructure of communications and computing, particularly software. Silicon Valley sustains both MAIN STREET and WALL STREET by supplying them with new technology. Through Wall Street, Silicon Valley provides Main Street with opportunities for sharing in the equity of the ascendant sectors of the world economy.

In recent years, Silicon Valley has suffered from the HYPERTROPHY

OF FINANCE, become bloated with MONOPOLY MONEY,
and been bent by controls from the Wall Street-Washington axis.
Like Wall Street, Silicon Valley has bypassed Main Street, which
has remained trapped in its pedestrian time-based compensation
and mindless index fund investments.

Expansionary fiscal and monetary policy: The attempt by central banks to stimulate economic activity by selling government securities to pay for a governmental deficit. Keynesians believe that selling securities will impart a fiscal stimulus by enabling more government spending.

Monetarists, on the other hand, believe that to stimulate economic activity central banks should create money to *buy* government securities, money that supposedly is put into the economy. But this new money goes to the owners of the purchased securities, chiefly banks, which in recent years have used their money to purchase more securities from the Treasury. Thus Keynesianism and monetarism converge in expanding the government's power to spend.

In an information economy, both measures attempt to use government power to force growth. But ECONOMIC GROWTH is *learning* (accumulating tested knowledge). Learning cannot be forced.

Real money: A measuring stick, a metric of value, reflecting the scarcity and irreversible passage of time-entropy based, equally distributed, and founded on the physical limits of the speed of light and the span of life. **BITCOIN and GOLD are both real money in this sense. MONOPOLY MONEY is not.**

Bitcoin blockchain: A method of secure transactions based on wide publication and decentralization of a ledger across the Internet, in contrast to current credit card systems based on secrecy and centralization, using protected networks and firewalled data centers filled with the personal information of the transactors. The public ledger of transactions is collected in blocks roughly every ten minutes, beginning with the current block and going back to the "Genesis block" created by Satoshi Nakamoto, the pseudonymous inventor of bitcoin. Each block is confirmed when at least half the participants in bitcoin nodes-the "miners" hash the block mathematically with all the previous blocks since the Genesis block. In order to change or rescind a transaction, therefore, more than half the computers in the system have to agree to recompute and restate all the transactions since Genesis. Bitcoins are used to evaluate transactions based on the time taken to validate a block. Bitcoins thus are not coins but metrics or measuring sticks for transactions that are permanently registered in the **BLOCKCHAIN**.

Blockchain: A database, similar to a cadastre of real estate titles, extended to events, covenants, patents, licenses, or other permanent records. All are hashed together mathematically from the origin of the series, with the record distributed and publicized on

decentralized Internet nodes.

Gold: The monetary element, tested over centuries. Usually thought to be money because it is a useful commodity-pretty, shiny, divisible, portable, scarce, and convertible into jewelrygold is in fact the monetary element because it is useless. Money is not valuable because it is really jewelry; jewelry is valuable because it is really money. Gold is a metric of valuation based on the time to extract an incremental ounce, which has changed little over the centuries while gold has become more difficult to extract from deeper and more-attenuated lodes.

Shannon entropy: Information measured by surprisal, or unexpected bits, "news." Counterintuitively, surprising information is a kind of disorder. The alphabet is ordered; crystals are ordered; snowflakes are ordered. *Hamlet* and Google are beautifully disordered alphabets conveying surprising information.

III. RESTORING REAL MONEY (CHAPTER 14)

I am more convinced than ever that if we ever again are going to have sound money it will not come from government. It will be issued by private enterprise.

-Friedrich Hayek, 1977

Current state of the world diagnosed by the author:

- Government is getting bigger and bigger by more tax collections.
- To get re-elected, they made promises of stimulation which results in expansion of debts and currencies.
- Continuous “stimulation” produces fake money.
- Fake money gives wrong signals to economic entities.
- Speculative investment thrives with the booming of money exchange market.
- Lavish spending from borrowing make people lives miserable.
- Mortgage means you pay your debt through your life time. Mort is to mean dead. Gage is to mean pledge. If you don't pay you debt, you will have to pay with your life.

His Proposal is Policy Change:

Existing policies based on demand-side economics by a few elites, government and central banks, suppress growth. Needed is a shift in policy. Supply-side economics can bring about an instant and sharp enhancement of all entrepreneurial assets. [Real money, lower tax rates,](#)

and deregulation can open up and lengthen the time horizons of enterprise.

- To supply-side economics from demand-side economics
- To deregulate the economy from oppressive regulations
- To promote industrial innovation, manufacturing, skilled immigration, initial public offering
- To a small-entropy government from a high-entropy government
- To high-entropy private entrepreneurs with ample room for making real value creation and growth
- To expand the economy with ever cheaper and more useful goods and services with which everyone can thrive.
- To achieve all these can be helped by the redemption of sound money (honest money)

Sound Money (Honest money)

- Global money on the Internet
- Fixed exchange rate
- Payment methods over the Internet
- Distributed system rather than centralized.
- It is Bitcoin.

Previous attempts (back to sound money; did not get realized).

- Greenspan (Previous FED chairman) “Shelton bonds”: five year treasury notes payable in gold.

- Government has to be prudent. They now have to pay back to the borrowers with the real money.

Nature of Sound Money and Consequence

- Money is time. Money is essentially tokenized time. It allows this scarcity that applies to all economic activity ubiquitously across the economy. It allows you to translate that into transactions and prioritizations across the economy.
- With the real money, everyone cannot but be prudent!
 - No more stimulation via debts
 - By working to creating new value, you become rich.
 - You can share with others with what you've earned.
 - With money tied to time, money start to flows to real economic and productive activities.
 - Real economic activities produce goods and services.
 - Everyone can benefit from cheap but useful goods and services.

Can such a change be made? YES, we have examples.

Example: After World War II,

- government spending reduced by 61 percent between 1945 and 1947
- 150,000 regulators laid off + million other civil employees
- Economic growth surged by 10 percent over two years

- Civilian labor force expanded by seven million workers
- Large manufacturing corporations emerged
- Gold exchange standard (Bretton Woods System) provided sound and reliable money
- The fixed exchange rate of Bretton Woods (1 ounce of gold = 35 Dollars) is used throughout the world.
- Postwar economic boom, growth of middle class

After Nixon Shock '71, the monetary regime became dependent upon the politics of central banking, chiefly by the US Federal Reserve and the European Central Bank.

- Reliable money has become scarce

New Zealand

- With transformation to smaller government, NZ have reborn as one of the most creative and profitable food exporters.

Israel

- Cutting tax rate by 30% and shrinking the state-owned portion of leading corporations (80% to 20%), Israel has transformed itself from a cripple industrial laggard to leading the world in per capital innovation and growth.
- Google traffic guidance, Apple iPhones, Internet, Medical Center, Anti-missile defenses

China miracle

- “Perhaps most relevant today are the monetary lessons of the Chinese miracle. The laws of sound money and supply-side economics are so powerful that, under Mao's authoritarian but procapitalist successors, they transformed an economic wasteland into the world's largest and fastest-growing economy. Defying the monetarist counsel of Milton Friedman and the monetary harassment of four American presidents for alleged "manipulation," China accomplished this miracle by fixing its currency to the dollar. Its monetary conditions weren't perfect, but they were good enough, during decades of the dollar's relative stability, for a spectacular ascent of manufacturing.” (pg. 154, The Scandal of Money)

IV. THE CHANGING WORLD ORDER

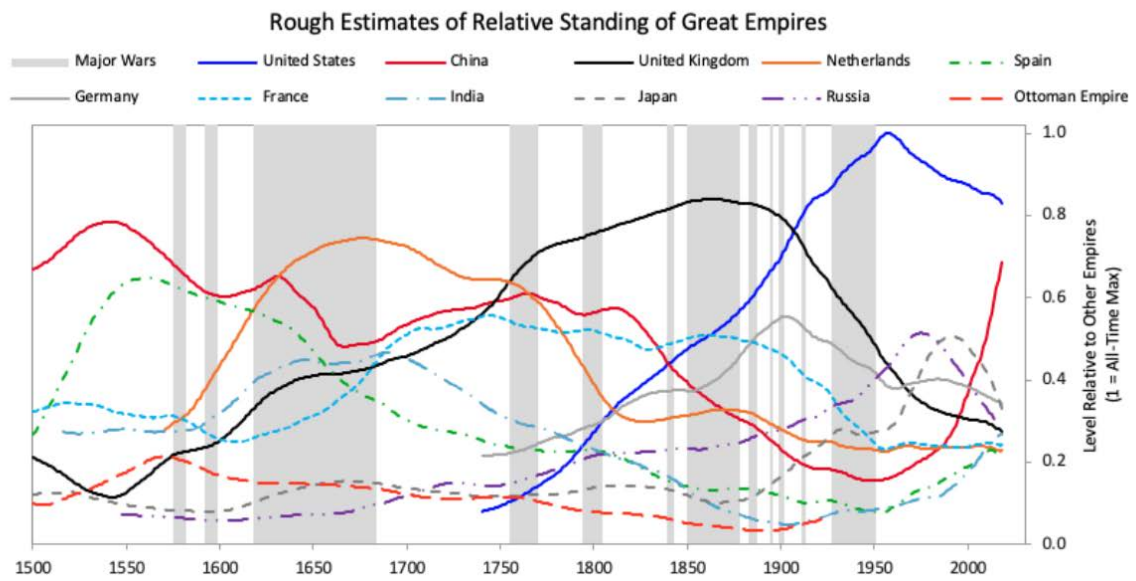
By Ray Dalio

<https://www.principles.com/the-changing-world-order/>

Ray Dalio is Founder of Bridgewater Associates. He, it is known, started Bridgewater out of his two-bedroom apartment in New York in 1975 and under his leadership, the firm has grown into one of influential (\$18.7 Billion) **hedge funds companies** in the US according to Fortune Magazine.

This book is about how different empires such as China, Nederland, and England in the past have evolved over time from the birth to the demise to a successor. The aim of this book, or the research done, is to protect the wealth (of his companies and his followers) by provision of better understanding the nature of empires and wars, the eight stages an empire goes through, and the role of its reserve currency and finance during these stages.

Introduction	Read Now
Ch 1: The Big Cycles in a Tiny Nutshell	Read Now
Ch 2: The Big Cycle of Money, Credit, Debt, and Economic Activity	Read Now
Ch 3: The Changing Value of Money	Read Now
Ch 4: The Big Cycles of the Dutch and British Empires and Their Currencies	Read Now
Ch 5: The Big Cycles of the United States and the Dollar, Part 1	Read Now
Ch 5: The Big Cycles of the United States and the Dollar, Part 2	Read Now
Ch 6: The Big Cycles of China and Its Currency	Read Now
Ch 7: US-China Relations and Wars	Read Now
Ch 8: The Archetypical Cycle of Internal Order and Disorder	Read Now
Ch 9: Delving into the Six Stages of the Internal Cycle with a Particular Focus on the US Now	Read Now



The graph above shows a level relative to other empires (1 = all time high)

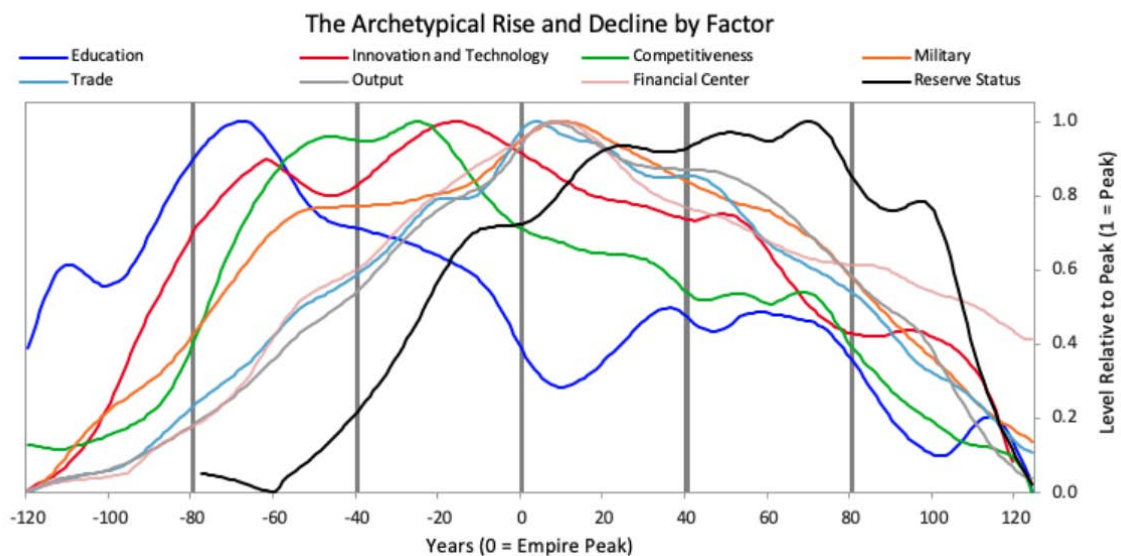
- 1500 – 1600: China
- 1625 – 1750: Nederland
- 1750 – 1900: The United Kingdom
- 1900 – current: The United States of America, The China is rising.

The measure of wealth and power is made of eight measures:

1. Education
2. Competitiveness
3. Technology
4. Economic output
5. Share of world trade

6. Military strength
7. Financial center strength
8. Reserve currency

The following chart below shows the average of each of these measures of strength, with most of the weight on the most recent three reserve countries (i.e., the US, the UK, and the Dutch).



The chart above shows that the power in Education comes first and followed by Innovation and Technology. The one comes last is the status of Reserve Currency.

Education (Blue) → Innovation and Technology (Red) → Competitiveness (Green), Military(Orange), Trade (Light Green), Financial Center(Peach) → Reserve Status.

The lines on the chart do a pretty good job of [telling the story of why and how the rises and declines took place](#). Using these and referring to some additional factors that we will delve deeper into later, I will describe that cycle in a nutshell. But before I start, it's worth noting that all of these measures of strength rose and declined over the arc of the empire. That's because these strengths and weaknesses are mutually reinforcing—i.e., strengths and weaknesses in education, competitiveness, economic output, share of world trade, etc., contribute to the others being strong or weak, for logical reasons. [For example, it makes sense that better-educated people would produce societies that are more innovative, competitive, and productive](#). I call this cyclical interrelated move up and down “the Big Cycle.”

Take note of the order that these items move up and down in the chart because it is broadly indicative of the processes that lead to the rising and declining of empires. [For example, quality of education has been the long-leading strength of rises and declines in these measures of power, and the long-lagging strength has been the reserve currency](#). That is because strong education leads to strengths in most areas, including the creation of the world's most common currency. That common currency, just like the world's common language, tends to stay around because the habit of usage lasts longer than the strengths that made it so commonly used.

Where does the US stand in 2021?

V. HOMEWORK #1

1. Read the lecture note materials and the references. Lectures by FED chairman Ben Bernanke, Denationalization of Money, The Changing World Order, The Scandal of Money.
2. Think about the following questions at least.
3. Write an essay (less than 10 page, 12 font size, Times New Romans) and submit by March 22nd, 10:30AM.

What do you like to do after reading these books so far?

Do you agree with Ray Dalio's research?

Which one do you think is right, demand-side economics or supply-side economics?

No matter what you believe in their work, but can you agree with their observation of how the world is moving and diagnosis that the money today has a problem causing inequality and crisis.

After studying these materials, what position would you like to take?

- 1. Use this knowledge and become rich.
- 2. Diversify your portfolio and let others know as well.
- 3. Do something to make a change.

One says that you can change by programming.

Do you believe in these words?

If yes, how do you think programming can change the world?