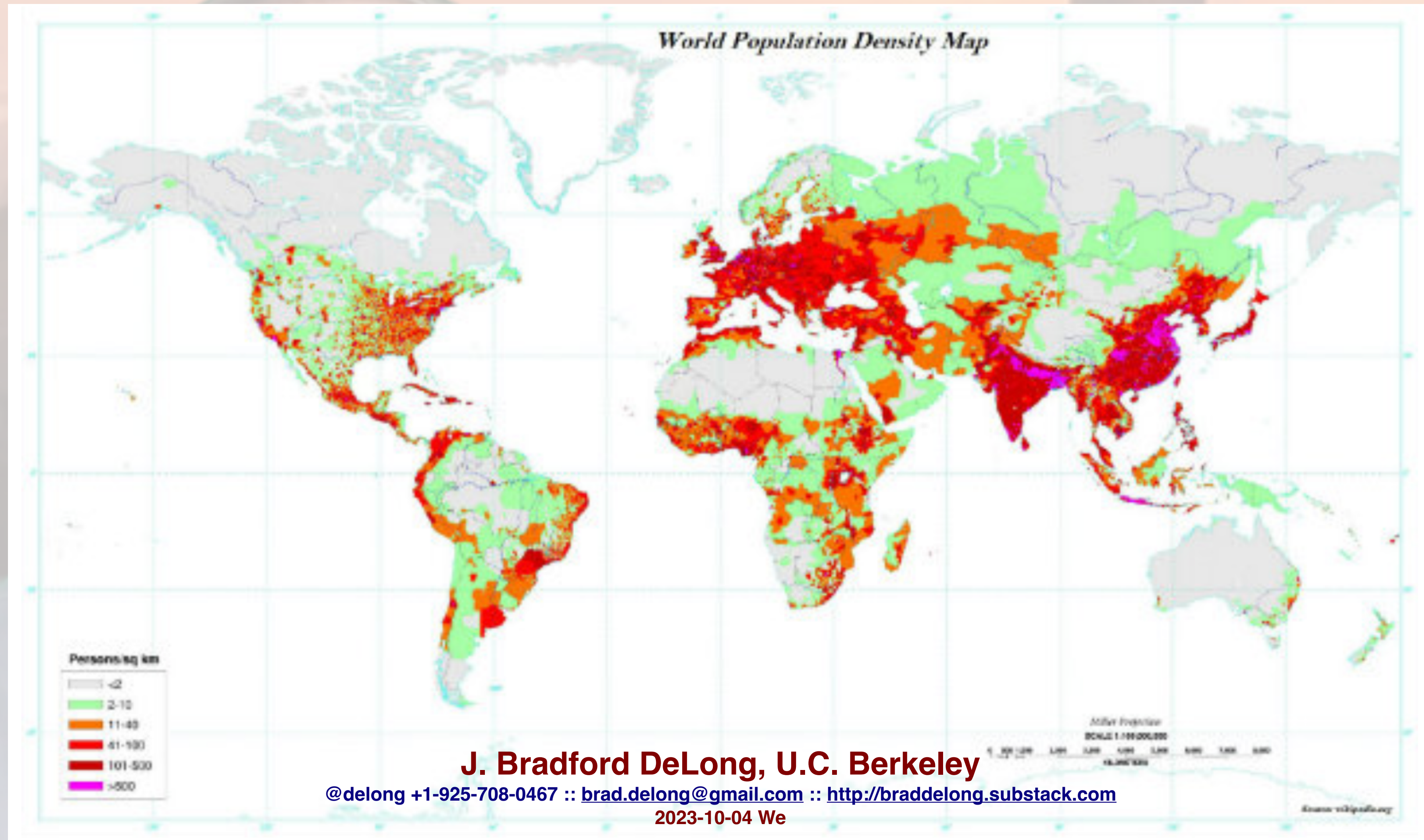


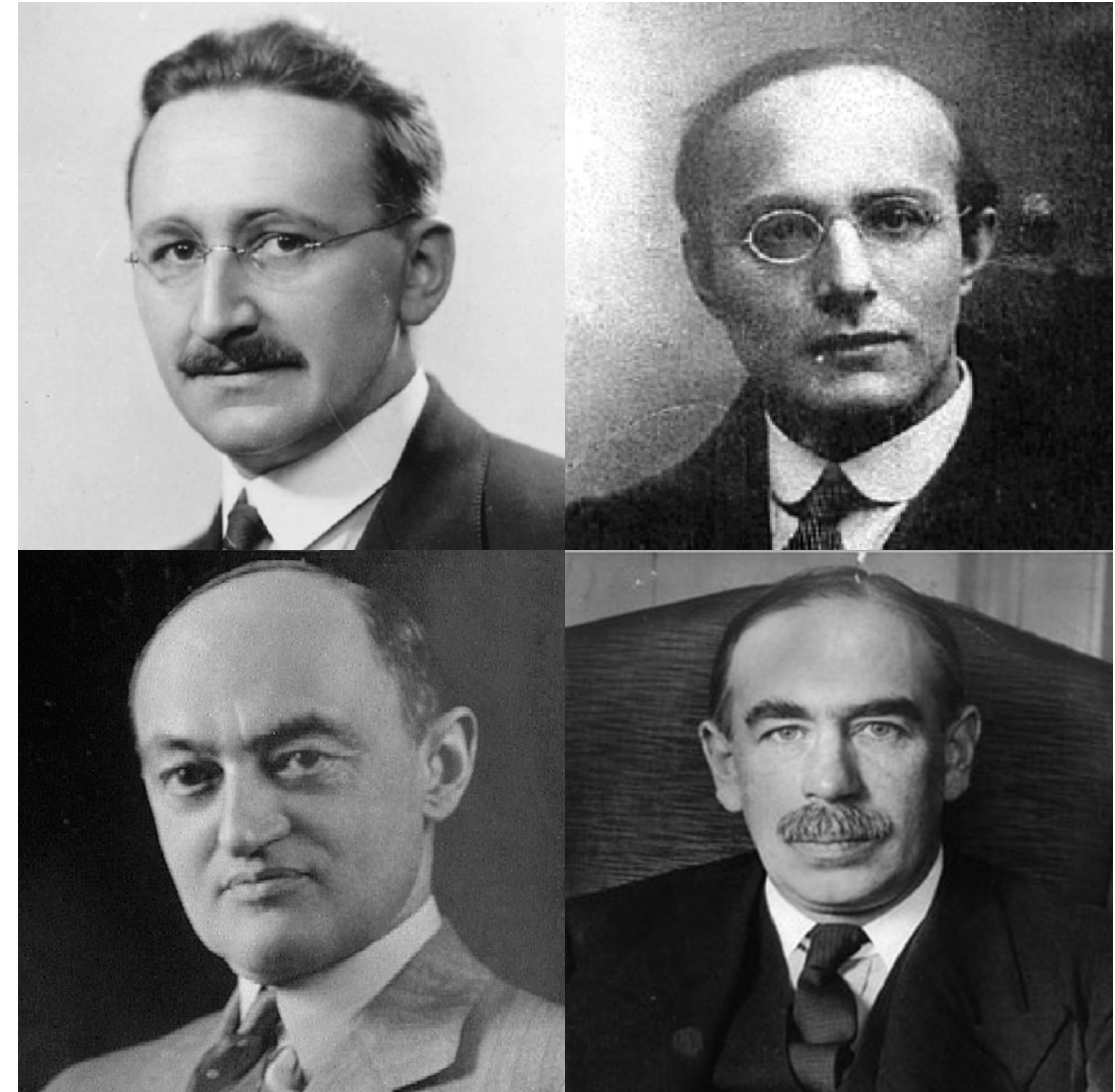
Afterthoughts on *Slouching Towards Utopia*: 20th-Century Modes-of-Production in Historical Perspective

“*Slouching Towards Utopia* is the last orthodox work of late-1800s Second-Internationalist Marxism” —Dylan John Riley



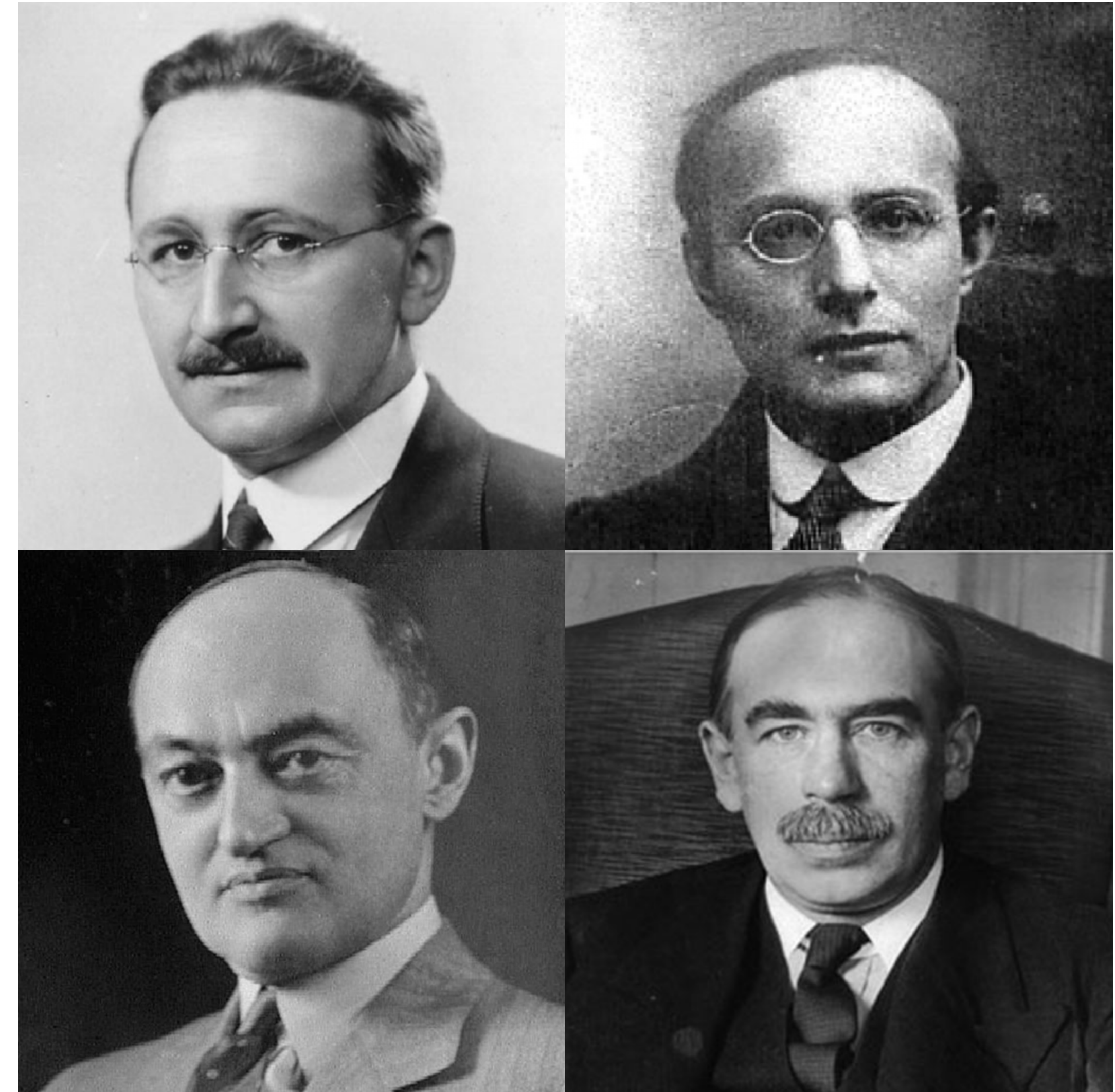
My Bottom Line Today I: A Potentially Big-Enough Economic Pie

- Schumpeter, von Hayek, Polanyi, &—maybe—Keynes have the ideas that are key to understanding the economic history of the 20th century
- Before 1870, history was bound to be brutal and brutish
- After 1870, it was clear that we were rapidly becoming rich enough to make a truly human world
- But since 1870 we have failed to do more than slouch towards anyone’s idea of utopia
- We are rapidly solving the problem of baking a sufficiently large economic pie for everyone to have enough
- But what should be the much easier problems of slicing and tasting the pie—they continue to more-or-less completely flummox us:
 - We are unable to slice—distribute things equitably
 - We are unable to taste—utilize our wealth to live wisely and well, so that people feel safe and secure and are healthy and happy
 - In fact, although the long 20th century has been the most prosperous in human history, there is also a strong case that it has been the most terrifying and the most murderous
- In large part, the problems of slicing and tasting flummox us because both need and cannot stand the market system:
 - “The market giveth, the market taketh away: blessed be the name of the market...”
 - vs.
 - “The market was made for man, not man for the market...”
- Since 1870, technological change has effectively replaced the old economy with a new one twice as productive with a different forces-of-production structure every generation
- Thus we have to rewrite, every generation, the econo-social-political software code of society that runs on top of forces-of-production hardware
- This is really hard to do on the fly; and so the system repeatedly crashes



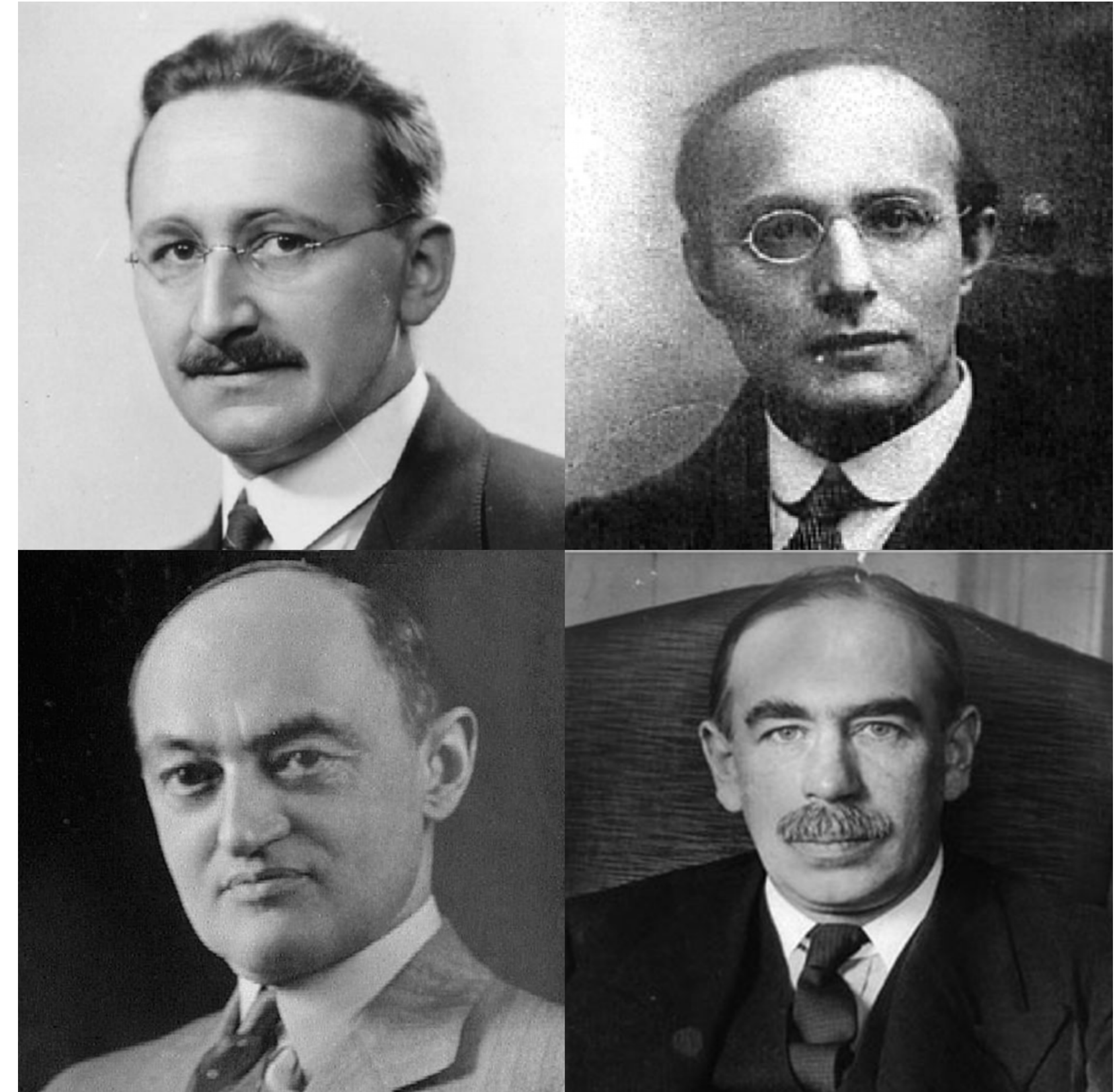
My Bottom Line Today II: Failing at the Problems of “Slicing” and “Tasting” Our Big-Enough Economic Pie

- But what should be the much easier problems of slicing and tasting the pie—they continue to more-or-less completely flummox us:
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My Bottom Line Today II: Our Civilization & Its Our Discontents

- In large part, the problems of slicing and tasting flummox us because both need and cannot stand the market system:
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Quantitative

Semi-

Guesses

Heroic Assumptions

Date	Real Income/ Capita y	Popula- tion P (millions)	Ideas Growth Rate h	Ideas Stock Level H
150	\$900	200	0.060%	0.272
800	\$900	240	0.014%	0.297
1500	\$900	500	0.052%	0.429
1770	\$1,100	750	0.149%	0.643
1870	\$1,300	1300	0.442%	1.000
2010	\$11,600	6900	2.159%	20.557
2100	\$53,802	9000	2.000%	108.893
2200	\$397,543	9000	2.000%	804.618
2500	\$160,380,	9000	2.000%	324606.13

$$H = \left(\frac{n + g + \delta}{s} \right)^\theta y \sqrt{L}$$

- Assume constancy of capital intensity...
- Assume constancy of labor-force share...
- Assume $\gamma = 2$
- Normalize...

$$H_{1870} = 1$$

$$H = y \sqrt{P}$$

Within-Nation Inequality...

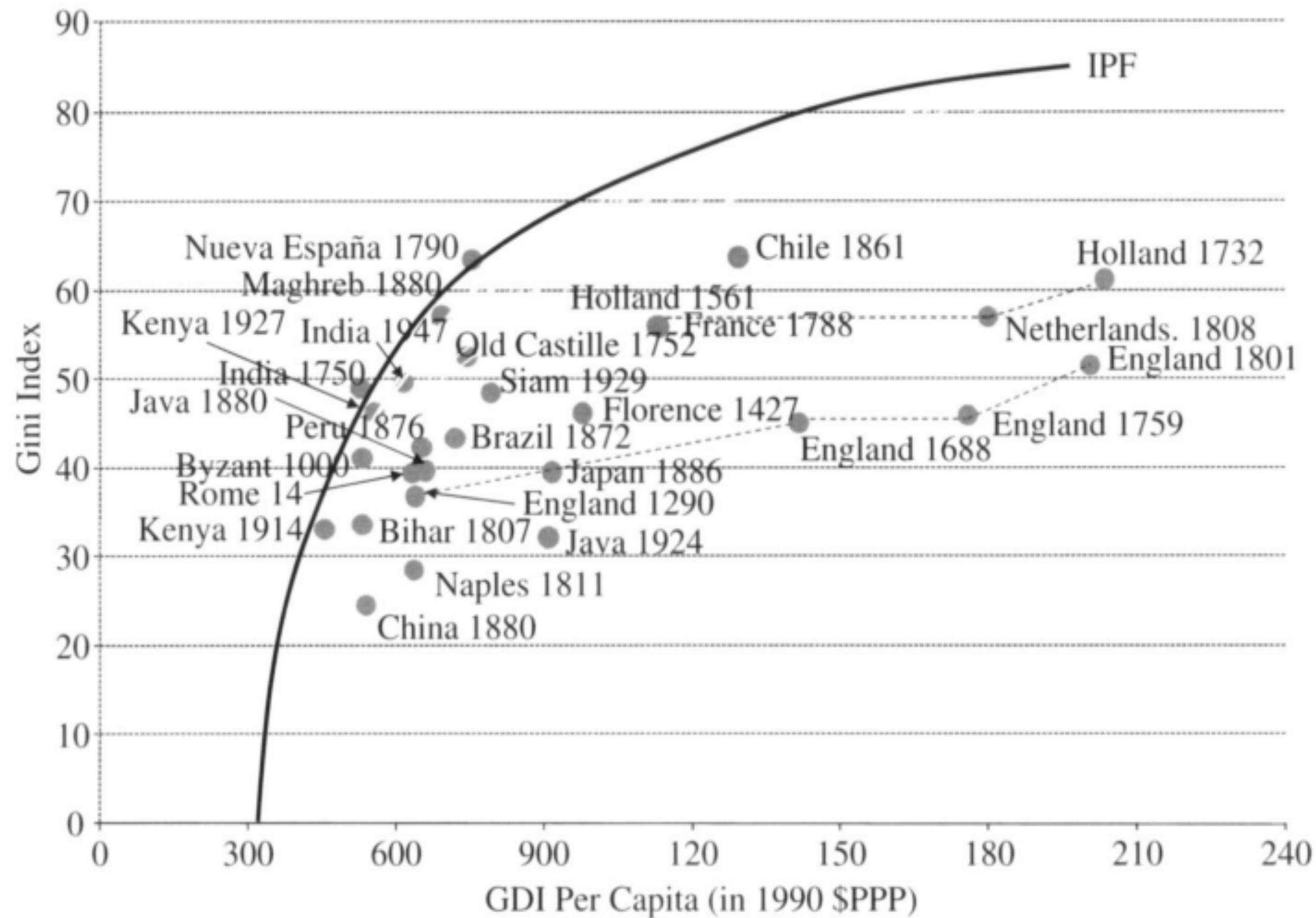
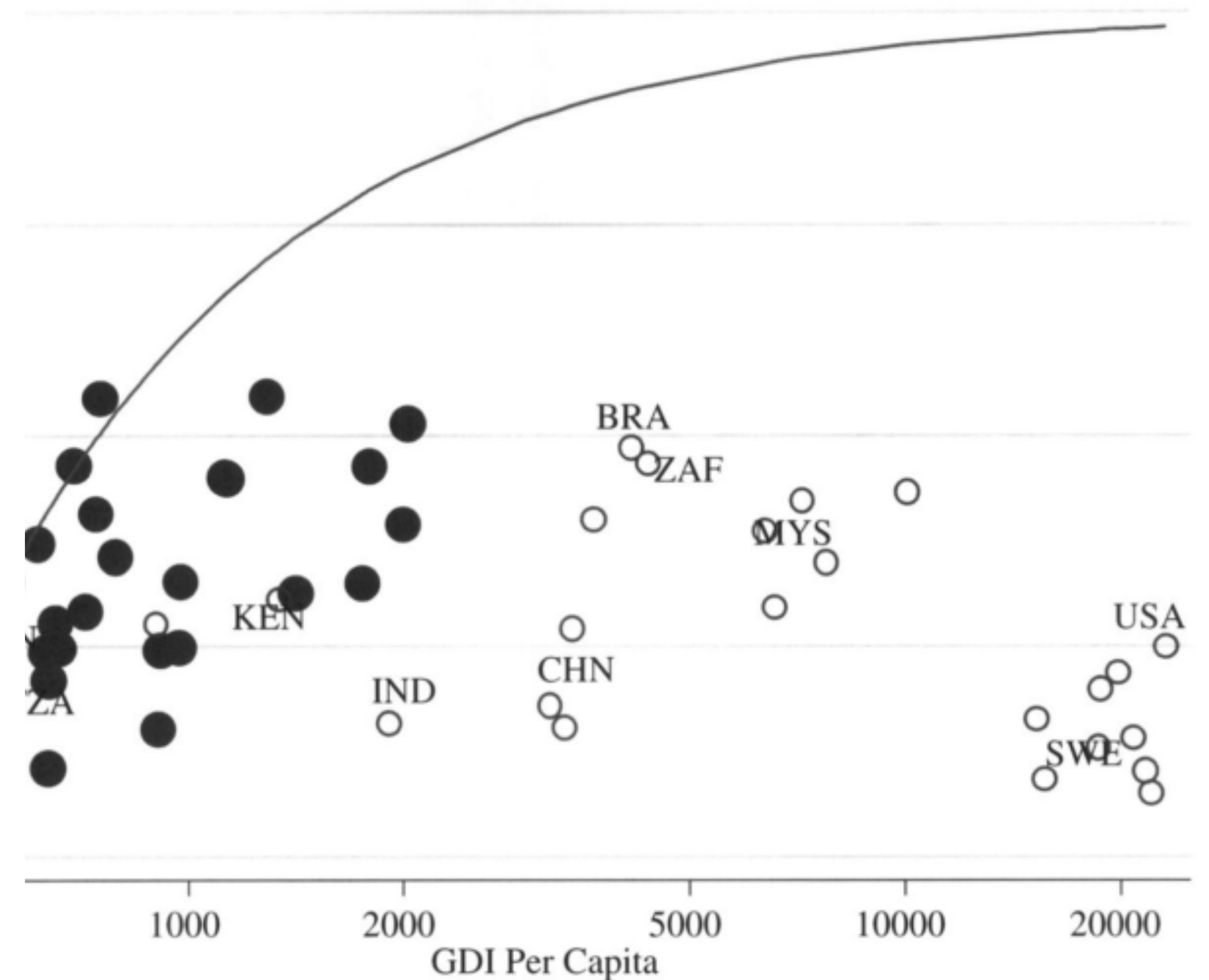


Fig. 2. *Pre-industrial Inequalities: Estimated Gini Coefficients, and the Inequality Possibility Frontiers*

Note. The solid IPF line is constructed on the assumption that $s = \$PPP 300$. The Gini index is estimated by Gini2.



the Inequality Possibility Frontier for the Pre-industrial Society Sample and Selected Modern Societies

NOTE. MODERN SOCIETIES are drawn with hollow circles. IPF drawn on the assumption of $s = \$PPP 300$ per capita per year. Horizontal axis in logs.

& Global Between-Nation Inequality...



The Pre-1870

World

The Arming of Akhilleus



Aristotle & the Four Branches of the Science of Acquisition



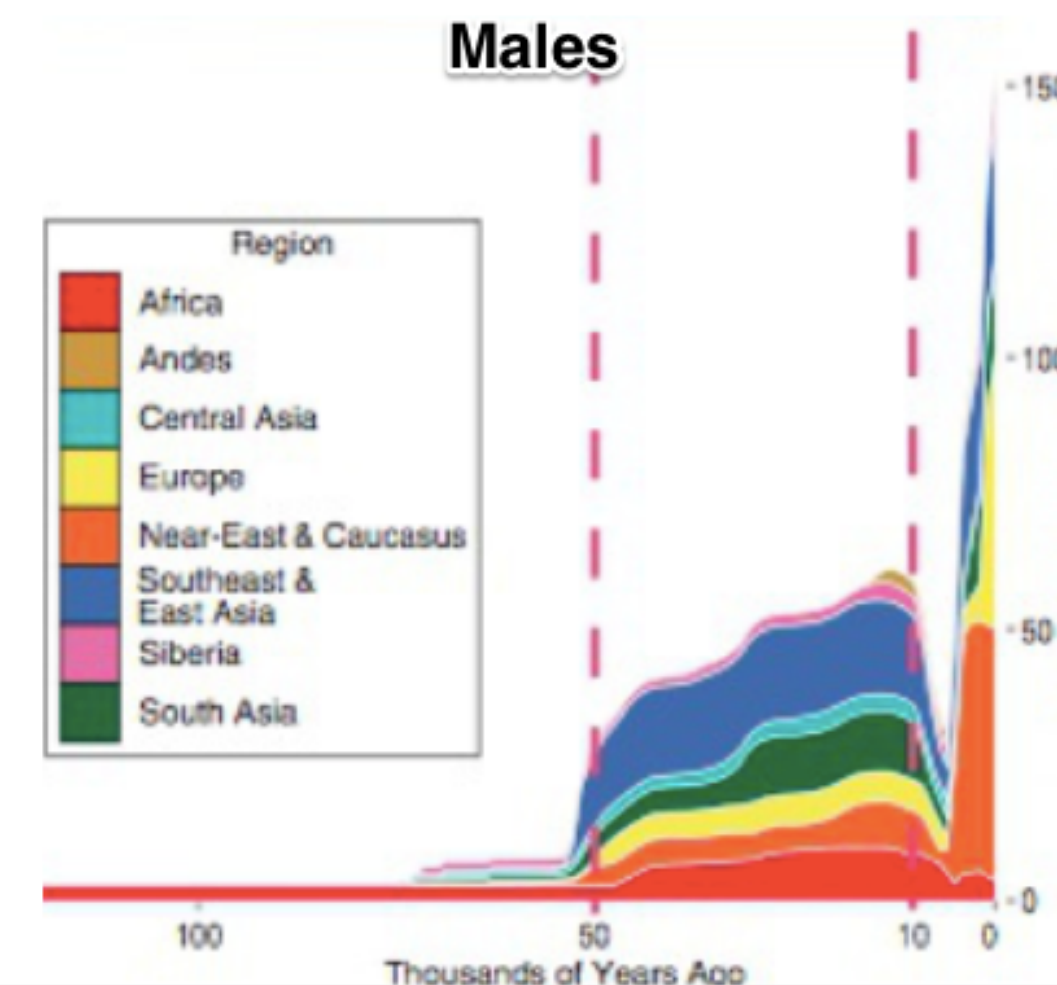
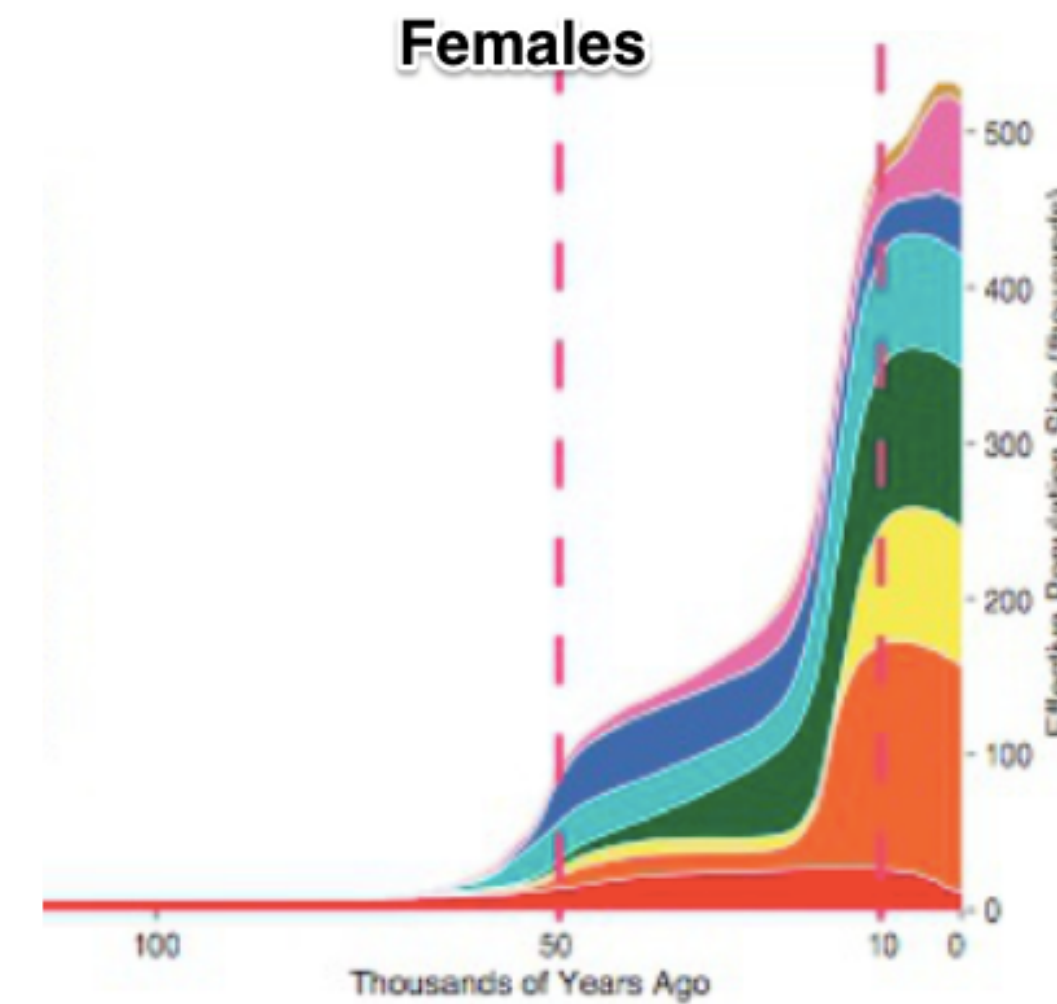
Inequality Has Ruled since Shortly After the Invention of Agriculture III

- “He has taken all their children, for is Gilgamesh not the shepherd of his people?”
- “Gilgamesh does not leave a daughter to her mother, nor the maiden to the warrior, nor the wife to her husband.
- “Yet Gilgamesh is the magnificent and glorious shepherd of his people.
- “The gods heard the people’s cry, and the gods of heaven beseeched the Lord of Uruk, Anu the god...”



Inequality and Patriarchy

- Everyone inherits their mitochondria from their mothers
- Every male inherits his Y-chromosome from his father
- From 5000-2000 BC, a huge chunk of Y-chromosome lineages are not propagating
 - Polygyny for some—and non-matrimony for others
 - Persistence of (male) descent groups
 - What's life like for women as this goes on?
 - <https://logarithmichistory.wordpress.com/2015/09/27/the-patriarchal-age/>
 - <http://genome.cshlp.org/content/early/2015/03/13/gr.186684.114.full.pdf>



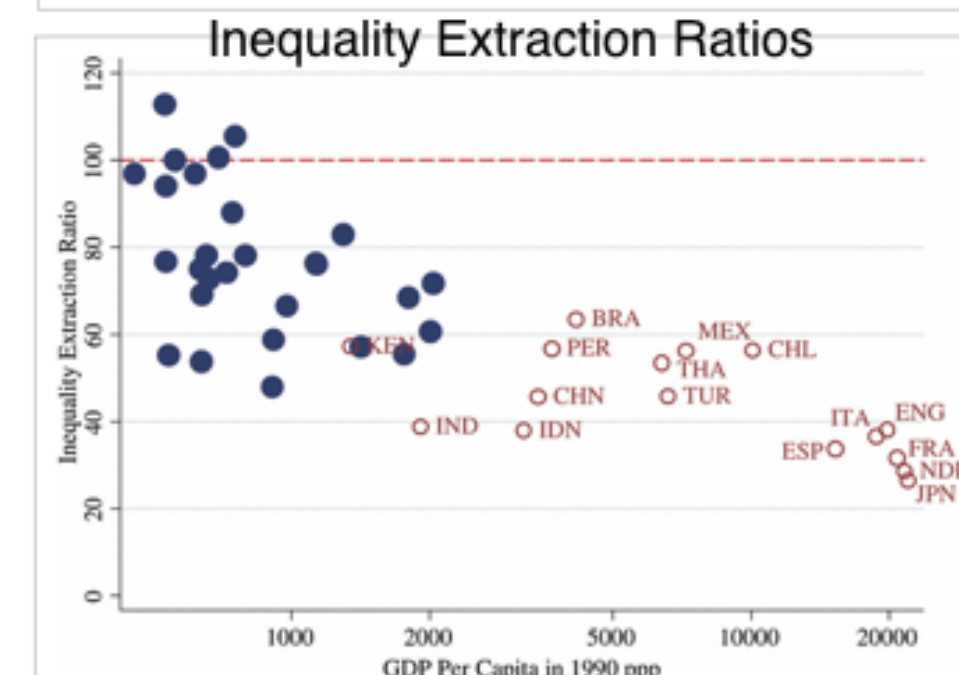
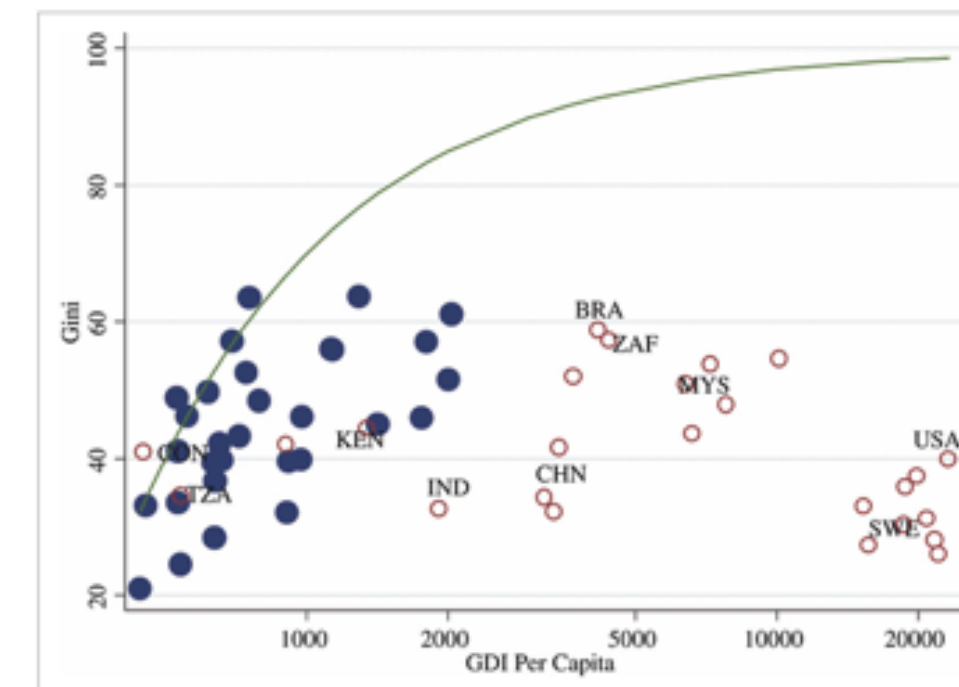
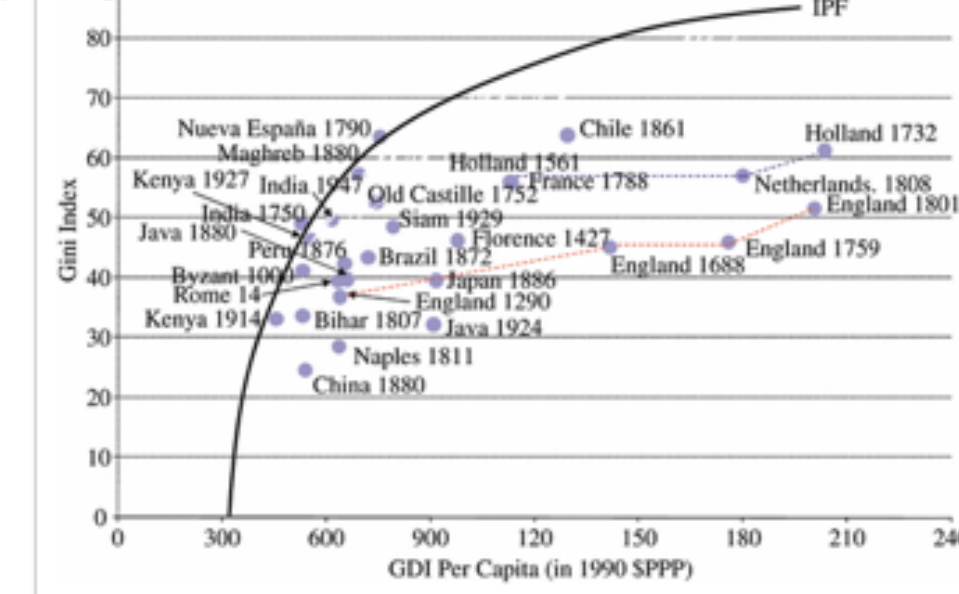
The Gini Coefficient

- The “Gini Coefficient”
 - If the bottom $3/4$ got $1/4$ of the income and the top $1/4$ the rest (evenly distributed), the Gini would be 0.5
 - If the bottom $2/3$ got $1/3$ of the income and the top $1/3$ the rest (evenly distributed), the Gini would be 0.33
 - This is income: not status. the 4M slaves in the U.S. in 1860 would have objected most strongly to claim that U.S. then no more unequal than Britain
- If you were to think like a utilitarian—and assume that each doubling of income is equally valuable in a utilitarian sense—a move from a Gini of 0.5 to 0.33 would be like a 30% boost to everyone’s income

Agrarian Age Economies Look to Have Been About 80% as Unequal as They Could Have Possibly Been

- In a poor agrarian-age economy, inequality cannot be too great.
- If it is, then poor women are too skinny to ovulate and poor children so malnourished as to have compromised immune systems.
- In which case they die, and so “decrease the surplus population”.
- <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0297.2010.02403.x/full>

Inequality in Pre-Industrial and Modern Economies



Feudal Society

- Feudal-era forces- and relations-of-production taught:
 - society is static, hierarchical
 - who you is chosen for you by the role ascribed to you
 - production is small-scale, handicraft, and individually autonomous
 - those who work owe rent to those who protect them and tithes to those who guide them to salvation.
- Agrarian-Age forces-of-production require that we write something like feudal-society software to run on top of it.



Commercial-Imperial Society

- Commercial-imperial gunpowder-empire forces- and relations-of-production taught:
 - society is mobile, contractual
 - who you are is chosen by you—if you can make a contractual-network place for yourself;
 - production is middle-scale, aided by tools and finance, and interdependent
 - in a peaceful world we can make and fulfill the bargains and contracts our interdependence requires
 - the bourgeois virtues.
- But the role of gunpowder empires?
 - Gunpowder empire as the most likely climax state of human society?



1870 as the

Hinge of

History

Commercial-Imperial to Steampower & Machine Society

- After 1870, it is clear that soon, very soon, governance no longer has to be a force-and-fraud scheme...
- Friedrich Engels—Freddie from Barmen: The requirements of organizing production in Steampower & Machinery Society will teach us:
 - to recognize our interdependence...
 - to recognize our collective power...
 - to recognize our individual equality...
 - that it is fair that we rotate through administrative jobs...
 - that we really want to all wear identical blue overalls...
 - that we really want to all call one another “comrade!”...
- The problems of slicing and tasting the sufficiently large economic pie are second-order...
- Yet this mode of thought did not come to dominate...
 - Aristocratic Old Régime persisted
 - Commercial-liberal currents of thought gained strength
 - As did social-darwinism as a bridge
- “Just give history time”, Engels said. “It took 700 years to go from feudalism to commercial society; so far it has been less than 200 from commercial to steampower and machine society”



Might We Have Wound Up in a Permanent or Semi-Permanent Steampower Society?

- Rate of global technology growth in years up to 1870: 0.45%/year
 - $\frac{1}{3}$ of that from the ingathering of manufacturing to the North Atlantic
 - $\frac{1}{3}$ of that from really, really cheap coal—glaciers as bulldozers
- That is not enough to get us out of the Malthusian trap
- That is not enough to trigger the demographic transition
- We needed what is called the: **Second Industrial Revolution**



After Steampower...

- What possibilities were unleashed by the coming of the:
 - Applied Science?
 - Mass Production?
 - Global Value Chain?
 - Attention-Info-Biotech?
- Different:
 - Externalities
 - Distributions
 - Psychological Lessons

Date	Ideas Growth Rate h	Ideas Stock Level H	Real Income/ Capita y	Human Population P (millions)
-6000		0.06	\$900	10
800	0.023%	0.28	\$900	220
1500	0.071%	0.47	\$1,000	480
1770	0.146%	0.69	\$1,100	875
1870	0.365%	1.00	\$1,300	1300
1930	1.831%	3.00	\$3,000	2100
1975	2.441%	9.00	\$6,000	4000
2020	2.441%	27.00	\$12,000	7800
2050	1.250%	40.00	\$16,000	9500

The Polanyian Perplex

- Land, Labor, and Finance as “Fictitious Commodities”:
 - They are not real “commodities”
 - Real “commodities” are properly pushed to their most valuable use by market forces
 - It is right and proper that each use of them must pass a profitability test...
- Fictitious commodities:
 - “Land”—what your community is
 - “Labor”—what your lifestyle is
 - “Finance”—whether you have a job, or a firm to work for, or can quickly find another one
- People think they have rights to stable communities, expected incomes, secure jobs

Popular Government and the Market Economy: Society's Revenge

Karl Polanyi:

- In a market economy, the only rights a market society respects are property rights:
 - & the only property rights that are worth anything are those that help you produce things for which rich people have a serious jones
 - & a market economy produces change and upheaval
 - Creative destruction at a rate never before seen:
 - Remember: 1 year sees as much technological and organizational change as 50 years back in the agrarian age
- Hence there will be anxiety—economic anxiety and uncertainty
 - Perhaps it can be papered over if economic growth is fast enough
 - But if not?
 - Society will have its revenge: it will protect itself against the market logic
 - Somehow, it will find a way—constructive or destructive, left or right
- And political entrepreneurs seeking power, or seeking to advance cause not broadly popular in their own right, will take advantage...



**Post-
Steampower
Modes of
Production**

Applied-Science Society

- The industrial proletariat never becomes a majority of any society
 - The fragmentation of the working class
 - The emergence of new organized social groups that did not identify with the socialist movement—white-collar workers, farmers, veterans, and women
 - The importance of industrial and sectoral cleavages, as opposed to class cleavages
 - Ideological divisions and conflicts within the socialist parties themselves—especially between “reformist” and “revolutionary” factions.
 - The rise of nationalism—plus ethnic minorities
- Fascism offering a more appealing and charismatic alternative than socialism
- The persistence of the old régime: hostility and repression of the conservatives who still had much control over the state apparatus
- Liberal refusal to buy into the nationalization program
- Liberal attempts to move back to? beyond? the individual-rights-and-property order of 1870-1914



Mass Production Society & the New Deal Order

- A mode of industrial production that relies on standardized and interchangeable parts, assembly lines, and mass consumption.
- A political order based on a compromise between capital and labor that emerged in the United States in the 1930s and 1940s.
 - The New Deal Order did not start out ideological, but became ideological
- A culture that values efficiency, rationality, conformity, and consumerism.
- A historical phase that lasted until the 1970s, when it was challenged by economic crises, social movements, and neoliberal policies.
- A framework that, starting in the 1960s, generated discontent, alienation, and resistance among workers and other groups as well as libertarian and plutocratic opposition.
- A social formation that was tremendously successful, but also remarkably fragile.



Global Value-Chain Society

- A reaction to the collapse of the New Deal order in the 1970s.
- A shift in economic policy and ideology, which favored deregulation, privatization, free trade, fiscal austerity, and monetary discipline.
- A failure to restore rapid and inclusive growth or a “moral center” too society
- But instead a rise in inequality, financial instability, social discontent, and political polarization.
- Nobody likes it anymore—but what is the alternative?

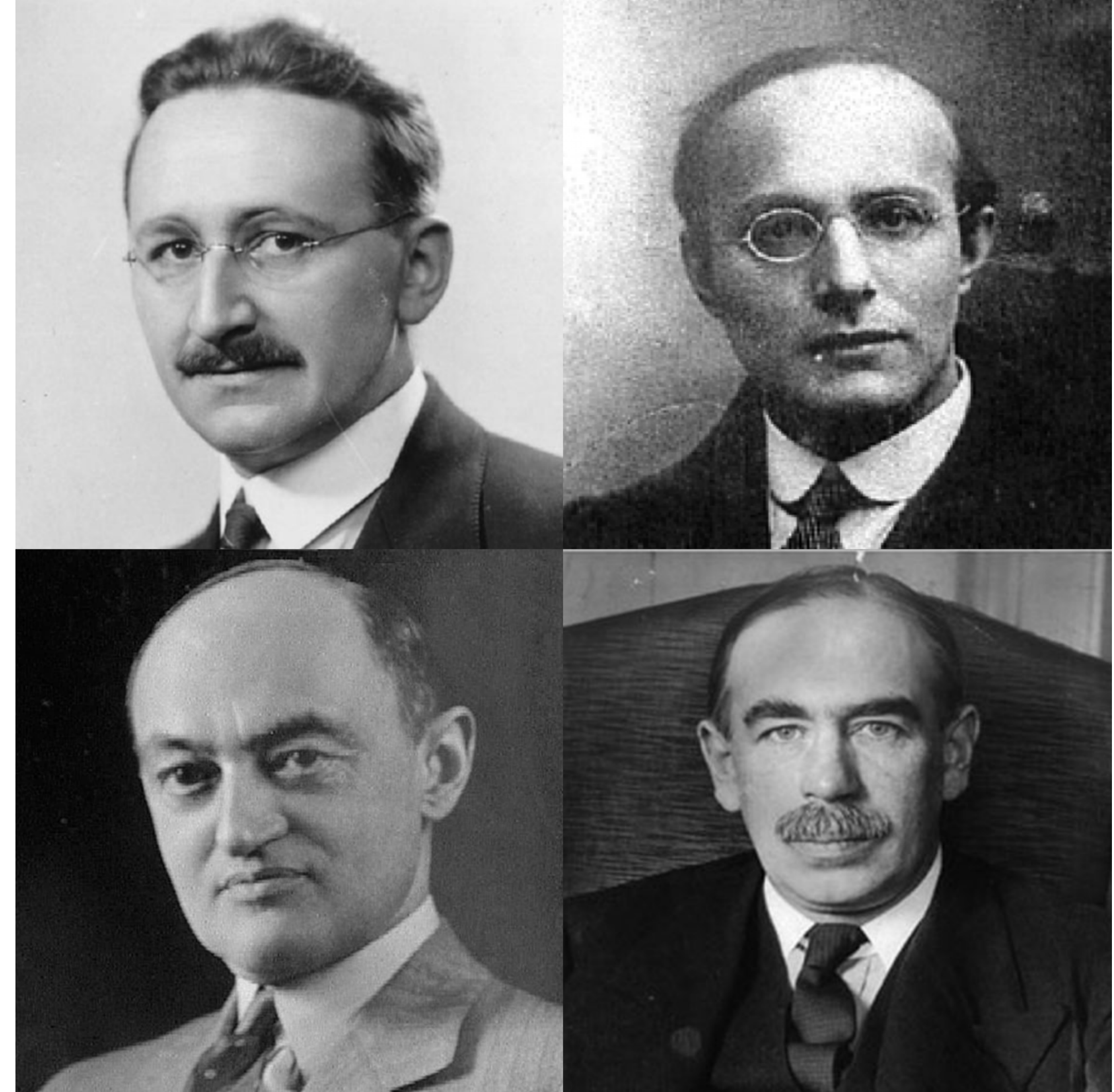


Toward Attention-Info-Bio Society:

**We need help in figuring out
how to rewrite society's
software code, yet again...**

The Principal Constants on Attention-Info-Bio Society: Hayek, Polanyi, Schumpeter, Keynes—Plus Global Warming & Possible Logistic Path of Technology

- Schumpeterian creative-destruction revolutionizing the economy every generation...
 - Schumpeterian creative-destruction creating immense wealth...
 - Schumpeterian creative-destruction destroying firms, jobs, occupations, livelihoods, communities...
 - We need the market economy to crowdsource the problems of managing our immensely complex division of labor...
 - But the only rights the market vindicates are property rights...
 - That stark utopia is not fit for humans...
- How to cobble together rewritten software code for society on the fly so that it does not crash as the underlying forces-of-production hardware changes?...
- Now with added problems:
 - Global warming
 - Possible transformation of the technology curve from an exponential into a logistic



Attention-Info-Bio Society

- ?
- ?
- ?



The Farther Future

Exponential or Logistic?:

- 2020: \$13K
- 2100: \$54K
- 2200: \$400K
- 2500: \$160M



Bel-Air: \$180 million

Date	Total Real World Income Y (billions)	Average Real Income per Capita y (per year)	Total Human Population L (millions)
-68000	\$0.12	\$1,200	0.1
-8000	\$3.0	\$1,200	2.5
-6000	\$6.3	\$900	7
-3000	\$14	\$900	15
-1000	\$45	\$900	50
0	\$153	\$900	170
1500	\$450	\$900	500
1770	\$825	\$1,100	750
1870	\$1,690	\$1,300	1300
2020	\$90,000	\$11,842	7600
2100	\$485,096	\$53,900	9000
2200	\$3,584,405	\$398,267	9000
2500	\$1,446,052,279	\$160,672,475	9000

The Great Filter?

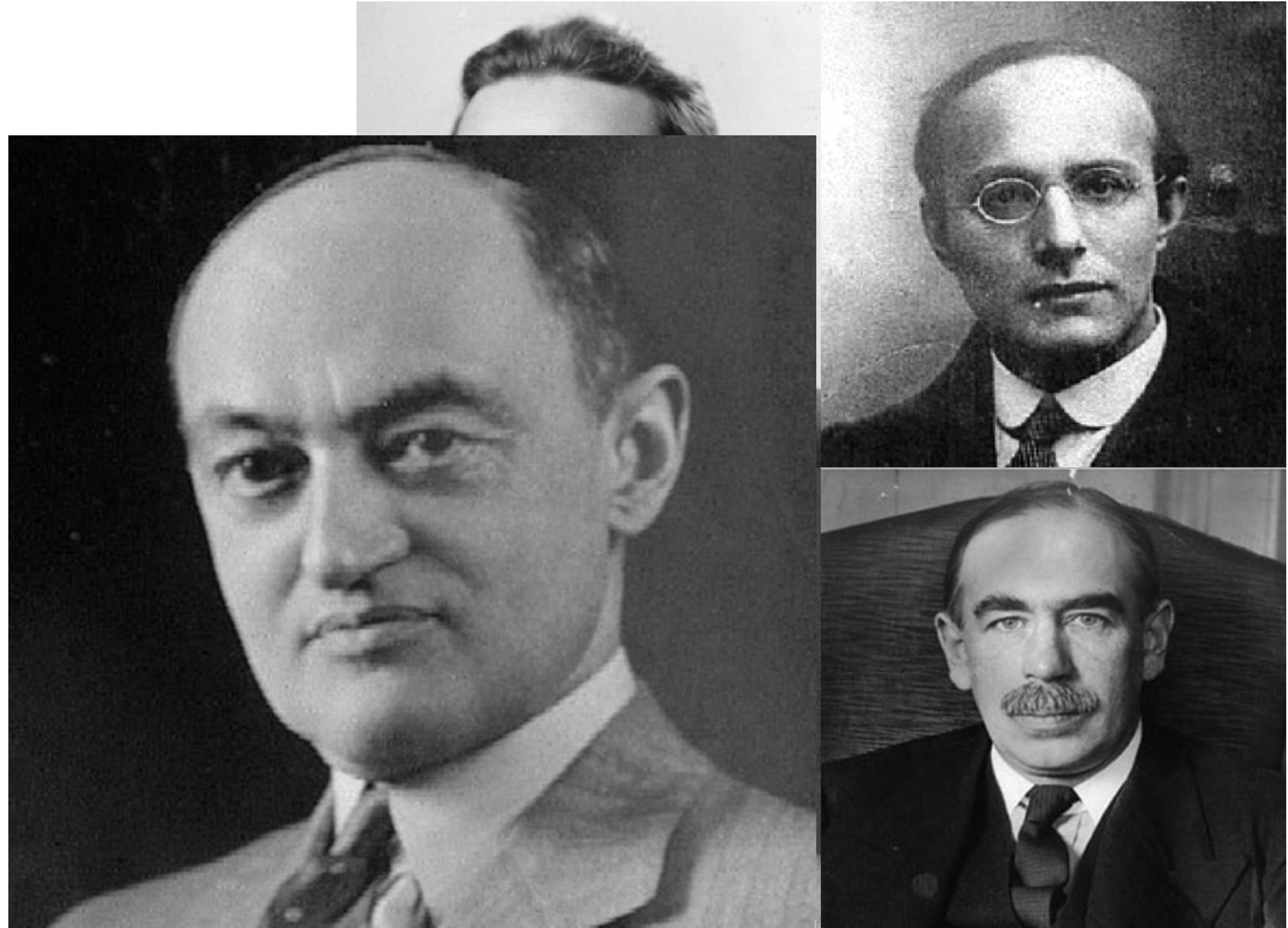
- Astronomy and the Fermi Paradox
- The Drake Equation: The number of civilizations in the galaxy is the product of
 - R^* , the rate of star formation
 - f_p , the fraction of stars with planets,
 - n_e , habitable planets per star,
 - f_l , fraction that develop life,
 - f_i , fraction of living planets with intelligent, civilized life,
 - f_c , fraction that communicate, and
- L , how long civilizations last
- We got $R^* \approx 1$ (or more)
- f_p , and $n_e \approx 1$
- If f_l , f_i , and $f_c \approx 10\%$
- $N = L \times 10^{-3}$
- $(N \leq 1) \Leftrightarrow (L \leq 10^3)$
- i.e., Earth will spend only 1000 years with civilized life...

- The Great Filter
- But see: Sandberg, Drexler, and Org <<https://arxiv.org/pdf/1806.02404.pdf>>



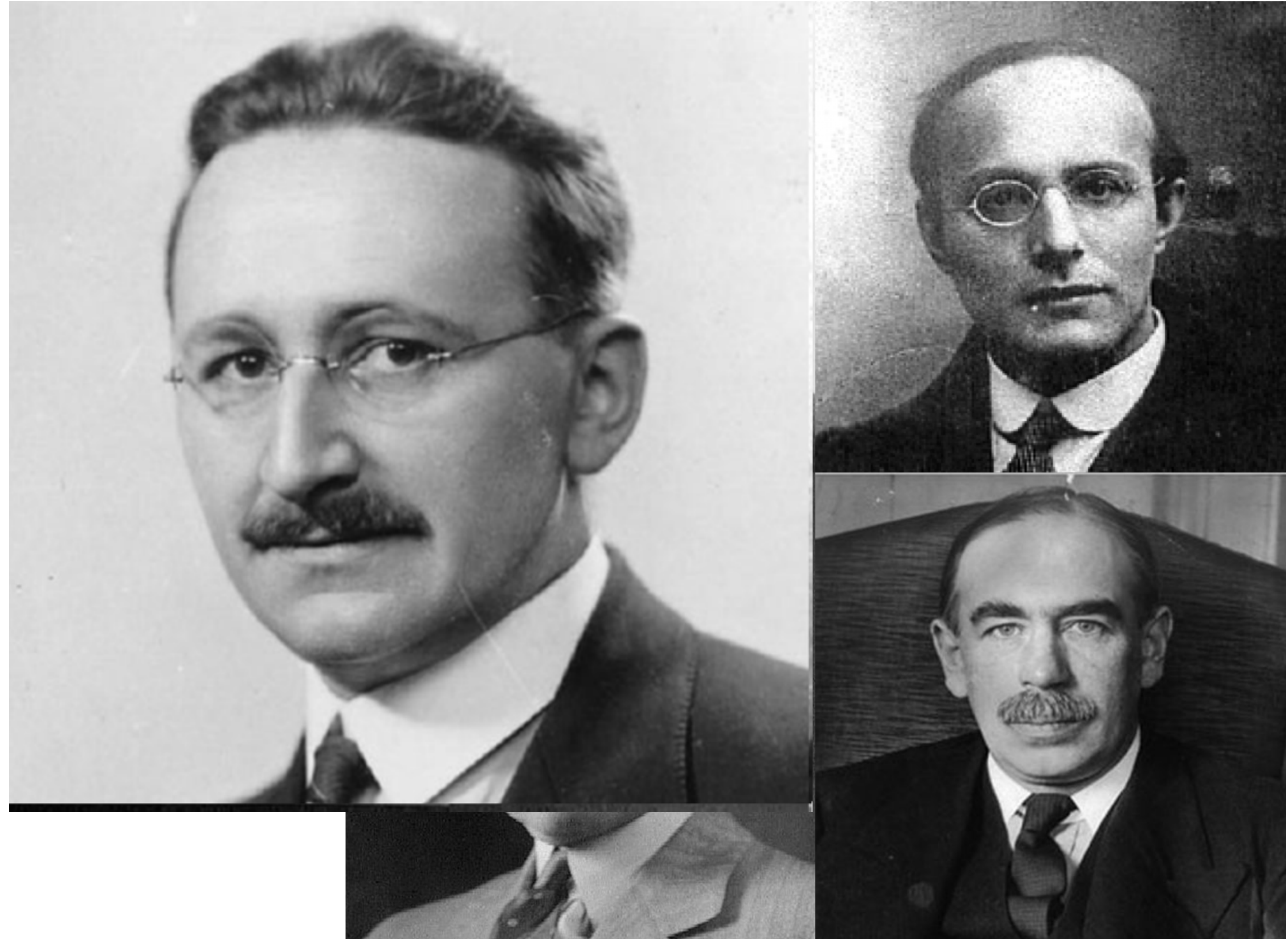
Insights from Schumpeter

- We are rapidly solving the problem of baking a sufficiently large economic pie for everyone to have enough
- The entrepreneurial capitalist market economy produces change and upheaval
- Creative destruction at a rate never before seen:
- Remember: 1 year sees as much technological and organizational change as 50 years back in the agrarian age
- This creates great anxiety, for there are losers and people who fear they will be losers
- Society may well try to protect itself—through bureaucracy



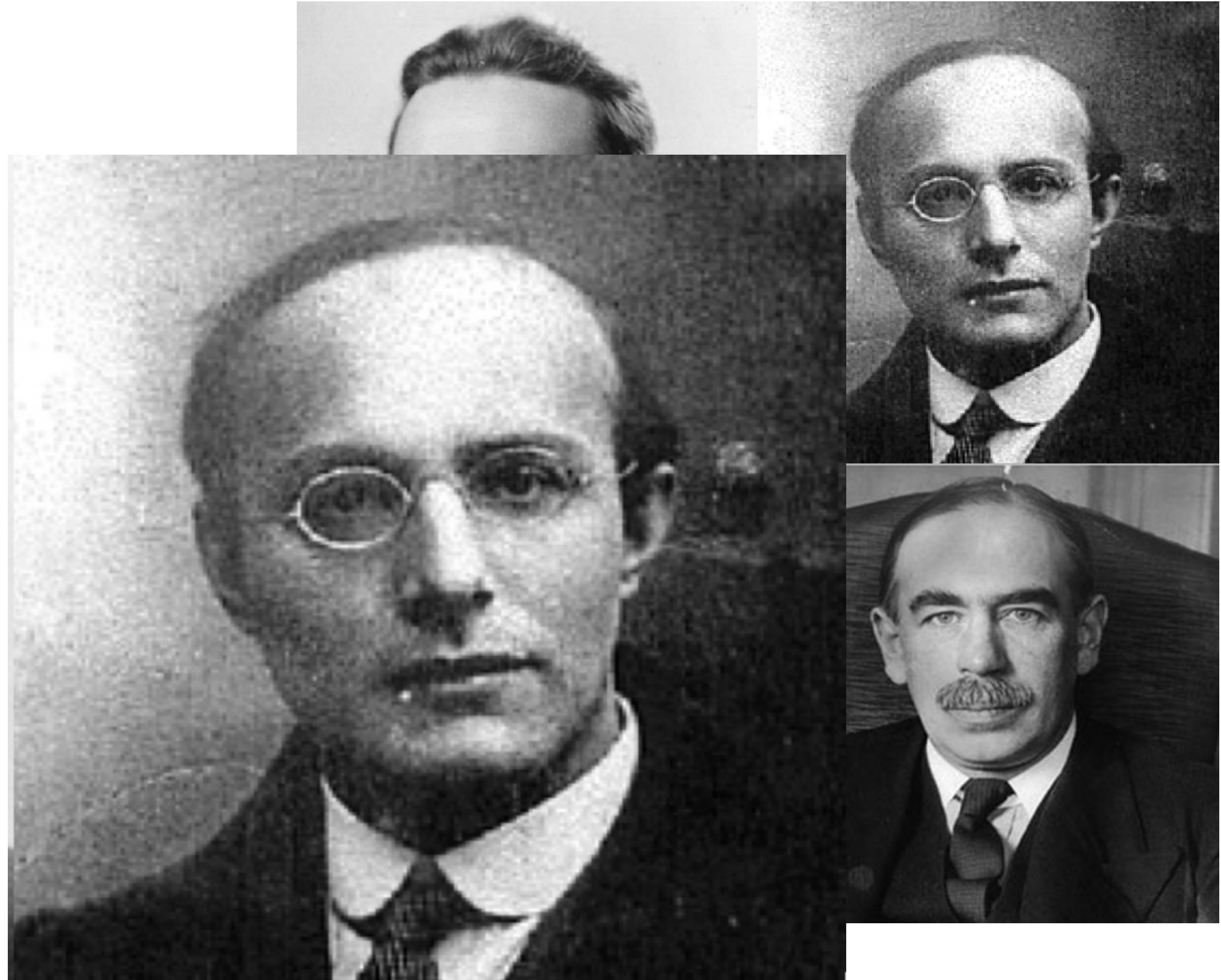
Insights from von Hayek

- We need the market to manage our enormously productive societal division of labor
- Bureaucracy and command cannot manage it —cannot solve the problems of information and incentivization
- The market, however, distributes wealth as it produces a high-productivity society
- And that distribution is not “just” —it is not “injust” either, because injustice requires a human actor who perpetrates the injustice
- But any attempt to move the distribution closer to anyone’s idea of “social justice” will derange the market’s ability to make us rich
- Hence the best we can do is to accept the gospel: “the market giveth, the market taketh away: blessed be the name of the market”



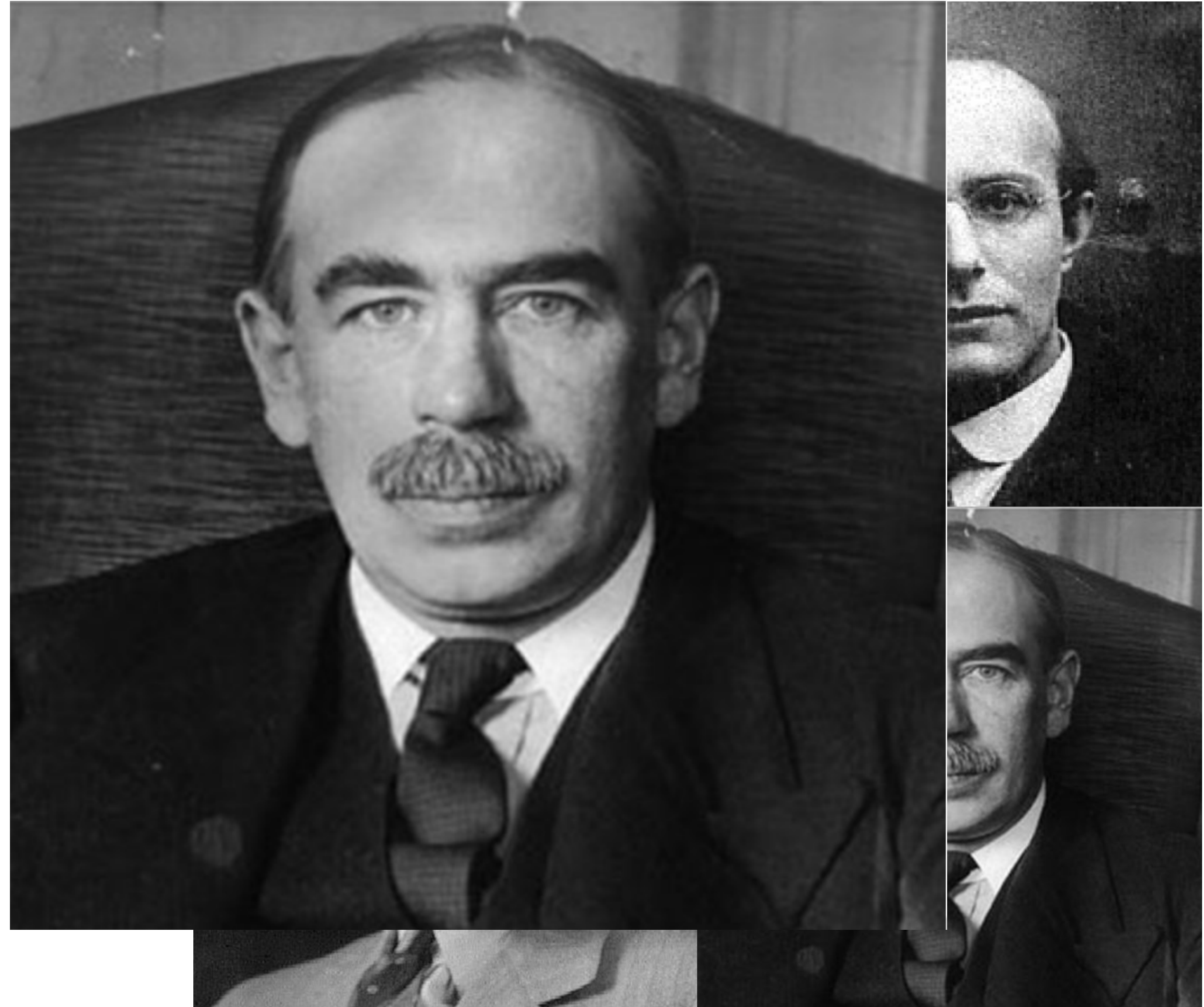
Insights from Polanyi

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 - They are not real “commodities”
 - Real “commodities” are properly pushed to their most valuable use by market forces
 - It is right and proper that each use of them must pass a profitability test...
- Fictitious commodities:
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 - “Finance”—whether you have a job, or a firm to work for, or can quickly find another one
 - People think they have rights to stable communities, expected incomes, secure jobs
- Hence people do not like the “stark utopia” of the market allocation of production and distribution: there will be anxiety—economic anxiety and uncertainty
 - Perhaps it can be papered over if economic growth is fast enough
 - But if not?
 - Society will have its revenge: it will protect itself against the market logic
 - Somehow, it will find a way—constructive or destructive, left or right
- And political entrepreneurs seeking power, or seeking to advance cause not broadly popular in their own right, will take advantage...



Insights from Keynes

- The capitalist market economy—the bourgeois order—has produced Economic El Dorado on a scale never before imagined
- It continues: by a century after 1930, in the richest countries at least, the “economic problem” of insufficient wealth will no longer be a major problem for the human race
- But there are two major problems with the capitalist market economy: unemployment and inequality
- Let me technocratic students run a low interest-rate monetary policy supported by a somewhat-comprehensive socialization of investment:
 - We will then have full employment
 - The fact that the market recognizes only valuable property rights will no longer be a huge problem, because everyone’s property over their labor will be a valuable piece of property
 - A full-employment policy is a low interest-rate policy, so even a very large capital sum will only produce a low income
 - Hence if plutocrats wish to exercise social power, they can only do so by spending down their capital
 - Hence the excessive social power of plutocrats is a problem that liquidates itself



Catch Our Breath...

- Ask a couple of questions?
- Make a couple of comments?
- Any readings to recommend?

