

Founder and President John Fullerton Defines the Capital Institute Mission

Finance is the fuel of our economic system. With our contemporary version of capitalism, which some have called “finance capitalism,” finance’s role as the critical point of intervention has never been greater.

The great transition to a sustainable and restorative economic system will define the 21st century. This system will be built on truthful, free-market principles that create real wealth for humanity on a more equitable basis, while at the same time respecting the physical boundaries of the biosphere. The collaborative work required to affect this transition will unite humanity in a common purpose. And with that common purpose comes our best hope ever for peace on earth.

The collapse of the global financial system that began in 2007 revealed the horrific economic consequences that result from an obsession with unsustainable short-term returns on financial capital at the expense of system resiliency. So-called “finance capitalism”¹ has failed; yet the way forward is far from clear.

As of June 2009, the capital commitment of US taxpayers to bail out the financial system had totaled a staggering \$6 trillion; the worst-case estimates of what the ultimate exposure will be are far greater. Figures of this magnitude are beyond our capacity to comprehend. They exceed the inflation-adjusted cost of the Louisiana Purchase, the New Deal and the Marshall Plan, the Korean and Vietnam Wars, the S&L debacle, and NASA’s race to the moon, *combined!*² Even the United States’ expenditure on World War II-- an inflation-adjusted \$3.6 trillion—pales in comparison to the cost of the most recent financial bailout.³ How the systemic flaws that led to this spectacular collapse can be corrected is now being widely debated.

*At the same time, a second and ultimately far more critical pillar of financial system reform is the topic of global sustainability and social justice conversations, notably those under the auspices of the United Nations and the global NGO community. Increasingly, progressive thinkers understand the pivotal role that finance, its guiding metrics, and in particular *real investment* and capital allocation decisions will play in defining the future quantitative *and qualitative*⁴ characteristics of the global economy.*

Overshoot – Scale Matters

Since the mid-nineteen eighties, humanity has been in ecological overshoot with demand on the Earth’s resources exceeding what it can regenerate. It now takes the Earth one year and four months to regenerate the natural capital we use in a year. ⁵ In other words, the global economy now requires 1.3 earths and will require 2 in the next quarter century if we continue business as usual. If everyone lived like the average American, we would currently need five earths. We are going deeper and deeper into ecological debt, without the ability to grow the resources of the planet. This trajectory is obviously unsustainable.

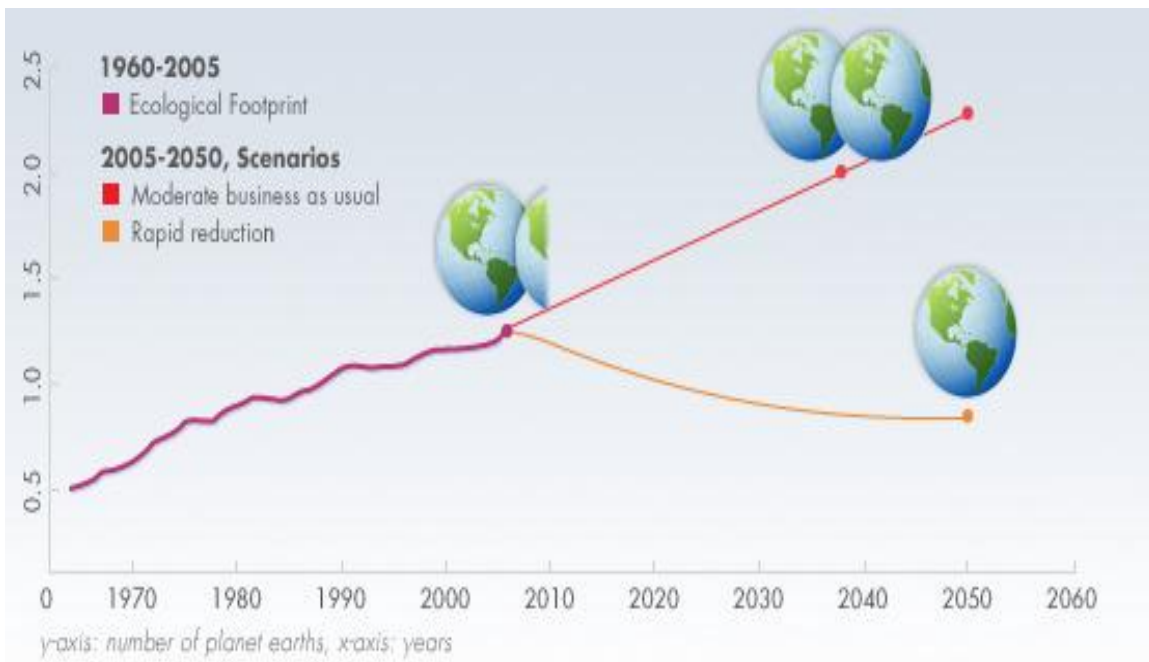
¹ Finance capitalism is a term used to describe an economic system in which a free wheeling financial sector, unconstrained by the friction of regulation and filled with innovation that accentuates abstraction, becomes the leading sector of the economy and a major contributor to perceived economic growth and prosperity. Capital Institute views finance capitalism as a mirage, and a confusion of means and ends.

² Bernard Lietaer, White Paper on All the Options from Managing a Systemic Bank Crisis, October 2008.

³ Ibid.

⁴ See Capra and Henderson: “Qualitative Growth”, 2009.

⁵ Footprintnetwork.org.



Source: Global Footprint Network, 2009

Evidence is mounting that if we continue along our current unsustainable growth trajectory we are headed toward calamity. We see this made manifest in diminishing forest cover, desertification (the Sahara is a man-made desert, as is the Kalahari; New Mexico will be next), depletion of fresh water systems, collapsing fisheries, and the build up of pollution and waste with potentially catastrophic implications, most notably, global climate change. Other less noticeable effects include an alarming acceleration in biodiversity loss. The BP disaster in the Gulf of Mexico, in addition to highlighting the environmental risk our global energy system entails, should be a harsh reminder of looming “peak oil,” after which annual global oil production will stop growing, despite expectations for growing demand. Oil scarcity when it comes will change life as we know it. We have no option but to transition our economic system to align with the physical boundaries of our one planet, both with respect to the natural resources we demand, and the wastes we emit.

Wealth Inequality – Why it Matters

Few would debate that widening income and wealth inequality represents a profound ethical and practical challenge to society. The United States has been the leader of free market capitalism, yet it also boasts the highest inequality rates in the developed world. The top 1% now own 70% of all financial assets. From 1980 to 2006, the richest 1% of Americans tripled their after-tax income while the bottom 90% *lost* 20%. The rising tide is not working to lift all boats. On a global level, the data suggest that 25% of the population is impoverished, and half the planet lives on \$2/day.

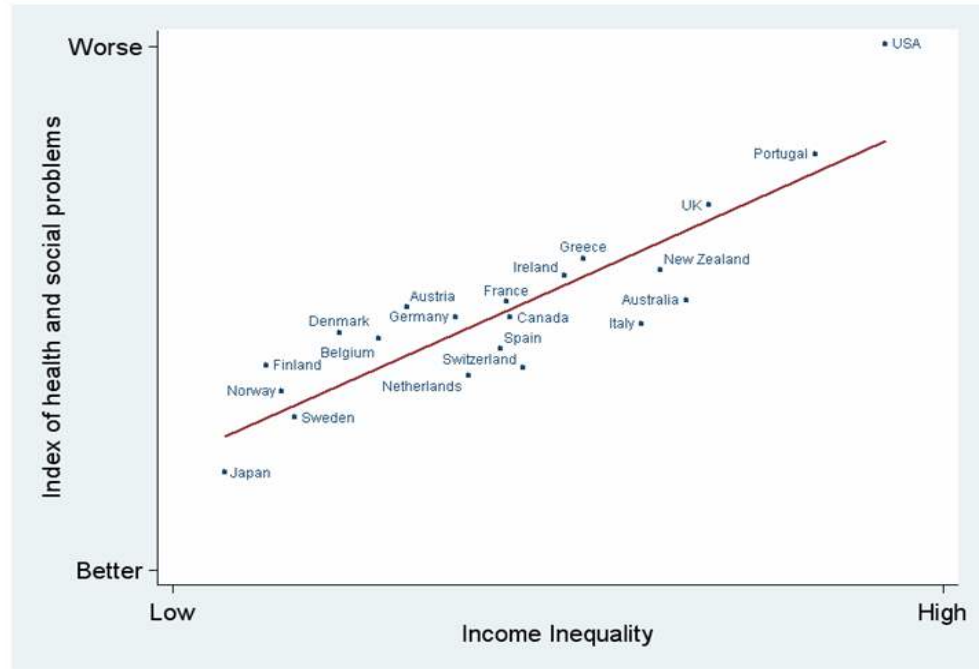
New research conducted on eleven different health and social problems show a clear relationship between inequality and worsening health and social outcomes.⁶ Indeed it is now clear that more unequal societies are not only morally troubling, they are actually harmful to *all* members of such societies, including those at the top of the income distribution pyramid. And the impact of inequality is large, not marginal. The following summary table that aggregates a series of health and social problem indicators is quite telling:

⁶ www.equalitytrust.org.uk.

Health and Social Problems are Worse in More Unequal Countries

Index of:

- Life expectancy
- Math & Literacy
- Infant mortality
- Homicides
- Imprisonment
- Teenage births
- Trust
- Obesity
- Mental illness – incl. drug & alcohol addiction
- Social mobility



Source: Wilkinson & Pickett, *The Spirit Level* (2009)

www.equalitytrust.org.uk

Equality Trust

The data is troubling. Of particular interest in the wake of the financial collapse, the research shows that levels of trust are inversely correlated with income equality. When trust is the foundation of any financial system as well as the social fabric of society, we must take notice.

Outdated Economic Theory

The deficiencies of neo-liberal economics are well understood and have been articulated by many.⁷ In particular, the deep flaw in the assumption that the global economy is a closed system and can operate independently of the natural environment has been exposed. So, too, has Adam Smith's theory of the "invisible hand" been debunked, as it has been revealed to have been drawn from false comparisons to the laws of Newtonian physics. Many including George Soros and Nassim Taleb have convincingly challenged the core premise of modern economic and most financial theory upon which investment decisions are made: that markets move toward equilibrium.⁸ Experience now reveals such assumptions to be patently false. Furthermore, the core idea of modern economics--that humans are simply independent utility maximizing atomic parts in a mechanistic system--ignores all non-monetary values as well as everything that we now know about the emergence of life in complex systems.

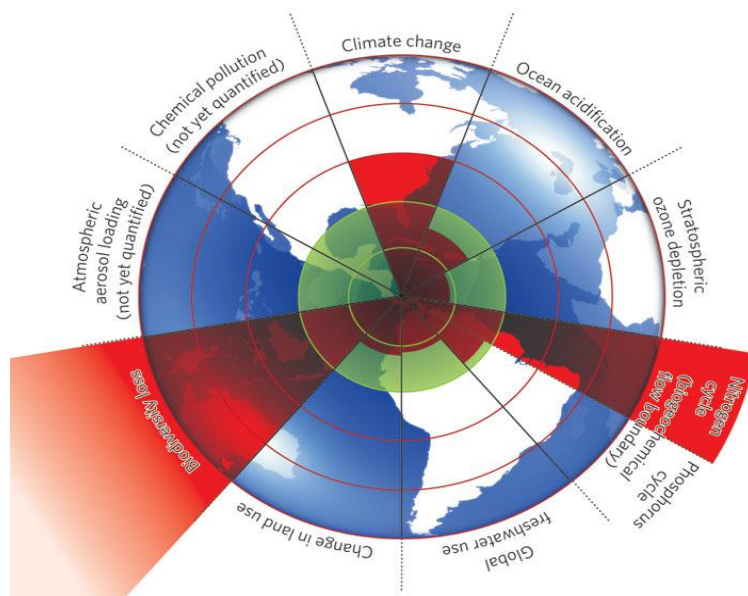
⁷ For an excellent examination of the historical context under which the critical flaws of modern economic theory went unchecked and became akin to fundamentalist religion, see Robert Nadeau, *Environmental Endgame* (2006). Herman Daly does an excellent job at articulating the limitations and misconceptions of economics in, Herman Daly & John Cobb, Jr., *For the Common Good* (1994). Hazel Henderson has been writing about this subject for over 30 years, see *Politics of the Solar Age* (1988). A good summary article is at <http://www.scientificamerican.com/article.cfm?id=the-economist-has-no-clothes>.

⁸ A central tenant of Modern Portfolio Theory, the basis of modern investment allocation decisions, is the efficient-market hypothesis first espoused by French mathematician Louis Bachelier in his 1900 dissertation, "The Theory of Speculation."

In fact, in both quantum physics (in contrast to mechanistic Newtonian physics) and modern biology, emergent properties⁹ are understood to be a critical outcome of the relationship-centric networks of life. Indeed, the whole is much more than the sum of the parts. For example, life itself is an emergent property enabled by the relationship of its parts: human beings are far more than the sum of individual cells; a family more than its individual members; and a team more than the sum of the individual players. The critical interrelationships of living organisms in a complex sustainable system such as a rainforest are not yet fully understood.

Bringing this new awareness to our study of economics changes everything. The economic system, we now realize, is far more complex than simply the sum of the multitude of micro economies. In the language of systems science, “feedback loops” affect the outcome of all systems and operate in the realms of financial systems (as evidenced by the recent financial collapse), of societal systems (as evidenced by growing unemployment and related social ills in the US as a result of globalization), and the ecosystem (as evidenced by climate change, water scarcity, and desertification, among a multitude of symptoms).

What we fail to heed at our peril is that ecological feedback loops are operationally unique, eventually leading to undesired consequences that cannot be reversed with the traditional remedial tools of behavioral scientists, policymakers, and technology. As we approach the critical juncture of no return in the operation of ecological feedback loops, we can no longer afford the luxury of allowing the macro economy to operate outside the physical boundaries of the biosphere. An important global project called the Integrated History and future of People on Earth (IHOPE) being conducted at UC Santa Barbara’s National Center for Ecological Analysis and Synthesis, in cooperation with the Stockholm Resilience Center at Stockholm University, was summarized in the science journal, Nature. It seeks to determine the “safe operating space” for the economy to operate and calls attention to dangerous thresholds we do not want to cross without risking permanent shifts in the biophysical system of the planet. The results, while not yet complete, are quite troubling. It shows that biodiversity loss and the nitrogen cycle in particular have already breached critical boundaries, as have CO2 emissions, which are much more widely understood.¹⁰



The critical deficiencies of the simplistic neo-liberal economic theories that served as the foundation for modern society are being exposed as the material economy expands beyond the boundaries of the

⁹ When individual components in an environment come together to create distinct, collective and interactive properties and functions, the results are called emergent properties. – ISCID Encyclopedia of Science and Philosophy.

¹⁰ <http://www.nature.com/news/specials/planetaryboundaries/index.html#feature>.

finite biosphere. For the first time in the four billion year history of planet earth and the 10,000-year history of human civilization, we are living in a condition of *overshoot*.

As the Romanian mathematician and economist Nicholas Georgescu-Roegen critically observed in 1971, the entropy law governs economics.¹¹ Perpetual, exponential growth of material throughput in an economic system (natural resources into the economic system, wastes out into the environment) violates the second law of thermodynamics (the law of entropy). The only question is not *if* we will collapse if we don't adjust, but *when*.

This violation of natural law is now manifesting itself in alarming trends, including the shrinking of the polar ice caps, biodiversity losses, and the peaking of oil reserves. Such trends will lead inevitably to collapse if not altered, as has been clearly demonstrated in multiple studies dating back to the Club of Rome's *Limits to Growth*¹² and before. Natural systems simply cannot sustain exponential physical growth. It is the ideology of a cancer cell. Cancer cells replicate until they subsume their host, at which point, along with their host, they expire. The approach of this planetary endgame has profound and urgent implications for economics and finance. *This is the Copernican moment of our age*,¹³ presenting perhaps the greatest opportunities and responsibilities that humanity has yet encountered.

¹¹ Nicholas Georgescu-Roegen, *The Entropy Law and the Economic Process*, 1971. See also Herman Daly, *Beyond Growth*, 1996.

¹² D. Meadows et al, *Limits to Growth: The 30 Year Update*, 2004.

¹³ Copernicus was scorned for his hypothesis that the sun, not the earth, was at the center of the universe, in conflict with espoused "truth" of the powerful elite in the Church at the time. It took almost a century for Galileo to prove him right with the telescope.