OUR CAPTIVITY SYSTEM[1]

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Yes, it's *ours,* because we're complicit in it.

It's a *system*, just like everything else in reality, including the human body, which includes some thirty-seven trillion cells and one hundred trillion microbes—each itself a system.[2]

And we are *captive* to it, pretty much like the ancient Israelites in Egypt,[3] as they sold themselves, in stages, into slavery to Joseph and the Pharaohs.

Introduction

Actually, our captivity system was born, some 4,500 years ago, in the temple economies of those ancient kingdoms and empires of West Asia—especially Sumer, Babylon and Egypt. Several key mechanisms of our current system were invented and widely used by those economies.[4]

I'm inviting you, of course, into a look at our financial-economic system.

I hope to present this system calmly but clearly, without a lot of rhetoric. My focus here is to "drill down" to the essentials of how it actually works. Our economic-financial system is actually quite simple and elegant.[5]

What's its name? Some use "capitalism," others use "feudalism." My candidate here is "corporate feudalism," because 1) corporations are a primary institutional reality of our time; 2) "capitalism"—in its current financial, monopolistic and global phase— is the latest stage in the development of feudalism, which was born in those ancient temple economies; our current iteration is clearly taking most of us backward into the kind of captivity we associate with at least the Middle Ages of Europe.[6]

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[2] Eva Bionconi et al., "An Estimation of the Number of Cells in the Human Body," *Annals of Human Biology* November-December 2013, pages 463-471; Paul Zimmer, "Tending the Body's Microbial Garden," *New York Times*, June 18, 2012.
[3] Genesis, Chapter 47.
[4] See Michael Hudson & Marc Van Der Mieroop, eds., *Debt and Economic Renewal In The Ancient Near East* (CDL Press 2002).
[5] The Appendix, in four parts, includes several key mechanisms and their details.
[6] Naomi Klein, in *This Changes Everything* (Simon and Shuster, 2014), suggests "unregulated capitalism" and "extractivism." In my darker moments, I call it "piranha capitalism." Given the ongoing floodtide of scandals, how about "feral'?

Why Do This?

In the Biocommons class, we've been working with two major concepts: First, the crisis—both threat and opportunity— of our time is multi-dimensional: Earth's systems, and human Economic, Political, and Spiritual systems.

The second concept is our framing: the Yes/No/Yes of our crisis—the Great Yes of Creationjustice, which is the ground of both 1) the enormous No of the Threat to Creationjustice, and 2) the Yes of the equally enormous Opportunity, which is our Great Work.[7]

Our objective is to help our faith communities equip themselves for this crisis.

In this context, we're trying to look, with both left and right sides of our brains, at the four major systems of our crisis. Here I focus just on finance-economics.[8]

Our culture is weak at systemic thinking, and especially weak at examining the fundamental drivers, structures and flows of systems. We like the convenience of driving our cars, but we are not much interested in what's under the hood—much less the design concepts that went into the vehicle, or the function of the car in society and nature.

We no longer have the "bubble" luxury of focusing on fragments, parts, surfaces and distractions. Our crisis is "growing us up." That means studying, emoting and thinking our way into the Whole.

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[7] Our frame is at Ecofaithrecovery.org/Biocommons; "Creationjustice" is a fine new word, coined, I believe, by Larry Rasmussen, in *Earth-Honoring Faith: Religious Ethics in a New Key* (Oxford 2013); "Great Work" comes from Thomas Berry, *The Great Work: Our Way Into the Future* (Random House, 1999.)

[8] Please consider these other, parallel and simultaneous system-crises: in Earth's climate and species systems; in our culture of commodification, separation, and world-view confusion; in our democracy, or *polis*. All four system-crises contribute to each other, and to the total crisis we now face. Getting our minds and emotions around both the four major components and the total crisis is the work of the Biocommons class, aimed primarily at building up teams within faith communities.

I'm arguing that examining systems and how they work is essential if our families and faith communities are to equip for surviving our crisis. We owe that to our children, grandchildren and great-grand children, to all the rest of life, to our Earth and the cosmic processes that birthed it.

Why "Drill Down?"

When a child comes down with fever, or a spouse contracts cancer, we tend to react with two urgent questions:

1) How do we get it under control?

2) What caused it?

These two questions are obviously related. A mediocre doctor may mess up the diagnosis—what's the root cause?—and focus on a secondary cause or even a symptom; so from the wrong assumptions, he winds up with the wrong treatment. A wise and good doctor will "drill down" for the fundamental cause, by:

1) Spending quality time, to ask parents, spouse and patient lots of questions;

2) Reviewing the relevant (and perhaps some of the unorthodox) literature;

3) Consulting her or his medical team, so they can cover more of the bases of diagnosis and prognosis.

Both fever and cancer are serious *imbalances* in our bodies. Earth's climate and ecological systems are seriously out-of-balance. Metaphorically, Earth now suffers from both fever and cancer; as embedded members of Earth's community, participants in all of Earth's systems, we humans who are now alive are confronted, whether we're conscious of it or not, with urgent Emergency Room and Long-Term care questions:

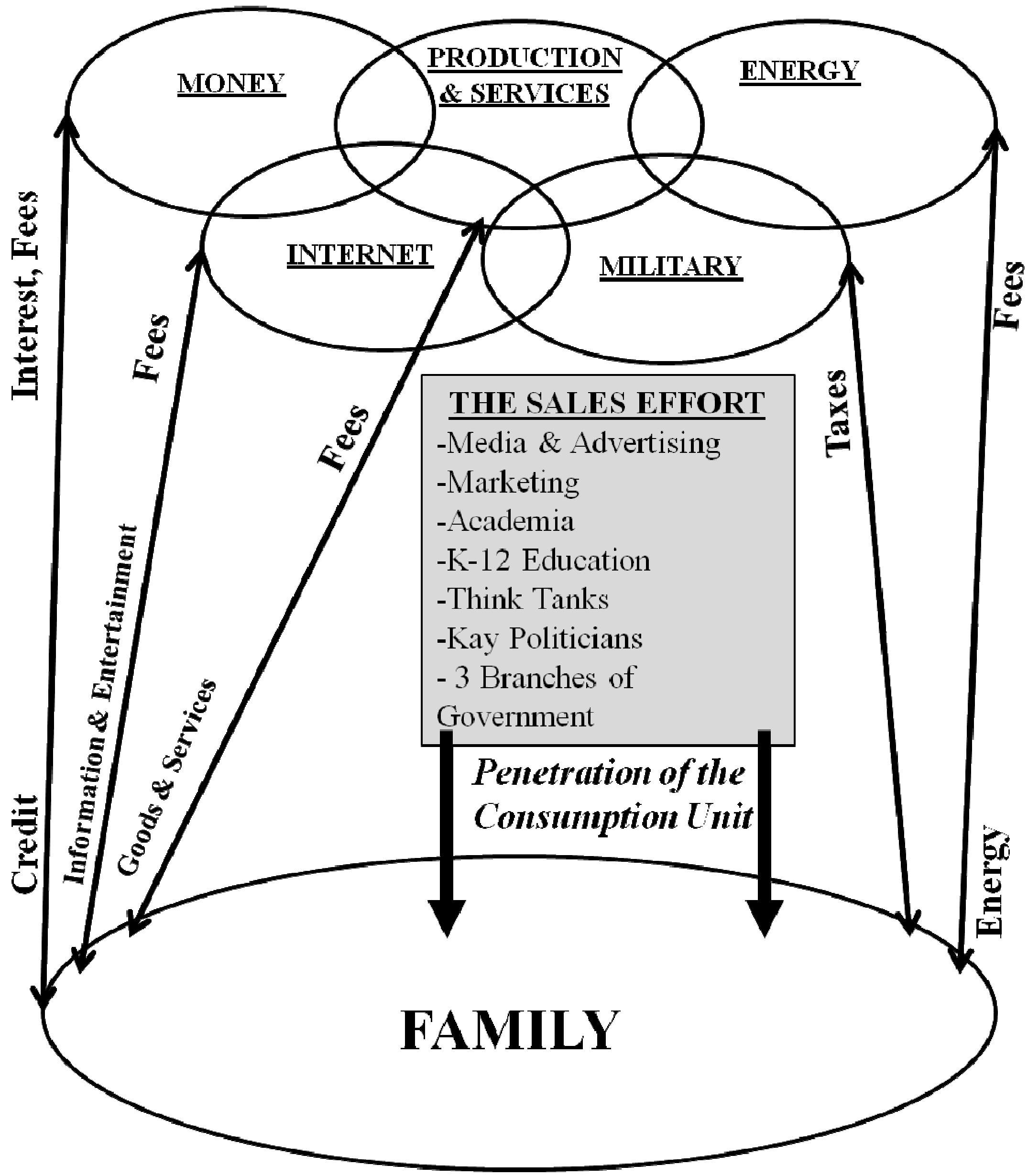
1) What’s the fundamental cause of Earth’s compound sickness?

2) How do we treat it, or can we?

I focus here on the first question, the deep diagnosis, so the treatment can be well-grounded. I’ve “drilled down,” into my own experience, into a significant amount of research and reflection on it, and then learning more through teaching in the Biocommons class; I’ve wanted to get beyond the usual cluster of secondary causes, symptoms and surfaces posing as true causes that our culture conventionally offers.

Let’s start with two diagrams (page six)—simplified for teaching purposes, but I believe accurately. The suggestions that follow are, in part, in outline form— also for workshop purposes.

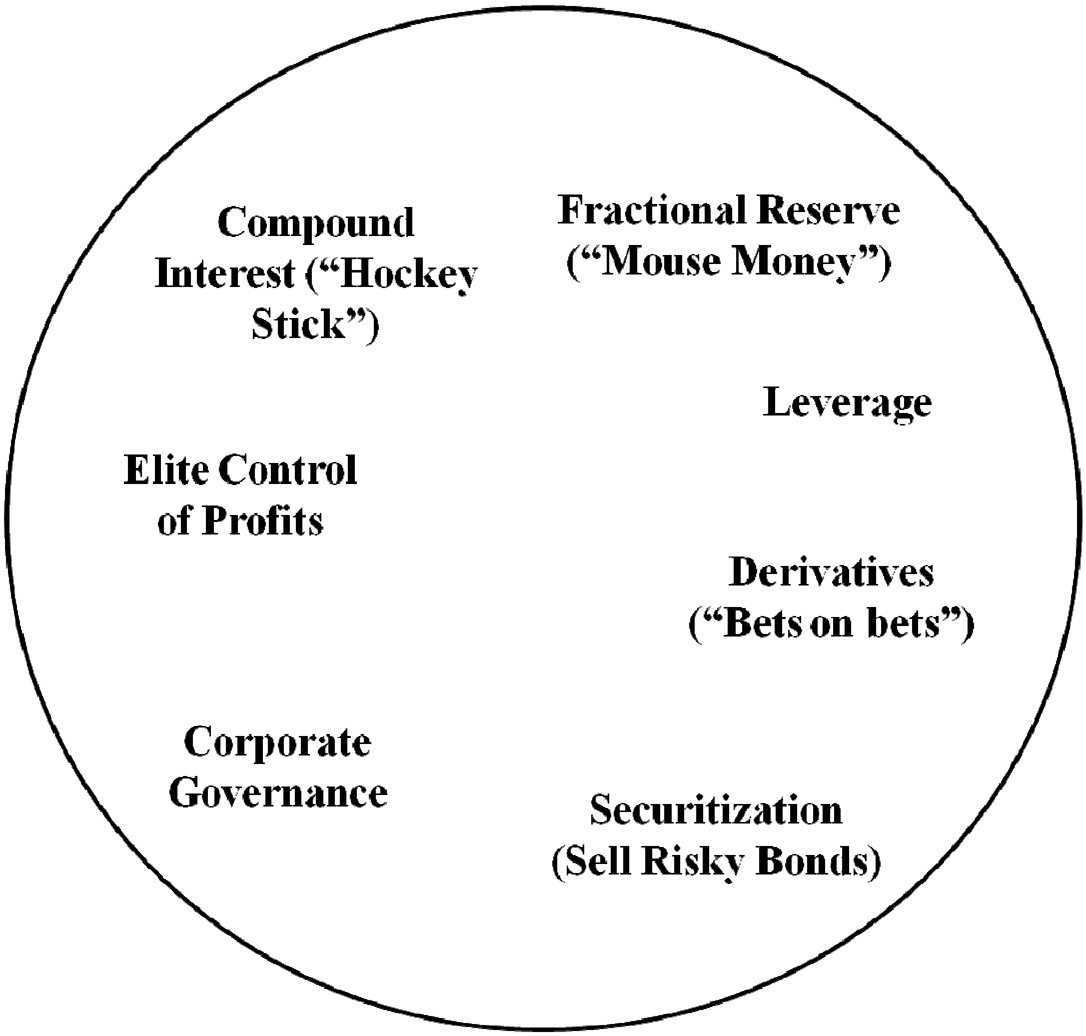
Diagram 1. Our Captivity System



The 5 subsystems share:
-The Corporate Governance Structure
-Ownership of the Sales Effort

The Elements of This System: An Outline

Diagram 2. The Money System



Brain: The Money Subsystem; Banks, Central Banks (U.S. Federal Reserve Board.)

—Compound Interest (the first, primary "hockey stick.")[9]

—Fractional reserve banking (credit-based money creation; "mouse money.")[10]

—Leverage (investing with *borrowed* money, at ratios from 1 to10 to 1-100.)[11]

—Derivatives: bets on bets, paper assets, at 5% margin.[12]

—Monopoly control, by a global banking elite, of interest, the profit from debt.[13]

—The money created each year pays for principal, but not interest. Everyone is chasing, never catching, that elusive goal of paying off the total interest due each year. We are like hamsters on an accelerating wheel. More debt, *versus* a shrinking physical asset base, requires exponential growth in paper and virtual "wealth"—which cannot defy the physical limits of Earth's systems.

2. Oxygen: The Energy Subsystem; Fossil Fuel Corporations. [14]

—Intensity of fossil fuels.

—Cost of emissions "externalized" (not included in price.)

—"Net" energy (energy in vs. energy out.)

—Stock exchange-listed corporations and State-owned firms.

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[9] See appendix A for details.
[10] See Appendix B for details.
[11] See Appendix C for details.
[12] Ibid.
[13] Michael Hudson, *Finance Capital and Its Discontents* (ISLET 2012.)
[14] See the work of Michael Klare for oil geopolitics; Oil Drum's website for energy economics and "net energy;" Carbon Tracker's website for State-owned and major stock exchange-listed oil corporations.

3. Raised Arm: The Military Subsystem; Pentagon, Contractors. [15]

—Protects global fossil fuel routes and sources.

—Over 700 global bases.

—Total military-related US expenditures about $1 trillion/year.

—Lowers real jobless rate through Pentagon and contractor employment: social safety valve.

4. Voice: Media, Travel, Web Portal, Cloud Computing sectors.

—Top Ten Internet corporations: Revenues of $262.5 billion; Market Cap of $975 billion; 290,000 employees.

—Quasi-monopoly market, primary instrument of corporate and political invasion of privacy, primary instrument of spy-states—the complete opposite of its original promise.

—Primary instrument of identify formation.

—Transformer of electoral politics, rationale for *Citizens United* decision. [16]

5. Trunk: Production & Service Subsystem; Manufacturing, Processing, Service Corporations.

—Minerals and metals.

—Industrial agriculture, pharmaceuticals, chemicals.

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[15] See the work of Chalmers Johnson for global Pentagon operations; National Priorities Project for Pentagon and military-related costs; *Monthly Review*, March 2013 and January 2014 for the military as safety valve for the surplus labor force, and as a way to reduce official unemployment rates.

[16] For this connection, see the brilliant work of John Nichols and Robert W. McChesney, in their book, *Dollarocracy: How the Money and Media Election Complex is Destroying America* (Nation Books, 2013.)

—Insurance, real estate.

—Transportation, high-tech.

—Household consumption products.

—Multi-national corporations; oligopolies in all sectors.

—Newer markets, including water, air, k-12 and post-k-12 education.

The Captivity System's five strategic subsystems are *intimately allied,* through joint investment led by the biggest banks. They share:

—A common corporate governance structure, through which a small group (shareholders) make almost all decisions, and much larger stakeholder groups (labor, consumers, community members) do not participate in most decisions. [17]

—Ownership of the Sales Effort.

The Sales Effort

—is the direct instrument of our captivity; it is the direct delivery mechanism of pressures on our families. It is this system's amplified voice, filling all our spaces, all our moments.

—is made up of these sectors:

—media: five media corporations dominate US market.

—advertising and marketing: over $150 billion/year in US, $500 billion/year globally.

—Think tanks and academia (especially economics departments

[17] See Richard D. Wolff, *Capitalism Hits the Fan: The Global Economic Meltdown and What to Do About It* (Olive Branch Press, 2010.)

and business schools).

—Key leaders of both major parties, in all three branches of federal, state and local government. This ownership of our politics gives corporate leadership a subsystem of law, including tax policy and subsidies, to protect and expand their interests. This "kleptocracy" has displaced our democracy.

Impact of sales effort on our families:

This instrument of our captivity operates concretely through control of most media-advertising, marketing, and data mining, which are now highly effective *formation* tools:

—"Penetrating" is the actionable mode of marketing; its object is "the unit of consumption"—our families. Consider a four-letter word for "penetration"—*rape*— and whether or not marketing's invasion of our minds, bodies and souls is in fact a violent relationship, in which each of us is seen as object.

—We receive 16,000 marketing images a day, on average, in the US. Does that impact influence our values and world-view—for example, the commodification of *everything, including the human person?*

—This amounts to creating *our identities, as consumers (not citizens*), as separate from other humans and all the rest of nature; as superior to nature, as controllers of nature, as alien to Earth's ecological and climate systems—all of which are for extraction and sale, as commodities.

—Commodification and separation of the person produces *self*-alienation, separation from our true and sacred self. That alienation creates enormous *imbalances* within us—deep "needs" which are really only manufactured "wants." The "sales effort" attempts to meet those "wants as needs" by forming us as "pursuers" of happiness through buying consumer goods.

—Since World War II, but especially since 1981, the banking system has created money as debt-based credit to enable us to be affluent enough to buy these goods. Debt has financed our pursuit of "wants

as needs." Debt is the basis for our personal and cultural self-image of affluence; it reinforces our separation from each other and from nature.

—These deep imbalances leave us experiencing a "hole" within us; this hole, and our manufactured "pursuit" to fill it, become wired into our brain patterns. They become *addictions*, the demand for a never-ending quantitative MORE. The deep source of all addictions in our era lies in this manufactured "pursuit."

Our Captivity System's "Sales Effort," and its imbalances within us, create the immense pressures on 1) our families and their local organizations; 2) Earth's climate and ecological systems.

— *First*, our families and faith communities, our unions and school communities:

— The symptoms we feel, bearing in on our families and "mediating institutions," can be summed up in the word *inequality*. We are experiencing the effects of a relationship of severe and growing inequality between, on one hand, us and our organizations, and on the other, the institutions of each of the five subsystems—Money, Energy, Military, Internet, Production and Services.

—We then feel we have no choice but to participate in this system of captivity.

—To buy whatever will satisfy our unending "wants/needs," we borrow money from the banks, and thus help them expand their paper assets, their debt-based available credit, and their power over our electoral politics. We pay for our debt with compound, exponential interest, which is the banks' profit. When we cannot pay the interest, we lose our homes, our savings, our pensions, our health, our incomes—to the drivers of the captivity system.

—To keep pace with "innovation," we buy an array of electronic devices; all of them are re-charged mostly by fossil fuels. Our homes and buildings, our transportation systems, our

pharmaceuticals and plastics and household purchases, even our food— all require fossil fuels, and all are financed through the credit system.

—Most of us are dependent, directly or indirectly, on the corporations of the five subsystems for our income; or on government jobs, now under well-organized under attack from parts of the five subsystems, which want out-right (not just indirect) control of *commonly-owned public goods* such as health, education, hard and soft infrastructure, air and water.

—We find that government no longer has the revenue to support our soft or hard infrastructures—schools, universities, roads, bridges, water, sewer, energy. We find that state, local, and national governments are suffocating from loss of tax revenue, as corporate tax rates fall steadily—and take our jobs offshore; or from debt payments on deteriorating, poorly-maintained infrastructure; or from the cost of fighting wars or protecting fossil fuel shipping lanes.

—The *second* impact is on Earth's ecological and climate systems; they are reacting to the poisoning and disruption pouring from steady growth in addiction-based demand for cheap energy, cheap minerals, cheap credit and cheap goods; "Peak Everything" means that demand is outrunning supply of low-cost conventional oil and other natural resources, so prices are rising. But short-term thinking rules both government and corporate agendas, so the hamster-wheel accelerates, Earth's illnesses grow—and so do ours. Since Earth is sick, so are we—with our culture and politics. This is what our families and local organizations are struggling with, consciously or not.

—When we look at any set of graphs on human activities and their impact on Earth's systems, we are essentially looking at *symptoms,* or at best secondary causes of our social and natural crisis. The graphs usually end with *population or economic growth.*

—Both are important drivers of our social and natural crisis. But they are not primary or fundamental. The *primary driver* of our crisis is found in the "Brains" of our system—the insatiable lure of maximum wealth made possible by the corporate organization of

exponential interest, debt-created money supply, leverage and derivatives, all controlled by a small and unaccountable elite of (mostly) men who run our captivity system.

—Some say that *greed* is the fundamental cause of our crisis. What this simple answer leaves out is *organization.* Corporations organize greed. The first step in creating alternatives to that greed-based organization is to *name the system and how that system works*—through which the dark side of our nature assaults both our Biosphere and our *Polis.*

—We do not need to blind ourselves with hate for those (mostly) males who run our captivity system. We can love our enemies; we can show creative compassion toward them. They require our compassion, for they are deeply confused; they are driven by the narrowest of self-interests; they are seriously addicted to the MORE of maximizing their wealth. This addiction shows itself in classic addict-behavior: to shortest-term thinking, wide-spread destruction, and sociopathic isolation from and indifference to the sacredness of our social and natural community.

—Creative compassion for them also leads us, it seems to me, to walking away from the sirens they offer through the sales effort, and creating new, locally-based enterprises of economy, culture and politics—something along the lines envisioned in the Biocommons idea.

Our Great Work

***ONE* system is assaulting *both* human society and nature, in which our species is embedded. *ONE* system is, for the benefit of a tiny elite, oppressing all of nature, including the rest (outside the elite) of humans.**

Social justice and environmental justice are *one. The social-economic question of the 19th and 20th centuries has become integrated, as the eco-social-economic question of our 21st century; in reality, these dimensions of our crisis cannot be understood or acted upon without the spiritual dimension. That is why Biocommons work is four-dimensional; we wrestle*

with the connections among the four crises—of Earth's systems and our human systems of economy, culture and politics.

Recall that the roots of this system lie in the temple economies of the ancient Near East some 45 centuries ago. The "operating system" of the modern, financialized and global corporate version of that system—what we're calling corporate feudalism here—emerged historically alongside the Enlightenment, creating a world-view of human separation from, superiority to, and power over nature.

We are now shifting from this "matrix," to the worldview now emerging, in which humans are one species among many, all members of the beloved community of earth, solar system and cosmos.

Larry Rasmussen calls the work of that community Creationjustice, from the Hebrew worldview. Another term could be building *cosmopolis (*city and cosmos are aligned*)* from the ancient Greek matrix. Still a third term might be Organizing in the Biocommons, which is rooted in *the local*. Another, contemporary image is Spaceship Earth.[18]

Regardless of what "name" we give it, our great work focuses in two areas:

—First, working through our *fear, grief and denial*, as we struggle to break our addictions to our current, addiction-creating system; letting go of our captivity system is hard work—soul-and-spirit work, both-sides-of-the-brain work. That work takes time and communities that know us deeply and care about us, so that when we hit bottom, where there is no hope, we can find what Walter Breuggemann calls *outrageous* hope. It takes real conversation, real liturgy, profound lament. That work is what our faith communities are for.

[18] Each has its limitations: In Ancient Greece, women and slaves could not vote. In early 19th century US society, which de Tocqueville saw as uniquely democratic, women and slaves could not vote. Biocommons may or may not be able to extend life-right to all living beings and their support systems. Spaceship Earth tends toward techno-fix. The two common problems of all these "world-images" are: 1) lack of understanding our economy as *system*; and 2) our difficulty as seeing them as within the cosmic creative process, which requires our species to mature significantly, and to act significantly.

—Second, re-setting our families and *re-organizing* our faith communities, unions and schools, as what we're calling *organizing mediating communities*—building the *capacity* for creating *a new economy* that does not assault Creation and its humans, but lives and works in radical, I-Thou relationality with all of Creation, extending life-right to *all* life-forms and their support systems. That I-Thou, root relationality evokes in us gratitude, wonder, compassion, and the deepest desire to nurture.

Our Great Work carries a triple vision. We lie in a time when millions of people around Earth are in a Great awakening. On September 21st, just in the US, somewhere between seven hundred and fifty thousand and one million people gathered and marched. All of those people, in one way or another, are saying—at the same time—yes, no, and yes:

—yes, first to Creation, to of all of nature, including every human person;

—yes, second, to a new system of economy, created from the bottom up, rising out of ancient spiritualities and a century of science and local experiments, and economy that works from and with nature, not against it; and

—no to our current system of captivity.

We are struggling to free the captives, the prisoners. We have met them, and they are us; but us is not just humans: us is all creatures, with our habitat and support systems, all Creation, all calling to us in our generations, from our suffering and wonder: throw off this captivity and come home.

We start, in my view, by organizing within and among our civil sector communities, of faith, labor and education:

—we gather, into conversation, about the pressures on us from this great question of Creation and what we are doing to it;

—we grieve and lament, as we name both the pressures on us, and our emotions about this crisis;

—we act together, commonly, for focused, specific objectives;

—we evaluate, then tell the story, in our communities, of what we have done and name our emotions and our meaning;

—we gather more people through that story-telling, and plan and carry out the next action.

Our capacity grows, our objectives expand, our wisdom deepens. We mature.

FOUR QUESTIONS, FOR REFLECTION AND DISCUSSION

—First, What is the *design* of this system of our captivity?

—Second, What is the *purpose* of this system?

—Third, how do you see the design and purpose of a new, regenerative economy?

—Fourth, if our faith communities transform themselves into organizing, mediating communities, what might their role be in nurturing a regenerative economy, culture and politics?

APPENDIX A

COMPOUND (EXPONENTIAL) INTEREST

—Any high school math teacher will know how to unveil the "mysteries" of compound or exponential interest.

—Google has plenty on the subject. Chris Martenson (Peak Prosperity website) does a good job, with lots of graphs and a minimum of equations.

—A friendly banker or credit union loan officer can help you see compound interest at work on your mortgages, car loan, credit card debt, or student loan. There is a big difference between 1) simple interest (the interest is paid only on the remaining principal, or on a set annual amount of principal); and 2) compound interest, which is interest on the rising total of principal plus interest.

—Your common sense can also help: Ask yourself, what's the difference between addition and multiplication?

— 2 + 2= 4. 2X2=4. 4+2=6

— 2+2 + 2=6 2X4=8 8X2=16

— To ramp it up:

—If you *add* 2 eight times, you get sixteen.

—If you *multiply* 2 eight times, you get five hundred twelve.

—Or Google "the Rule of 72," and you'll see why Einstein called compound, exponential interest the most important discovery in mathematics.

—*Wikipedia* has a short piece on usury, in Scripture and in Judaic and Christian history.

—Why is this "mystery" so important for us? Three reasons:

—Debt eats us alive, especially in an economy where there is no effective limit on interest, and where credit is the oxygen for consumption. (See Michael Hudson's *The Bubble and Beyond*, or David Graeber's *Debt*.)

—Debt is the product of bankers. Interest is the profit on that product. That profit is monopolized by the so-called "private" sector (actually, "market" is more accurate.) The immensity of that profit gives bankers their power, so they can control 1) much of the non-banking corporate sector, including, among others, media, manufacturing, telecom, agriculture, consumer goods, pharmaceuticals, and energy; 2) much of academia (especially the economics departments and business schools); 3) and most of the leadership of Congress and state legislatures.

—Compound interest (along with fractional reserve banking—creating money out of nothing) is the primary driver of unlimited economic growth. It is the invisible "hockey stick" trend-line behind all other "hockey sticks"—all our social pathologies and inequalities, all the enormous wounds in our Earth's ecological and climate systems.

—M. King Hubbert was a 20th century geologist who worked for Shell and the U.S. Geological Survey, and taught at Stanford and UC

Berkeley. He stated that Western civilization is addicted to compound interest, cheap credit and cheap fossil fuels.

—Understanding how compound, exponential interest works— especially in intimate alliance with high-intensity fossil fuels— helps us to understand:

- **the pressures on our families, congregations, unions and schools, and on our ecological and climate systems;**

- **the brain and engine of our financial-economic system; and therefore,**

- **the brain and engine of what is fundamentally wrong in our time.**

- **what is at stake for our children and grandchildren and their kin in our awakening to the Fossil Fuel threat to our beautiful Pacific Northwest.**

—Consider the power of the major banks, driven by the power of exponential accumulation of wealth through exponential interest and debt-based money, to ally, and finance, the major fossil fuel corporations. This alliance denies, dismisses and defies the sacredness of Creationjustice.

APPENDIX B

Fractional Reserve Banking

From the bank's point of view, **you can take out a loan (say $900):**

—After you have made a deposit in that bank of $1,000. That deposit is, to you, an asset; it belongs to you—you are lending it to the bank, for (now tiny) interest income and safety. For the bank, it's a liability, because it owes that money to you. But the bank knows that all of its depositors will not demand all their money back at the same time.

—So, the bank works to loan out most (currently 90%) of your deposit to others; the Federal Reserve requires the bank to set aside a fraction (10%) of that $1,000 in its own reserve account, in case the loan goes bad.

—At the same time that the bank deposits the $900 in your account, (on the liability side of its balance sheet), ***its computers automatically enter the same $900 as a number*** **on the asset side of its balance sheet.**

—The bank has just created, with the click of a mouse, a new $900—literally out of nothing, out of thin cyber-air. As soon as the bank brings in a new qualified debtor, it can make the loan: it sets aside 10% of the new $900 —$90—as reserve, and makes the second

loan, at $810. At each step, the mouse creates a new deposit, new money.

—That $810 loan immediately is both deposited in the debtor's account as real money, to be used in the economy; and in the bank's cyber-asset account—poised to become the third loan ($81 in reserve, $729 deposited in the third depositor's account.

—At any point, a debtor can spend her loaned money, say, for paying off medical bills; that money moves into other banks. But the total loan amount is in the local-regional banking system, which is "re-balanced" daily.

—If we follow the original $1,000, we find that, through fractional reserves and mouse-click accounting, it can "grow" into a total of $10,000, which is now deposited in several banks.

—The original $1,000 has created— out of nothing— $9,000 fresh, new dollars. (They are actually printed by the U.S. Treasury.) The original bank, as it settles with the other local and regional banks, winds up with notes that total $9,000, and a total reserve of $1,000.

—The original bank has made money by charging interest on each loan, at a higher rate than it paid depositors. (This is called "the spread.")

Two things are important to remember here: Look at this from the bank's point of view, not just your own. Work at seeing this part, and the whole, of the money system.

Second, under *de-regulation* that began in 1978, banks got away with lower reserves, and invested our "safe" deposits in highly risky ventures like junk bonds, sub-prime mortgages, sub-prime auto loans, and derivatives. Non-bank institutions (the "shadow bank" sector) operated with no required reserves at all. High leverage (from low reserves) drives speculation. Combine this with a) Money borrowed for margins on derivatives, and b) the scale of derivatives, and we have an upside-down mountain of debt: its tip resting on a tiny asset base, its base swaying in cyber-space—a condition of great instability, enormous risk

and uncertainty. This game continues almost unabated five years into "recovery."

Bill Greider, a fine journalist and a critically-minded ally of organizing, was the first writer to bring me up against the "magical" way central banks (including especially the Federal Reserve Board) and commercial banks create money. (See his *Secrets of the Temple: How the Federal Reserve Board Runs the Country—Penguin, 1987.)*

As I tried to "drill down" to the heart of the 2007-09 financial crisis, these books helped me explore the range of views about money and its history:

—Richard Duncan, *The Dollar Crisis: Causes, Consequences, Cures* (John Wiley, 2003), and *The New Depression: The Breakdown of the Paper Money Economy* (John Wiley, 2012.)

—John Kenneth Galbraith, *Money: Whence it Came, Where It Went* (Replica Books, 2001—first published 1975.) "The process by which money is created is so simple that the mind is repelled."

—Thomas H. Greco, *The End of Money and the Future of Civilization* (Chelsea Green, 2009.)

—Christ Martenson, *The Crash Course* (John Wiley, 2011.)

—Ronnie J. Phillips, *The Chicago Plan & New Deal Banking Reform* (M.E. Sharp, 1995.)

—L. Randall Wray, *Understanding Modern Money: The Key to Full Employment and Price Stability* (Edward Elgar, 1998.)

Wray, along with Bill Mitchell, Stephanie Kelton, Warren Mosler and James K. Galbraith, have helped revive a long-dormant debate about money its nature and role. Their work is loosely named "Modern Money Theory," or MMT. Some place MMT within a larger effort in current economics, called Post-Keynesianism, which is clustered at the University of Missouri/ Kansas City, and also includes Michael Hudson and William Black. This stream of thinking has been a major

resource for me. Another key figure is Steve Keen, an Australian economist. Unlike most economists over the past forty years, these scholars take debt and credit-based money—and therefore inequality— seriously.

APPENDIX C

Derivatives

This is a fancy word for "bet." A derivative is an "insurance" contract that covers a bet that a price will go up or down—or that the temperature will drop, rain will come, or the Mariners will get a wild-card spot. I kid you not.

Take your average sports bar, and its football pool. Five guys at the bar bet for or against the Seahawks. Their bet is only on the outcome of the game. They are not betting on the stock of the franchise, which has something to do with the actual asset—the financial value of the corporation. No, their bet is already once removed from the actual asset.

Next step: You and I are sitting with ten other folks in two big booths. We're watching the five betters at the bar, and their action. The guys in our crowd start betting on this or that bar-guy—will he win his bet or not? We are one more step removed from the actual asset.

Then the women in our crowd get into the action: they start betting on *our* bets. Before you know it, the whole bar crowd—fifty or sixty of us—are betting on how our bets on bets will do.

Imagine keeping track of all these bets, with small pieces of paper, or contracts. There's no one person that keeps track and keeps everybody honest. It's a free-for all, what they call "over-the-counter (OTC) in markets.

All this for "value" not directly connected to the hard value of the asset.

It's like a house of mirrors—trying to find the real object amidst all of its reflections. Those reflections are the equivalent of derivatives.

It's a fun-house for derivatives trading, a mirror-covered casino. You might call it an asylum—a big one. Global, in fact.

Derivatives' current global notional total value is $710 trillion—about ten times global GDP—and up $50 trillion from their pre-crash peak in 2007; their actual market value is $24 trillion. (The notional value of US banks' derivatives comes to $240 trillion.)

In a crash, if 90% of these $710 trillion in global bets were settled by cancelling both sides of each contract ("netting out"), that would leave $71 trillion at risk. Defenders of the largely-unregulated derivatives market (10% are traded on exchanges) claim that "netting out" removes most of the speculative hangover.

This claim rests on the assumption that in a crisis, counterparties (the "other guy" in the bet—mostly other banks or hedge funds—will rationally come to the table. This did not happen in a number of cases in the recent crash.; the counterparties were in crisis and would not disclose how weak they were. The big example was AIG.

In the summer of 2007, when large numbers of homeowners with subprime mortgages began defaulting, investors in subprimes stopped buying; prices of the fraudulently-rated bonds that bundled huge numbers of lousy mortgages fell sharply.

Suddenly, many of the banks and hedge funds, both U.S. and European, that had "bet" that the casino would continue to boom, wanted their money. AIG's London unit, a primary insurer of those "bets" couldn't pay Goldman Sachs, Morgan Stanley, Bank of America, Merrill Lynch,

and dozens of European banks. AIG came to the cliff of insolvency because it could not meet its obligations for derivative contracts worth almost $185 billion. So the feds, seeing a catastrophe of the entire system, stepped in with a bailout.

To return to the current $710 trillion maze: as I understand it, the original $24 trillion in actual market value requires 5% placed "on margin," or down payment, in cash and collateral, which comes to $1.2 trillion.

So in a crash, we have, first, the $24 trillion that must be paid in reality, and second, the $710 trillion that is the totality of the current speculation, all the paper that's in the game; no one knows how much of that $710 trillion would be lost in another crash. (In the 2007-09 crash, the US Treasury estimates US households lost $19.2 trillion, and US workers lost 8 million jobs. IMF estimated in 2009 that globally banks would lose $4 trillion. The total US government bailout, including cheap Federal Reserve loans, came to about $23 trillion.)

This casino includes the global currency market (forex)—with 2013 *daily volume* of $5.3 trillion. Taken as a whole, this casino is where the biggest returns are; this game is a major cause *and* effect of the *ongoing* radical social and natural instability created by capitalism's current money system.

For data on both derivatives and forex, see Bank for International Settlements (BIS) reports for 2013.

For critique from first-hand experience as a Wall Street dealer in derivatives, See Frank Partnoy's two books— *F.I.A.S.C.O*. and *Infectious Greed.* Other important critiques include:

—Neil Barofsky, *Bailout* (Free Press 2012.)

—John Cassidy, *Why Markets Fail* (Farrar, Strauss, Giroux 2009.)

—William D. Cohan, *House of Cards* (Anchor 2010.)

—Satyajit Das, *Traders, Guns and Money* (Prentice Hall 2006.)

—Simon Johnson and James Kwak, *13 Bankers* (Pantheon 2010.)

—Paul Mason, *Meltdown* (Verso 2009.)

—Paul Muolo and Mathew Padilla, *Chain of Blame* (John Wiley 2008.)

—Charles R. Morris, *The Trillion Dollar Meltdown* (Public Affairs 2008.)

—Yves Smith, *Econned* (Palgrave Macmillan 2010.)

—Gillian Tett, *Fool's Gold* (New Press 2009). Tett is a senior editor at *Financial Times*.

APPENDIX D

Truth and Consequences for the Big Banks

Let's conclude by looking at key factors for the biggest banks: Exposure of big banks to derivatives; concentration of the bank sector; fines by US regulators for a variety of fraudulent practices; and the explosion of credit in the US and global credit economies.

***First*, Derivative exposure, compared to total assets, top 4 banks ranked by derivative activities. (Office of Comptroller of Currency *Report of Bank Trading and Derivative Activities 3rd Quarter 2013*, page 30):**

Bank	Total Assets	Total Derivatives (Notional value)	Ratio ders/assets
JPMorgan Chase	$2 trillion	$72 trillion	36/1
Citibank	1.3 trillion	64 trillion	49/1

Goldman Sachs	111 *billion*	47 trillion	423/1
Bank of America	1.4 trillion	41 trillion	29/1
34/1			
Total 4 banks	4.8 trillion	224 trillion	47/1

Note that Goldman Sachs has a relatively small asset base ($111 billions, with a 'b') but a heavyweight exposure to derivatives ($47 trillion.) And *each* bank in this chart has at least $40 trillion in derivative exposure. The ratio column tells us that these 4 banks are way over any sane level of leverage; they are top-heavy, each an upside-down mountain.
The banks are hiding this risk in their annual reports—with obfuscating legalese and mis-named types of risk. Investors often mistrust bank accounting. as opaque. (An example of this is in Wells Fargo's 2012 annual report, examined by Frank Partnoy and Jesse Eisinger in "What's Inside America's Banks?" The *Atlantic*, January 2013.)

The $224 trillion in derivative exposure among these top four US banks is almost one-third (32%) of the $710 trillion in global exposure. But it is a much larger percentage of US total bank exposure ($240 trillion): 93.3%, to be exact. What does this mean? The top US and European banks, five years after the crash, continue to gamble recklessly, continue to commit fraud, continue to be TBTF: Too big to fail, jail, or run.

As I mentioned earlier, that $710 trillion is about ten times the size of the global economy.

Second, the same goes for size and concentration: The number of banks in the US has shrunk, from a peak of 18,100 to 6,891, the lowest number since 1934; 1,400 of the lost banks merged or failed since 2008.In mid-2013, all US banks together held a total of $14.4 trillion in assets; of that, the top *ten* banks held more than 50% (up from 20% in 1990); the top *six* banks held 67%, or $9.65 trillion—up 37% from 2008.

Wells Fargo makes about one fourth of all loans in the US. The largest *five* banks make just over 40% of all loans. Bank of American makes

about one-third of all us business loans. JPMorganChase's assets are about the size of Great Britain's economy.

***Third*, fines:**

Some of the financial roosters are finally coming home, in the form of fines, for a long series of frauds during and since the financial crisis. US top banks so far have been hit with over $100 billion in fines; the global total is almost $150 billion. More cases are pending, so more fines are coming—including against US branches of European banks.

But no banker has gone to jail, no banker has suffered a personal fine commensurate with his decisions to commit fraud; and there are no real signs yet, since the fines are a cost of doing business and therefore reduce the tax bill, that the banks are actually changing their cultures. Regulators vary in their seriousness, and some of the fines are merely "show" for political purposes.

(See the work of William Black, who was a top regulator during the savings and loan prosecutions of the 1980s; he insists that the US regulators are ignoring major intentional fraud, and therefore the opportunity to try for jail time and heavy personal fines, in pretty much all these cases. See also the statements of Thomas Hoenig, Vice Chair of the FDIC, who publicly calls for breaking up the biggest banks.)

***Fourth,* a note on the big picture: In 1968, US total credit was $1 trillion. By 2010, it was $52 trillion—an increase of 52 times, in 42 years.[19] The direct causes of this flood of credit were:**

—Over the same years, a parallel increase in US money supply; the Fed printed $886 billion of new notes, an increase of 20 times. That $886 billion was the base for the $52 trillion in credit. In turn, the base for the new money supply was the government's promise that it would pay; our money supply, after 1968, has been paper, or fiat currency.

[19] See Richard Duncan, *The New Depression: The breakdown of the paper Money Economy* (John Wiley 2012.)

—Across the years of de-regulation, regulators lowered reserve requirements. Loans became easier to make, more computer mice created more deposits/money, and bank profits expanded as credit expanded.

—Also during the de-regulation era, a new, non-bank and *largely un-regulated* set of institutions emerged, to dominate the financial sector: hedge funds, private equity funds, money market funds, asset-backed commercial paper conduits (ABCP), investment banks and mortgage firms, markets for repurchase agreements (repos), securities broker-dealers, credit insurance providers, securitization and finance firms, special investment vehicles (SIV) and special purpose funds (SPE). This became known as "the shadow banking system."

These new institutions created a huge set of highly complex instruments that promised great returns to bamboozled investors. The most famous were the mortgage-back securities (MBS) of the US housing crash; but there were dozens of new names for fraud, new and not-so-new gimmicks, backed with tons of computer-spewed data, that lured millions of suckers, and trillions of their dollars, from banks, pension funds, endowments, insurance companies and crazed individuals in Europe, the US and as far away as Australia.

This casino without rules, rigged with the explosion of credit it created and sold, has created, since 1968, the great surge of consumption that we in the "civilized" countries of corporate capitalism call "our standard of living," or "our way of life." We are divided within ourselves about playing in this casino; some of us are eagerly in pursuit of the game's rewards, while others are struggling with our addiction to it. It's hard to avoid the casino. (Or is the casino also a prison?)

It was all a Ponzi scheme—a Lemming Effect, driving continual borrowing, to bet on high returns in an always-receding future.

The explosion of credit, and the system that drives and attracts it, changed our economy from manufacturing to finance-based, and its purpose from production to consumption. We borrowed not in order to invest, but in order to consume.

That manufactured explosion of consumption, as M.King Hubbert so clearly saw, is based on cheap credit and cheap fossil fuels. That combination—cheap credit and cheap fossil fuels—is throwing our Earth's climate and species systems and our human "world" systems into deep volatility, imbalance, and uncertainty.

This system—fueled with cheap credit and cheap fossil fuels— is tearing up the fabric of millions of human families around the world every year, in forced displacement and migration, joblessness, poverty, poor health, cultural confusion and war. At the same time, using the same mechanisms, this system is tearing up thousands of other species each year, along with their habitat and the climate that humans have always known.

This same system, represented by the oil, gas, coal and rail industries of the US and Canada, has mounted an all-out attack upon the US states of Oregon and Washington and the Canadian province of British Columbia. This same system intends to devour this beautiful and abundant region, our Eden if you will.

So this system, whether we call it "corporate feudalism" or "capitalism" or "our way of life," is ***here all around us, now*****; out here in paradise— in every forest torched from an explosion, in every crop that shrivels and dies from coal dust, every river near a coal or oil rail right of way with water and salmon lost in a fossil spill, every small town or city through which the trains run, every time a job is lost in tourism, fishing, or recreation, in every tax dollar we have to pay out to cover damages to health, safety and property—this assault is a clear, present and massive danger, chewing us up even as it holds us captive.**

We can do this. We can say yes to Creation and to our Great Work, and no to this threat to our Eden.

It starts, in my view, in conversations within and among all the people of the civil sector communities of faith, labor and education.