

**Regenerative Capitalism Address at Yale University's  
Center for Business and the Environment**  
(Summary of Remarks by John Fullerton)  
April 21, 2015

I'm honored to be here at Yale today and particularly excited to be addressing the Center for Business and the Environment. I've been working on the edge of these two disciplines for over a decade now.

You're sitting on the elephant in the room issue we must address: our current economy is destroying the planet — the very basis of civilization — because there's a profit in it. How we manage this issue will literally define our legacy on this earth!

Most of you understand we have a problem. Welcome to the Anthropocene, the new geological era where man's choices will literally determine the outcome for the entire planet. This is new; and we're messing it up.

We live in a time of interconnected crises: economic, social, and ecological. They're systemic. You intuit that capitalism as we know it is in question. Your skepticism about whether or not our leaders are in control is well founded.

Yet, if you are like me, you appreciate the many strengths of our capitalist, free enterprise system. You're not interested in throwing that all away in search of some utopian dream that you know in your gut is naive.

My hope is that the framework I'm calling Regenerative Capitalism will provide the vital road map we need to find that better way. A pathway to the next stage of capitalism. It provides the framework for a new story, one that is aligned with how the universe actually works.

What's crystal clear to me, is that *YOU* are the heroes of this new story. This needs to be your story... And my generation had better adapt or get out of the way. After a nearly twenty-year career at JPMorgan, ending in 2001, I

kind of stumbled into this question – the question of how to fix capitalism so that it works for people and the planet. And a related question: what is the purpose of capital? I’ve become passionate about the need for system change, inspired by a paper by Dana Meadows. In it she wrote that if you want to change a system, the most important place to intervene is the paradigm, or the story of shared beliefs, within which the system exists.

*Our economic story of undifferentiated exponential growth and optimizing shareholder value at all costs as the path to prosperity no longer works.*

A new story demands a new theory, for as Einstein said, “it is theory that determines what we can see.” I believe our imaginations are limited because we are trapped in the old paradigm based on flawed theory. At times of great change — like right now — new theories matter.

This shift in paradigm — our search for a new story — is **WAY** bigger than the age-old question of capitalism versus

socialism, or free markets versus government regulation, or the story playing out in Europe today about deficit spending versus austerity.

This shift is about a new way to think. Systems thinking. It may be as big as the Copernican shift – Copernicus as you will remember challenged the earth-centric paradigm and offered his new theory that the earth actually revolved around the sun and not the other way around. The Enlightenment was born! It was very threatening to the high priests of the church at the time. Scientific logic would usurp power from the Church.

In a similar way, I believe, thinking in systems — integral thinking — will revolutionize every field of study from medicine to management, to urban planning, political governance and law, *and yes most certainly to economics and finance!*

*And, this shift in thinking is equally threatening to our high priests!* — those who benefit most from maintaining the

status quo. Most of them are good people, trapped in a flawed paradigm. I often find the more one has to lose, whether money or personal status, the less one can afford to see the consequences of our flawed system.

At this moment in time, we had better heed management guru (and early systems thinker) W. Edwards Deming's warning: "Learning is not compulsory. Neither is survival."

## **Interconnected Crises**

Before we turn to this new story, let us very briefly confront reality head on, summarized in three interconnected crisis.

- We are in ecological overshoot, using up 1.5 times the earth's natural capacity to regenerate natural capital according to the Global Footprint Network. This manifests in numerous crises, the most alarming of which is climate change.
- We are in economic crisis, evidenced by the decoupling of GDP growth from rising prosperity as demonstrated by the Genuine Progress Indicator and

- other alternative measures. Our basic strategy to enhance well-being that worked very well in a different context is no longer working. This crisis manifests in numerous consequences including structural unemployment, rising and grotesque inequality, and a growing and dangerous sense of widespread disempowerment and loss in confidence about the future. The economic crisis also manifested the financial crisis, and the ongoing triage where central banks are artificially supporting the global capital markets in a desperate attempt to shore up the growth economy.
- And finally, we are in social crisis, as the ecological and economic crises cascade into growing social unrest, particularly across Europe. Even the scourge of terrorism and the unrest in America's inner cities triggered by racial tension between communities and the police charged with protecting them, can be traced in part to the disempowerment derived from our economic system's failure to deliver on the promise of a broadly shared prosperity.

## A New Way of Thinking

The most important point I will make today is this: For five hundred years since the Enlightenment, we have perfected the skill of analytical problem solving. We break down what's complicated into component parts. We optimize. But in doing so, we lose sight of the whole. That's when we get in trouble. We *are* in trouble.

Regenerative Capitalism is “radical” in the literal sense — getting to the “root.” It represents huge challenges to business as usual. But anything less is simply not a credible response to the immense challenges we face.

I believe this integral or holistic approach is not only realistic, it is already emergent in the world. It's all around us, and your study of ecology provides a vital clue to how this works. It's the difference for example, between Western and Eastern medicine. The goal is integrated medicine, building on the best of both. In that sense, we're searching for an “integrated economics and finance.”

We write about it in our *Field Guide to Investing in a Regenerative Economy*. I've invested in regenerative projects personally so I've experienced its magic first hand. But it is still very fragile. It takes a new theory to help us see it. And to know how to measure it empirically so we can manage it. Then we can scale it up.

If we are to avoid a major, systemic collapse, the leaders of tomorrow will need to think in systems.

*I'd bet my life on that.*

## **Universal Pattern and Principles of Network Health**

So what is a Regenerative Economy? The answer starts with a simple premise:

There are universal patterns and principles that govern healthy, complex systems throughout the real world. They apply to living systems such as our bodies, and to entire ecosystems. But also to non-living systems such as the



Internet and electricity grids. Human economies, embedded in society, are another example of such complex systems, or energy flow networks.

*Our challenge is to bring our economics and finance into alignment with these universal principles and patterns.*

When we do, we will have what we're calling "*Regenerative Capitalism.*" Alternatively, someone needs to make the case why these patterns and principles don't apply to us and to our human economy, or that the principles are wrong.

I invite you to go to our *Field Guide* where we now have over 25 stories of projects that have tapped into this regenerative potential that exists all around us waiting to be activated.

Remember this key point: These principles overlap and work as a pattern. It's not an a la cart menu that we can pick and choose from. We must learn to think, and

manage, in patterns. With that said, in order to illuminate the eight key principles listed below in linear fashion, I am now forced to shift gears into a reductionist presentation. But as you consider them, and other principles you would add, keep in mind they all fit together in a single pattern, creating a whole that is far greater than the sum of the parts. Like two molecules of hydrogen and one molecule of oxygen combine together in relationship to create water!

## **Eight Key Principles of Regenerative Capitalism**

1. **In Right Relationship** – Humanity is an integral part of an interconnected web of life in which there is no real separation between “us” and “it.” The scale of the human economy matters in relation to the biosphere in which it is embedded. What is more, we are all connected to one another and to all locales of our global civilization. Damage to any part of that web ripples back to harm every other part as well.

This principle has profound implications for the entire industrial economy. Dumping excess carbon in the atmosphere beyond well-understood scientific limits

shifts the carbon balance out of right relationship and should be seen as unacceptable. Similarly, dumping 80,000 (and growing) distinct chemicals into the environment, many toxic, many with consequences we don't understand, and many that never go away, when we know everything is connected to everything, violates this core principle. We know this intuitively, but the principle proves it and should guide our policies rather than the current standard of proof to show harm.

Modern finance in particular has evolved in a way that violates this principle, apart from its well-publicized ethical challenges. Properly understood, finance must be in service to a healthy economic system, but it acts as if it is the system. To be in service, finance must allow real investors and lenders to reconnect “in right relationship” with enterprise. Modern capital markets and our ever shorter term time horizon in the pursuit of efficiency (with respect to short-term returns to capital), have disconnected this vital relationship, making long-term, responsible decision-making among real investors and creditors and business all but impossible.

- 2. Views Wealth Holistically** – True wealth is not merely money in the bank. It must be defined and managed in terms of the well-being of the whole, achieved through the harmonization of multiple kinds of wealth or capital, including social, cultural, living, and experiential. It must also be defined by a broadly shared prosperity across all of these varied forms of capital. The whole is only as strong as the weakest link.

Much work is underway in the corporate arena seeking to measure nonfinancial wealth, develop standards, and creating “integrated reporting” that provides greater transparency to the full impact of an enterprise on all its stakeholders. This effort is an encouraging start. But we will find that harmonizing the multiple forms of wealth for the long term rather than simply reporting on it will be very challenging, placing new demands on enterprise leaders and requiring long-term partnerships with enterprise owners that do not exist today in the public market context as discussed above.

3. **Innovative, Adaptive, Responsive** – In a world in which change is both ever-present and accelerating, the qualities of innovation and adaptability are critical to health. It is this idea that Charles Darwin intended to convey in this often-misconstrued statement attributed to him: “In the struggle for survival, the fittest win out at the expense of their rivals.” What Darwin actually meant is that the most “fit” is the one that fits best, i.e., the one that is most adaptable to a changing environment. The proper way to channel our competitive instincts is in the pursuit of quality to “fit best” in the dynamic landscape rather than the pursuit of power to control and resist change as often happens in mature businesses in contemporary capitalism.
  
4. **Empowered Participation** – In an interdependent system, fitness comes from contributing in some way to the health of the whole. The quality of empowered participation means that all parts must be “in relationship” with the larger whole in ways that not only empower them to negotiate for their own needs, but also enable them to add their unique contribution towards the health and well-being of the larger

wholes in which they are embedded.

For example, our toes and fingers need to be empowered to negotiate for enough oxygen to remain healthy, and therefore contribute to the healthy functioning of our bodies. So too, the lower level and rural human communities must be empowered to negotiate for their essential needs or the entire economic system suffers – essentially what is happening today. This realization should shift the debate around poverty and inequality, making it not only an ethical issue, but also a threat to systemic health in which all in the system – rich and poor alike – suffer when inequality reaches extreme levels as it has today. This insight is born out in research done by Kate Pickett and Richard Wilkinson, which shows that developed world countries that are more unequal suffer worse health and social outcomes.

- 5. Honors Community and Place** – Each human community consists of a mosaic of peoples, traditions, beliefs, and institutions uniquely shaped by long-term pressures of geography, human history, culture, local environment, and changing human needs. Honoring this fact, a Regenerative Economy

nurtures healthy and resilient communities and regions, each one uniquely informed by the essence of its individual history and place.

We see this principle manifesting in the great interest in local economy movements, beginning with farmer's markets but expanding to all place-based economy efforts, such as the leveraging of the procurement power of anchor institutions like hospitals and universities that are formally linked to place. This principle suggests that there are limits to globalization and the endless pursuit of expected efficiencies from economies of scale, the latter often resulting in the destruction of vibrant, place-based communities. In the United States, the Business Alliance for Local Living Economies (BALLE) is a network of place-based local businesses demonstrating the organically manifesting urge to reconnect with place and community, while Slow Food began in Italy in response to the threat of the commodification of food through fast food restaurant chains.

6. **Edge Effect Abundance** – Creativity and abundance flourish synergistically at the “edges” of systems, where the bonds holding the dominant pattern in place are weakest. For example, there is an abundance of interdependent life in salt marshes where a river meets the ocean. At those edges the opportunities for innovation and cross-fertilization are the greatest. Working collaboratively across edges – with ongoing learning and development sourced from the diversity that exists there – is transformative for both the communities where the exchanges are happening, and for the individuals involved.

For example, we see much regenerative potential being realized on the edges between the private sector and the public sector, or the private sector and the education sector. Anywhere where we work across silos we enhance the regenerative potential. This is hard work, requiring people to engage outside their comfort zones. It can be risky work as well. But life happens on the edges, and the more edges, the greater the opportunity for mutually beneficial exchange and innovation to occur.



- 7. Robust Circulatory Flow** – Just as human health depends on the robust circulation of oxygen, nutrients, etc., so too does economic health depend on robust circulatory flows of money, information, resources, and goods and services to support exchange, flush toxins, and nourish every cell at every level of our human networks. The circulation of money and information and the efficient use and reuse of materials are particularly critical to individuals, businesses, and economies reaching their regenerative potential.

This principle reinforces the importance of the closed-loop manufacturing — reuse, recycle, and remanufacture — concepts of circular economy efforts. But it also explains the immense regenerative potential unlocked by the invention of search by Google, exponentially expanding the circulation of information throughout the world. And it points to the damage done by the excessive consolidation of banking inside Too Big To Fail banks, and their overriding focus on optimizing return on regulatory capital. The latter often comes at the expense of healthy circulation of credit to the lower levels of the

economy since it becomes “uneconomic” for these institutions to undertake small-scale and seemingly “inefficient” business.

8. **Seeks Balance** – Being in balance is more than just a nice way to be; it is actually essential to systemic health. Like a unicycle rider, regenerative systems are always engaged in this delicate dance in search of balance. Achieving it requires that they harmonize multiple variables instead of optimizing single ones. A Regenerative Economy seeks to balance: efficiency and resilience; collaboration and competition; diversity and coherence; and small, medium, and large organizations and needs.

Discovering that there is a “window of vitality” in living systems where these and more qualities are in balance helps explain why contemporary economics and finance, with their objective of optimizing efficiency, has made their entire economic system brittle and susceptible to collapse. In fact the near collapse of the financial system, with its mindless pursuit of short-term efficiency of return on capital at any cost can be seen as a warning sign of what happens when systems lose their essential balance

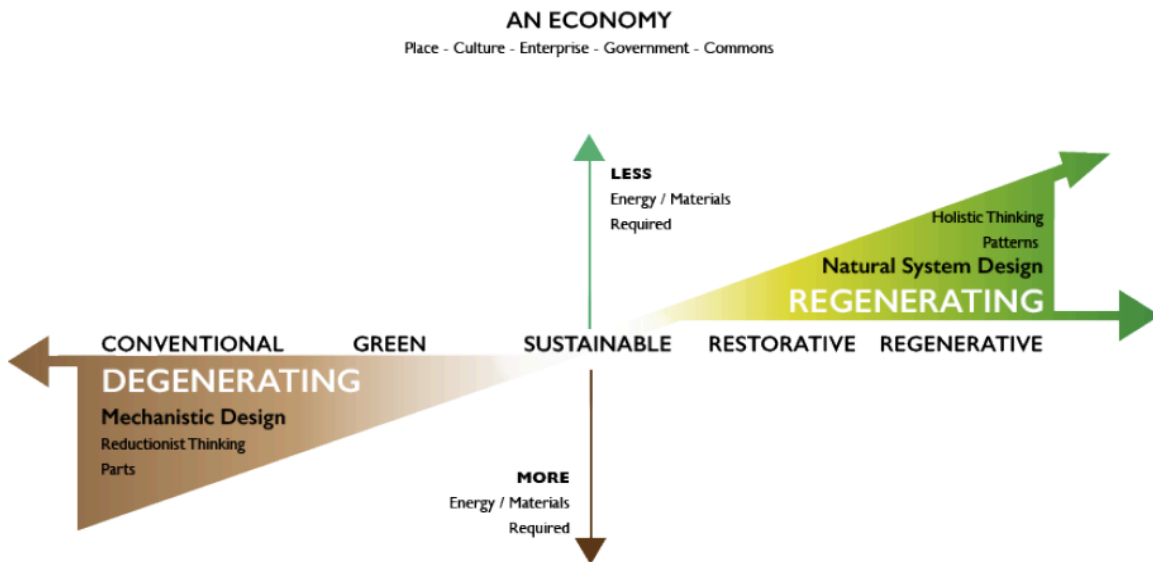
between efficiency and resiliency. A little more stodgy direct mortgage lending between a local bank and a local borrower, even if at a moderately higher interest rate, would make the system far more resilient.

## **From Growth to Health**

*My suggestion is simple:* Align our economy with the pattern of regenerative health following these 8 principles, instead of the relentless pursuit - *at all cost* - of GDP growth and shareholder value. By doing so, we will be more likely to achieve the outcomes we are looking for and generally agree upon. They are the outcomes that only a healthy regenerative system can deliver.

As illustrated in the figure below, we are moving from (degenerative) business as usual (the lower left) towards “green” – less bad, but still unsustainable. That’s generally where we are today, greening our economy. But less bad will not cut it.

Figure (adaptation of Bill Reed's chart)



Only by aligning with the 8 principles (and more), all related in a pattern, can we push above the line to restorative, and finally to regenerative on the upper right, the self-renewing process that is the source of systemic health. Sustainability – system health – is not the goal. Rather, it's the result of the regenerative process. The process is the goal. Like our bodies are sustainable because we are regenerating all of our cells every seven years on average. It's the *regenerative process* that is the key.

## Implications for Public Policy

My hope is that the vision of sustainable capitalism can help us to finally transcend the division that now defines the political process in America. It can help us move forward to debate *the real issues* of how best to foster widespread well-being, through a regenerative economy.

Much work lies ahead in educating leaders in government, business, and finance, all along the political spectrum. We must educate our future leaders to think in regenerative systems.

Systems scientists are now developing metrics to measure these principles in real economies. For example, we can measure circulation and we can measure system balance. And we can measure, to some degree, nonfinancial wealth. I was in China recently where Sanya City unveiled the first natural capital balance sheet of any major municipal government in the world. It's happening. We

will also need to use nonanalytical judgment, dare I say wisdom. Our forgotten wisdom, modern and indigenous, has never been more important.

## **Implications for Finance**

The implications of this regenerative framework for modern finance are profound. For example, it will tell us empirically what is a Too Big To Fail Bank. The recent capital surplus penalty for “systemically important” banks is a fitting response in alignment with regenerative thinking. So we are already moving in the right direction, albeit too timidly.

Real asset owners like pension funds need to reconnect *in right relationship* with real enterprises, using long-term investment approaches like Evergreen Direct Investing. This has the potential to create an entirely new intermediation business model for Wall Street that is value added rather than extractive.

A simple Financial Transactions Tax would restore some capital market resiliency, even if at the expense of (minor) system efficiency. The subsidy to debt for everything from McMansions to LBOs and hedge fund speculation makes no sense in the regenerative framework. And on and on...

## Conclusion

It may seem arrogant to presume we live in historic times. That this is a new Copernican moment. After careful consideration, I believe we are in such a moment, and my conviction on this question only grows stronger as time passes. Richard Tarnas' description of epiphany, and about intuition running ahead of theory, resonates strongly.

*“The first Copernicans had experienced a kind of inner conversion. Their epiphany was at once intellectual and spiritual, psychological and cosmological... Their intuition ran ahead far in advance of all the theoretical and empirical work that had to be done.”*

*- Richard Tarnas*

We are in search of a new story. One that is aligned with our latest scientific understandings that are profoundly more advanced than the science of the Enlightenment. And also aligned with our humanistic values, and the core insights of our great wisdom traditions, which are remarkably aligned with the new science, yet often in conflict with our economics and finance!

This new story will require a shift from relying exclusively on reductionist “problem solving” to holistic or systems thinking. But we now understand the pattern and core principles that describe all systems in the cosmos. This must be our new roadmap. And, we’re beginning to know how to measure them in the real world, often with surprising simplicity once we have the data. So we can learn to manage the system in alignment with the principles, remembering it is only as strong as its weakest link. Try running a marathon on a broken toe!

Our challenge is to realign our economic system with the universal patterns of systemic health, keeping what works



from conventional economics, while confronting head on the flawed assumptions:

Money is not wealth. Exponential growth of material throughput in the economy — ever more resources in, ever more waste out — will end. Not all resources are substitutable with financial capital — like water, for example. And we'll never know the true price of externalities until it's too late.

Nowhere will this shift be harder than in finance. It will require a shift in consciousness really. I see evidence of that shift increasingly all around us. The former Governor of Massachusetts just went to Bain Capital to launch an impact investment fund. But we will need courage and resolve from our regulators and legislators as well to address much that remains parasitic about modern finance.

Our calling, and our shared purpose, is to lead this historic shift to a regenerative civilization! I say that full well

knowing the real world tension involved in needing to live in the world that is, while at the same time catalyzing the change to what is emerging. That's very tough.

As I said, life happens on the edges. And danger exists on the edges. My wish for you, and for all of us, is for your generation to show us how to dance on that edge. Your genius must be to dance on that edge. I'm here to help any way I can. Let's dance!