

Regenerative Enterprise

Optimizing for Multi-Capital Abundance

Version 1.0

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Optimizing for Multi-Capital Abundance - Version 1.0 eBook Format

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1

Chapter Thesis and Assumptions

We live in the anthropocene era, a time of rapid global change dominated by the actions of the human species.¹ Politically, economically, and ecologically, we exist as a global society. Never before has our level of interconnection been so international and so influential. Sudden changes in the government, economy, or environment of any nation quickly reverberate throughout the rest of the world.

Capitalism is the most prevalent and powerful economic system on the planet. The amount of money and financial wealth in the world is increasing exponentially, as required by capitalism's dependence on continued economic growth. At the same time, global ecosystems are degrading. The fundamental basis of human productivity (the land, water, and soil under our feet) is being damaged, polluted, and eroded at an increasingly rapid rate. Contributing to both trends is our growing human population, which requires more resources to sustain than ever before in history.

We (the authors of this book) are entrepreneurs, ecologists, and global citizens. We believe in democracy, enterprise, and the incredible power of individuals and groups to envision and create the world they want to live in. We believe that there is a rational way that humans can exist on the planet, one that reverses current trends and actually *increases* the health of all ecosystems and living beings. Working from within the current system of capitalism over the last decade, we have

witnessed and developed enterprises that demonstrate the power of business for creating good in the world. We believe that enterprises are the most effective tool for creating positive change. Through clear vision, hard work, and innovative business models, they carry massive potential for global regeneration.

Our thesis is that enterprises can be created that produce wealth while increasing the health and vitality of living human communities and the ecosystems in which they live. These enterprises will produce multi-capital abundance by mimicking natural ecosystems and collaboratively forming multi-entity alliances: Regenerative enterprise ecologies.

In this book, we articulate the context of global degradation, the conceptual underpinnings of a new model of capital, and the definition of regeneration. We then develop the theoretical and practical requirements for regenerative enterprises, entrepreneurs, and enterprise ecologies. We conclude with three global imperatives and a clear set of principles that invite well-designed and effective action.

2

Global Degradation

Chapter

According to the Millennium Ecosystem Assessment, more than 60% of global ecosystem services are being degraded or used unsustainably.² The basic ecosystem functions that supply what humans and other species require to survive are crumbling around us: from the provisioning of food, water, fiber and fuel to the regulation of climate, floods, droughts, and diseases. The breakdown of ecosystem services threatens countless species with extinction – projected extinction rates in the next 40 years are between 10,000 - 100,000 times that of the historical record.³

This degradation of ecosystems is also causing significant harm to human well-being around the world.⁴ Loss of land- and sea-based livelihoods due to ecosystem degradation cost billions of dollars each year, levels of poverty remain high, and inequities are growing. Many people still do not have a sufficient supply of or access to ecosystem services,⁵ especially in vulnerable coastal, island, and tropical areas of the planet. Many of the trends in degradation will be exacerbated by rapid climate change we are experiencing.

The Intergovernmental Panel on Climate Change Special Report on Extreme Weather predicts an overall increase in droughts, floods, heat waves, and hurricanes around the world. These extreme events will incur billions of dollars in damages and untold harm to human health

and well-being, especially in coastal areas.⁶ In 2012, exceptional drought and ‘super storm’ Sandy grounded these severe warnings into reality, even in the financially affluent United States.

Culturally, we are also living in a time of rapid degradation. The world’s languages are disappearing at a rate even faster than that of biological diversity, with some estimating that 90% of all existing languages (nearly 7000) will be either dead or moribund within the century.⁷ With many of the unique beliefs, stories, songs, seeds, and foods connected to each language disappearing, this loss of languages represents an incredible loss of culture.

Many of these languages are spoken by indigenous peoples, whose lands and lifeways are threatened on a daily basis by our current extractive global society. A recent World Wildlife Fund study named the 200 places on earth that have the highest and most fragile biodiversity, and found that 95 percent of them are on Indigenous territories.⁸ Yet those same Indigenous lands are routinely raided for minerals, timber, farmland, oil, and other resources. Governments give industries concessions to use Indigenous land without ever consulting the Indigenous groups who live there, and in almost no case do Indigenous Peoples benefit from the financial income generated by this activity.⁹

As cultures and ecosystems degrade around us on a global scale, some of the worst effects harm the world’s poorest people and are sometimes the principal factor causing poverty.¹⁰ This is painfully and graphically illustrated in India, where each year thousands of farmers who depend on healthy productive ecosystems are committing suicide because of economic, social, and environmental factors exacerbated by degraded ecosystem services.¹¹

In this context of ecological and cultural degradation, one trend seems to be heading in the opposite direction: There is exponentially more money in existence than there ever has been before.¹² Ecosystems are degrading at increasing rates, and the amount of money is increasing – what’s going on here?

3

The Eight Forms of Capital

Chapter

In 2009, the authors developed a new economic map to fully conceptualize and account for the world's multiplicity of resource flows: The Eight Forms of Capital.¹³ Even as the soils erode away, biodiversity plummets, and ecosystems reel from the shocks of species loss, fragmentation, and climate change, economists and governments insist that economies must 'keep growing'. How is this possible? Can our global society truly continue to grow forever?

The infinite growth required by our current global system is primarily an infinite growth of one form of capital: financial. The Eight Forms of Capital economic model recognizes that there are other forms: social, material, living, intellectual, experiential, cultural and spiritual capital. We propose that the ongoing growth of financial capital is only possible through the loss of other forms of capital.

The current global society is organized and controlled primarily through the flow of financial capital, but the survival of any human or society depends primarily on living capital and the material capital that arises from it: food, water, energy, and shelter. It is the cooperation and collaboration of people in the forms of villages, tribes, regions and nations that support each other to successfully gather these provisions of ecosystem services and transform them into the goods and services that underly the global economic system.

The Eight Forms of Capital provides a clear framework to understand this global web of interactions and transactions. The Eight Forms of Capital can be summarized as follows:¹⁴

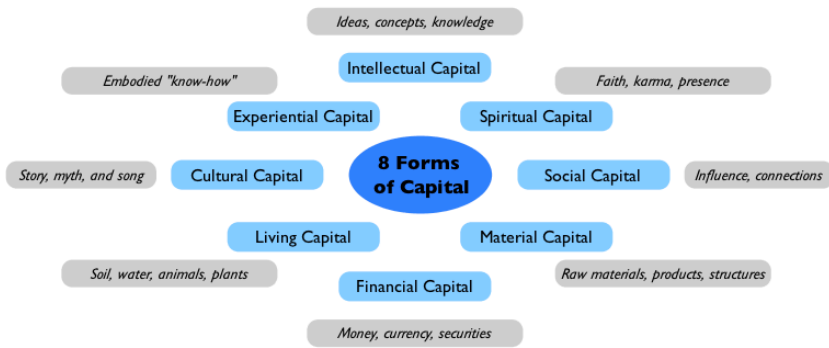


Figure 3.1 - The eight forms of capital.

- Social Capital - Connections, relationships, and influence. Can be complexed to webs of social indebtedness.
- Material Capital - Non-living physical objects: Timber, minerals, metals, fossil fuels. Can be complexed to plastic & electronic products, and further into structures, infrastructure, and technologies.
- Financial Capital - Money, currency, securities, and other instruments. Currently, facilitates the exchange of goods and services.
- Living Capital - Soil, water, animals, plants, human health and the health of other organisms, complexed to the ubiquitous ecosystems of which humans are a part.
- Intellectual Capital - Ideas, concepts, knowledge, “truth”. Held primarily in the human neocortex, intellectual capital is highly valued in the current society.
- Experiential Capital - Actual embodied ‘know-how’, built from personal experience.
- Spiritual Capital - Sometimes expressed as karma, faith or presence, spiritual capital is defined by an entity’s internal

connection and awareness of a greater whole. Spiritual capital is often complexly intertwined with cultural context and Cultural Capital.

- Cultural Capital - Shared internal and external experiences of a group of people: Cultural capital is an emergent property of the complex inter-capital exchanges in a community, village, city, bioregion, or nation. Story, myth, song, and art are tangible manifestations of cultural capital – they are also sometimes liquidated and exchanged for other forms of capital, usual financial.

Pools of capital can be held and developed by multiple entities, and various flows can occur within and between each form of capital:

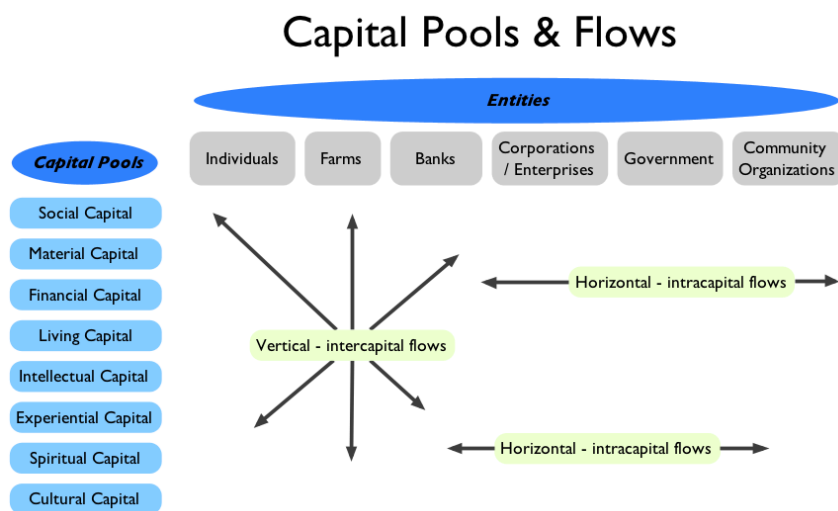


Figure 3.2 - Multi-capital pools and flows.

The sum total of global inter- and intra-capital exchanges is the current economic system. The international trend is to deplete the pools of most forms of capital while exponentially increasing the amount of financial capital. This mono-capital trajectory has significant impacts on the sustainability of current and future generations.

4

Regeneration Defined

Chapter

Using the eight forms of capital as a lens, it is evident that current human-led processes are rapidly depleting living, cultural, and spiritual capital on a global scale.¹⁵ This trajectory fundamentally limits the long-term viability of humans and other species on the planet – instead of life flourishing, it is degenerating.

In this context, degenerative systems optimize the increase of financial and material capital by depleting the fundamental generative basis of living, cultural, and spiritual capital. Degenerative systems intentionally apply intellectual, experiential, and social capital to achieve the increase of financial and material capital at the expense of living capital.

A “sustainable” system is defined as one that maintains existing pools of each form of capital, while providing for the upkeep and replacement of the fundamental living capital that all beings depend on for survival. But simply ‘maintaining’ the currently depleted state of living capital would be disastrous - 90% of all ocean fish would still be lost, two thirds of all species on earth would still be threatened with extinction, and the millions of acres of forest already cut and soil already eroded would not return.

In this context, we must move beyond sustainability and into regeneration of all forms of capital.

Regenerative systems actively build life, complexity and diversity. They grow the foundations and the potential of what humans perceive and experience as ‘wealth’. The following sections articulate three important properties of regenerative systems in the context of the business world and the eight forms of capital.

Extraction vs. Cultivation

Extract: “To pull or take out forcibly”¹⁶

*Cultivate: “To apply oneself to improving or developing,”
“Raise or grow”¹⁷*

We live in a world where huge amounts of living capital are ripped from the earth, hammered and smelted and twisted into material capital, and traded to create financial capital. The scale of this extraction is hardly fathomable by the human mind. In the over-developed nations where the authors live, stories are told about why this extraction is necessary and good: “Consumers are purchasing more and more things,” “The economy must keep growing,” and others. Massive ecological and cultural degradation tell a different story: extractive industries and processes destroy the foundation of our wealth and our very lives.

In the context of this book, we define **extraction** as the removal of capital from a system in a way that diminishes its overall the health, function, or resilience. A nearly ubiquitous example of the current extractive economy is the mining of soils known as agriculture. Millions of tons of soil are inexorably lost every year through tillage, biology-destroying chemical fertilizers, and the resulting rapid erosion. Dr. David Pimental of Cornell University estimates that some farms lose more than 250 tons of soil per acre per year, destroying their ability to produce food: “As a result of erosion over the past 40 years, 30 percent of the world’s arable land has become unproductive.”¹⁸

The extractive economy asks, “How much can we get out of this landscape?” or, “What can we take from these people or this place to make a financial capital profit?”

Within the framework of Regenerative Enterprise, the questions become: “What are we cultivating in our interaction with this landscape? How can our connection with the system we are harvesting from grow the integrity, resilience and long-term viability of these people and this place? In this context, we define **cultivation** as the addition to and removal of capital from a system in a way that develops and evolves its health, function, and resilience.

When a regenerative ‘cultivation’ approach is applied to agriculture, a productive revolution ensues. Agricultural systems like Permaculture, GROW BIOINTENSIVE®, and Holistic Management®, demonstrate that agriculture can actually grow soil instead of depleting it. How can this understanding be applied across other fields and arenas? What, exactly, are regenerative systems cultivating?

Edges & Connections

Rather than simply increasing the *quantity*, amount, or volume of a certain form of capital, regenerative systems develop the *quality*, complexity, or connectivity of capital. Any framework that requires ever-increasing quantities of capital will lead to the same result as the current extractive economy: cancer-like exponential growth. For example, the infinite growth of financial capital required by today’s global economy requires an ever-increasing manufacture and consumption of material capital products. Like cancer, the current economy is extracting unsustainable amounts of living capital to maintain its exponential growth – unless the system can be transformed, this will likely lead to overall collapse. Also like cancer, some of the causes of the current extractive mindset may be ‘environmental’ factors in the personal, internal, and social ecosystems of all of us humans who maintain the system.

Infinite growth of quantities of capital is not the goal. Instead, regenerative cultivation develops the quality, the richness, and the connectivity of different forms of capital. In the current extractive economy, material capital is mass-produced, homogenous and disconnected from its place. Cultivation of material capital in a regenerative context leads to material goods and structures that are handcrafted, beautiful, directly connected to their place, and full of life. Picture the difference between a vinyl-sided modular home and a green-roofed earthen home, or the open-air bamboo and hardwood houses of the tropics. Or the difference between the dull uniformity of mass-produced dish sets and the uniquely glazed and subtly asymmetric warmth of a hand-thrown clay bowl.

For living capital, consider the example of a farm. Rather than increasing the raw quantity of goods produced, regenerative cultivation would increase the quality (nutrient density, resilience, beauty) and the diversity of the goods produced out of the same space. The number of connections between elements on the farm also increase – the inherent input requirements of one element are met by the inherent outputs of other elements. Rather than disposing of manure and purchasing chemical fertilizers, the manure is composted to create biologically-active fertilizer. The more functional interconnections are cultivated in a system, the more resilience and robustness it will exhibit when inevitable disturbances occur.¹⁹

In practical terms, one way to increase the number of connections between elements is to increase the amount of **edge** or surface area in the system.²⁰

In living ecosystems the edges between different habitats are rich in biological diversity. The blending availability of resources from each habitat creates a situation where more species can live and interact than in either of the two adjoining habitats on their own.²¹

If only the size of either habitat increases, the amount of edge remains the same. This does not necessarily add richness to the system. However, cultivating and growing the edge itself can offer significant benefits to both habitats without increasing the size of either.

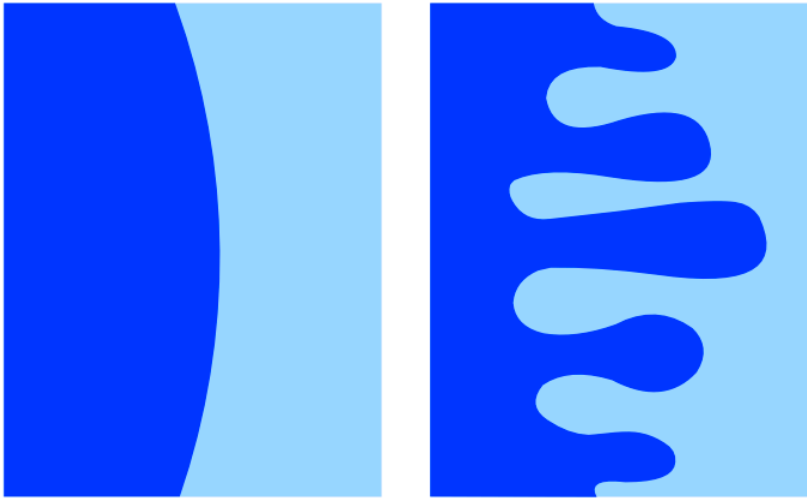


Figure 4.1 - Cultivating edge. The darker side has an equal amount of area in both images, while the image on the right has four times the amount of edge for interconnections and exchange.

For a well-known example of the beautiful diversity and richness of edge, consider coral reefs. They form at the edge between land and sea, anchored to firm bedrock where the agitated tropical water constantly moves. They also exhibit an incredible amount of edge within themselves: Every crenulation of coral, every waving seaweed, every tiny area of three-dimensional topography is home to a myriad of creatures. Edge-abundant coral reefs are some of the world's most productive ecosystems, hosting millions of symbiotic relationships and a vast biodiversity.²²

Another widespread example of edge in the natural world comes from examining a tree. If a tree attempted to grow the quantity of its biomass alone, it would look like a large spherical blob. This would negate the tree's ability to efficiently connect nutrients from the soil with energy from the sun. Instead of optimizing for volume as an organism, trees grow to optimize edge (surface area) while minimizing the relative volume of its biomass. In other words, trees choose to produce less wood and more leaves.

Trees also cultivate a vast amount of edge underground, by spreading their roots in a dendritic fractal pattern through the soil to efficiently gain access to as many nutrients and as much water as possible. They then multiply the amount of edge several orders of magnitude by developing symbiotic relationships with mycorrhizal fungi, who trade tree-produced sugars for extended access to nutrients and moisture through their networks of fungal hyphae.

With all of this connective edge, trees explode down into the earth and up into the sky, creating a sustained and beautiful pattern of growth with multiple functions for the ecosystem as a whole.

The current global economy and society has deeply accepted the idea that “growth is good.” To turn the human desire for growth away from extraction and towards regeneration, it must be refocused on surface area and connections: Regeneratively cultivating capital means increasing the amount and complexity of edge, not just growing the size of the system.

Harvesting the Surplus vs. Stealing the Core

With an abundance of living, thriving edges and the large number of connections they support, healthy systems begin to generate capital surpluses. In living capital, a tree yields more fruit and seeds than could ever possibly grow into new trees. With intellectual capital, a collaborative team generates more innovations and solutions than can feasibly be put into action. It is these emergent properties and surplus capitals of healthy systems that may be harvested and exchanged in a regenerative economy.

The extractive economy forcibly steals from the core pools of different forms of capital, reducing the ability of the system to maintain itself, much less produce a surplus. This behavior has tended to mine the foundational wealth of living, cultural, social and spiritual capital. Though it does appear to create financial capital profits, it impoverishes any short-, mid- or long-term opportunity for whole-system health.

The current trend to value and exchange ecosystem services in terms of financial capital (carbon markets, wetland mitigation banking, etc.) has the potential to go horribly awry. Living capital should only be valued and exchanged on the marketplace to the extent that the capital being traded is a surplus. Otherwise, the same extractive practices will harvest the living core of each locality, preventing regeneration and continued health of the system. Foundational pools of capital must be kept intact – enterprises must never extract more value than can be regenerated within the capacity of the living system itself.

By cultivating capital instead of extracting it, growing the edges of a system, and increasing its internal and external connectivity, enterprises can proactively develop greater surpluses for harvest and exchange.

The forestry enterprise Windhorse Farm in Nova Scotia offers an excellent example of how living capital can be cultivated by regeneratively ‘harvesting the surplus’. Using a management system called Ecoforestry, Windhorse Farm measures the amount that their forest grows on an annual basis, and chooses to only harvest a fixed percentage of that growth. The farm also chooses to harvest slower-growing trees, leaving the best trees to continue growing the living capital of the system. By culling the lowest quality saw-logs, they ensure that the quality of the remaining timber as well as the health of the trees increases each year.

Windhorse Farm continues to cut and sell wood from a forest that has been harvested every year since 1840. They have harvested over 7.5 million board feet of timber, with 2.0 million board feet (and growing!) remaining in the forest. According to the manager James Drescher,

“If this 100-acre lot had been clear cut in 1840, and again in 1890, 1940, and 1990, the total harvest would have been, at most, 5.5 million feet, and the quality of the second, third and fourth harvests would have been much lower than the wood harvested by the annual selection methods. Of course there would be no standing merchantable timber today.”²³

By harvesting the surplus living capital developed by regenerative ecoforestry management, Windhorse farm creates true wealth and

avoids the extractive processes that dominate today's business world. We now proceed to define a 'Regenerative Enterprise' as a venture that pro-actively grows and cultivates the foundational pools of social, cultural, spiritual, and living capital by providing goods and services in a way that creates net positive gains for the system as a whole.

5

Regenerative Enterprise

Chapter

An enterprise is defined as, “a project or undertaking, typically one that is difficult or requires effort,” and, “initiative and resourcefulness.”²⁴ The current business world is saturated with examples of degenerative enterprises (fossil-fuel extraction and power-generation, automobile manufacturing, mining, military and defense, etc.), to the extent that it is nearly impossible to function in the so-called ‘developed’ countries without their goods and services. Even as we are writing this book, we are depending on an array of degenerative enterprises!

In the last two decades, a small but growing number of businesses have sought to define themselves as ‘social enterprises’ by including positive social objectives into their mission statements and operating procedures. Much of the Corporate Social Responsibility (CSR) movement has focused on this goal of generating social capital within and through the activities of their companies, while still maintaining an un-erring commitment to financial capital profits.

Some companies and organizations have attempted to go a step further, articulating a goal of ‘triple bottom line’ (TBL) profits: economic, environmental, and social.²⁵ This is an excellent direction to take, and notable exemplars have emerged at different scales: Stonyfield Farms, Seventh Generation, Aarstiderne, Growing Power, and others. However, because the current system requires enterprises to create a

financial capital profit or fail, most businesses that start out in this direction are forced to reduce their triple bottom line to a single bottom line.

Furthermore, even the best TBL companies lack the whole-systems viewpoint provided by the eight forms of capital. Without this lens, they (and the vast majority of all other enterprises) have so far missed several key praxis points that will support the healing and re-growth of our damaged global systems. These are the defining factors of a regenerative enterprise...

The Four Nurture Capitals

At best, triple-bottom line enterprises tend to 'do no harm' to ecological and social systems, while ensuring their continued financial capital abundance. With looming climate chaos, post-peak petroleum wars, near-peak water and precious metal resources, and rapidly decreasing biodiversity, this simply is not enough.

The pools of valuable resources from which living systems spring (social, cultural, spiritual, and living capital) must be replenished. To do so, they must be nurtured – not pushed, or coerced, or harassed into increasing, but lovingly and carefully supported to re-sprout and re-grow from their already sad, angry, bruised, and mistreated state.

Like killing the proverbial goose for the stash of golden eggs, enterprises cannot continue to ransack the forest for the trees or forcibly re-locate peoples to mine the fuels and ore beneath them. The four 'nurture capitals' can slowly be regenerated on the local, bioregional, and global scale – as long as the enterprises that exist in them learn to nurture their healthy expression and growth.

A regenerative enterprise does not harvest the root of the tree of production, only its fruit. They gather the unique, surplus, place-based goods and services that are emergent properties of healthy eco-cultural systems, while simultaneously nurturing the system's ability to thrive. The regenerative enterprise helps to grow the roots deeper and wider,

healing the damage that has been done and eventually creating the possibility of new and larger fruits.

For example, consider New Forest Farm in Wisconsin. The dominant agriculture system in this area of the midwestern United States continues to strip living capital out of the ecosystem, sending it eroding downstream or shipping it to the ethanol distilleries to fuel more cars. Financial capital yields are significant for large agribusiness companies, but continue to impoverish local communities and decrease the organic matter content of soils. New Forest Farm reverses the trend by increasing organic matter and fertility in the soil through permaculture farming practices - nurturing living capital back towards health. By harvesting the emergent wealth of the healthy system, the farm also produces financial, material, and intellectual capital profits.²⁶

A regenerative enterprise must cultivate the fundamental health of the four nurture capitals in order to optimize long-term production of all eight forms of capital.

Financial Capital to Living Capital

In order to begin restorative development at any scale, regenerative enterprises must identify and reverse the currently predominant inter-capital flows that are degrading ecological, social, and cultural systems. At a macro-level there is one primary flow which, once reversed, will act as a leverage point to restore holistic health and the foundation of wealth for our global society.

The current flow in need of reversal is between living capital and financial capital: living capital is systematically damaged and destroyed in order to build financial capital. From mountain-top-removal coal mining, to rainforest clear-cutting, to chemical-based monoculture farming, to ocean over-fishing, to the entire fossil fuel extraction and combustion industry:²⁷ Living capital decreases, financial capital increases. What would it look like if this trend were reversed?

One exemplar to consider is Polyface Farms in Virginia, USA. On this farm, the Salatin family grows a diversity of grass-based animal products (primarily rabbits, chickens, turkeys, pigs, and cattle) in a way that continually improves the quality and productivity of their land, creates multiple jobs, and earns significant amounts of financial revenue.

Because they are building their soil, catching and storing water, and increasing the health of their forests while they sell top-quality grass-fed meat, their farm system removes financial capital from degenerative systems into vibrant living capital.

A regenerative enterprise can certainly obtain a financial capital profit in the process of regenerating local ecosystems, but the majority of financial capital flowing through the enterprise will be transformed or invested into long-term living, social, and cultural resilience. Polyface Farms' annual revenue is approximately two million dollars, which they flow back into the land (growing their herds, digging multi-functional ponds, building new infrastructure) and the local community (through jobs, feed purchases, and professional services).²⁸ As Mark Shepard of New Forest Farm writes in *Restoration Agriculture*,

*"Degrade the ecology and degrade the economy.
Restore the ecology and restore the economy."*²⁹

A regenerative enterprise flows financial capital **out** of the current destructive economic system. The financial capital flows **in** to non-financial forms of capital, especially living capital.

This financial capital does not disappear. In fact, regenerative enterprises can create significant long-term financial returns, as demonstrated by Windhorse Farm and Polyface Farm. These farms show the balance between long-term financial return and reinvestment in the living capital foundation that generates the surplus in the first place. Financial capital returns should be continuously re-invested into cultivating the health and resilience of living, cultural, social and spiritual capital, not extracted for the purpose of creating financial or material capital that has no functional interconnection with the regenerative context from which it emerged.

External & Internal Development

So far, we have concentrated primarily on the external manifestations of degenerative, sustainable and regenerative systems. Underlying the eight forms of capital is another map, developed and utilized by philosopher Ken Wilbur and the international Integral community. The most basic level of the Integral framework is called the four quadrants:³⁰

The Four Quadrants

Adapted from Ken Wilbur, a Theory of Everything

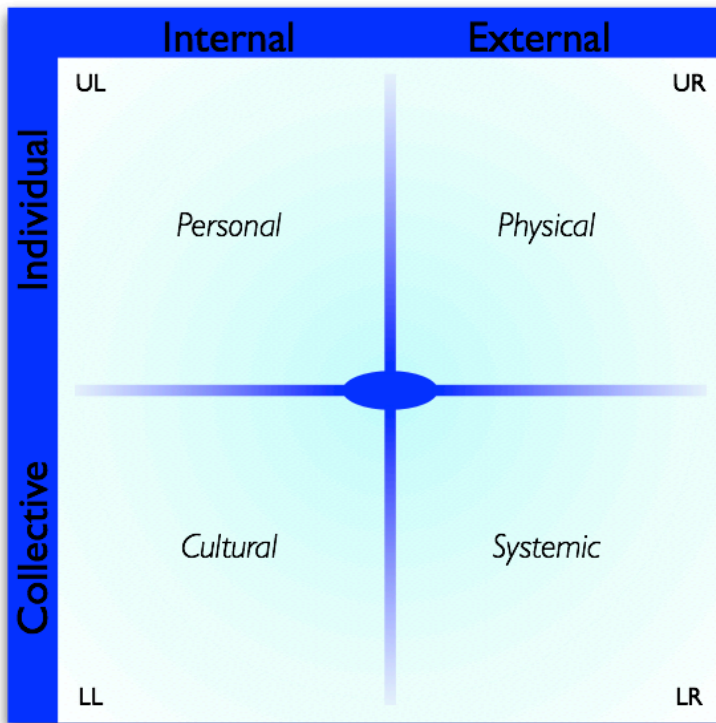


Figure 5.1 - The four quadrants. Each quadrant represents a facet of reality, and none of them can be reduced to any other. They all exist in all enterprises, whether they are acknowledged or not.

The quadrants are created by juxtaposing the internal facets of reality (on the left) with the external facets of reality (on the right), and the individual experiences of reality (on the top) with the collective experiences of reality (on the bottom). The quadrants are named:

- **Upper Left:** internal / individual
- **Upper Right:** external / individual
- **Lower Left:** internal / collective
- **Lower Right:** external / collective

The vast majority of entrepreneurial thinking and sustainability initiatives is focused on external results.³¹ Financial capital profits for executives, employees and stockholders is the simple bottom line for all current enterprises. Most triple-bottom-line companies add two other factors:

- Environmental ‘do-no-harm-ism’, focused on external metrics like air quality, water quality, less-toxic materials, or reduced amounts of waste sent to landfills.
- Social equity, usually translated again to external metrics like living wages, support for community organizations, or healthy working environments.

The Social Entrepreneurship community creates business and organizations that focus on finding “innovative solutions to society’s most pressing social problems”.³² However, these entrepreneurs are also required to produce external financial capital profits, external social systems benefits, and external environmental benefits to prove their effectiveness. All realms of the current business world are focused on only one half of reality. Something is missing.

A tenant of the four quadrants model is that no organization, venture, or individual can achieve its aims by working solely in the external quadrants. Especially if the purpose is to develop sustainability or regeneration of whole living systems, the internal quadrants must be fully integrated into the project. For example, consider a project run by a christian missionary organization that aims to increase urban food security by helping people plant gardens near their homes.

This project could focus on getting legal access to gardening spaces, providing soil and water and tools and seeds, hosting community classes on different aspects of gardening, promoting the benefits for physical health, or perhaps even exploring the money-saving or money-making potential of small-scale crop production. The project could do all of these external things, at the highest level of quality and with the best intentions, but still not achieve its goals. Why? Because the internal quadrants of the individuals and community have not been addressed.

The people in the urban area could have a firm internal belief that growing vegetables is a dirty, lowly, menial way to spend their time, suitable only for poor farmers in the countryside. Urban youth might think that growing food is 'un-cool', experience peer-pressure to not get involved, or feel fear about some aspect of the project. The population could be orthodox jews, whose shared cultural beliefs are fundamentally at odds with the christian missionary organization running the project. Or perhaps some people in the area have African-american or Caribbean heritage, and connect agricultural activity with the oppression and pain of their ancestors' slavery.

Without exploring, understanding, and actively addressing the internal aspects of the people and communities involved in a project, wholeness cannot be achieved. Enterprises cannot succeed at regeneration without both the external and the internal.

Zooming out to a larger, societal scale, internal individual preferences and shared cultural beliefs often have their root in painful and oppressive historical events. Many of the original colonists of what is now called the United States were fleeing from religious persecution – they were Christian protestants who had been systematically mistreated for attempting to follow their own beliefs. This left deep psychological, emotional, and intellectual wounds on each individual. They fled to a “new” land where they could have freedom from oppression, and then immediately repeated the pattern by systematically mistreating, stealing from, and killing the native peoples of the continent, who were following their own beliefs.

In fact, this oppressive pattern of colonization goes back even further. In the country now called Great Britain, pre-“european” indigenous people were colonized and conquered by successive waves

of Celts, Romans, and Germanic peoples.³³ In each case, the older cultures and languages were dominated and mostly destroyed by the colonists. A similar story exists for almost all of the countries in modern-day Europe, and the large-scale cultural wounds inflicted were never addressed or healed. During the so-called “discovery” period of the 15th and 16th centuries, these unhealed wounds of violence and colonization were carried onwards across the ocean – Europeans dominated and destroyed much of the cultural, spiritual, and living capital of what is now called North America.³⁴

The oppressed became the oppressors. Culturally, this trend continues today.

Agriculturally, this trend also continues today. The fossil-fuel-driven shift towards large-scale industrial food monocultures impoverishes each of the places it touches and the people who live there. The degradation of ecosystem services and living capital is oppressive: Humans systematically mistreat the environment around them for material or financial capital gain.

Our belief is that most of the current global society is based on oppression: the systematic mistreatment of one group of people or form of capital by another group of people or by the society as a whole. The primary oppression is financial, wherein the few people that control the vast majority of financial capital actively (but usually unconsciously) destroy living capital and perpetuate artificial divisions between human beings based on their skin color, country of origin, gender, age, or other factors to achieve continued financial capital accumulation.

The financial inequality currently present in the world is held in place by racism, sexism, age-ism, and other oppressions that insidiously separate people from each other³⁵ and prevent them from supporting each others happiness, health, and multi-capital wealth.

This system hurts every person on the planet. People who are targeted by oppression are systematically denied access to resources, verbally and physically insulted, and treated as inferior human beings. Sometimes the oppressive ideas and messages will become internalized by people who are targeted by oppression, and then acted out upon themselves and other people in the same targeted group. For example, many women in the current society receive the incorrect and oppressive

message that they “are not smart” or should “keep quiet” from a young age. Some women come to believe this about themselves, and may act to invalidate or discourage other women who display their intelligence or voice their thinking. This is called ‘Internalized Oppression’, and is one of the major barriers to ending oppression in the world.³⁶

People in oppressor roles are also hurt by oppression, through rigid feelings of guilt and blame, acts of self-deprecation and self-mistrust, and a pervasive isolation from people in the oppressed groups and even from each other. However, the hurts experienced by people in oppressor roles cannot be compared to the hurts experienced by people targeted by oppression.³⁷ Each individual may contain a mix of oppressed and oppressor roles: A working-class man in the United States of Irish heritage may be oppressed as an immigrant and a person of the working class, but may also find himself in oppressor roles as a “white” person and as a man.

Each of us is a part of this system. The multiple forms of oppression keep people divided from each other, while living capital degrades and financial capital disparity increases around the globe.

Whether each individual likes it or not, each individual carries wounds, prejudices, and rigid ways of acting and thinking from growing up in this oppressive system. No individual would choose this system of inequality had they not been hurt and unconsciously trained into perpetuating it.

Ask yourself: Would I choose to design a world where 50% of the people will suffer malnutrition,³⁸ 48% cannot speak or act according to their faith and conscience due to harassment, imprisonment, torture, or death,³⁹ and the collective actions of humans on our planet threaten 66% of all the world’s living species with extinction this century?⁴⁰

Again: no individual consciously chose to systematically degrade the living, social, cultural, and spiritual capital of the world. And, it is not the fault of any person or any particular group of people. All people are inherently good, but as a result of being systematically mistreated (as young people, as women, as men, as darker-skinned people, as jews, as muslims, as christians, as indigenous people, as communists, as capitalists, etc.), people seek to release their wounds by systematically mistreating the earth’s living capital and the social, cultural, and

spiritual capital of other peoples in order to achieve a false sense of safety and separation from the oppression they have undergone.

All oppression can be ended. Each individual who wants to create a equitable world free from oppression must first seek healing and liberation of *their own* wounds and prejudices. If each individual does not take on a path of personal development and healing, our societies will continue to re-create the patterns of oppression and extraction that have brought the world to its degraded state. If each individual *does* take on a path of personal development and healing, they will begin to transform their own reactive, patterned, oppressive ways of being into consciousness and action that can regenerate local human and natural and ecosystems.

There are many communities, schools, and modalities of personal development. Entrepreneurs engaged with them report the following results as they work to heal their internal landscape:

- Increased ability to articulate and achieve goals
- Improved capacity for clear communication
- Greater integrity in making and keeping commitments
- Enhanced intellectual and emotional flexibility, especially in difficult or ‘charged’ situations
- Decreased reactivity, anger, and fighting in all realms of life
- Significantly less self-doubt and self-loathing
- Deeper understanding and compassion of different people and situations
- A greater sense of spiritual well-being and confidence

Additionally, regenerative internal development leads to positive external development: Clear-thinking, spiritually confident, emotionally resilient people are more effective at repairing the world’s living and cultural capital.

Each individual in a regenerative enterprise must commit to ongoing personal internal development. Ideally, the individuals develop an ecology of personal growth and healing modalities, ensuring continued emotional, intellectual, and spiritual development.

Ecosystem Mimicry

The fourth factor of a regenerative enterprise is that it recognizes its actual place within the larger whole systems in which it exists. Consider the following diagram:

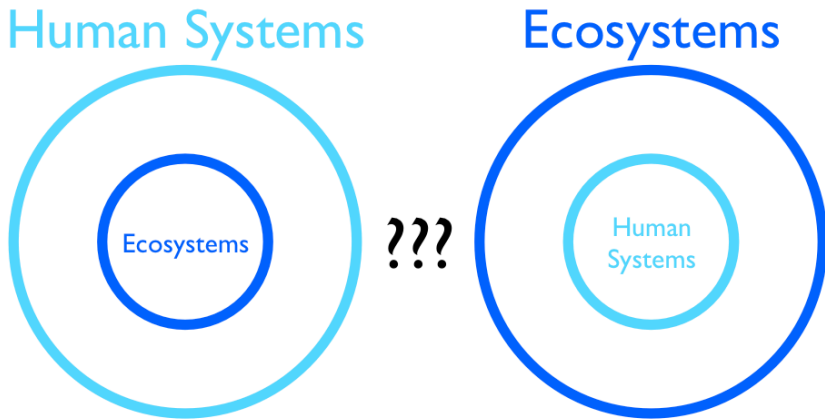


Figure 5.2 Nested systems.

Which model is correct? Which systems are subsets of the other? The answer to this question may seem obvious, but few enterprises are acting as if they understand or believe it.

Human systems are governed by the same fundamental laws as all natural systems. An enterprise working to regenerate multiple forms of capital will be significantly more successful if it models its own paradigms, processes, and practices after the ecosystems in which it exists.

One implication of this reality is that individual enterprises do not exist in a vacuum. Each enterprise is constantly interacting with other businesses, organizations, and individuals – it is an organism in a larger web of organisms, an interconnected part of a dynamic network. In healthy ecosystems, organisms fulfill specific roles and occupy specific niches, utilizing and transforming different forms of living and material

capital in a way that ultimately benefits the whole. The relationships are (for the most part) mutually supportive, and form the beautiful complex mysterious evolving natural world that teems around all of us, despite years of mistreatment and degradation.

For example, non-human ecosystems produce no “waste” – every output of an organism or system becomes available as an input to another organism or system. The fallen tree becomes food for soil-building fungi; the fungi sprouts a mushroom which becomes food for insects; the insects become food for birds; the birds eventually die and compost into useful nutrients to feed the trees. Individual organisms live and thrive and die, but the overall health, resilience, and foundational living capital of the system is growing.

Awareness of ecosystem mimicry as an essential factor of regenerative enterprise points to an uncomfortable truth: regenerative enterprises cannot exist alone.

What would it look like if an enterprise could successfully become aware of itself in the context of a larger system? If it could consciously co-pattern its capital inflows and outflows in a way that supported the thriving foundation of all four nurture capitals? What if companies designed synergistic enterprise ecologies, where each organism could play a particular part, in relationship with other organisms, in the positive development of the whole?

6

Regenerative Enterprise Ecologies

Chapter

As in the case of triple-bottom-line businesses, it is difficult for a single enterprise working in isolation to create profits for even three forms of capital. How could a single enterprise possibly produce positive development of all eight forms? Alone, it cannot.

If the goal is to regenerate the health and vitality of living systems, then an enterprise will be most effective if it is designed:

1. To mimic living systems, following clearly defined ecosystem principles,
2. To be an integral part of living systems, building living capital through all their processes, and
3. Collaboratively with other enterprises, to form conscious **enterprise ecologies**.

Furthermore, if an enterprise ecology with these three characteristics wants to truly achieve regeneration, the system as a whole must articulate its core purpose as the restoration and development of living, social, spiritual, and cultural capital.

In this way, each enterprise is not responsible for the daunting task of eight-capital regeneration – the work is shared between all the enterprises in the ecology.

Here is a hypothetical example of a relatively simple four-enterprise ecology, functioning in a rural agricultural region anywhere in the world:

Enterprise Focus	Value Proposition	Customer Segments	Capital(s) Developed
Restoration Research	Determines optimal patterns, practices, and species mixes for local ecological regeneration	(Other enterprises in the ecology), Farmers	Intellectual, Experiential
Land Restoration	Repairs degraded land through rotational grazing and agroforestry	Farmers, Land-owners, Municipalities	Living, Financial, Experiential
Ecoforestry	Highest-quality sustainably-produced wood & timber products	Builders, Furniture-makers	Material, Living, Financial
Community Land Conservation	Education about and celebration of bioregional identity	Families, Land-owners, Municipalities	Cultural, Intellectual, Experiential

All individuals in each enterprise choose to actively develop their own emotional well-being and spiritual capital. All enterprises actively create social capital through their positive interactions with farmers, land-owners, government officials, and other organizations in the region.

The basic pattern is that the Research enterprise cultivates intellectual and experiential capital on the most efficient and appropriate local approaches to living capital regeneration, which is then implemented for a fee by the Land Restoration enterprise. One of the land-use patterns researched and developed is agroforestry, which (depending on the specifics of the local ecosystem) begins yielding

usable wood and timber products in 3-10 years. The Forestry enterprise harvests and markets these material-capital products to collect financial capital, while simultaneously tending the agroforests to increase their living capital. The Conservation enterprise educates the community about the value and practicalities of land restoration, and gathers volunteers to offer their time to support the Research and Restoration enterprises.

The Restoration and Forestry enterprises are designed for financial-capital profit to support the Research and Community Land Conservation projects. However, all of the enterprises could potentially generate a net financial capital profit – especially if capital is flowing into the ecology from the vast majority of degenerative enterprises functioning in the world.

In the long term, it is obviously not sufficient for a regenerative enterprise ecology to rebuild living capital solely by in-flowing financial capital from degenerative enterprises – especially if the degeneration moves at a faster rate than the regeneration (as it currently is worldwide). However, this will necessarily be the case at the outset, until greater knowledge and experience of regenerative eco-social practices grow throughout the world. Eventually, regenerative ecologies will in-flow all of their capital from other regenerative ecologies, creating a positive feedback loop that will ‘overgrow’ the current degenerative trend.

Multi-capital Optimization

Recent social and ecological enterprises have focused on the potential of ‘biochar’ (a biologically active form of charcoal) as an agricultural input.⁴¹ Biochar increases living capital in the soil and has the potential to grow significant financial and social capital. Depending on the scale and ethics of biochar production and utilization, it can indeed have regenerative effects on agro-ecosystems managed within a holistic permaculture framework. Here, the process that creates biochar

(pyrolysis: low-oxygen combustion of plant-derived biomass) is used as metaphor to elucidate an important concept for regenerative enterprise ecologies.

There are three primary potential products of the pyrolysis process: heat energy, biochar, and syngas. Syngas is a biomass-derived gas that has the energy equivalent of propane or butane, and can be pressurized into a liquid form for efficient transportation and use. Different pyrolysis systems focus on the creation of different products – one produces a greater yield of biochar, but lesser yields of energy and syngas. Others are designed for the production of energy, with smaller ancillary yields of syngas and biochar. However, biochar systems can also be ‘optimized’ to create balanced quantities of each product, aiming for a whole systems yield instead of an individual output.

Over the long term this kind of multi-output optimization simultaneously allows for the creation of heat energy for driving steam engines or heating spaces, biochar to build soil fertility, and stored syngas for future energy production. None of these products are developed as quickly when the system is optimized for multi-output yield, but over time each one continues to cultivate the capacity of the overall system. Biochar increases the productivity of the biomass farming that produces the feedstock material, and syngas can be used to power equipment to run the operation and lower costs, increasing net financial capital gain over time.⁴²

In the same way, enterprises can also focus on the output of various forms of capital: most target financial capital gain, some target social capital outcomes, and others target purely environmental benefits. Triple-bottom-line businesses attempt to optimize for three forms of capital within the same enterprise. At first, it might seem that a regenerative enterprise must optimize their systems to produce all eight forms of capital, but this is not the case. Why? Because, as previously stated, regenerative enterprises can not exist outside of an enterprise ecology.

Working as a collaborative network, regenerative enterprise ecologies can achieve eight-capital optimization by consciously articulating which enterprises are responsible for the optimization of each form of capital. Individual enterprises optimize for one or more

capital profits, and in so doing support the ability of the other enterprises to optimize for different capital profits. As long as individual enterprises can generate a surplus of each form of capital to be reinvested back into the ecology as a whole, multi-capital optimization is feasible.

We believe that enterprise ecologies that can optimize the production of multiple forms of capital will have emergent properties of overall ecosystem health, human happiness, and system resilience.

“Sustainable” / Living & Dying

In 2010, a global list of the 100 most “sustainable” corporations included soft-drink multi-national Coca Cola, fossil-fuel energy giant Royal Dutch Shell, and the pharmaceutical / biotech company Glaxosmithkline.⁴³ Is this because they’ve been actively degrading the four nurture capitals to create financial capital for hundreds of years, and show no sign of slowing down?

Current legal systems consider corporations to be people, providing them many of the benefits afforded to humans by the law. In some respects, corporations do function like organisms in an ecosystem – they utilize resources, interact with other organisms (corporations, enterprises, governments, and people), and occupy certain niches in an overall economic system. If corporations desire to be treated as a living organism, it makes sense that they would also accept the reality that all organisms eventually die. Many corporations are now focused on being more “sustainable” – which in the current business lexicon, seems to mean ‘keeps going indefinitely’ or ‘lives forever’.

In the context of ecosystems, this idea is ridiculous. Some of the core process of ecological sustainability are death and decomposition: when an organism dies, its decay transforms it back into the elements that supply everything around it. Trees slowly rot into carbon- and nutrient-rich soil, insects become food for adult and juvenile birds, and ground-

dwelling mammals die underground leaving a cache of nitrogen that enhances the growth of vegetation that other animals consume.

All living things powerfully re-invest their energetic ‘savings’ back into their ecosystem *through dying!*

Therefore, we propose that an enterprise that is part of a regenerative ecology will not ‘sustain’ forever, but will instead design it’s own eventual demise in a way that feeds the other enterprises in the system. The system itself continues to grow and evolve, but businesses (like organisms), should gracefully live and die – developing multiple forms of capital throughout their life and in their death.

Financial Capital Flows: Opportunity & Investment

The vast majority of current enterprises are focused on the creation of financial profits. Some of them have become ‘sustainable’ in this purely financial context by optimizing for financial capital at the expense of all other capitals or (at best) decreasing their harmful impact.

Regenerative enterprise ecologies, on the other hand, provide new avenues for the flow of financial capital. They siphon it out of the extractive global enterprise ecology and into existing and emerging enterprise ecologies that optimize for multiple forms of nurture capital.

For existing businesses that want to move in a regenerative direction, one essential directive is as follows: Create, through your current financial-capital abundance, clear opportunities and invitations for other enterprises to optimize for other forms of capital.

Which capitals are the most important to optimize? Does a regenerative enterprise ecology have to optimize for a balance of all eight forms of capital?

This may be possible in a future where the basic living and cultural capital foundation for life, health and wealth have not been degraded to unsustainable levels. But for right now, it is more important for regenerative enterprise ecologies to focus on turning the tide: Instead of optimizing for all eight forms, they must optimize primarily for living,

and cultural capital. An ecology that achieves this optimization will begin to shift the balance against the current only-financial-capital-dominated system.

One essential flow of financial capital to support this shift can come from the investment community. The individual enterprises that most investors focus on will not be likely to achieve multi-capital abundance alone, and may or may not be interconnected with enterprises for multi-capital regeneration. Rather than investing in such ventures, we recommend a shift of investment capital into existing and emerging enterprise ecologies. Especially for investors in the Socially Responsible Investing (SRI), Program-Related Investing (PRI), and Impact Investing space, regenerative enterprise ecologies could offer more resilient, diversified, and multi-capital-profitable opportunities.

Slow Money's recent work with the Soil Trust, which invests donor financial capital into small- and mid-sized enterprises in the food and agriculture sector, is a solid step in this direction.⁴⁴ We applaud this approach, and believe that its broad multi-regional base of enterprises will offer a diversified portfolio in the growing organic agriculture and food sector. However, none of the enterprises in the fund will necessarily be connected to one another, and therefore will face the same challenges as any individual business. Greater impact will come from investing in functional business clusters – regenerative enterprise ecologies that can mutually support each other to restore the multi-capital health of a bioregion or nation.

As previously articulated, regenerative enterprises in an ecology can create financial capital profits. In the current marketplace, this is a requirement if an enterprise expects to receive significant amounts of financial capital investment. For investors, the benefits of such investments are potentially eight-fold: the potential financial return is augmented and extended by the growth of other forms of capital in the bioregion of the enterprise ecology. Additionally, enterprise ecologies could offer non-financial-capital returns to investors. In the enterprise ecology example above, an investor could receive in-season organic food, a small parcel of restored land, beautiful hand-made wooden furniture, and a share of the positive reputation and social capital developed by the enterprises.

By creating new flows for financial capital, enterprise ecologies that focus on the development of living, social, cultural, and spiritual capital will eventually repair the currently degraded and damaged landscape. Investors have the opportunity to restore the foundational eco-cultural soil of our planet, so that a symbiotic web of place-based enterprises can nurture and support the ecosystems and their people on this earth.

7

Global Imperatives

Chapter

Humans seem to believe that we are not one of the 66% of all species that may go extinct

in the next 87 years. Across the planet, massive change is necessary to reverse the overall trend of extraction and degradation of multiple forms of capital. To build consensus and support among governments, businesses, actionists, and civil society, we propose a set of global imperatives: three essential directives which must be undertaken *now* by as many entities as possible.

The imperatives offer a way for individuals, communities, and governments to actively support the work of regenerative enterprises. They contain basic agreements and values which can be linked to direct actions and policies that incentivize regenerative enterprise ecologies. Individuals, communities, and governments are encouraged to adopt one or more of the imperatives as part of their strategic planning. We believe this will create green jobs, spark new businesses, and increase regenerative economic development.

The Personal Imperative

Ecosystems are degrading in every climate in nearly every country in the world. It is not fluctuating temperatures, or eroding soils, or lack of

rainfall that cause ecological degradation. The only common factor in every place is us: Human beings. Our sprawling cities, our polluting energy, our industrial agriculture, and at a more fundamental level the choices that each person makes, are at the root of the problem. Can we also be at the root of a solution?

The other common factor among people is oppression. The current global society consciously and unconsciously mistreats all people based on who they are. Whether a person is female or male, white or black, young or old, Asian or South American, financially rich or financially poor, indigenous or industrial – no one experiences life without oppression. From a young age, the mistreatment has specific manifestations in every individual: hurts, wounds and traumas that express themselves through life as preferences, habits, fears, opinions, addictions, and rigid patterns of behavior and decision-making. Unless these hurts are consciously explored and healed, it is likely that they will be passed on: The same oppression visited on a person will be visited on the social and ecological systems around them.

And, the wounds that each person carries can be healed. This liberation from past hurts leads to enhanced awareness, clearer thinking, and improved decision-making – exactly the ingredients necessary to grow a mind capable of multi-capital consciousness. Rigid patterns of behavior can be transformed into flexible and new thinking, so that hurts are no longer passed on to other humans and the ecosystems in which they live.

Oppress a person and oppress the eco-social systems around them; heal a person and heal the eco-social systems around them.

Therefore, as individual human beings, we must:

Recognize, face, and heal our own internal wounds,

Liberating our ability to make decisions that enhance multiple forms of capital,

So that we can cultivate and regenerate the external systems around us.

People must approach the healing of their internal landscape with the same consistency and passion that they bring to work in the external world. Each individual can ask, “How have I been hurt, and how do I

act out this hurt on people and ecosystems around me?” and “How have I been oppressed, and how to I act out this oppression on the people and ecosystems around me?” Oppression of people and ecosystems by the society as a whole can not be ended until individuals find, face, and end the oppression inside themselves and in their own lives.

As more and more people take on the project of healing their internal landscape, the global external landscape will start to show signs of repair and regrowth. The Personal Imperative insists that change begins inside, placing responsibility in the hands of each person on the planet. Starting with each individual, it also points towards the second global imperative.

The Trade Imperative

Building on the Personal Imperative, the Trade Imperative focuses on the interaction between each individual and the goods and services of the global marketplace. Each individual chooses to use goods and services that originate somewhere on the planet, obtained and transported and sold by some set of enterprises. These enterprises and their operations range from extractive business as usual, to socially responsible, to sustainable or even multi-capital regenerative. However, it is rare that the ethics, principles, and practices of these enterprises are thoughtfully reviewed before making purchasing decisions. In this context, the Trade Imperative is straightforward.

With increased internal well-being and awareness, each individual must choose to:

Stop buying, selling, and trading in degenerative goods and services.

This step is essential to halt the rapid degradation of the nurture capitals worldwide. Especially in over-developed “western” nations and the rapidly expanding economies that emulate the lifestyles of these

nations, un-aware consumption habits drive degenerative enterprise practices.

The Trade Imperative offers each individual a tangible and valuable place to start in their own life and in their own community. Each person must understand and admit their current addiction to degenerative goods and services. As work with the Personal Imperative continues, this awareness can be followed by personal buying and selling changes aimed towards more sustainable enterprises. Finally, individuals must gather together to make community commitments to replace degenerative trade with goods and services offered by regenerative enterprise ecologies.

And, this imperative is by no means a long-term solution. It is an important stop-gap measure, a useful band-aid that states only what each individual must *not* do. In order to move forward in an evolutionary way towards multi-capital abundance, a final global imperative is required.

The Capital Imperative

With ecological and cultural degradation occurring at increasing rates on a global scale, human activities must change. The widespread suffering, ecological and social injustice, and striking inequalities between peoples has gone on for too long. The central driver of eco-cultural degradation in the last 500 years has been the belief that financial capital is more valuable than living capital, and that economies require un-ending financial growth at any cost. For the equitable and just survival of our species and millions of others, this belief and strategies that emerge from it must change.

As a global society, we must:

*Reverse the dominant flow of capital,
Stopping financial capital's destructive processes,
So that living capital can repair, grow, and thrive.*

Living capital, not financial capital, is the basis upon which all life actually depends. Humans survived for more than 2 million years without the New York Stock Exchange, but cannot survive more than a few days without food and water.

The Capital Imperative requires that we shift our metrics, methods, and minds to a holistic multi-capital framework:

- Metrics for measuring all eight forms of capital are beginning to appear. Triple Bottom Line thinkers have taken excellent steps in this direction, and more are needed. Intuitive, quantitative, qualitative, locally-relevant, and globally-translatable metrics must be developed. This is a strategic priority for researchers, businesses, designers, governments, and investors around the world. And, the world cannot wait until the metrics are in place – *action is required now.*
- Methods for multi-capital generation are well-understood and improving daily. Millions of people in the fields of Permaculture, Social Entrepreneurship, Sustainable Agriculture, Integral Studies, Ecological Restoration, Systemic Biomimicry, Triple-Bottom-Line Economics, Transformative Action Learning, and Holistic Management are putting them into practice every day. *Millions more are needed.*
- Shifting our minds may be the most challenging aspect of the three. The evolution of each person's core values and beliefs takes time, shifting external circumstances, and conscious internal attention.⁴⁵ This points back to the Personal Imperative, which proposes a pathway for development of a multi-capital mind.

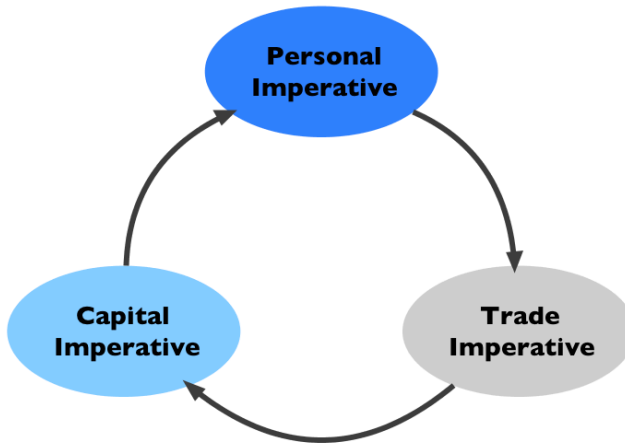


Figure 7.1 - The self-reinforcing interrelationship between the three global imperatives.

Financial capital has dominated the global discourse for too long. The Capital Imperative sets a new path forward, where financial capital is useful but living capital is essential. Together, people of the world can reverse the flow of capital and live as part of a thriving planet for generations to come. To guide the overall journey, we now articulate nine principles that offer a set of clear directives to act.

8

Principles for Regenerative Enterprise

Chapter

How can each individual and enterprise begin implementing the global imperatives? What steps can be taken towards becoming a regenerative enterprise? How can an enterprise collaboratively design itself into a regenerative enterprise ecology? Starting at a personal level and moving outward, the following principles offer cross-context guides to action.

Personal Development Principles

The first three principles address this basic fact: every decision in the world is made by individual human beings. The sum total of decisions made over time and space have led to our current state of global instability and degradation. Shifting the course of societies towards regeneration ultimately requires new decisions to be made on the individual level. Therefore, these three principles focus on the growth and development of each person towards regenerative ways of thinking, being, and acting. They extend and ground the Personal Imperative for entrepreneurs, and recommend specific pathways for each person to walk. These principles apply, in particular, to you.

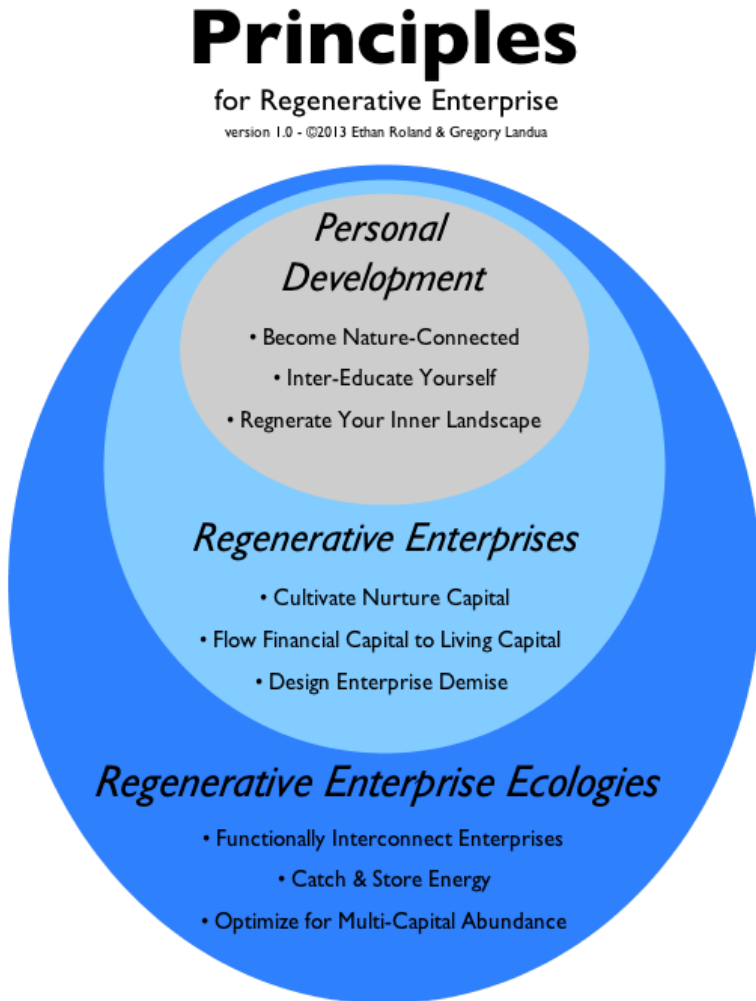


Figure 8.1 - Principles for Regenerative Enterprise. The principles form a nested whole system.

- **Become Nature-Connected**
 - It will not be possible to regenerate living capital unless you have a deep and embodied relationship with the ecosystem in which you live. By far the best way for non-indigenous

'modern' people to begin this journey is through the work of Jon Young, the Wilderness Awareness School, and the international Art of Mentoring communities: www.wildernessawareness.org/associates

- **Inter-Educate Yourself**

- If you've been working in a living capital field (environment, conservation, agriculture, etc.), go for entrepreneurial training: Start a small business, explore social entrepreneurship, take a financial permaculture course, get an MBA. *Doing all of these would be a good start.*
- If you've been working in a social capital space (non-profit, government, social entrepreneurship), go for ecological training: Take a Permaculture Design Certification course, work on organic farms, get a volunteer position at a local wilderness organization, complete 'The Standard' course at the Tracker School. *Doing all of these would be a good start.*
- If you've been working in financial capital (corporate, investment, military, industrial, etc), get the ecological training listed above and go for social education: Take an Ecovillage Design Education course, go live in an intentional community, get a non-leadership volunteer position with a local social justice organization, complete an Art of Mentoring workshop. *Doing all of these would be a good start.*

- **Regenerate Your Inner Landscape**

- External regeneration cannot occur without internal regeneration. Find a way, or an ecology of ways, to heal your inner self. This could include traditional therapy, peer-to-peer counseling, group work, or a commitment to one of the many schools of human potential and personal development. A spiritual practice can be included, but is not enough to fully heal the wounds that each person carries from the current oppressive society.

Regenerative Enterprise Principles

To create a fully regenerative enterprise will take time, attention, and consistent cultivation of the entrepreneurs and the business itself. Ultimately, each regenerative enterprise must:

- **Cultivate Nurture Capital**

- Cultivate the health of the four nurture capitals: social, cultural, spiritual, and living. Enterprises may choose a primary focus on one or more of these capitals, or ensure that they are nourished through the process of building other forms of capital.

- **Flow Financial Capital to Living Capital**

- Move, shift, and flow financial capital into living capital. This reverses the dominant extractive trend, re-builds the foundation for all true wealth, and creates the potential for new ecological and multi-capital development. Look to perennial polyculture systems, permaculture & agroforestry farms, ecoforestry projects, and Slow Money enterprises for examples of this principle in action.

- **Design Enterprise Demise**

- In ecosystems, no organism lives forever. The niche that the organism occupied will be filled by another organism, or change its function as the overall system evolves. Design the demise of your enterprise from the beginning so that it's dissolution redistributes capital for the benefit of the whole ecology.

Regenerative Enterprise Ecology Principles

Given that the current global system functions on the flow of financial capital through the dominant frameworks of capitalism and enterprise,

we believe that creating regenerative enterprise ecologies is an effective route to multi-capital regeneration. By mimicking currently prevalent business structures, these ecologies will not be rejected outright. By mimicking the underlying principles of ecosystems, these ecologies will also sprout a fundamental transformation in those same systems. For global living capital, the ecosystem services it generates, and the human species that depends on them, the shift to regenerative enterprise ecologies is imperative.

Mimicking ecosystems, each regenerative enterprise must consciously design itself to evolve as part of an enterprise ecology. The following principles guide the development of the ecology as a whole:

- **Functionally Interconnect Enterprises**

- Design ecologies such that the inherent input requirements of each enterprise are supplied by the inherent outputs of other enterprises. For example, the Research-Restoration-Ecoforestry-Conservation ecology described in Chapter 6 or the ‘Industrial Ecology’ systems proposed by ZERI⁴⁶ describe functionally interconnected enterprise ecologies.

- **Catch and Store Energy**

- Just as regenerative farms and ecoforestry projects catch and store rainfall in the soil, regenerative enterprise ecologies must be designed to catch and store different forms of capital in their network. Simply pouring millions of gallons of water onto a degraded landscape will cause further erosion and loss of living capital. The same is true with money: adding millions of dollars of financial capital to a degraded financial ecosystem will cause further erosion of social, cultural, spiritual, and living capital. Design regenerative enterprise ecologies to slow, sink, and spread financial capital into non-liquid living and cultural capital assets until the foundations of a regenerative economy are regrown.

- **Optimize for Multi-Capital Abundance**

- Individual enterprises are often most efficient at cultivating specific forms of capital. And, all forms of capital are valuable. Therefore, design interconnections between entities such that each enterprise can thrive AND support the whole system to cultivate multiple forms of capital.

9

Conclusion and Invitation

Chapter

In today's context of human-driven global degradation, habitats, species, and languages are irreversibly going extinct on a daily basis. The global economy is growing faster than ever, putting exponentially more pressure on the living capital upon which all life depends. Business and entrepreneurship is expanding across the globe, with national and international financial institutions supporting the rapid and far-reaching growth. Extractive enterprises report large financial capital profits – at the ongoing expense of people and places around the world.

The time has come to change paradigms: To expand our personal awareness and the global discourse from mono-capital financial profits to multi-capital living abundance. The eight forms of capital offers a framework by which individuals, enterprises, organizations, and governments can re-define their economic existence. The meaning of 'wealth' can be evolved to include the living, social, cultural, experiential and spiritual health of whole living systems.

Simply naming three 'bottom line' goals does not offer enough opportunity for interconnection and exchange – Triple bottom line enterprises alone cannot mimic the resilient complexity of living ecosystems. When all eight capitals are articulated, and their cultivation is designed into an enterprise ecology, the resulting network has the opportunity to be functionally interconnected and robust. Even if one or

several connections is weakened or breaks, the ecology as a whole continues to function.

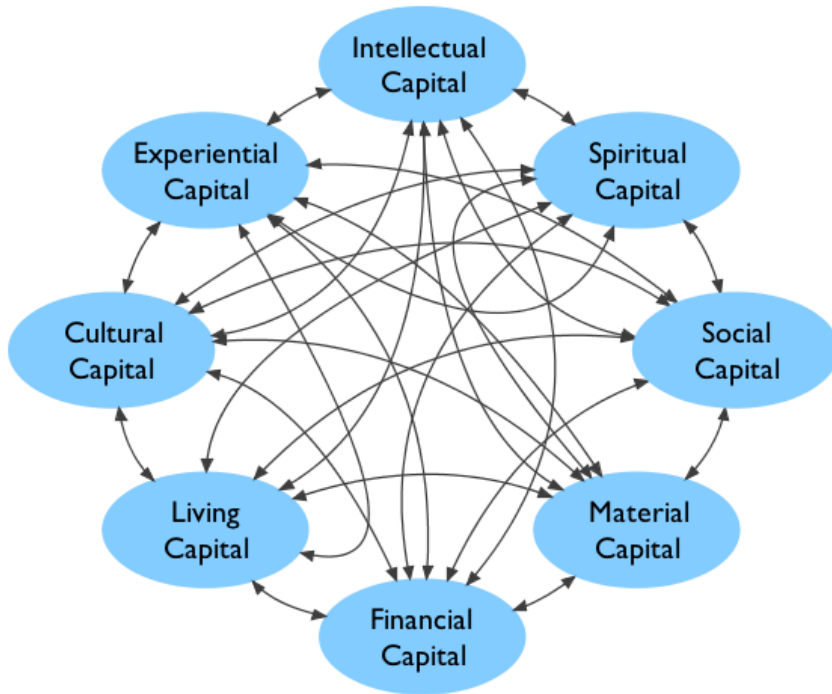


Figure 9.1 - Cultivation of all eight forms in a regenerative enterprise ecology yields a resilient network of functionally interconnected capital pools. If a link breaks, the system still functions.

Degenerative processes extract capital from systems in a way that decreases their health and resilience, often by stealing from the core capital pools of the system. Regenerative processes actively grow system health by cultivating multiple forms of capital and increasing the edge and interconnections of the system. Regenerative harvesting of capital is possible, provided that the capital that is valued and exchanged is surplus emergent wealth from the healthy functioning of the system.

The current economy is defined and driven by enterprises of many scales, from small family-owned businesses to large multi-national

corporations. Enterprises are the ideal format for initiating and sustaining positive whole-systems change, because they can work with the support of the current global economic and legal system. To reverse the degenerative trend of today's economy, each enterprise that seeks to become regenerative must:

- Grow the health of the four nurture capitals (social, cultural, spiritual, and living capital),
- Transform financial capital into living capital, and
- Support the personal internal development of all its people.

It is difficult, if not impossible, for individual enterprises to achieve these aims and succeed financially in the current mono-capital economy. Therefore, to achieve true regeneration each enterprise must mimic ecosystems and consciously design itself to develop within an enterprise ecology. As a whole, a fully regenerative enterprise ecology must:

- Optimize for multiple forms of capital,
- Design the demise of each member enterprise to feed the whole, and
- Offer new routes for the flow of financial capital into regenerative ventures.

However, entrepreneurs can not be expected to regenerate living systems on their own. They are part of larger socio-cultural-economic ecosystems, which contain billions of individual decision-makers and hundreds of thousands of local, regional, national, and international governments. The three global imperatives offer powerful guidance to conceptually and practically align these entities in support of regenerative enterprise.

With governments and communities adopting the imperatives, individual decision-makers are given both personal direction (*Heal your own internal wounds*) and personal constraint (*Stop buying, selling, and trading in degenerative goods and services*). These actions are coordinated under the overarching direction of the Capital Imperative, which reverses the dominant flow of capital so that all of our local waterways, farms, landscapes, and ecosystems can repair, grow, and thrive.

For new entrepreneurs or existing businesses, nine principles guide regenerative enterprise actions in three nested realms of work. Ultimately, each regenerative entrepreneur must develop themselves with the core personal principles. Entrepreneurs may, however, choose to begin with one of the other principles – some may seem more feasible and attractive than others at the outset of a transition to regeneration. As the journey progresses, each principle will become relevant and applicable. Development in any realm will lead to development in the others, because they are as interconnected as the ecosystems in which we all live.

Learning from the natural world to re-design the business world is not merely useful, it is imperative – the business world is inexorably linked to the natural world. If there are to be businesses that function regeneratively on planet earth, they must look to the organisms and ecologies that feed, shelter, and inspire all people and all beings.

Invitation

The current extractive economy is acting much like the farmer in Aesop's classic fable of the golden goose:

A farmer and his wife had a goose that laid a golden egg every day. They supposed that the goose must contain a great lump of gold in its inside, and in order to get the gold they killed it. Having done so, they found to their surprise that the goose differed in no respect from their other geese. The foolish pair, thus hoping to become rich all at once, deprived themselves of the gain of which they were assured day by day.⁴⁷

Ecosystems and human cultures generate massive value in multiple forms of capital – when consciously tended and cultivated, they produce a consistent surplus of 'eggs'. If people decide to steal from the core for short-term gain, there will not be any ecosystems or cultures to tend.

The time has come for us to stop trying to kill and butcher the goose who lays the golden eggs. Instead, we invite you to start caring for her, feeding her, and cultivating an ecosystem where her eggs can mature and hatch. Perhaps with time and attention a new goose will be born – one that lays silver, platinum, or better yet, *edible* eggs.

This book lays out a vision for a form of entrepreneurship that is only beginning to emerge on the planet. Few regenerative enterprises or regenerative enterprise ecologies currently exist. We see this not as a limit, but an opportunity: Instead of driving forward while watching the rear-view mirror, let's stop the car entirely and step out into the ecosystem.

We invite you to grasp the intellectual capital presented in this book and engage with the network of people, enterprises, and communities with which it is connected. Integrate the frameworks, imperatives, and principles with your own life and projects. As your internal realm develops, you will be able to take bigger and bolder actions towards an abundant and regenerating world.

Here is the call, and the challenge: Step forward and begin a regenerative enterprise now. Take on the large and complex situation of global eco-cultural degradation. Value all eight forms of capital, and grow innovative business models that support whole living systems. Cultivate an enterprise ecology, sharing the responsibilities and the surpluses with other regenerative entrepreneurs.

The need for regeneration is as real as the ecological and cultural degradation occurring around the globe. We invite you to join us, and develop the regenerative enterprises that will create multi-capital abundance for generations to come.

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Ethan C. Roland is an entrepreneur and investor focused on the nexus between agriculture, finance, and education. His ventures repair degraded farmland (Regenerative Real Estate LLC), support international development (Terra Genesis International LLC), and educate the next generation of multi-capital profitable farmers (the Carbon Farming Course™). Ethan is an international expert on sustainable agriculture and permaculture design, with experience in 26 countries and projects from the wild apple forests of Kazakhstan to the tropical monsoon ecosystems of Thailand. He is the President of the Apios Institute for Regenerative Perennial Agriculture, sits on the board of The Resilience Foundation, and holds an M.S. in Eco-Social Design from Gaia University.

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*Thank you for reading **Regenerative Enterprise: Optimizing for Multi-Capital Abundance** Version 1.0.*

Version 2.0 will include chapters on:

- *Eight-Capital Design Strategy,*
- *Enterprise Ecology Management and Governance,*
- *The Top Five Regenerative Enterprise Opportunities,*
- *and more...*

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