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LEADING FROM THE EMERGING FUTURE

**From Ego-System
to Eco-System Economies**



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Transforming Thought: The Matrix of Economic Evolution

We are torn between two worlds: the world of new leadership challenges on the one hand, and the world of old economic and management tools on the other. Between these two lies a yawning abyss. In this chapter, we explore this gap by continuing to explore the iceberg: from symptoms (level 1) and structural disconnects (level 2) to underlying paradigms of thought (level 3).

The Blind Spot II: Consciousness

In order to meet the challenges of our time, we need to shift our thinking as individuals and as a society. The profound changes that are necessary today require a shift in our paradigm of thought and a shift in consciousness from an ego-system to an eco-system awareness. The deeper we move into the complex, volatile, and disruptive challenges of the twenty-first century, the more this hidden dimension of leadership moves to center stage. The blind spot in the twentieth-century toolkit of economics and management can be summarized in a single word: *consciousness*.

Today's economy works as a set of locally embedded and globally interlinked eco-systems. The word *ecology* was coined in 1866 by the German biologist Ernst Haeckel to mean the study of a living organism and its surroundings. As noted in the introduction, its Greek root is *oikos*, which means "the whole house" or "the place to live."¹ The word *system* denotes a set of interdependent components forming an integrated whole. Thus an *eco-system* is a system whose elements interact with their surroundings, the ecological, social, intellectual, and spiritual context as a unit—the whole house.

Today's real economy is a set of highly interdependent eco-systems, but the consciousness of the players within them is fragmented into a set of ego-systems. Instead of encompassing the whole, the awareness of the players in the larger system is bounded by its smaller subparts. The gap between eco-system reality and ego-system consciousness may well be the most important leadership challenge today—in business, in government, and in civil society.

Wherever you go, leaders and change-makers are working to bridge that gap. When the leader of a company works with departments that need to improve their collaboration around a common core process, that person is trying to move the departments from ego-system awareness (of their own departmental needs) to an extended stakeholder awareness (of their shared process needs across the firm). When a group of leaders convenes the key players in the value chain in order to facilitate cross-institutional collaboration and innovation, they are doing the same thing: extending the ego-system awareness in their institutions to an eco-system awareness of the entire extended enterprise. When an NGO such as Oxfam or the World Wildlife Fund (WWF) campaigns against child labor or environmental destruction, it tries to extend the awareness of everyone in the system (including consumers) to include the well-being of others, particularly the most marginalized groups.

Facilitating this sort of shift is not an esoteric or peripheral endeavor by people on the fringes. It's a mission-critical process for millions of institutions and enterprises that is being facilitated by leaders, change-makers, coaches, and consultants. Despite their practical relevance, consciousness and awareness are not variables in the framework of mainstream economics and management. They are a blind spot. With the notable exception of some recent work in behavioral economics, economic theory has built models of competition and transactions based on assumptions about *given preferences*. Little knowledge is being developed or attention being paid to the conditions that allow a system to shift from one *state* of operating to another—e.g., from ego-system awareness to eco-system awareness.

Mainstream economic theory and the traditional management toolkit assume a two-dimensional “flat” space for economic action that is limited to a single state of operational awareness. But there are multiple

states of awareness and consciousness that economic and managerial actors can operate from. If these different states of awareness were incorporated into economic theory, and if policymakers paid attention to their impact on what outcomes we create, a whole new dimension of policy, innovation, and collective action would emerge.

Social Fields

In physics, we know that matter behaves differently in different states. For example, water, H_2O , freezes at 32 degrees Fahrenheit. Above that temperature, ice melts. At 212 degrees Fahrenheit, water boils and evaporates, and so on. In each case the H_2O molecules are the same, but they behave quite differently.

In the case of social fields, we see the same phenomenon. Depending on the state of consciousness of a social field or the quality of people's awareness, social systems enact completely different structures and behaviors. Just like water in the physical system, the makeup of people in a social system stays the same under a given set of conditions. The difference between natural laws and the social field is that the actors in social systems are able to initiate change. In other words, they are sitting in the water while the temperature changes—and they potentially can get their hands on the temperature control. When their field state of awareness or conversation changes, the actors relate to one another in different ways, and end up co-creating very different results.

Oikos: The Origins of Economic Thought

For Aristotle, economy was an integral part of his practical philosophy, along with ethics and politics. In its original meaning, the managing of “the house” related to the *whole house* and was not yet separated from the *polis*—that is, the association and community of free citizens. And until the seventeenth or eighteenth century, the term *economy* related to the management of the whole house, and not to activities that serve the purpose of making money, which was described as *commerce*.

Modern-day economics has developed in ways that separate the economy from the *polis*. Economics has become a narrow set of proposi-

tions that deal only with the so-called economic subsystem of society. Economics no longer deals with the whole house—that is, with the economic subsystem’s impact on society as a whole and its social-ecological-cultural context. Instead economics refers to those as externalities.

Given this background, it is even more remarkable that in the early years of the twenty-first century, we are seeing a return to the original meaning of *oikos*. The social and ecological challenges for today’s institutional leaders are starting to redirect the course of economic inquiry toward its *oikos*-related origins by forcing us, once again, to broaden our perspective. What “the whole house” refers to has changed. It is no longer just our “small” individual house, our local micro-conditions; it also refers to the regional and global house we live in, and thus to the macro- and mundo-conditions on our planet and to the sum total of our social, ecological, and spiritual-cultural relationships.

To sum this up, the way we think about the relationship between society and economy is changing. While the first economic concepts saw the economy as being firmly integrated in the larger societal whole, modern economics conceive of the economy as an autonomous subsystem in the larger societal whole. The challenges we are dealing with as a society force us to rethink this mental model, and to include the impact of our actions on the environmental, social, and cultural context in which we are operating.

The Death of Economic Monotheism

Another important building block of contemporary economic thought concerns the bias toward an *economic monotheism* that puts the primacy of one coordination mechanism atop all economic activities: the *invisible hand* of the market.² This mechanism is *omnipotent* in the sense that it isn’t limited by other coordination mechanisms, as we saw in the deregulated financial markets before the 2008 crisis. It is *omnipresent* through its ever-increasing penetration of all sectors and systems of society. And it is *omniscient* in its assumed access to all information.

As the economic monotheisms of the past have resulted in a long list of catastrophic failures—including the state-fundamentalist monothe-

ism that led the Soviet Union into a collapse in 1991 and the market-fundamentalist neoliberal model that put the world financial system at the brink of collapse in 2008—an increasing number of leading economists, including Nobel laureates Joseph Stiglitz and Paul Krugman, have pointed to various structural flaws in mainstream (neoclassical and neoliberal) economic thought. Economic thought systems matter because they are at the heart of an intellectual battle over the future direction of our society. Simon Johnson, an MIT professor and former IMF chief economist, argues that a power struggle between Wall Street and government lies at the heart of our current crisis.³ In a primitive political system, according to Johnson, power is transmitted through violence (carried out by military coups and militias, for example; see the coercive power discussed in table 2 in chapter 2). In a more developed society, power is transmitted through money (in the form of bribes, kickbacks, campaign contributions; see the remunerative power discussed in table 2). But in the most advanced societies, power is transmitted through cultural capital, such as belief systems (see the normative power discussed in table 2).

Says Johnson, “By 1998, it was part of the worldview of the Washington elite that what was good for Wall Street was good for America.”⁴ That belief system has given Wall Street a de facto veto over public policymaking that no other group or industry enjoys. Since the beginning of the financial crisis in 2008, this unparalleled influence of Wall Street on Washington has only increased. As a result, the financial crisis has not led to an independent review of the financial sector or to possible new regulations to prevent future meltdowns. Instead, the six largest banks in the United States became even larger, and society as a whole is even more dependent on them.⁵

Sadly, in this critical clash of economic ideas, one dogma-based system is fighting another one: Left versus Right; twentieth-century thought versus eighteenth- and nineteenth-century thought; or, in the language introduced above, 3.0 versus 2.0. We need to articulate a different view of economic, political, and spiritual affairs—a view that is not primarily Left or Right, that is not wrapped around the primacy of this mechanism or that one, that doesn’t believe that the solution to our

problems lies with Big Government, Big Corporations, Big Money, or Big Ideology.

Today's change efforts need to be in touch with the *emerging realities* of our century; we need to harness the power of individual and collective entrepreneurship in order to co-create new solutions across sector boundaries. This requires strengthening collective attention in order to source innovation from the field of future possibility.

We need a new culture of communication and a framework of economic thought that does not simply put another single dogma at the center of the intellectual universe, but that puts our shared reality at the center of our attention. What is needed is the ability to *hold and evolve our collective attention* at the same rate at which the reality around us keeps changing. Contrary to conventional wisdom on the progressive Left and the neoconservative Right, we do not need to impose another ideology or set of beliefs onto reality. Instead, we need to hold the space for opening and heightening our attention collectively in such ways that our old economic ideas become subject to change. Only when we allow our shared economic reality to change us—and our thinking—will we start to develop economic ideas that can be helpful, healing, and transformative.

The Matrix of Economic Evolution

Our economies evolved around challenges and responses. Societies responded to the challenges of instability, growth, and domestic externalities by updating their economic logic, and by innovating new coordination mechanisms (hierarchy, markets, networks, eco-system awareness). Each new stage came with an evolutionary change in consciousness, from traditional to ego-centric to stakeholder-centric and, maybe, in the emerging next stage, to eco-centric.

The structural disconnects discussed in the previous chapter are social pathologies that affect our lives today and that originate in the underlying architecture of economic thought. All economic systems deal with the production, distribution, and consumption of goods and services. Societies in different regions, times, and cultures have developed different ways of structuring these processes. In this book, we have identified five approaches to managing them:

1. Organizing around place-based communities (premodern)
2. Organizing around centralized power: the state (one sector; centralized state)
3. Organizing around competition: state plus market (two sectors; decentralized markets)
4. Organizing around special-interest groups: state plus market plus NGOs (three sectors; conflicting relationships)
5. Organizing around the commons (three sectors; co-creative relationships)

We have also noted that the economic logic of each earlier stage continues to exist in the later stages—but is mitigated by a new meta-context that is defined by 2.0, 3.0, or 4.0 practices, respectively.

Following Thomas Kuhn's work on scientific revolutions and Arnold Toynbee's work on the rise and fall of civilizations, we can state that whenever an economic paradigm is unable to provide useful answers to a period's biggest challenges, society will enter a transitional period in which, sooner or later, it replaces the existing logic and operating system with an updated and better one. What, then, is the driving force for moving an economy or a society from one operating system to another? We believe that there are two primary ones: exterior challenges (the push factor) and the development of consciousness (the pull factor).

Societal evolution happens when the forces of push and pull meet and align: the external challenge that can no longer be ignored and the internal resonance with an awakening human consciousness and will. Wherever these two forces align, we see mountains move, as they did in 1989 with the collapse of the Berlin Wall; in 1991 with the collapse of the Soviet Union; in 1994 with the collapse of the apartheid system in South Africa; and in 2011 with the collapse of the Mubarak regime in Egypt and the Ghaddafi regime in Libya.

We have seen numerous 1.0 tyrants tumble. And we believe that in this decade we will see many more walls go down. And yet the eight structural disconnects remind us that there are still major structures that need to be rethought, reinvented, and transformed. Just as a hundred years ago the Western economies moved from 2.0 to 3.0 by invent-

TABLE 3 The Matrix of Economic Evolution

Stage	Nature	Labor	Capital	Technology	Leadership	Consumption	Coordination	Ownership
o.o: Communal; <i>Premodern Awareness</i>	Mother Nature	Self-sufficiency	Natural capital	Indigenous wisdom	Community	Survival	Community	Communal
1.o: State-Centric; Mercantilism; State Capitalism; <i>Traditional Awareness</i>	Resource	Serfdom, slavery	Human capital	Tools: Agricultural Revolution	Authoritarian (sticks)	Traditional (needs-driven)	Hierarchy and control	State
2.o: Free Market; Laissez-Faire; <i>Ego-Centric Awareness</i>	Commodity (land, raw materials)	Labor (commodity)	Industrial capital	Machines: first Industrial Revolution (coal, steam, railway)	Incentives (carrots)	Consumerism: mass consumption	Markets and competition	Private: exchange of private ownership in markets
3.o: Social Market: Regulated; <i>Stakeholder-Centric Awareness</i>	Regulated commodity	Labor (regulated commodity)	Financial capital (externality-blind)	System-centric automation: second Industrial Revolution (oil, combustion engine, chemicals)	Participative (norms)	Selectively conscious consumption	Networks and negotiation	Mixed (public-private)
4.o: Co-Creative; Distributed; Direct; Dialogic; <i>Eco-Centric Awareness</i>	Eco-system and commons	Social and business entrepreneurship	Cultural creative capital (externality-aware)	Human-centric technologies: third Industrial Revolution (renewable energy and information technologies)	Co-creative (collective presence)	CCC: collaborative conscious consumption	ABC: awareness-based collective action	Shared access to services and common resources

ing mechanisms to mitigate negative domestic externalities, we are again facing a new set of issues: global externalities and an age of disruption that will keep generating systemic breakdowns. It's not a matter of dealing with one more financial crisis and then we're done. It's a matter of addressing the systemic limits at their root.

Table 3 looks at the eight elements that together make an economy work and describes their development through the stages of our economic evolution worldwide.

Reading the Matrix

The Matrix of Economic Evolution maps both the journey of our economic development and the possible development space going forward.

Here is how we suggest that you read the matrix. Note the shaded cells in each column of the matrix, indicating the critical factor in each developmental stage. In the 0.0 stage, "Mother Nature" is shaded, indicating that nature is the critical factor for the production function. Then, at stage 1.0, dependent labor (serfdom and slavery) became the critical developmental factor. The production function changes from one factor (nature) to two (nature, labor). In stage 2.0, when economies move from state-centered societies to market economies, industrial capital becomes the critical developmental factor. Capital allows the new players in the market economy to be productive, and as a result the production function of the economic system now has three factors (nature, labor, capital).

In stage 3.0, technology emerges as a critical factor, and with that the factors of production evolve to four (nature, labor, capital, technology). And finally, in the currently emerging stage 4.0, all of the factors may turn out to be bottlenecks, or critical factors, in the economy:

Nature—resource scarcity and reducing our ecological footprint

Labor—unleashing the power of entrepreneurship

Capital—redirecting the flows of global capital to serving the commons

Technology—building core technologies for the third Industrial Revolution

Leadership—co-creating the capacity to sense and realize an emerging future

Consumption—empowering CCC (collaborative conscious consumption)

Coordination—coordinating by ABC (awareness-based collective action)

Ownership—innovating by commons-based property rights

A word about stage 0.0: Western civilization has colonized and destroyed most of these early cultures.⁶ Picturing the evolution from 0.0 to 4.0 as a linear process is somewhat misleading. Instead, we suggest seeing the evolution as a more circular process, with 0.0 at the top; it moves counterclockwise to 1.0 and 2.0, continues around to 3.0, and finally ends up at 4.0, near the starting point. Western thought tends to conceive of history as a linear process, while the Eastern view is more cyclical. Both meta-views have strengths and their blind spots. If we combine them, we end up with something like a spiral, or a U. The U is an evolutionary form that combines both cyclical and linear elements. But a journey on the U ends at a place that is different from the starting point, because something is born in the process and unfolds on the journey.

Some economies, such as those of Europe, go through these stages over several hundred years. Other countries, such as China, take much of this journey in thirty to sixty years. In both cases, it is unclear what a future 4.0 logic and stage of the economy would look like. We have occasionally seen the world move backward, as it did during the neoliberal revolution from 1980 to 2008 in the West. Thus it is possible for countries to make choices and to move in both directions.

We believe that there is no more important research challenge today than to invent and prototype the *institutional innovations* that will power, scale, and sustain Economy 4.0. In other words, we need to upgrade the economic operating system from ego-system to eco-system logic and awareness.

Questions

While the public conversation in the twentieth century tended to be fixated on just *two* alternatives, market-centric versus government-centric, the matrix in table 3 makes it possible to imagine 390,625 *additional* ways to address current challenges. The remainder of this chapter will focus on broadening economic discourse beyond its old 2.0 versus 3.0 format.

Framing this century's challenges through the lens of 2.0 and 3.0 thought is like driving a vehicle while looking in the rear-view mirror. If you do that, you'll miss seeing what is right in front of you—in this case, an oncoming tsunami of disruptive change. Here are some questions that will guide our inquiry into the eight acupuncture points of deep systemic change throughout this chapter:

1. *Nature*: How can we rethink the economy and nature from “take, make, and throw away” to an integrated closed-loop design, in which everything that we take from the earth is returned at the same or a higher level of quality?
2. *Labor*: How can we relink work—the profession we choose to pursue—with Work—what we really love doing?
3. *Capital*: How can we relink the financial economy and the real economy by recycling financial capital into the service and cultivation of ecological, social, and cultural commons?
4. *Technology*: How can we create broad access to the core technologies of the third Industrial Revolution, blending information technology, regenerative energy, and social technologies in order to unleash individual and collective creativity?
5. *Leadership*: How can we build a collective leadership capacity to innovate at the scale of the whole system?
6. *Consumption*: How can we rebalance the economic playing field so that consumers can engage in collaborative, conscious consumption and become equal partners in an economy that creates well-being for all?
7. *Coordination*: How can we end the war of the parts against the whole by shifting the mode of consciousness from ego-system to ecosystem awareness?
8. *Ownership*: What innovations in property rights would give voice to future generations and facilitate the best societal uses of scarce resources and commons?

These eight elements, from nature to ownership, define the core of any economic system. Our notions about each element change profoundly in the journey from 0.0 to 4.0. Understanding these changes and shifts

allows us not only to understand our current reality, but also to identify the potential of the future.

The next pages follow the journey of each of the eight key factors, or acupuncture points, from 0.0 to 4.0. If you are not particularly interested in all the details of the evolution of economic thought, you can jump to the concluding remarks at the end of each section, or you can skim the rest of the chapter and read the sections that interest you most.

1. Nature: Relinking Economy with Nature

All economic activity arises from nature—and returns to it. Nature in economic thought and action has been transformed from its original function as *mother* (0.0) to a *resource* (1.0) to a *commodity* (2.0) to a *regulated commodity* (3.0). In the emerging next stage of economic thought, we might reframe the role of nature in terms of *eco-system* and *commons*, which we collectively cultivate and steward for the well-being of future generations and the whole (4.0).

THE JOURNEY FROM 0.0 TO 3.0

The transition from 0.0 to 1.0 was marked by an agricultural revolution. As long as humans limited their economic activities to harvesting and hunting in order to feed and clothe themselves, their impact on nature was limited. But when people started to settle in one place and to cultivate the land, they began to interfere more deeply with the natural ecosystem. They began to use tools to cut trees and plow the land.

Over thousands of years, humans focused their economic activities on advancing agricultural production, and through these efforts developed a complex system of seeds, tools, livestock, and cultivation practices. The eighteenth century brought the next profound economic revolution—the Industrial Revolution—which first took shape in England and eventually moved the entire economic system from 1.0 to 2.0. This process continued throughout the nineteenth century and into the twentieth.

With simultaneous inventions in cotton spinning, steam power, and iron making, as well as in ownership structures, the Industrial Revolution took human intervention to a different level. What had started

with picking fruits morphed into blasting holes in the ground to extract metals and fossil fuels to feed the global industrial machine. As the sociologist Max Weber famously put it: “This order [i.e., capitalism] is now bound to the technical and economic conditions of machine production which today determine the lives of all the individuals who are born into this mechanism, . . . with irresistible force. Perhaps it will so determine them until the last ton of fossilized coal is burnt.”⁷

As this journey of burning fossil fuel is now closing in on its last ton with irresistible force, we are confronted with negative externalities that have prompted the system to move to the next evolutionary stage. The introduction of standards and regulations helped the industrial economy to evolve from 2.0 to 3.0 throughout the twentieth century. These institutional innovations protect the regeneration of nature, labor, and capital and also help to stabilize incomes on the consumer side, which fuel the mass consumption that keeps the industrial machine running and growing.

The flip side of this story of material growth and success is the rapid depletion of our common resource pool. Although the introduction of new technologies has reduced the material footprint of economic value creation to some degree, the dematerialization of industrial production has been surpassed by the total growth rate of the overall economy. The net result is that our extractions from the earth have continued to grow until the present day. In 2005, for example, 58 billion metric tons of materials entered the economy to keep our global industrial production running (one metric ton equals 2,204.6 pounds). On a global per-person basis, according to Juliet Schor in her book *Plenitude*, the average material use has been 8.8 metric tons, or just under 50 pounds per day. The US consumer used more than 2.5 times that amount (23 metric tons per person per year, or 139 pounds per person per day).⁸

IN SEARCH OF 4.0

How can we rethink and redesign our economic processes in ways that will reintegrate economic cycles with nature?

The structure of economic thought is disconnected from the ecosystem realities of our planet. The 0.0 unity with our planet is gone. We have—through our economic thought—turned our planet into a

commodity. We have created an economic machine that requires the resources of 1.5 planets.

How can we reconcile this contradiction? Here are four propositions and principles as a conversation starter.

1. *All economic activity arises from and returns to nature.* What started as an obvious and natural connection between economic activity and the natural world during the early stages of economic development faded in the later stages. Yet the actual role of nature in the economic process has increased steadily.

The current global GDP of US\$60 trillion would drop to zero in an instant without nature. Our entire economy and society rely on the eco-system services of nature. According to a 2010 UNEP study, the total value of all eco-system services (which accounts for only part of nature's contribution) amounts to at least US\$70 trillion a year.⁹ In other words, the unassessed value that nature creates for our economic process and well-being is higher than the value of all produced goods and services (global GDP). Yet nature has disappeared almost completely from the categories of modern economic thought into what can only be called a massive institutionalized blind spot.¹⁰

2. *Commodity fiction.* We run a 1.5 planet-footprint economy in a one-planet ecological reality. Why? Because of commodity fiction. In all modern economic theory, nature is thought of as a commodity. This is, as we learned from reading Karl Polanyi's book *The Great Transformation*, a fiction. A commodity is a product that we produce for the market with the purpose of consumption. But Planet Earth is not produced by us, nor is its purpose to be consumed by us. If anything, the planet is a gift that has been handed to us. This deep sense of responsibility can still be found today among farmers when they talk about their land, and also among entrepreneurs when they talk about their enterprise. None of them considers the earth or the essence of their enterprise to be a commodity. Yet this deep human understanding is not reflected in modern economic thought.

The intellectual root cause of the 1.5 planet-footprint problem originates from economic frameworks that conceive of nature as a

commodity—in other words, just about every mainstream economic framework today.¹¹

3. *Biomimicry*. How would nature design the economic processes that we cultivate and manage? Janine Benyus, author of *Biomimicry* and cofounder of the global network Biomimicry 3.8, asks this critical question. Reflecting on the key principles of nature and its ecosystems, here are a few that stand out:¹²
 - a. *Zero waste*. Nature is designed as a zero-waste system. Every output is someone else's input. There is no such thing as waste in nature. By contrast, the human economy is full of waste: waste that is produced while sourcing from nature. Only tiny fractions of our waste are being cycled back into a closed-loop system of reuse.
 - b. *Solar energy*. Nature operates on 100 percent renewable energy. Cells, like the human economy, need an external source of energy. But unlike the human economy, which has located those sources predominantly in fossil fuels, cells turn to sunlight as their sustainable source of energy.
 - c. *Diversity and symbiosis*. All eco-systems are based on the principles of diversity and symbiosis: different species working together in symbiotic and harmonious ways. By contrast, industrial production promotes monocultures and single-variable maximization that reduce resilience and make the system vulnerable to disruption.
4. *Closed-Loop Designs*. In order to create well-being for all without destroying the planet, we would have to increase resource productivity by a factor of five—or we would have to reduce resource use by 80 percent (at current rates of consumption). Ernst Ulrich von Weizsäcker, coauthor of the book *Factor Five*, thinks this is quite possible if all the key players started to move in this direction.¹³ It would mean replacing the current industrial paradigm (take, make, and throw away) with one that manages closed-loop cycles of materials and energy. The approach of William McDonough and Michael Braungart around rethinking the economic process as an

earth-to-earth closed loop that integrates economics, eco-system science, chemistry, design, and systems thinking is another pioneering example for this line of work.¹⁴

The practical challenge in implementing these approaches lies in bringing together interests and players from the entire business ecosystem in order to make them see, think, talk, and work together—a challenge that we will inquire into more later, when we talk about the issue of leadership.

SEEING OUR FUTURE: CULTIVATING OUR COMMONS

There is a whole landscape of emerging examples that embody these principles: the Slow Food movement; community-supported agriculture (CSA); local food; local living economies; and sustainable sourcing practices.¹⁵

Biodynamic (organic) farming is one of these examples and close to our hearts because Otto grew up on a biodynamic farm in Germany.¹⁶ A biodynamic farm is based on the principles of zero importing (a closed-loop cycle), zero waste (every output of one sector is an input for another), diversity (crop rotation and diverse eco-systems instead of monoculture), and a symbiotic relationship among all these elements of the larger living system (the idea that each farm has a unique *living individuality*).

On a very small scale, a biodynamic farm embodies many of the principles identified above. But how can we scale up these practices to the level of the whole food system, and eventually the whole economy? We will return to this question when we share the stories of BALLE (the Business Alliance for Local Living Economies) and the Sustainable Food Lab later in this chapter and in chapter 7.

2. Labor: Relinking Work (Jobs) with Work (Purpose)

All economic value creation starts with applying work to nature. That was true in the days of hunting and gathering, and it is true today. In both cases we apply creativity to nature. The result of that co-creative activity emerges in the form of some “added value.” In the case of, say, an apple, we know that almost all of the value comes from Mother Nature.

Nature takes care of the “production” process, and we just do the harvesting, sorting, packaging, and distributing.

But an Apple computer is quite different. It is produced by a global web of collaborative value creation, including people with design ideas in Cupertino, California, and tens of thousands of others throughout the value chain processing the raw materials from around the world, manufacturing the core components and building blocks in Asia, assembling the components in China, and shipping and distributing the products through Apple stores in consumer markets. The ratio of work to nature is much higher than in the case of the apple that we harvest in our backyard.

What gets lost in translation throughout this journey to a global division of labor is meaning. Meaning emerges from seeing one’s own connection and contribution to the whole. But being underpaid in Asia as I assemble a product for the global supply chain of, say, the iPad—what meaning and purpose can I derive from that? Very little. Today’s challenge of reinventing labor does not concern only the issues of jobs and living wages. It also concerns the issue of meaning, that is, of relinking work (jobs) with Work (passion and purpose).

THE JOURNEY FROM 0.0 TO 3.0

As depicted in table 3, the role of work and labor has changed profoundly throughout history. In the 0.0 stage, work was still embedded in communal practices for the purposes of subsistence. In the 1.0 stage, most labor was performed by slaves or indentured servants. Labor was an embodiment of dependency, and in many places it still is. When Aristotle wrote about the *oikos* in his practical philosophy, he referred to households that were operated mainly by slave labor.

Then came the Industrial Revolution and with it what Karl Polanyi called the commodity fiction of labor (2.0)—that is, the idea that labor is a commodity.¹⁷ In the 2.0 economic world, most people are no longer slaves or bondsmen, but instead of selling their bodies they sell their *time*. An employer pays them, and that gives him the right to tell his employees what to do. Compared with the 1.0 world (slavery), this is major progress. But the 2.0 world does not feature anything like entrepreneurial freedom for employees. It is more an evolved form of dependency. Moving from a hard 1.0 type of dependency (bondage) to a soft

2.0 type of dependency (labor as a commodity) has often, but not always, improved the lives of workers, which is why, in the shift from 2.0 to 3.0, unions, social security, and other worker protections emerge.

The evolution to a 3.0 economy has been another big leap forward. But then, particularly toward the end of the twentieth and the beginning of the twenty-first centuries, 3.0 solutions began hitting the wall in the form of (1) jobless growth that increased mass unemployment in developed countries; (2) awareness that continued exponential growth would ruin the planet rather than solve the employment issue; and (3) an acknowledgment that the 3.0 solution to the labor problem was more fragile than we thought: It worked only in some parts of the world, and it worked only for a limited time, when growth was supercharged by cheap fossil fuels. Put bluntly: It worked because we paid for it with our children's future.

IN SEARCH OF 4.0

With these funds gone, what do we do now? Let's consider three views. The first view says that we should muddle through and continue operating as a 3.0 economy. The second suggests that we should go back to 2.0 (which includes dismantling unions, social security, and regulations on the financial sector and to protect the environment). A third group of voices, less prominent, suggests returning to a 1.0 or 0.0 state of the economy (possibly, but not necessarily, in the form of totalitarian fascism).

We believe that none of these options is viable today. What we need today is a different conversation focused on how we can move *forward*—instead of backward—by creating a path to 4.0. That conversation should start with the honest acknowledgment, especially by politicians and economists, that more of the same will never solve the unemployment issue. The 1.0, 2.0, and 3.0 toolkits of the past are out of date and will never be sufficient to take on the huge challenges we are facing now.

Instead, we need to collectively examine the root causes of our current predicament. Consider the following four concepts as input for such a 4.0 conversation.

1. *The discourse of denial.* The public debate over deficit reduction and the promise of future growth that would bring back the industrial

jobs that went to China and India all argue that we are just in another cyclical downturn that will be solved as soon as the recession ends. This argument ignores demographic trends, ecological breakdown, and the current level of economic distress. According to the World Bank in 2012, “Some 200 million people—including 75 million under the age of 25—are unemployed. Over the next 15 years an additional 600 million new jobs will be needed.”¹⁸

So what are we offering to the 600 million young people still looking for work? The current debate is not addressing the scope of this challenge. The debate moves back and forth between the 2.0 and 3.0 perspectives, but does not step out and take a serious look at current reality. Two myths in particular keep us locked into the old patterns of thinking: the myth of growth and the myth of money.

2. *The myth of growth.* One argument that has caused the debate to stagnate is the assumption that we will solve our economic woes over the next two or three decades through accelerated growth. *Nothing* could be further from the truth. This is a delusional myth for at least three reasons:
 - a. *Ecological limits.* If we solve the employment problem by doing more of what we’ve been doing for the past decade, we will produce severe ecological breakdowns in less than a generation.
 - b. *Social limits.* If we add to the unemployed the working poor in the United States and the welfare-dependent in Europe, the result is a more accurate number of people for whom the current system doesn’t produce sufficient work. The size of this group is probably 20 or 30 percent of the adult population. In other countries, particularly in the global South, this number exceeds 60 or 70 percent. What do we do with that largely excluded group?
 - c. *Jobless growth.* Even though the economy continues to grow in many parts of the world, it is not producing the quantity of jobs that will be needed.

While the growth myth has been attacked for the past forty years by the global environmental movement, this next myth has largely been ignored.

3. *The myth of money.* What is it that drives teachers, entrepreneurs, engineers, and others to do their best work? It's the connection to their inner source of inspired creative energy. Connecting with that source is what drives profound innovation and renewal for people of all ages across all cultures. The problem is that we have organized our economy and our economic thinking around a really bad idea: that we should work for money. That idea is one of the biggest creativity killers. Sadly, this mindset is instilled when parents try to motivate their children with rewards: "If you do this, we will give you that." This is the first attack on any child's inner creativity. The second one comes in school, where old-style teaching does the same thing: "If you do *A*, that will get you *B*, and with that you will be admitted to *C* [college]." The third attack happens in the workplace in the form of management incentives, tying bonus payments to targets, and other best practices that are taught in business schools and that, as research tell us, kill creativity in the organization.¹⁹

These practices poison all real creativity because they disconnect what we do for a living (our work) from what we really care about (our Work or passion). All great inventors, creators, and entrepreneurs, all great social activists, share the same inner journey and source of satisfaction: *loving what you do and doing what you love*. That, according to the late Steve Jobs, arguably a good example of a Working entrepreneur, "is the *only* way to do great work."²⁰ It is recognizing the connection to this deep source of knowing that can help us in moments when all other navigation instruments fail.

4. *Relinking work and entrepreneurship.* The essence of 4.0 is to provide an institutional context that allows us to relink work (jobs) with Work (purpose). The evolution of work from 1.0 (slavery) to 4.0 (Work) is a journey that has been gradually shifting the locus of control from outside (dependence) to inside the networked individual (networked independence). That journey started with gradual emancipation from 0.0 structures (traditions), 1.0 structures (bondage), 2.0 structures (labor-market dependencies), and finally 3.0 structures (welfare-state dependencies), and has led us to a point where we can strengthen the conditions for individual and communal entrepreneurship.

In order to step into this emerging 4.0 space, we need more enabling infrastructures that invite more people into the generative space of co-sensing and co-creating the future that they care about. Today there are not just thousands or millions of people who are trying to enter such a space, but hundreds of millions, even billions. We need to take a fresh look at the bigger picture. None of the current issues, from poverty to unemployment to environmental destruction to the global economic crisis, can be solved in isolation. We need an integral approach to tackling them. We need to create new types of enabling infrastructures that help people to co-sense, co-develop, and co-create their entrepreneurial capacities by serving the real needs in their communities.

These infrastructures combine the following elements and provide access to:

1. enabling spaces: innovation happens in nurturing places
2. key challenges: challenges are the raw material for all learning
3. sensing mechanisms that allow people to see themselves as part of a bigger picture
4. capacity-building mechanisms
5. capital
6. technology
7. community: a global web of mentors, partners, and entrepreneurs who collectively create prototypes for Society 4.0

As a global community, we must ask ourselves whether we are willing to accept that we are not separate from one another, but are ecologically, economically, socially, and spiritually highly interdependent and connected. And if we agree that we are, are we willing to lend a hand to one another?²¹

If the answer is yes, then a high-leverage economic intervention point would be to simply create an *economic human right* to basic income for every human being on the planet. If this basic need were combined with free or inexpensive access to health care and education, we would create a much more equal and level playing field. It would be a world in which everyone had a fair chance to pursue their entrepreneurial aspira-

tions and dreams. In other words, we could put our creativity into the service of the larger community.

This idea may sound radical, but it really isn't. It is just naming what some parts of our global society are already doing. But since our thinking is still stuck in 2.0 types of transactional frameworks, we tend to be blind to the co-creative elements of an emerging 4.0 economy, which operates through the *economies of presencing* rather than through the *economies of transactional benefits*.

A case in point: Otjivero-Omitara is a small village in Namibia. From January 2008 to December 2009, this village became the first place to experiment with unconditional cash transfers, in the form of a basic income grant (BIG). The idea of BIG is that basic income is a universal human right. During the two-year experiment, each person, regardless of income, received a monthly grant of 100 Namibian dollars (US\$13). After only one year, child malnutrition had declined from 42 percent to 10 percent, household poverty had dropped from 76 percent to 37 percent, school dropout rates had declined from 40 percent to 0 percent, and crime went down by 42 percent. Over the same period, entrepreneurial activity and self-employment went up by 300 percent.²²

The ideas behind cash transfers are simple: Basic income is a human right, and if you give it to people without conditions, you reduce government bureaucracy and create demand on a local level that in turn fuels micro-entrepreneurial opportunities and new ventures. In this instance, cash transfers to the poor kickstarted and strengthened the economy at the level of the micro-entrepreneur. The cost of creating such a cash transfer for the entire population in Namibia would be 2.2 to 3 percent of the country's GDP.²³

Is this amazing example spreading like wildfire and sparking other, similar efforts around the world? No, at least not at the speed and scale necessary. Why not? Because it contradicts the current habits of economic thought that believe in extrinsic rather than intrinsic motivation of human behavior. People do not believe the results of the Namibian experiment because they contradict their 2.0 economic belief structures, which see human behavior as driven by rewards and punishment rather than by passion and purpose. That being said, we have seen very

significant efforts in Brazil and Latin America that have pulled tens of millions of people out of poverty by offering conditional cash transfers.

SEEING OUR FUTURE: IGNITING GLOBAL FIELDS OF SOCIAL ENTREPRENEURSHIP

The seeds of the future are already planted. This future is visible in the first wave of current social entrepreneurship, which we discussed earlier. And in our work we also see a whole second wave of emerging future social entrepreneurship, a wave composed of millions of individuals—many of them feeling a bit stuck in traditional big institutions—who would love to become involved in this emerging global movement. How can these two waves of entrepreneurship and socially responsible awareness meet and connect? Let's look at one example.

The Business Alliance for Local Living Economies (BALLE)

BALLE's founding executive director, Michelle Long, grew up in the Midwest in a fairly traditional, conservative environment. As an undergraduate, she pursued a degree in business and upon graduation was offered a position with a large pharmaceutical company—at the time a coveted first job for career-oriented students such as herself. But she soon became disillusioned; while she was working hard, she saw no larger purpose to her work other than making more money for the corporation. Then one day she was asked to perform a task she felt was unethical. Choosing to decline, she realized that she was not on the journey she wanted to be on. In spite of her family's disapproval, she decided to quit her job and embark on a journey around the world to seek a more compelling path.

Over the next two years, her travels took her many places, including India. There she realized that many of the practices and customs that she had thought of as “the way things are” were not the way things were at all in this new context. Rather, much of what was natural for her was strange to the people she met in India, and vice versa. Realizing there was no single, natural way to do things, she had a realization: Perhaps it is possible to create an entirely *new way* of doing things that is not business as usual in India or the United States, but is instead a way that works better for everyone.

With this new impulse, Michelle returned to the United States and enrolled in business school, where she entered an entrepreneurship competition with what at the time was a novel idea: to create an online marketplace connecting artisans and farmers in developing countries with consumers in the West who wanted to buy products in line with their community and environmental values. Michelle won the competition and, with backing from venture capitalists and other traditional stakeholders such as the World Bank, left business school to pursue this idea.

However, as her business took off, something started to bother her. She felt removed from what was going on in the communities she was trying to serve and began to sense that it was not really her place to be solving problems in distant lands she knew little about when there were so many problems in her own backyard. It was then that she discovered an important truth for her: She wanted to be taking direct action in the places she loved and felt connected to.

So she took the next big leap. She paid off all fair trade suppliers, closed down her company, and set up all the vendors—the fair trade artisans—with a brand-new initiative through Overstock.com, which later became WorldStock.com. Michelle went on to follow her passion and joined an initiative that would link place-based efforts to regenerate local economies. The result is a vibrant national network, BALLE, which is now North America's fastest-growing network of socially responsible businesses, and Michelle serves as its executive director. (For more details on BALLE, see chapter 7.)

The story of Michelle and of BALLE is a good example of what may well be the greatest dormant superpower on this planet: the power of the untapped potential of entrepreneurial creativity to build up social mission-driven enterprises—hybrid enterprises that combine personal initiative with a social mission and with business.

3. Capital: Relinking Financial with Real Capital

Capital is the quintessential concept of economics, as is reflected in the term *capitalism*. At the same time, there are probably few notions today that are more misunderstood. Most people think of capital as money.

However, capital has different forms: It can be physical, human, industrial, financial, social, or spiritual. One characteristic that all these forms of capital have in common is that we expect capital to generate a profit. The term *profit* comes from Latin, meaning “to make progress.”

Capital is a young word, originating in the Latin *caput*, the “head.” As indicated in table 3, earlier in this chapter, the concept of capital has changed significantly over the course of human and economic history.²⁴

THE JOURNEY FROM 0.0 TO 3.0: NATURAL, HUMAN, INDUSTRIAL, AND FINANCIAL CAPITAL

Capital was not in the vocabularies of 0.0 societies. From today’s view, 0.0 economies used capital in the form of physical tools and indigenous wisdom to relate to the natural cycles of Mother Nature. Nor was the word used during the Agricultural Revolution, in what we’re calling 1.0. Instead, advanced forms of physical equipment, craftsmanship, and knowledge of how to use tools were examples of capital.

In the Middle Ages, capital meant financial assets that people invested in businesses. What we know as capital began in the British colonial empire as merchant capital and later morphed into industrial capital. Without the accumulation of physical, human, and financial capital, the growth miracle of the Industrial Revolution would not have been possible. Both the quantity and the quality of capital changed. Physical capital took the form of heavy machinery. Combined with industrial organization and the contemporary type of schooling, new forms of production initiated unprecedented growth and shifted the center of gravity from individual human skills to industrial organization and mass production. In order to make this shift possible, a new dimension of financial investments was required to facilitate the blending of all these components.

Thus the Industrial Revolution actually gave *capital* a new meaning—the meaning that we associate with it today. Adam Smith was one of the first to emphasize the profit expectation. Karl Marx used the term *capital* to describe the central category of his economic analysis. He described the movement of capital from money (M) to real capital and finally back to money (M'). The difference between M and M' was profit, which was the progress achieved throughout this cycle. Marx saw the inherent contradictions between the *forces of production* (such as prog-

ress in productivity) and *relations of production* (such as ownership) as key drivers of societal transformation and change.

The actual evolution of society, however, turned out to be somewhat different than Marxist theory anticipated. Capitalism 2.0, rather than collapsing because of its inherent contradictions, turned out to be remarkably flexible and resilient, reinventing itself in the form of capitalism 3.0. It took on the form of a stakeholder-driven social-market economy that promised to take better care of its regulatory frameworks for the environment, labor, and finance. Starting with Bismarck's social security legislation in the 1870s in Germany and continuing with the Federal Reserve Act in December 1913 and the US New Deal in the 1930s, a whole string of regulatory innovations in many places around the world helped the economy to move from 2.0 to 3.0. While this process took more than half a century in the West, in China it took only a decade to move the (rudimentary) social safety net coverage for 15 percent of the population in 2000 to 95 percent in 2010 (adding more than a billion people within a single decade).

The Industrial Revolution in the 2.0 economies was driven primarily by the growth of physical and human capital. In contrast, the rise of the 3.0 economies came with unprecedented growth and accumulation of financial capital, which fueled an ever-increasing decoupling of the financial and real economy over the course of the twentieth century.²⁵

THE GROWING GAP BETWEEN THE FINANCIAL AND THE REAL ECONOMY

One reason for the widening gap between the financial and the real economy is the advantage that financial capital has over nonfinancial capital. Physical and human capital are confined to specific locations and contexts, while financial capital can travel the globe. As Joseph Stiglitz wrote in *The Price of Inequality*:

Imagine, for a moment, what the world would be like if there was free mobility of labor, but no mobility of capital. . . . In its early history, the United States had such conditions, and indeed a very different process played out. Territories and the new western states of the Union competed for settlers with the older states on the Eastern Seaboard. This led across the nation to the expansion of voting rights, in

the right to run for political office, and in public education, which in turn contributed to the vast expansion of literacy in the United States (relative to what it had been before, and what it was in Europe).²⁶

Today, financial capital tends to be global, while labor and physical capital tend to be local. Financial capital can change owners and places in seconds. Labor and physical capital cannot. Moreover, the value of physical capital often decreases with use, while the value of financial capital (apart from inflation) does not diminish through use. On the contrary, through the mechanism of interest and compound interest, financial capital tends to grow exponentially over time, while physical capital tends to be limited and finite.

These structural differences translate into a structural advantage of financial over physical capital that keeps driving the deepening disconnect between finance and the real economy. The results of this disconnect were on display during the financial crisis of 2007–08. Enabled and fueled by the deregulation of the financial industry during the Reagan and Clinton administrations in the 1980s and 1990s, the gap between the financial economy and the real economy widened dramatically, as exemplified by the following data points:

1. *The financial bubble.* In 2006, the McKinsey Global Institute (MGI) calculated that the world's financial markets were struggling to find investment opportunities for US\$167 trillion in global "liquidity."²⁷ That sum was unprecedented, roughly 3.5 times the aggregate global GDP of US\$52 trillion at the time. The deputy secretary of the US Treasury during this time, Robert Kimmitt, estimated the figure at US\$190 trillion.²⁸
2. *The profit bubble.* There is a growing gap between the profits of the financial sector and those of the rest of the economy. The profits of the former jumped from less than 16 percent of domestic corporate profits (1973–85) to 41 percent by the first decade of this century.²⁹ This change reflects the advantages the financial sector has over the real economy, but a highly profitable financial sector in a real economy with a shrinking profit base is not sustainable. The return on capital must be earned in the real economy. Consequently, when the financial sector is that much more profitable, this profit is created

by a bubble that at some point will burst and make the real economy pay the price.³⁰

3. *The compensation bubble.* “From 1948 until 1979,” say Simon Johnson and James Kwak, “average compensation in the banking sector was essentially the same as in the private sector, . . . until 2007 the average bank employee earned twice as much as the average private sector worker.”³¹ But what creates a huge public outcry are the bonuses paid to investment bankers. Wall Street paid US\$18 billion in year-end bonuses to its New York City employees in 2008, the year when it received a government bailout of US\$243 billion.³²

The gap between financial capital of US\$190 trillion looking for highly profitable investment opportunities and a real economy and social sector without access to the financial capital needed to operate and grow is at the heart of the worldwide economic crisis.³³ It's related to the problem we discussed earlier, that foreign exchange transactions of US\$1.5 quadrillion dwarf international trade by a factor of 75.³⁴ The consequences of this problem are evident in all dimensions of the three divides. Moreover, the real economy struggles more and more to compete with profit expectations that an artificially inflated financial economy imposes on the rest of the economic actors. Small and medium-sized companies struggle to gain access to cost-effective loans, although it is they that create most of the new jobs that are desperately needed today.

The result? This situation is comparable to a circulatory system that pumps all the blood into the head, leaving the other organs to starve. Something in this system is broken and needs to be fixed. Money does for the economy what blood does for the human body: It keeps the system moving, connected, and alive. If that circulatory system is broken, it means that the health of the whole economy is at risk.

The 3.0 response to these crises is more and better regulation, including (1) limiting the size of banks so that they are no longer capable of taking a country hostage (by being “too big to fail”); (2) regulating financial products (limiting derivatives); (3) taxing speculative financial transactions; and (4) separating the core banking business from the investment business so that risky investments no longer put core banking services, especially loans to small and medium-sized companies and innovators, at risk.

But these regulations barely scratch the surface of the deep underlying problem and the myths that keep us from seeing the new reality of capital and money.

IN SEARCH OF 4.0

We need a serious conversation about the role of capital and money in a twenty-first-century economy. To start this conversation, here are four propositions that challenge some of the conventional wisdom that keeps our thinking boxed into an old frame.

1. *The financial system is too efficient.* The main problem with our current financial system, according to Bernard Lietaer, author of *The Future of Money*, is that it is too efficient.³⁵ It focuses too narrowly on short-term financial profitability, with no awareness of its negative side effects on people and the planet. The result of this system is an economy that turns our companies into machines that are designed to generate financial profit and negative externalities at an unprecedented level, compromising the longer-term health, resilience, and survival capacity of the system. In contrast to markets in the real economy, the financial sector trades a good that is merely a legal construct, and consequently follows different rules from those that apply to other goods and services in the economy. The guideline “what’s good for the financial sector is good for the whole country and economy” or, in the case of the United States, “what’s good for Wall Street is good for America,” does not apply, as became painfully visible when the financial meltdowns destroyed roughly US\$50 trillion of capital³⁶ and worldwide about 30 million jobs between 2007 and the end of 2009.³⁷ Rather than improving the efficiency of a financial services industry that extracts profits by generating one bubble after another, what we need is a more effective financial market that *serves* the needs of the real economy.
2. *Money is not capital.* Capital is an entrepreneurial capacity that propels the economy and drives the transformative process of value creation. Financial capital allows entrepreneurs to take an idea and move it toward action: to hire people, build a product that they envision, and create the infrastructure required to sustain a business. As described by the economist Joseph Schumpeter, this process is

“creative destruction.”³⁸ What drives it? In Schumpeter’s view, it is the entrepreneur. Schumpeter thought that capitalism would eventually destroy itself by crowding out entrepreneurs from increasingly bigger and more bureaucratic companies.³⁹ While his view on entrepreneurs rings true to many, there is an even deeper force at work that drives entrepreneurial activity and value creation across all sectors of society. It is the force of *creativity*: individual and collective creativity, which we believe is the ultimate source of all capital and value creation.

Redesigning a postbubble financial economy requires us to redesign the flow of money so that it *serves* the actualizing of our creative resources across all sectors of society. We need to redesign our money and capital flows from operating externality-blind to operating externality-aware. In other words, the economy needs to move from 3.0 to 4.0.

3. *Money is not a commodity.* A 2010 survey in the United Kingdom found that 66 percent of the surveyed individuals did not know what portion of their checking account was used in various ways by their bank.⁴⁰ Despite the importance of London as a global financial hub, for most people, how the monetary system works is something of a black box. Much of our current banking system is based on the belief that money is a commodity. To debunk that belief, let us take a quick tour through the history of money as a drama in four acts, following the economic paradigms from 1.0 to 4.0.

The prologue (0.0): physical. Initially “money” had different physical forms, such as grain, silver, gold, or salt—material objects that had value in themselves.

Act 1.0: representational. Money moves from the physical value of gold or silver to a representational value as a legal or social construct based on trust that economic actors will accept the representation as an agreed-upon form of payment.

Act 2.0: commodity. Money becomes a market commodity. That happens when private banks begin to create money with the primary purpose of making a profit. While at first this injects much more money into the economy and thereby fuels growth and development, sooner or later the financial and the real economy begin gradually to decouple.

Act 3.0: regulated commodity. As a commodity, money turns into a vehicle for creating financial bubbles. The moment the bubble bursts, the real economy falters and everyone pays the price. The response to these crises are regulations such as the Glass-Steagall Act of 1933, which followed the stock market crash of 1929, and Basel III, which followed the market crash of 2007–08. The market deals with money as a regulated commodity. Regulations aim to ensure that the mistakes of the past don't repeat themselves. In that regard, they are effective. The shortcoming of most regulations is that they only look one way: into the past. They fix the problem of yesterday's bubble but are usually unable to anticipate the next bubble.

Act 4.0: intentional money for the realization of creativity. This act is still being written in the emerging history of money. It concerns the use of money to achieve *intentional collective creativity*. The history of money is a history of consciousness; that is, it's a story of increasing degrees of awareness and intention. Physical money (0.0) has its own intrinsic value. Representational money (1.0) receives its value through a social construct agreed to by the economic players. Money as a commodity (2.0) is even more intentionally used by some (the bankers) but unfortunately not by other participants in the economic process. Regulation (3.0) increases the number of stakeholders that intentionally co-shape the systemic use of money. The rise of the whole demand-side or Keynesian economy is a good example of this school of thought: making the systemic features of money work for the benefit of the whole. But still many players remain excluded from the process. Money 4.0, which does not yet exist, would maximize the capacity of all economic actors to shape the systemic use of money in a more intentional, collective, and creative way.

The main purpose of money 4.0 and capital 4.0 is to *relink the creation of money with entrepreneurial intention in our communities*. The function of all money and financial mechanisms is to serve the real economy—that is, to serve the well-being of all by opening a field of individual and collective creativity. Money and capital are enabling conditions in our economy for the creation of products and

services that meet the needs of the community. But they are not products (or commodities) themselves. This means that we need to link their governance more intentionally to the evolution of our needs and systems. What types of money and financing do business and social entrepreneurs need? And how can we provide access to capital to all groups and creative people in society—particularly to the next generation of entrepreneurs?

The problem with Wall Street is not just that it requires more regulation, but that our banking institutions operate in an emerging 4.0 world with a 2.0 mindset and toolkit. The main problem is not the greed of some individual bankers but the design of the system. A twenty-first-century finance system needs to be designed according to principles of fairness, inclusiveness, transparency, and effectiveness for the real economy—none of which are part of the design of our financial systems today.

A 4.0 system would put these principles to work. The flows of money and capital would be redirected from the US\$190 trillion bubble of profit-seeking capital into those sectors of society that today are underfunded—basically, the whole *regenerative* side of the economy: innovation, education, health, sustainability, and the environmental, social, and cultural commons.

Money 4.0 requires not just regulation, but an awareness of and connection to the evolving whole of a given economic system. Some first examples of a new breed of banks are Triodos Bank and GLS Bank, both in Europe, and BRAC Bank, in Bangladesh. Triodos and GLS Bank guarantee their customers that their deposits will be invested in ecological and social enterprises. One hundred percent of their loans are made public, for example on an interactive Google map, to create transparency. BRAC Bank, the third largest bank in Bangladesh, was founded in 2001 with the purpose of serving the “missing middle,” medium-sized enterprises that create desperately needed employment opportunities. These banks develop financial products that address key challenges of their society: financial tools for regenerative energy; loans for entrepreneurs who still operate primarily with cash; and phone banking systems that allow families in remote rural areas to efficiently receive cash transfers from relatives

abroad. All of these innovations are examples of a financial sector in service of the real economy.

4. *Money does not equal money.* Any transfer of money is not only a technical act, but is also mirrored in the real economy through one of four actions:⁴¹
 - a. *Making a speculative transaction.* Speculative transactions keep money in the financial sector without moving it back into renewal of the ecological, social, or cultural commons. Speculation results in the creation of financial bubbles that, once they burst, hurt rather than help the real economy.
 - b. *Making a purchase.* Buying a good or service is an economic transaction that is clearly defined by time and location. When both sides agree to a transfer, the transaction is completed.
 - c. *Making a loan.* Using money to provide a loan has a different quality than a purchase. Will the borrower be able to repay the loan? What is the purpose of the loan? Has the borrower been successful in the past? Is there a market and need for the borrower's entrepreneurial idea? How long will it take? A loan (1) lengthens the time horizon of the transaction; (2) deepens the investigation into the person and how the money will be used; and (3) requires an assessment of the borrower's future capacity to repay the loan. This also indicates that a loan just for consumption makes only limited sense because the investment does not create any surplus.
 - d. *Making a gift.* Gifts of money are often overlooked in economic discourse. We give money to our kids by paying for their education, or to a charity. We do not expect a monetary return, but the gift enables others to actualize their potential. Gift money plays an important regenerative role in an economic system that is still not well understood.

From the viewpoint of the recipients, these four types of financial transactions create very different footprints in the real economy: (a) A speculative transaction tends to harm agents in the real economy in the long run once they end up paying the price of irrational volatility and depression after the bust. (b) In a purchase, the seller must deliver exactly what the customer wants, which gives the recipient

a limited degree of freedom. (c) In a loan, the borrower is free to use the money to realize his or her entrepreneurial idea. (d) A gift enables the recipient to invest in the future without being limited by short-term profitability, the greatest degree of freedom. Contrary to conventional wisdom, gift money often generates the highest productivity over the long term because it allows recipients to radically sense and actualize the emerging future, rather than satisfying the expectations of funders or other stakeholders who tend to be driven by viewpoints and indicators of the past.

The deeper structural problem of our financial crisis today falls into two categories. One, there is too much activity on level 1 money: the speculative sphere of *fictitious* value creation. And, two, there is too little activity on level 4 money: in the gift economy that could enable a new breed of entrepreneurs and social entrepreneurs to regenerate an economy with a social mission that works for all. In short: We need to move money from level 1 (the ego-sphere of speculation) to level 4 (the eco-sphere of societal renewal).

Economic theory rightly emphasizes the importance of investments and the structural importance of loans for innovation and entrepreneurship. But what is less well understood by economists today is the even higher productivity of the gift economy, as well as the toxic impact of an oversized casino economy that is driven by speculation instead of serving the development of the real economy. Remarkable exceptions, like Amartya Sen, Joseph Stiglitz, Juliet Schor, Paul Krugman, Raghuram Rajan, Riane Eisler, and Simon Johnson, confirm the rule.

This is what we call the co-creative eco-system economy; it includes continuous reinvestment of money from the financial sector into nonfinancial forms of capital formation, that is, natural, human, social, and cultural-creative capital. A better balance among these spheres of monetary activity lies at the heart of the 4.0 financial system.

SEEING OUR FUTURE: COLLECTIVELY CREATIVE CAPITAL

The ideas we have discussed here are not abstract ideals possible only in a distant future. They are already being practiced and experimented with in many places around the globe. Here are a few examples.

GLS Bank and Triodos Bank

Two European banks, as noted earlier, provide glimpses of an emerging 4.0 model of financial institutions: GLS Bank in Germany and the Dutch Triodos Bank, with branches in six European countries. Both banks provide financing to leading innovators in ecological and social businesses. Their innovative financial products serve entrepreneurs who are addressing urgent societal and economic challenges. These banks operate according to principles of the triple bottom line and transparency. Their depositor clients know what their money is used for and know that 100 percent of their deposits flow into ecological and social investments.

BRAC Bank

The development NGO BRAC is known by almost every Bangladeshi. Founded in 1974, it currently operates in ten countries globally. In Bangladesh, 5 million children have graduated from BRAC's 32,000 schools; its health program reaches 92 million people there; and since 1974 BRAC has built up a microfinance sector that serves all of Bangladesh as well as eight other countries. But it has realized that microfinance is not sufficient. For entrepreneurs to be successful and grow, they need loans that go beyond microfinancing. The founders of the NGO decided to establish BRAC Bank to serve this market segment not served by conventional banks, focusing primarily on making cost-effective larger loans that can be delivered in a standardized loan application process. This required BRAC Bank to invent a new business model that allows them to reach out to unbanked small businesses and entrepreneurs. It is these businesses that create new jobs, and with that address poverty at its root.⁴²

Complementary Currencies

There is a largely ignored global movement around creating complementary currencies. Complementary currencies are local and regional currencies that complement a national (or regional) currency. One example is the Chiemgauer, a local currency started in 2003 in southern Germany to promote local commerce; it has 2,700 participants, including 750 businesses. Another is the local exchange trading (LET) system founded in the 1980s in Canada. There are similar systems in over fif-

teen countries. In Japan, a local currency called the *kurin* has about 570 participants.⁴³

The main purpose of all these initiatives is to strengthen the local economy by creating a system that supports local and regional economic transactions. Only local businesses accept the currency; participants can barter their services in exchange for the currency; and because the currency is not accepted outside its region, there is an incentive to spend it faster than the national currency. The result is an increase in local transactions.

In 1932 a small town in Austria, Worgl, conducted a well-known experiment with complementary currencies. Confronted with hyperinflation and high unemployment, the town's mayor, Michael Unterguggenberger, issued a local currency that citizens could use to pay for infrastructure projects and was accepted by local businesses. As a result, employment rose and the local economy stabilized. As this model started to be replicated in other towns, the central government intervened and banned the local currencies, claiming that only national governments could issue money.

Examples of complementary currencies that have been experimented with suggest that they work better the more they are embedded in a functioning local structure and the more the overall economy is in a state of crisis (as in 1932). Thus complementary currencies can be seen as an investment in the resilience of a system.

CONCLUSION: RECLAIMING OUR OWNERSHIP OF CAPITAL

The core economic challenge today lies in the gaping disconnect between the real and the financial economy. That disconnect originates in how we think about money and capital. The conventional wisdom conceives of money and capital in terms of four myths: (1) efficient financial markets are good for the economy; (2) capital is money; (3) money is a commodity; (4) money equals money. On the surface, each statement seems to make sense. And yet on consideration, each of them is dead wrong. What we need instead are:

- i. new tools to monitor and measure a comprehensive economic and social impact across all four levels of money and its uses (speculat-

ing, purchasing, lending, and gifting) to increase transparency and awareness on impact;

2. a concept of capital that relinks the actual creation of capital with its source: the collective creativity of all actors in an economic community;
3. a concept of money that debunks the commodity fiction and makes the creation of money transparent and aligned with the entrepreneurial intention in a community; and
4. a healthier balance among the four spheres of money-related actions, achieved by eliminating level 1 (the casino economy) and strengthening level 4 (the gift economy) in order to allow more people to tap and realize their full entrepreneurial potential.

A 4.0 economy would also relink the individual intentions of all actors with a shared intention. Individual examples of financial institutions that have begun to operate in this way do exist, but in the larger scheme of things, they affect only a very small fraction of the total deployed capital today. The Global Alliance for Banking on Values, a network of twenty financial institutions that focus on relinking finance with a shared intention for positive social change, sets a positive example.

4. Technology: Relinking Technology with Collective Creativity

All economic value creation involves the use of knowledge and technology. This is true for farming as well as for industrial and postindustrial production. While technological tools have greatly improved people's lives, in recent decades technological systems have also created challenges.

THE JOURNEY FROM 1.0 TO 3.0: TOOLS, MACHINES, AND SYSTEMS

Technology evolves in waves (see table 3). The first wave came in the form of tools (1.0). Humans developed tools that allowed them to improve on what they could do physically with their own bodies. Simple examples include the ax, shovel, plow, and knife.

The second wave of technology came in the form of machines (2.0). The steam engine, railways, and inventions in the textile and steel industries gave rise to a whole set of interrelated machines that fueled the first Industrial Revolution and replaced physical labor with coal-powered machines. These machines allowed levels of productivity to skyrocket.

The next wave came in the form of the second Industrial Revolution (oil-based energy, the combustion engine, the petrochemical industry) and changed manufacturing from individual machines to system-centric automated production. While individual machines still needed human operators, in the 3.0 world many operators were replaced by automation in the form of a mathematical algorithm. Today's automated production lines in car manufacturing plants are an impressive and intriguing example of this 3.0 wave of advanced manufacturing technology.

The imperatives of the industrial systems world, in the words of German sociologist Jürgen Habermas, started to “colonize the lifeworld,” that is, people's *experience* of life and work.⁴⁴ The main thrust of 3.0 technologies is a system-centric view in which functional specialists control the key algorithms of the whole, and masses of users in these systems often feel disempowered and unable to change the basic specifications of the design. Think about the automated “customer service” systems of major companies that make you provide the same information four times before you're connected to a real person—*that's* how system-centric feels. Mass production and mass consumption penetrate all aspects of society.

Finally, the fourth wave of technological innovation is about to give rise to another Industrial Revolution that blends ICT (information communication technologies) with renewable energy, the smart grid, and awareness-based social technologies: a more human-centric turn in production and use. Just as 2.0 machines changed the dominance of 1.0 tools by being powered through energy, and 3.0 automated systems changed the dominance of 2.0 machines through the application of mathematical algorithms, we now see 4.0 technologies beginning to change the dominance of the old system-centric technologies.

We call this incipient fourth wave *human-* or *life-centric* technology because it is organized around empowering individual and collective

human experiences: that is, around the core process of becoming aware and the actions that arise from it. Applied to technology, it means shifting the locus of technology invention from optimizing abstract systems to co-shaping a creative human process that leads to changing the experiences that people have with the system, with one another, and with themselves.

The real disruptive change has little to do with cloud computing or faster data processing, but is the shift from optimizing abstract systemic functions or “systemic imperatives,” in the words of Habermas, to creating a *shared field of human awareness* that facilitates a new quality of entrepreneurship that *sources action from the emerging whole*.⁴⁵ We refer to this transformative journey as the U process.

Jeremy Rifkin refers to the convergence of ICT, biotech, nanotech, renewable energy, and the smart grid as the Third Industrial Revolution.⁴⁶ Just as the earlier waves of technology created an economic sphere that mirrors and amplifies the mechanical (1.0), motoric (2.0), and systemic (3.0) functions of the human being, the focus of our current technological innovations seems to duplicate and amplify the cognitive and communicative functions (4.0). As we see connections strengthen between humans and machines and between machines and machines, a question arises: Where is this journey taking us?

WHY THE FUTURE DOESN'T NEED US

One scenario that has been discussed in this context is the one that the movie *The Matrix* popularized: a future ruled by machines. A few years after the *Matrix* trilogy came out, Bill Joy, then chief scientist at Sun Microsystems, reminded us in his brilliant article “Why the Future Doesn’t Need Us” that rule by machines isn’t just a movie fiction: “Our most powerful twenty-first-century technologies are threatening to make humans an endangered species.” He continued: “The experiences of the atomic scientists clearly show the need to take personal responsibility, the danger that things will move too fast, and the way in which a process can take on a life of its own. We can, as they did, create insurmountable problems in almost no time flat. We must do more thinking up front if we are not to be similarly surprised and shocked by the consequences of our inventions.”⁴⁷

IN SEARCH OF 4.0

What would it take to move from technology 3.0 (system-centric) to 4.0 (human- and life-centric)? Here are four propositions as conversation starters.

1. *Debunk the liberation myth.* Not too long ago we were having serious conversations about what to do with all the free time given to us by new technologies in communication, production, and the household. If we had maintained the material consumption level of the 1950s, it would have taken only an eleven-hour workweek per person or employee to produce the output needed.⁴⁸ But our present reality is obviously quite different. Today our lives are more hectic than ever. Not only do we work more hours, but we have more trouble controlling our time. Every moment of the day is subject to interruption by several communication devices. Technology, it seems clear, doesn't just liberate. Consider the following thought, displayed on a poster that a friend from Indonesia shared with us: LIFE WAS MUCH EASIER WHEN APPLE AND BLACKBERRY WERE JUST FRUITS.

Think of our attention and our ability to pay attention as the sacred space that we want to savor, protect, and cultivate because it is our well of strength and well-being. We know how much attention matters, given our earlier discussions in this book. So what is the current state of our sacred space? *Under attack!*

We know that multitasking is a myth. When we multitask, we just shorten the amount of time we give to each task. Technology doesn't liberate. People do. We have to first change the mindset and awareness with which we put our technologies to work. If we use technology in a 4.0 environment but we operate with a 3.0, 2.0, or 1.0 mindset, then we simply continue to create a mess around us, and also within ourselves.

Developing and using advanced technologies means that we need also to advance the inner awareness with which we deploy these technologies. If we can do that, then technology becomes a force of liberation. If we can't, we create a set of systemic imperatives and dependencies that create a system around us that eventually "doesn't need us," as Bill Joy put it succinctly.⁴⁹ Summing up: Whether tech-

nology is a force of liberation or a force of dependency depends on the inner place—the quality of awareness—from which we operate.

2. *Debunk the technology-fix myth.* Regardless of the societal challenge being discussed, one usually hears two responses or suggestions for dealing with it. One group suggests that throwing new technology at the problem will solve it. This is the “technology fix.” The other group believes that technology may be necessary but is not sufficient and that deeper change is necessary. This deeper change includes transforming our thinking and awareness.

Despite technology’s many failures, the belief that it can magically solve our global and local crises around water, food, energy, health, and sustainability is as strong as ever. The wonderful appeal of the proposition that technology will fix the problem is that it sounds easy. The fix does not require that we address underlying issues or engage in a profound change process. Climate change? No problem! Let’s just throw some geoengineering at it, like a global shield around the planet that will deflect the sun’s rays away from the earth.⁵⁰

3. *Relink R&D investments with pressing societal needs.* Today’s global investments in research and development (R&D) are around US\$1.2 trillion. The Gross Domestic Expenditures on R&D (GERD) indicator summarizes the R&D expenditures of business, government, universities, and nonprofit organizations. As might be expected, over 70 percent of GERD takes place in industrialized countries.⁵¹ This has implications for the kinds of technologies and innovations that result from these investments. Urgently needed innovations that improve life in nonindustrialized countries are underresearched. Investments in R&D are driven by profitability expectations and/or by political decisions—military research, for example. Relatively little research is done on neglected diseases. Ninety percent of industrial production in the health sector concentrates on noncommunicable diseases, which are predominant in developed countries, rather than on tropical infections, for instance, in low-income populations living in nonindustrialized countries. This inequity creates the so-called 90/10 gap.⁵² Neglected diseases are shunned by the pharmaceutical industry because the return on investment is so low.

4. *Lead the Third Industrial Revolution.* Technology is one of the most powerful forces today. But what is the deeper nature of that force?

The twentieth-century German philosopher Martin Heidegger followed this question in his work. He noted that the root of *technology* goes back to the Greek word *techne*, meaning “art.” Art is a realization of the creative process. Thus the source of technology leads us to the source of creativity. From that angle we can differentiate between two types of technology: technologies that are (from the viewpoint of the user) *creativity-appreciating* and technologies that are *creativity-depreciating*.

Following that distinction, the fundamental criterion for future public policy and public investment in technology could be this: Does the use of a specific technology *improve* or *stifle* our creativity? Are we, for example, turning users of technology into passive recipients of content that others produce, or are we empowering users of technology to co-create their own content and share it?

Does that distinction matter? Think about it. It puts into focus whether technology is appreciating or depreciating our reservoir of collective human and life creativity—which at the end of the day is the ultimate source of all forms of economic capital.

SEEING OUR FUTURE: UNLEASHING DISTRIBUTED COLLECTIVE INTELLIGENCE

Where do we see the seeds of the future? Here are a few examples.

Wikipedia

Wikipedia, which invites anyone to collectively co-create the encyclopedia, was launched in January 2001. During its first year, 20,000 entries were posted; three years later, the pool of articles exceeded 1 million in 100 different languages. Ten years after its founding, Wikipedia posted 19.7 million articles, and it has become the world’s seventh most popular website.⁵³ Wikipedia decided in 2002 not to accept commercial advertisements; it chose a foundation as its legal form and relies on donations to maintain its operations. In one of its first fundraisers, in 2005, it raised US\$94,000; in its 2011 fundraiser, it raised US\$16 million.

Linux

On August 25, 1991, in Helsinki, Linus Torvalds was so frustrated with existing operating systems that he began to develop his own and announced this system with the following email and invitation:

Hello everybody out there using minix—

I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewing since april, and is starting to get ready. I'd like any feedback on things people like/dislike. . . . This implies that I'll get something practical within a few months, and I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)

Linus (torvalds@kruuna.helsinki.fi)⁵⁴

Twenty-two years on, the project he announced in his email has morphed into one of the most successful operating systems in the world and has revolutionized a billion-dollar industry. How did that happen? Linus's early decision to develop the whole process in an open-source format allowed all developers to use the code for all purposes (commercial and noncommercial), to adapt them to the users' specific needs, and to share their modified versions with the whole community. This approach allowed him to move from an email in 1991 to a collaborative global community of developers from most of the world's countries and cultures; a foundation orchestrates the evolution and cultivation of that global community.

What do these examples have in common? They no longer design and deliver products to users. Instead they create a platform in which a distributed community of users and developers co-create the content or products (apps) themselves. Users move from being recipients of products and services to becoming their co-creators, co-authors, and also co-users.

CONCLUSION: RECLAIMING OUR ACCESS TO ENABLING TECHNOLOGIES

Throughout history, technology has morphed from a tool to a machine and from there to an automated system. Today we stand at the edge

of the next jump in technological innovation, which may take us from system-centric technologies to human- or life-centric technologies that we can shape and give meaning to. If we succeed in making this leap, we will strengthen the use of creativity-enhancing technologies that facilitate co-sensing, co-creating, and co-using.

What does it take? It takes the formation of some intentional communities of creation, like the one that Torvald started with a simple email. To create these communities more often, more intentionally, and also more inclusively, we need supportive holding spaces and people. These communities of creation, once formed, might have a huge impact on this century's journey.

5. Leadership: Relinking Leadership with the Emerging Future

We all know what the absence of leadership looks like: We collectively create results that nobody wants. Unless we radically regenerate our leadership capacity today, none of the other topics discussed in this book will have any chance of being implemented.

THE JOURNEY FROM 1.0 TO 3.0: STICKS, CARROTS, AND NORMS

The essence of leadership has always been about sensing and actualizing the future. It is about crossing the threshold and stepping into a new territory, into a future that is different from the past. The Indo-European root of the English word *leadership*, *leith*, means “to go forth,” “to cross a threshold,” or “to die.”⁵⁵ Letting go often feels like dying. This deep process of leadership, of letting go and letting the new and unknown come, of dying and being reborn, probably has not changed much over the course of human history. The German poet Johan Wolfgang von Goethe knew it well when he wrote, “And if you don’t know this dying and birth, you are merely a dreary guest on Earth.”⁵⁶

But what *has* changed is the structure of the collective social body in which this process is enacted. As indicated in table 3, that social body has changed from a single-pyramid-type structure in which leadership is centralized and hierarchical (1.0), to a more decentralized multi-

pyramid structure in which leadership happens through delegation and competition (2.0), and from there to a more participatory, relational, and networked structure in which multiple stakeholder and interest groups negotiate and engage in dialogue with one another (3.0). These are the three main vocabularies of leading and organizing today: centralization and hierarchy; decentralization and competition; and participatory-relational forms of networked stakeholder dialogue.

The problem is that none of these mechanisms is adequate for solving today's problems. The helplessness that many people feel is a symptom of this deeper issue: Our inherited leadership vocabulary is no longer fit to meet the challenges of our time. Climate chaos, food shortage, financial oligarchies, poverty—how do we respond to issues like these with the old organizational vocabulary?

Here is the hard truth: *We can't*. We need a new vocabulary to deal with the mess we are in today, and a new collective leadership mechanism that allows a diverse constellation of players to connect, co-sense, and co-create.

IN SEARCH OF 4.0

What would it take to develop a 4.0 leadership mechanism that could respond to the key challenges of our time at the “source” level?

There Is Only One Real Leadership Issue in the World

The primary leadership challenge today is the fact that our economic reality is shaped by globally interdependent eco-systems, while institutional leaders, by and large, operate with an organizational ego-system awareness. Most leadership issues can be boiled down to this one primary contradiction: We have an objective economic reality that works as a global eco-system, and then we have individuals and institutional leaders focused according to their institutional ego-system awareness. Consequently they consider the concerns of others to be externalities. The same problem is replicated inside institutions: Individual leaders attend to their individual targets (usually tied to bonuses) and ignore the well-being of the whole.

But what happens when the global eco-system reality meets a leadership that operates with an ego-system awareness? Pressing issues

around the commons are not addressed. The results are summarized in the discussion of the three divides in the previous chapter.

How can we reconcile a reality that already operates in a 4.0 world (eco-) with a leadership awareness that is largely stuck in a 2.0 universe of thought (ego-)? That reconciliation is the essence of leaders' new work, which is to help our organizations and stakeholders to move from ego- to eco-system awareness in order to catch up with the reality of our globally networked world.

For companies, it is often NGOs that facilitate the process of extending awareness from the boundaries of the organization to the well-being of suppliers, partners, customers, and communities. Consider the case of Nike. When NGOs hit Nike with a public campaign against child labor in Asia during the 1990s, the company first reacted by telling the public that they weren't at fault; it was just an issue with their suppliers overseas and whether or not they met Nike's standards. Soon Nike management realized that a "not our job" response was not good enough to protect its main asset as a company—the Nike brand.

Nike had no choice but to treat its suppliers' problem as if it were their own. Nike managers had to extend their awareness and their management processes from the boundaries of their own organization (ego-system) to the extended global enterprise (eco-system).

Three Leadership Myths

Three pervasive leadership myths reinforce the mind-matter split that cements the status quo that we observe all around us. All of them sound like sensible propositions, but all of them send us in the wrong direction.

Myth 1: *The leader is the guy at the top.* Leadership challenges that institutions are facing today cannot be solved with this old understanding of leadership. In order to face today's leadership challenges, many, *many* people in the organization—sometimes *everyone*—need to be involved.

Myth 2: *Leadership is about individuals.* In fact, leadership is a *distributed* or collective capacity in a system, not just something that individuals do. Leadership is about the capacity of the whole system to sense and actualize the future that wants to emerge.

Myth 3: *Leadership is about creating and communicating a vision.* The problem with this myth is that it focuses primarily on broadcasting a message rather than on something much more important: *listening*. Listening is the most important gateway to co-sensing and co-creating the emerging future. The world is full of grandiose leadership visions that were beautifully communicated—before they crashed and burned. Think Enron, Lehman Brothers, GM, AIG, Goldman Sachs, and the Bush-Cheney-Rumsfeld vision leading up to the Iraq War. The problem was not a lack of vision. The problem was that the vision was completely out of touch with reality. The problem was a lack of listening.

All great leadership starts with listening. That means listening with a wide-open mind, heart, and will. It means listening to what is being said as well as to what isn't being said. It means listening to the latent needs and aspirations of all people.

The Missing Mechanism: Collective Sensing and Prototyping

To learn to listen collectively, we need co-sensing mechanisms that help leaders and users in a system across institutional boundaries to listen, see, and make sense of the current situation together. One way to engage in co-sensing is to go on learning or sensing journeys together. Another approach to collective sensing is to invite a representative group of stakeholders in the larger eco-system (the “extended enterprise”) to engage in a collective process of sharing and dialogue.

The problem is not that people do not think about the larger eco-system or extended enterprise, but that we think about them in separate institutionalized silos. Most of us don't have a place that allows us to sense and think about the evolution of the larger eco-system *together*. It's these activities of co-sensing that activate the senses of the collective system. Without this collective activation through sensing, it is very rare that a shift to the deeper levels of the U will happen without an external shock.

What's also missing is a place to engage in practical prototyping experiments around exploring the future. Prototyping explores and evolves an idea by *doing*. The key mantra of prototyping can be found in

the words of Dave Kelly, co-founder of the design company IDEO: “Fail early to learn quickly.” You prototype an idea before you have fleshed it out completely. Prototyping is an experimental way of exploring and getting feedback from stakeholders in order to move forward.

The feedback continues the process of co-sensing and co-creating. A 4.0 stage of leadership requires a new set of enabling infrastructures that can support an eco-system to engage in co-sensing (sense-making), co-inspiring (connecting to source), and co-creating (prototyping) new possibilities together.

THE ESSENCE OF LEADERSHIP IS PRESENCING

The essence of leadership is about connecting, stepping into, and acting from the field of the future that wants to emerge. The question is, how do we do it? Where can we get guidance when we need to take a step forward? In 2005, Steve Jobs told the Stanford University graduating class how he dealt with this question: “You can connect the dots only by looking back. Not by looking forward.” OK, you can’t connect the dots by looking forward. But then where does your guidance come from? Jobs continued: “You’ve got to find what you love. . . . Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is great work. *And the only way to do great work is to love what you do.* If you haven’t found it yet, keep looking. Don’t settle.”⁵⁷

The *only* way to do great work is to love what you do, and to do what you love. Countless other entrepreneurs and innovators have confirmed this deep truth with their own life stories. But how we can create an institutional infrastructure that would allow us to operate from the same deep source on a collective systems level?

What we have learned is that the *inner* principle “do what you love and love what you do” needs to be complemented by an *outer* principle of deep immersion in the world, particularly a deep immersion in the marginalized edges of our world, with the practice of “always being in dialogue with the universe,” as Alan Webber, the founder of the journal *Fast Company*, puts it. “The universe,” says Webber, “actually is a helpful place. That means: Whatever the response you are getting, you look at it from the assumption that it wants to help you in some way.” In explain-

ing this important principle of all social entrepreneurship, Webber continues, “If you’re open in relation to your idea, the universe will help you. It wants to suggest ways for you to improve your idea.”⁵⁸

What’s necessary today is to lift up this deep entrepreneurial core process that Jobs and Webber talk about to the level of collective entrepreneurship, where the same process could happen on the scale of the whole system or eco-system. Jobs, for example, was a genius at inventing products and services that are in sync with our generation’s aspirations and lifestyle. But he was not particularly empathic or innovative in improving the lifestyle or pay of the workers in China who produce the iPad and iPhone under harsh conditions and with minimal compensation. True 4.0 or eco-system leadership would focus on the well-being of all participants in an eco-system, not just a few of them.

SEEING OUR FUTURE

Working with people in different systems over the past eighteen years, we have learned that this process of helping diverse stakeholder groups in eco-systems to sense and actualize future possibilities requires new infrastructures or holding spaces for five critical process steps: (1) *co-initiating*, i.e., helping stakeholders in fragmented systems to connect and discover common ground; (2) *co-sensing*, i.e., helping people to walk in each other’s shoes, to see the system from the edges, and to develop capacities for collective sensing; (3) *co-inspiring* through deep reflection practices and intentional moments of stillness that help us to connect to our deeper sources of knowing; (4) *co-creating*, or exploring the future through hands-on prototyping; and (5) *co-evolving*, or scaling and sustaining the new. There are many different methods and tools for providing these different holding spaces—but without these enabling conditions, very few useful things tend to happen on the level of fragmented larger systems.

6. Consumption: Relinking the Economy with Well-Being

Every economy has two main sources of value creation: the production and the consumption sides. All economic value creation *originates* in the

quality of experience that we have as users, consumers, and citizens. Just as it is true to say that without nature there would be no economy, it is equally valid to say that without consumption all economic value creation would be worth nothing. The ultimate purpose of an economy is to meet the needs of its members.

This proposed primacy of the user/consumer experience in all matters of economic value creation contrasts sharply with the actual *asymmetry* of power that tilts the economic playing field heavily to the disadvantage of users, consumers, and citizens.

THE JOURNEY FROM 0.0 TO 3.0: FROM CONSUMERISM TO CONSCIOUS CONSUMPTION

Viewed from this angle, what does the journey of the economy look like? As we have already discussed, this journey has evolved through stages. In the 0.0 stage, economic activities were subsistence driven—that is, driven by the immediate needs of a local community. In 1.0, the production function began to differentiate through the Agricultural Revolution as production became more methodical and intentional.

In the 2.0 economy, the differentiation of the production function continued, resulting in the first Industrial Revolution. Mass production led to mass consumption. Professional advertising, sales strategies, and product design slowly became part of the industrial management process. In the 3.0 economy, we see the second Industrial Revolution, as well as marketing and branding moving into the mainstream of management, thereby giving rise to a global culture of consumerism that took material consumption to previously unknown levels of scale. At the same time, consumer rights movements grew and resulted in various regulations to protect consumers and their interests.

The journey from 1.0 to 3.0 created a civilizational model of mass consumption that currently uses 50 percent more resources than the planet can regenerate each year. Addressing this problem requires rethinking the roots of consumerism. In the words of the Uruguayan writer Jorge Majfud, “Trying to reduce environmental pollution without reducing consumerism is like combating drug trafficking without reducing drug addiction.”⁵⁹ Which is, needless to say, a precise description of the US “war on drugs.”

IN SEARCH OF 4.0

What would a 4.0 postconsumerism economy, one that would respond to our global challenges at the level of their source, look like? And how could we get from here to there, from 3.0 to 4.0?

Step 1 on such a journey is to debunk three more myths:

Myth 1: *Production and consumption are separate.* In this thinking, the economy is conceived of as a *value chain* that starts with product design and raw materials and ends with consumers. In between, a sequence of processes apply labor, machinery, and organization to raw materials and assemble an amazing array of products that are packaged and then shipped to distributors and customers. What is wrong with this picture? Isn't this what we see going on in factories?

Nothing is wrong. Except that the customer stands at the end of the process, and his or her needs don't mark the beginning of the production sequence. The difference between consumer needs being at the source or at the end of this whole sequence is the difference between 4.0 and 3.0. As long as the customer stands at the end of this process, the old industrial management thinking dominates, in which fixed capital investments such as machinery need to be kept operating in order to reap economies of scale. A steady flow of products is thus pushed into the market and down the throats of customers by billion-dollar marketing budgets that manipulate consumer attention with ever-increasing firepower (3.0). The consumer is a *target* of economic activity rather than a *partner* whose evolving needs are being identified and served.

If the customer is positioned at the end of the pipeline, and if the purpose of commercials and marketing that bombard her is to create wants rather than meet needs, these commercials are part of a materialistic onslaught that only increases production's ecological footprint without increasing true value for the customer and user base. However, if customers were positioned at the source of the pipeline, a shared assessment of their real needs, including the needs of the underserved, would mark the beginning of the entire process of value creation. The result would be a more level playing field between producers and consumers/users, and with that the opportunity for

both groups to have an open, transparent, and inclusive dialogue—a common starting point for innovation and business development.

Myth 2: Consumers are separate from one another. Consumers, so the myth goes, are boxed into a rationality that maximizes individual gains without any regard for the interests of the larger community. To some degree, this myth describes societal reality. The ideology of consumerism that every citizen is exposed to by advertising has had an impact and reflects existing communication patterns. Consumerism has become part of the global mainstream culture of materialism today. But there is another emerging narrative that is worth noting, one that has not been scripted by the marketing industry.

This other story is about customers who are starting to co-create the economy in a more conscious, collective, and intentional way. This movement has deep roots that go back to the “taxation without representation” boycott of British trade goods in 1769 in Philadelphia, which started the American Revolution. Its roots also include Gandhi’s boycott of British goods and his advocacy of homespun cloth, and the boycott, starting in the 1970s, of corporations that did business with the apartheid system in South Africa—a boycott that de facto launched the birth of the socially responsible investment movement. And they include the Fair Trade Movement, which was started in the early 1980s by conscious consumers around the world concerned about the well-being of people and the planet. That movement has changed business practices in many industries and continues today in various forms of conscious, collaborative consumption that we will discuss in more detail below.

In all these examples, we see a similar theme: Consumers have begun to extend their awareness of the ego-system (the well-being of oneself) to the eco-system (the well-being of all). Individuals are aware of the impact that their purchasing decisions have on producer communities that may be thousands of miles away. When the Fair Trade Movement began to eliminate the intermediaries between coffee producers in South America and coffee consumers in Europe, fair trade activists started to consciously redesign an economic system based on principles of transparency, inclusiveness, and fairness.

Today examples of a 4.0 consumer movement are emerging everywhere: farmers' markets, slow or local organic food, community-supported agriculture (CSA), organic-fabric clothing, eco-tourism, urban agriculture, car sharing, zero-emission cars, and renewable energy. Instead of just boycotting a product, the 4.0 consumer makes informed and intentional choices to support and co-create economic processes that are more inclusive, sustainable, transparent, and collaborative.

Myth 3: *Material consumption creates well-being.* This statement sounds logical but is empirically questionable, as we know from our discussions in chapter 2. An increase in material consumption in developed countries does not translate into more well-being. Well-being originates with our experiences as users, consumers, and citizens. That experience is shaped by factors that are exterior (e.g., the products) and ones that are interior (the process of becoming aware). The interior process of becoming aware is what the late cognition scientist Francisco Varela focused on in his research when he described the processes of *suspending*, *redirecting*, and *letting go*. In the context of Theory U and presencing, we refer to this interior experience as the U process of opening the mind, the heart, and the will.

Thus, the strategy for enhancing our well-being without destroying the planet builds on reducing the flood of useless widgets and mindless commercials and increasing the capacity of the system to redirect resources to people's real needs, while strengthening their capacity to access their inner sources of well-being and happiness.

CLOSING THE FEEDBACK LOOP THROUGH ECONOMIC DIALOGUES

An economy that no longer separates (1) consumers from production, (2) consumers from one another (ego-system awareness), and (3) consumers from themselves (their sources of happiness) closes the feedback loop between consumers and producers (exploding myth 1), consumers and communities (exploding myth 2), and consumers and themselves (exploding myth 3). What would begin to emerge from this is an economy that is more transparent (by providing access to information), inclusive (by including all key players), and reflective (because the system can see itself).

For this shift to happen, the economy needs different patterns of communication, particularly between consumers and producers. The current communication model is unilateral, nontransparent, and linear. It is unilateral in that information flows only one way, as in the case of commercials. It is nontransparent in that access to information is restricted. It is linear because there is no feedback loop built into the system; the system cannot see itself.

But what is needed is a model of communication that creates missing links between the different actors in an economy. This model would be multilateral, which means that many parties could join the conversation. It would also be transparent by providing open access to information, and cyclical by allowing the group or the system to reflect on and see itself.

SEEING OUR FUTURE: THE POWER OF COLLABORATIVE CONSCIOUS CONSUMPTION

How do we see the 4.0 future of empowered, conscious, collaborative consumers emerging? There are four driving forces.

The first is *technology*. The World Wide Web continues to revolutionize the economy by providing easy access to information and thereby to a more level playing field. A combination of life-cycle analysis and digitized information will soon allow our cell phones to display the environmental footprint of products on supermarket shelves. This development will continue the megatrend toward transparency and could create easy-to-use metrics that help consumers make more informed and sustainable choices and connections. For example, www.renttherunway.com and www.couchsurfing.org are websites that connect unused resources in a community (clothing and accommodation, respectively) to unmet needs that other consumers have; they are places to make peer-to-peer exchanges.

A second driving force is *awareness*: More and more people have a desire to participate in lifestyles that are healthy, mindful, and sustainable. For example, in the United States this movement is referred to as LOHAS (Lifestyles of Health and Sustainability) and includes roughly one in four adult Americans—nearly 41 million people. That represents a US\$290 billion market opportunity for goods and services focused

on health, the environment, social justice, personal development, and sustainable living.⁶⁰

A third driving force is the *increasing intensity of disruption and breakdown*. The more the old formal system is disrupted and moves toward collapse, the more we will see new patterns of connection and self-organized collaboration emerge. For example, in Indonesia after the financial crisis in 1997, numerous informal, local economy networks started to emerge.

A fourth driving force has to do with economic *human rights*. More and more people around the world find it unacceptable that we operate a US\$60 trillion economy and yet are unable to reduce the number of people who live in poverty. The use of conditional cash transfers in South America is one step in a long journey toward economic human rights as the foundation of a future “global domestic policy,” or *Weltinnenpolitik*.⁶¹

7. Coordination Relinking the Parts with the Whole

Modern economies are based on a local, regional, and global division of labor. Over the past few hundred years, the division of labor has led to amazing productivity worldwide. But how do we coordinate and link all these individual activities in the context of an ever-changing whole?

As indicated in table 3, throughout economic history societies have coordinated their economic activities differently: (1) through centralized planning, (2) through markets, and (3) through negotiation/dialogue. These mechanisms gave rise to three stages of economic development:

- 1.o: Hierarchy and planning → rise of centralized economies
(one societal sector)
- 2.o: Market and competition → rise of liberal market economies
(two societal sectors)
- 3.o: Negotiation and dialogue → rise of social-market economies
(three conflicting societal sectors)

Today we may be at the cusp of generating a fourth answer to the coordination problem, 4.o: awareness-based collective action (ABC), giving rise to an intentional market economy.

THE JOURNEY FROM 0.0 TO 3.0: DEGREES OF SEPARATION

These four coordination mechanisms differ in how they connect to the economic actors that they coordinate. The structure of this relationship has been evolving, by and large, from exterior to interior, and from unaware to aware. Here is how:

1. In a centrally controlled economy, economic behavior is navigated through exterior mechanisms such as targets and plans (sticks).
2. In a market economy, economic behavior is navigated through the largely exterior mechanisms of price and competition (carrots).
3. In a social-market economy, the market is embedded in and navigated through negotiation, networks, and dialogue (norms), i.e., through mechanisms that are partly exterior and partly interior to economic actors and their awareness.
4. In a co-creative eco-system economy, the market is embedded in and navigated through the mostly interior mechanism of common awareness (ABC: action that arises from seeing the whole).

Thus the journey from stage 1 (central planning) to stage 4 (ABC) is a journey of increasing our degree of consciousness and interiorizing the whole. In stages 1 and 2, the well-being of the whole is mainly outside the consciousness of the individual actors, while in stage 4, the well-being of the whole is almost entirely interiorized in the consciousness of individual actors. Referring to our earlier discussions, we could also say: The journey from stage 1 to 4 is a journey of increased interiorization of externalities in the awareness of economic decision-makers.]

Table 4 offers two dimensions for defining how a society coordinates itself: according to a primacy of the whole or a primacy of the parts. The evolution of economic coordination mechanisms began with 1.0, central planning (in the lower left quadrant). It moved from there to 2.0, markets and competition (in the lower right). Both the *visible hand* of central planning and the *invisible hand* of decentralized markets have one thing in common: They do not require the individual decision-maker to consider the well-being of the whole. If the individual or the organization meets the targets (of central planning) or pursues their own self-interest (in the market), then the visible or invisible hand will magically take care of the whole.

TABLE 4 Four Economic Coordination Mechanisms:

A Journey of Interiorizing the Whole

System Integration/ Degree of Interiorizing the Whole	Primacy of the Whole	Primacy of the Parts
High	4.o: ABC:* <i>head, heart, and hand (intentional)</i>	3.o: Negotiation and dialogue: <i>head, heart, and hand (ad hoc)</i>
Low	1.o: Central planning: <i>visible hand</i>	2.o: Markets and competition: <i>invisible hand</i>

* Awareness-based collective action.

That's what the theory said! In reality, the story unfolded somewhat differently—namely, with overwhelming externality problems. These circumstances prompted economic systems to evolve into the upper two quadrants, in order to operate from all three or four of them. Prompted by the global rise of the NGO sector, most economies have moved to include negotiation and dialogue among stakeholders as part of their de facto coordination mechanisms today.

The shift to the upper quadrants reflects a much higher degree of awareness of externalities on the part of individual decision-makers. It means creating holding spaces in which actors and decision-makers can *internalize* the impact that their decisions have on others and the state of the whole (externalities). In the case of negotiation and dialogue, the interiorizing of externalities is usually limited to some subset of the system, such as one's own network or interest group. Coordinating via ABC internalizes the externalities of the whole eco-system. For ABC to work, groups must open up and link their common interests (head), their collective action (hand), and their shared solidarity and empathy (heart). Negotiation and dialogue require essentially the same process but tend to be limited to parts of the system.

The struggles of Northern Europeans (especially Germans) to interiorize the externalities of their Southern European neighbors in the current euro crisis and vice versa, and the struggle of the white American middle class to extend the Social Security system to people of color and those without jobs (many of whom were left out of the New Deal

of the 1930s) in the early twentieth century, are vivid examples. At the core of these struggles is the need to rethink our definitions of “we” and “them.”

So which of these mechanisms represents good governance? None of them individually. Good governance would be the ability to activate and operate all four of these mechanisms as needed.

PASSING LIKE MESSI

Consider a seemingly simple example: a soccer team. How do you make eleven guys (or girls) play together as a team?

The 1.0 approach is to strictly follow the plan that the coach lays out before the match. But such an inflexible team would likely perform poorly against a good opponent. Switching to the 2.0 solution would give individual players more freedom to act on their own.

Let us take this idea to the extreme. Say that you assemble eleven of the best players in the world and hope that somehow their individual brilliance will add up to make them a fabulous team. We can all think of many instances in which that did not happen, such as the collapse of the Miami Heat in 2011 in the finals against Dallas (for the basketball fans among us). Or (no offense intended) the failures of the French and British teams in the 2010 World Cup tournament (for the soccer fans among us). All three teams had absolutely brilliant individual players. But they didn’t succeed as teams.

When one realizes that brilliant individuals do not necessarily make a brilliant whole, the next step is to move to a different coordination mechanism, which we call 3.0. Here you allow for more creativity in your team; you allow parts of the team to form subgroups that pass the ball better and faster. But you also retain the team’s standard positions and roles: defense, midfield, strikers.

Making 4.0 happen requires “blowing up” these traditional roles and ways of thinking. The 4.0 philosophy goes back to the concept of *total football*, which Rinus Michels developed when he coached for Ajax Amsterdam and the Dutch national team in the early 1970s. Both teams were powered by the same core group of players. The best and most famous player in that group, Johan Cruyff, moved on and signed with CF Barcelona in 1973. It was Cruyff who brought the philosophy of total

football from Holland to Spain, from Ajax to CF Barcelona. Later, when he became the manager of CF Barcelona (1988–96), he evolved the philosophy of total football into what today is called tiki-taka soccer, which is the philosophy of the two current best teams in the world, CF Barcelona (which won fourteen titles with its coach “Pep Guardiola” in four years, 2008–12), and the Spanish national team, which was the 2012 UEFA Euro and 2010 FIFA World Champions. Again, both teams are organized around the same core group of players and developed around the same core philosophy.

What sets CF Barcelona and the Spanish national team apart? It is a soccer philosophy that (1) uses a very methodical system that focuses on controlling the ball through a lot of one-touch or two-touch short-distance passing; (2) requires players to think in terms of the whole, not the parts (while focusing on the *uninterrupted movement* of the ball as the central coordinate of attention); (3) punctuates that one-touch passing with sudden bursts of creativity that open up deep spaces on the other side; and (4) operates as one team in which all players play (or can play) *all* the roles and positions (defense, midfield, and attack) as the ball constantly roams and reconfigures the coordinates of a living field.

This is the cutting-edge approach to soccer that all the runners-up and next-best teams (like the promising young German team, for example) are trying to emulate. It embodies a number of interesting 4.0 characteristics, including the shared awareness of an ever-evolving field of emerging possibility.

So while the best soccer teams on the planet are closing in on playing from a 4.0 type of shared awareness of the evolving whole, where is our global economy headed? Sadly, it is stuck at much earlier stages. The current economic situation reflects a system that reacts to 4.0 challenges with 2.0 or 3.0 responses.

IN SEARCH OF 4.0

What would it take to upgrade the operating system of our economy to 4.0? Here are four propositions to start this conversation.

1. *The antagonism of markets versus hierarchies is a myth.* Much of the twentieth century was wasted in a false discourse: markets versus

government, capitalism versus socialism. The complexity of the economic playing field and its developmental options was reduced to a discourse on “more markets” versus “more government.” The Matrix of Economic Evolution depicts a gameboard of economic evolution and offers 390,625 possibilities, but we reduce the intellectual discussion to just two of these options.

2. *The answer to “either-or” is “both-and.”* One of the mindsets that triggered the financial crisis in 2007–08 was the fatal “either-or” logic in economic thought that led to the mindless deregulation of the financial sector in the 1990s and 2000s. When we take a closer look at current economies, we see that we need both markets and governments.

Economies that are built on a “both-and” philosophy are stronger than ever. Examples include China, Singapore, South Korea, Brazil, Indonesia, and Germany and the other countries of Northern Europe. All of these countries came out of the 2008 crisis better and faster than many others. Their economies collaborate strategically across the sectors of government, business, and, in some cases, civil society. They have created multiple platforms of conversation where the strategic direction of the whole country or community is being discussed and strategized. When disruptive change hits, they tend to move together and cooperate more closely, rather than moving apart and deepening political divides.

3. *An economy is not a business.* There are at least two important differences between an economy and a business: (1) An economy cannot walk away from its community of citizens;⁶² and (2) it has to internalize all of its externalities.

The traditional market idea argues that the goal of the corporation should be to maximize the financial bottom line while dumping all negative externalities onto others. Examples are Wall Street hedge funds and most of the financial services companies. Corporations acquire other companies in order to maximize profits. This might entail selling valuable assets at high profit margins, downsizing what remains, and leaving the social security costs to the government, and with that to society. An economy needs a different leadership than a company does, a leadership that owns and is fully accountable to reducing negative and increasing positive externalities.

4. *ABC closes the feedback loop between parts and whole.* The evolutionary threshold we are facing with capitalism today concerns the birth of a new coordination mechanism, one that complements the existing three mechanisms (hierarchy, markets, and negotiation) and builds the capacity of the whole system to see, sense, and regenerate itself. We call this new capacity ABC—awareness-based collective action—because it arises from places that facilitate the capacity of the system to see itself, to sense what wants to emerge, and to explore the future by doing (prototyping).

Where do we have spaces in our societies today where the key players in our economic eco-systems can come together to see, sense, and regenerate themselves? We are missing such spaces. It is an important institutional blind spot. We don't even create a space where we, as a whole society, make shared sense of current reality. We have *lots* of spaces for individual sense-making and strategizing. All organized interest groups come up with their own sense-making inside their own institutional silos. But we don't have places for co-sensing, for uncovering common sense and common will.

SEEING OUR FUTURE: ABC

The 4.0 economic revolution is all around us. It is the direction that we are heading, and it can be witnessed in many living examples today, not only on the soccer field.

But the problems are that (1) many of these initial examples are spontaneous rather than intentional; and (2) they tend to be micro or meso rather than macro and mundo, as we will discuss in more detail in the concluding part of the book.

One example of ABC coordination in action comes from Ohio. The introduction of checklists has been an innovative method to reduce mistakes and malpractice in hospitals. Just as airplane pilots do before takeoff, surgeons and the surgical team use checklists before performing a procedure on a patient. Research shows that the introduction of checklists in hospitals at first lowers the risk of mistakes, but gradually the error rate returns to near its former level. Noticing that pattern, Dr. Marc Parnes, an OB/GYN surgeon in Ohio, devised a different practice. Instead of using a checklist, he converses directly with the patient as she

is rolled into the procedure room. They have a quick, personal “check-in conversation” that includes the patient and the entire operating team. Surprisingly, this check-in practice reduces the rate of errors in a more sustainable way than the simple checklist practice did.⁶³

We consider this example highly interesting and relevant, since it literally *pulls away the cover* that is blocking the capacity of the *system to see itself*. The system in this case is everyone in the operating room, including the patient. When the system sees itself, it facilitates a conversation that lets each member of the group see the situation through the eyes of others, including the patient. Creating this awareness and seeing the system through the eyes of other stakeholders are key leverage points in all profound systems change.

8. Ownership: Relinking Ownership with the Best Societal Use

As economies develop, the structure of ownership rights also evolves. This has become especially visible with the development of the Internet. Open-source Wikipedia, or the creative commons with its new copyright model,⁶⁴ clash with legislation such as SOPA (the Stop Online Piracy Act) and PIPA (the Protect IP Act). Ownership is a bundle of rights and responsibilities. Like all matters of rights, ownership rights rise, evolve, and change in their social context as a function of their *legitimacy*. All legitimacy emerges from a felt sense of fair balance between rights and responsibilities among people in a community.

THE JOURNEY FROM 0.0 TO 3.0: OPEN ACCESS, STATE, PRIVATE, MIXED, AND COMMONS

Property rights are a bundle of rights and responsibilities that are legally enforceable. These rights include (1) access, (2) use, (3) management, (4) exclusion, and (5) alienation (the right to sell). These five elements can be viewed as five sticks in a bundle of ownership rights. Ownership can be viewed on a spectrum: One end of the spectrum holds just one stick (one right) and all five sticks are at the other end. All of these rights may be held by single individuals or by collective entities. Table 5 depicts how ownership forms have evolved from open access to state, private, mixed, and common ownership structures.

TABLE 5 Evolution of Property Rights by Economic Stage

Economy	Property Rights	Types of Goods	Bundle of Rights and Responsibilities	Institutionalization
0.0	Open access	Common pool resources: ocean fisheries, atmosphere (nonexcludable, rival)	No property rights	Communal ownership
1.0	State property rights	Public goods: national defense (nonexcludable, nonrival)	Property rights assigned by state	State ownership: four-year election cycles
2.0	Private property rights	Private goods: food, clothing, housing (excludable, rival)	Private property rights can be exchanged by market (access, use, management, exclusion, and right to sell)	Private ownership: quarterly results
3.0	Mixed (public-private) property rights	Mixed goods (public-private): eco-system services (excludable, nonexcludable, rival)	Mixed property rights that are managed and in part exchanged by markets (access, use, management, exclusion, and right to sell)	Mixed-stakeholder ownership (organized interest groups)
4.0	Commons-based property rights	Common goods: fisheries, eco-system services (non-excludable and rival)	Property rights are jointly controlled by trust-based co-owners, stakeholders, and trustees (access, use, management, exclusion, and shared cultivation)	Shared eco-system ownership (trustees representing the whole system, including future generations)

In 0.0 economies, most assets were shared by the whole community, but a few assets were considered private property. Examples of shared assets include *common pool resources* such as air quality, ocean fisheries, and the *Allmende*, a German word for the local areas that were used collectively by villagers for agriculture. Regional forms of collectively used space such as the *Allmende* continue to exist in many rural areas worldwide, including in Europe.⁶⁵

In 1.0 economies, more formalized property rights, such as those assigned to states or private entities, emerged. Examples of state property include national parks in the United States. The state emerged as an important economic player, particularly in regard to the production of *public goods*. Examples of public goods are national defense and IT infrastructures like the World Wide Web. The key characteristic of public goods is that they are accessible to all (nonexclusive) and that their consumption by one person does not reduce their benefit to someone else.

In 2.0 economies, we saw a profound shift to the primacy of *private ownership*. Private ownership has existed in all stages of economic and social development. But never before had it been the primary property concept framing much of public policy and economic development thought. The success story of private ownership happened in two waves. The first wave was based in the ancient *occupation theory* of ownership and was originally articulated by Cicero during the Roman Empire. This theory dominated the understanding and debate over private property in Europe almost up to the Industrial Revolution. Here are the cornerstones of that view: The world was given to all men in the first place, and whoever is the first to claim ownership holds the legal right (*prima occupation*), and with that the protection of the state. The main principles of this view include: (1) a starting point in which all men share common ownership of all property; (2) first occupation, which defines the right of individual ownership; (3) private ownership, which includes the social responsibility to provide for those who come later and have less; and (4) the state is permitted to intervene in the ownership of private property only when the well-being of society is at risk.⁶⁶

The occupation theory paradigm was challenged by John Locke with the publication of his “Second Treatise of Government” in 1689. Locke introduced what was later referred to as the *labor theory* of property.

Locke's main argument is that man owns his own body and consequently the fruits of his labor. This idea transformed several cultural assumptions. Whereas earlier the accumulation of wealth had been criticized as greed, under the labor theory wealth was viewed as God's reward for men's work. The labor theory of property also created the underpinnings for the argument that poverty is the result of laziness. It thus weakened the ability of the state to intervene in private property rights for the well-being of society as a whole.

Private property rights became a success story throughout the era of the first and second Industrial Revolutions. Yet, as discussed earlier, successful growth and the accumulation of material wealth came at the expense of negative externalities in the form of poverty and environmental overshoot. The societal response to these negative externalities resulted in a set of institutional innovations that reflected the interests of other stakeholders (examples include social security, public education, environmental legislation, building codes, and public-private partnerships).

Yet none of these Economy 3.0 innovations could prevent what we are facing today: the three major divides that have emerged directly from the tragedy of the commons, which could also be called the tragedy of common pool resources.⁶⁷ These common pool resources include ecological commons such as water, topsoil, clean air, energy, and seed; social commons such as trust, software, and social networks; and cultural commons such as knowledge, wisdom, and learning infrastructures.

The crisis of our time is a crisis of our commons. The three divides reflect a massive attack on our commons through a host of unintended negative externalities that the current design of property rights facilitate. Creating a 4.0 economy requires us to rethink and update the essence of property rights.

In a twenty-first-century networked society where value is emerging from distributed relationships among people, what good does it do to ground property rights in a highly individualistic theory that reflects seventeenth-century British society rather than the twenty-first-century global world? Today we need to continue the success story of private property rights by taking it to the next evolutionary stage: a new class of commons-based property rights that hold trustees and multiple stake-

holders accountable as stewards of the well-being of the eco-system and future generations of users.⁶⁸

IN SEARCH OF 4.0

Let us launch the 4.0 ownership conversation by considering the following propositions.

All Ownership Forms Are Socially Constructed

All ownership forms are socially constructed and hence contingent on a felt sense of legitimacy. In the world of Locke, characterized by small populations, small-scale individual production, and seemingly unlimited resources, it made complete sense to think in terms of individual private property rights. In the twenty-first-century world, with seven billion people, massive distributed networks of co-creative production, and collaborative consumption, as well as increasing resource scarcity and a depleted set of commons, we have entered an era when insisting on the primacy of individual property rights is outdated and in conflict with the real needs of our time.

There is a growing recognition that any form of private property rights should also include responsibilities to other stakeholders that might be affected by negative externalities of the goods or services at issue. For example, one of the primary founding principles of the German Constitution (*Grundgesetz*) states: “Property entails obligations. Its use shall also serve the public good.”⁶⁹ This is an example of a constitutional attempt to balance private property rights with the well-being of the society as a whole. But what we haven’t seen yet is a real strengthening of commons-based property rights that could spark a third Industrial Revolution featuring co-creative production and collaborative consumption, just as individual property rights sparked the first and second Industrial Revolutions.

Two main myths have locked the understanding of property rights in what are now outdated tracks of thought:

Myth 1: *Only private property rights are efficient; other forms are not.* Yes, it is true that private property rights have been a huge success story and remain an integral component of the rise of modern capitalism 2.0 and 3.0. But it is not true that all other forms of property rights

are ineffective. Three examples suggest a reevaluation of the primacy of individual private property rights: (1) the economic success of China, where a majority of the GDP is produced by state-owned companies;⁷⁰ (2) Germany, which bounced back from the 2008 crisis more quickly than other countries because companies, the government, and unions worked closely and collaboratively; and (3) the general decline of our global ecological commons, which reflects a lack of property rights that would create transparency and accountability for the overuse of scarce resources.

Myth 2: *There is no third form of ownership.* A second myth is that public and private are the only two forms of ownership and that there is no third form. In fact, much of the discourse of the past few decades has been shaped by an unholy alliance of special-interest groups that have used the interplay of state and private property rights to disenfranchise local communities from their commons-related de facto ownership rights. For example, farmers in developing countries have become dependent on genetically engineered hybrid seeds that no longer reproduce. What used to be a community-owned commons, seeds, was declared a public good (owned by the state) and then turned into a private good (owned by multinational companies like Monsanto). And before they knew it, millions of farmers in India and other places could no longer use their traditional practices of sharing and reproducing seeds because Monsanto had secured the patents on copies of local seeds. What used to be a cultural and economic practice (seed sharing among farmers) was illegal and could be prosecuted, leaving the farmers with a bad choice between economic dependence on Monsanto's GMO seeds and breaking the law, resulting in the major driver of what has been called the single largest wave of recorded suicides in human history, with 250,000 Indian farmers killing themselves over the past 16 years. This was referred to as "genetically modified genocide" by the press in India, but the Western press, particularly in the United States, continues to turn a blind eye to it.⁷¹

We Need Commons-Based Property Rights

In his book *Capitalism 3.0*, Peter Barnes suggests creating a third category of commons-based property rights that would augment exist-

ing state and private property rights. Commons-based property rights would be institutionalized through trusts and trustees accountable to all stakeholder groups in the eco-system, including future generations, to act as stewards of the whole. While financial benefits would go to the government in the case of state ownership and to shareholders in the case of private ownership, in the case of the commons the payoff would go to all citizens in the affected communities, providing, in effect, a “citizen dividend.”

A feature of trust-based community property rights is that they don’t operate like a company, which tends to be driven by profits over the short term, or like a government, which tends to be driven by special interests over the short and medium term (such as the run-up to the next election). A trust and its independent trustees are accountable for the long-term sustainability of the specific commons that they manage for the next generation.⁷²

Shared Ownership Is Rising

There are many examples of trusts and other forms of shared property rights. Access to and use of the Internet is an example that has become an essential part of our daily life. Emerging forms of ownership rights compose a global movement with many faces that is not yet even fully aware of itself. This new breed of 4.0 sharing-based ownership is disruptive to the old ways of doing business. As Mark Levine writes in the *New York Times*, “Sharing is to ownership what the iPod is to the eight-track, what the solar panel is to the coal mine. Sharing is clean, crisp, urbane, postmodern; owning is dull, selfish, timid, backward.”⁷³

Along those same lines, author Rachel Botsman says, “I don’t want stuff, I want the needs or experiences it fulfills! This is fueling massive shift, where usage trumps possession. I believe it will be referred to as a revolution, so to speak, when society, faced with great challenges, makes a seismic shift from individual getting and spending toward the rediscovery of collective good.”⁷⁴

Here are a few examples of the early stages of that seismic shift. Zipcar, a car-sharing service founded in 2000 in Cambridge, Massachusetts, had 670,000 members in 2012. Netflix, founded in 1997, allows its 23 million members to share access to DVDs. Zimride is a

social network for ride-sharing at MIT that allows students, employees, and faculty to coordinate shared car rides. At “Powershopping Parties” in Germany, women swap clothes at parties of eight hundred or more. More and more consumers are moving from buying to “using”; Botsman calls this phenomenon collaborative consumption.⁷⁵

Says Robert Henrich, CEO of Daimler’s Car2go, a car-sharing company that operates in Vancouver, British Columbia; Austin, Texas; Washington, DC; San Diego; Amsterdam; Vienna; Lyons; and Hamburg, Düsseldorf, and Ulm, Germany, “In the beginning, especially young people wanted to try this out. [Now] all groups of society participate. Students, employees, self-employed, entrepreneurs, seniors.”⁷⁶ In all of these examples, instead of owning a car, a DVD, or a tool, users share that resource.

Community-owned urban agriculture is also on the rise. The United Kingdom-based Landshare project connects people who have yards but no time or interest in using them with people who want to grow food. Launched in 2009, and with seventy-one thousand members three years later, Landshare combines the concern for producing food locally with the creation of a social network. An interactive map and website create a network of local growers. Members are individuals and families as well as schools and retirement homes.

Taking this idea to a different level, the town of Todmorden in West Yorkshire has set a goal to become self-sufficient in vegetables, orchard fruits, and eggs by 2018. It has carrots in front of the police station, raspberries, apricots, and apples on the canal towpath, blackcurrants, redcurrants, and strawberries beside the doctor’s office. Citizens are encouraged to harvest what they want. All produce is free.⁷⁷ Todmorden has inspired other towns to join the Incredible Edible model, which not only produces free local products, but also has fostered a new sense of community within the town. Interface, an Atlanta-based manufacturer of carpets, retains the ownership of its carpets and for a monthly fee maintains its products in the clients’ location. This service, combined with a system in which Interface replaces (and recycles) worn-out carpet tiles, reduces the need to replace carpets by up to 80 percent.

The 4.0 forms of shared ownership do not stop at the level of products or resources. Shared ownership is also being applied to what in capitalism seems to be the crown jewel of all assets: industrial capital.

Case in point: The global automotive supplier Bosch has more than 350 subsidiaries in more than 60 countries and employs over 300,000 people worldwide; it had revenues of approximately €51.4 billion in 2011. Ninety-two percent of its ownership is held by the Bosch Foundation, a charitable foundation that receives a portion of the dividends.

Another model comes from employee-owned corporations where ownership is distributed and held by those who work for the company. The Mondragon Corporation is a corporation and a federation of worker cooperatives based in the Basque region of Spain. In 2011 it employed 83,000 people, with a revenue of €14.7 billion. The Mondragon cooperatives operate with a highly participative culture and business model, which have made it possible to develop a whole eco-system of collaboration that includes 256 different cooperative companies. The cooperatives are owned by their worker-members, and power is based on the principle of one person, one vote.⁷⁸

In total, one billion people are involved in cooperatives as members-customers, as employees-participants, or as both. In 2008 the 300 largest cooperatives created a revenue of US\$1.6 trillion, which is comparable to the GDP of the ninth-largest world economy.⁷⁹

And, last but not least, the Internet has more than 2.1 billion users, almost a third of the earth's population. Without centralized governance, the Internet has two operating principles: (1) the Internet Protocol address space; and (2) the domain name system. The Internet Engineering Task Force (IETF), a nonprofit organization of loosely affiliated international participants that anyone may associate with by contributing technical expertise, standardizes the core protocols (IPv4 and IPv6).⁸⁰

SEEING OUR FUTURE: RECLAIMING THE OWNERSHIP AND STEWARDSHIP OF OUR COMMONS

The evolution from open access to state, private, and mixed forms of ownership and from there to commons-based property rights is at the heart of our current global transformation. While we are seeing the emergence of many spontaneous forms of collaborative commons and distributed ownership, we also cannot ignore the profound impact of the three divides that will hit our societies in the next few decades. They will lead to major disruptions that will require us to rethink the design, from

scratch, of property rights in our mainstream institutions and systems. It will not be sufficient to experiment with new forms of property rights on the outskirts of the system; we will be required to rethink and rebuild ownership rights in all mainstream systems that affect the regenerative capacity of our commons.

The current crisis of capitalism is a crisis of our outdated 2.0 and 3.0 frames of economic thought, which conceive of nature, work, and capital as commodities. Our belief in this commodity fiction allowed us to easily accumulate capital and organize industrial labor, and then, in fewer than two hundred years, to burn through almost all the fossil fuel that our planet had accumulated over millions of years.

If everything is a commodity, then I can take it, sell it, use it, dump it, and buy another one. And that is exactly what happens. Private property rights are brilliant in the case of commodities and less-distributed systems. But when they are applied to complex and distributed commons, they have a lot of baggage.

The ecological divide (overshoot), the social divide (inequity and poverty), and the spiritual-cultural divide (depression) emerge directly from the model of economic thought that frames the earth, human beings, and money as commodities. But the earth is not a commodity, and human beings aren't, either. We did not create the earth; it was given to us. Instead of just "take, make, sell, use, and dump," our role is to be good stewards who pass what has been given to us on to the next generation in the same or better condition as the one in which we received it.

We are at a turning point in history where the continued negative externalities that we collectively enact can no longer be absorbed by our surrounding ecological, social, and spiritual eco-systems. We are beginning to hit a wall, and the way we know this is the increasing rate of disruptions that we are facing as a global society. The present time is a profound moment in our evolutionary path: We can either wake up and redirect ourselves, or we can ignore what's going on and stay on a collision course that will cause catastrophic failures affecting billions of people just in our lifetime.

This is what is at stake when we consider the evolution of our economy and of economic thought.

Conclusion and Practices

This chapter focused on illuminating the blind spot that underlies the eight structural disconnects discussed in chapter 2. What is it that keeps us reenacting these structural disconnects? It is the outdated frames and paradigms of economic thought that decision-makers keep operating from.

We inquired into the evolution of the eight key concepts of economic thought that underlie the disconnects discussed in chapter 2: nature, labor, capital, technology, leadership, consumption, governance, and ownership. What we found throughout this reconstruction of economic thought is that each of these core concepts has gone through the same journey (see table 3). It is journey that redefines the essence of these core concepts according to the meta-journey of economic thought that has moved through the paradigms of communal (0.0), state-centric (1.0), free-market (2.0), and stakeholder or social-market (3.0) thought, and that going forward might evolve into an intentional eco-system economy that creates well-being for all (4.0). This journey through various economic paradigms can be told as a tale of the movement of human consciousness from traditional (1.0) and ego-system awareness (2.0) to stakeholder (3.0) and eco-system awareness (4.0).

Summing up, the evolution of economic thought and our economy follows the evolution of consciousness. The essence of the new economy is to transform economic thought from ego-system awareness to eco-system awareness. Throughout this chapter, we exemplified this transformation for our eight issue areas or, to use another term, acupuncture points. The story of these acupuncture points is basically a story of going beyond the commodity fiction of land, labor, and capital in order to develop better and more intelligent ways of stewarding the commons and redirecting financial capital into the real sources of individual and collective entrepreneurship, creativity, and well-being.

JOURNALING QUESTIONS

Use the below table as a mini-version of the Matrix of Economic Evolution (table 3) in order to assess your organization through the following five steps.

TABLE 6 Organizational Assessment

	Nature	Labor	Capital	Technology	Leadership	Consumption	Coordination	Ownership
1.0	Resource	Serfdom	Human	Tools	Authoritarian	Traditional	Central planning	State
2.0	Commodity	Commodity	Industrial	Machines	Incentives	Consumerism	Markets and competition	Private
3.0	Regulated commodity	Regulated commodity	Financial	System-centric automation	Participative	Selective conscious consumption	Networks and negotiation	Mixed
4.0	Ecosystem, commons	Entrepreneurship	Cultural, creative	Human-centric	Co-creative	Collaborative conscious consumption	ABC: Awareness-based collective action	Commons: shared access

1. In each row, check one box (1.0, 2.0, 3.0, or 4.0) that best represents the currently dominant operating model in your organization.
2. Then draw a *current reality line* that links all the boxes that you checked.
3. What would be the most appropriate operating model for the future work that needs to happen to address the big challenges of the next decade or two? In each row, check one box, this time using a different color.
4. Now draw the *emerging future line* by connecting the second set of checked boxes with the second color.
5. Compare both lines, the current reality line and the emerging future line. Do they differ, and if yes, where, and what does it mean?

CIRCLE CONVERSATION

1. After completing the tasks above individually, have each member share with the group what the answers might mean going forward.
2. What interesting prototypes can you think of for exploring 4.0 types of operating models in the context of your own work and life right now?