

The Regenerative Paradigm: Discerning How We Make Sense of the World

I have often wondered how fast we could create powerful shifts toward vital, viable ecosystems and societies, if we gathered the really big players in business, philanthropy, and education around a table to work on making a better world. I was hopeful that I might get some sort of answer when I was invited recently to participate in a dinner made up of twenty leaders from a huge retail business, a respected technology company, and a major foundation driving innovation on global challenges. Their purpose was to discover ways to slow and even to reverse ecological destruction.

I was sorely disappointed, not in their good faith and aspiration, but in the thinking they brought to the subject. Einstein was rolling over in his grave! One could easily see how they were addressing this great intention with the same nature of mind that had created the *very* challenges they were working on. Of course they had come up with new content and ideas, but they were thinking about ecosystems and restoration using outdated paradigms and ways of exploring opportunity. Without even a hint that they understood the insanity of expecting a new result, they spent two hours mired in archaic ways of working on change, only repeating the thinking that created racism, inequity in social systems, and climate change in the first place.

In the following pages I hope to provide a basis for individuals and groups, even those with the grandest intentions, who wish explore the potential for change from a new perspective and with a radically different way of thinking, one based in the actual living systems under consideration.

Discerning Paradigms

I was a sophomore in college in 1962, when Thomas Kuhn released *The Structure of the Scientific Revolution*, introducing us all to the idea of paradigm shift. Kuhn taught at the University of California, Berkeley, in both the philosophy and history departments. His introductory philosophy course was the most destabilizing event I experienced there—and that is saying a lot! I was questioning everything at that stage of my life, and Kuhn, who invited us as a species to consider the evolution of our interpretation of the world, gave me the framework for an appropriate and productive reasoning process. He described how we had gotten stuck in a single prescribed view, which limited our ability to discern how nature and society work, and he offered as an alternative a more whole and complete perspective. That is, he made us aware that the world is made up of alive and dynamic processes.

Kuhn defined a paradigm as an era-based, normalized protocol, prescribed by the scientific community for discovering answers to puzzles. A paradigm codifies a set of concepts and practices that *define* a discipline in the quest for truth. Most researchers in a given era ascribe to its dominant paradigms, and thus they become the right and only way to create new knowledge. These mental boundaries tend to blind people to other ways of considering, and they become like the water that fish swim in—invisible and normal. Like fish, we humans have no idea that we are experiencing the limitations of unexamined paradigms.

I vividly remember the shock with which I reacted to Kuhn's claims: "You mean that there is no *agreed-on, absolute truth*?" I had believed that everything I was being taught was proven science, coupled with settled religious facts. This encounter with reality left me floating for the next few years, trying hard to get my grounding; ultimately, it started me down a demanding path toward a life's work that I hadn't imagined for myself. In the middle of the free speech movement and the war in Vietnam, when paradigms were shifting and new ways of thinking were still unnamed, I began to examine and give names to the paradigms that were driving our governing, educational, and economic processes.

Now, after decades of exploration them for five decades, I am able to discern four major paradigms through which we observe and attempt to make sense of our universe. These paradigms arose in different historical eras and are associated with distinct *worldviews*. Taken together, paradigms and worldviews guide our thinking, often without any conscious awareness on our part.

Here is a brief clarification of the difference between a paradigm and a worldview. A paradigm has to do with how we pursue knowledge: what we are able to perceive, the ways we acquire knowledge, especially in science, and what we consider to be reliable knowledge (the study of which is formally known as epistemology). Paradigms set the boundaries for the questions we pursue and the answers we are able to find. A worldview, on the other hand, is a cosmological framing of how things work. It is based on societal values and beliefs and has mainly to do with how we ought to live. We willingly live in accord with worldviews because they help us make sense of the how the world works. They vary among cultural groups, from atheist to Christian for example, and they define the possible range of answers within disciplines, such as sociology, history, musicology, and aesthetics. They also shape agreements between disciplines, framing them so that they align with one another and work together to describe how the world operates. Within disciplines or fields of endeavor, it is worldviews that describe origins and provide coherence.

In the following pages, I will explore both paradigms and worldviews, and describe ways in which our interpretations of unfolding events are informed by paradigms. In particular, I will examine the most recently emerging global paradigm, *Evolve Capacity*, and the living systems worldview that it informs and is framed by. I will also describe some ways to bring the Evolve Capacity paradigm's perspective into any kind of work.

Seeing Paradigms and Their Effects

We often sense the paradigms that people operate from when we observe their language, stories, or behavior, and we use this information to determine whether or not they are in our

tribe. But much more important is to learn to clearly see our own adopted paradigm and the way it continually shapes and limits, or perhaps has the potential to expand, our ways of thinking, relating, and working. To make it easy to grasp how paradigms show up, individually and collectively, I will look at examples from home and work, following a framework that anyone can use to develop a more encompassing perspective on how they are making sense of their immediate world. As a frame of reference for this exploration, I will use human-to-human interactions and the ways we navigate with worldviews and disciplines to make sense of the social world that we inhabit, coupled with a few brief examples of our engagements with the natural world.

Most people work or have worked in places where choices are made about managing people, based on one or another prescribed management system. Each of these management systems is invisibly based in a paradigm included in the framework, and thus each offers varying methods and also very different results measured in different ways. The effects of the systems on work and employee wellbeing are what first become visible, not only to the people being managed and led, but also to the people doing the leading, although they may not at first seem to be in line with the paradigm that sourced the thinking. Some paradigms degrade commitment up and down the business and across the all work systems. Some give extraordinary results to the systems and each person in them. But how can you know in advance what the results will be?

Each of us has unknowingly chosen, by luck of birth and family or education or other experience, a paradigm that shapes our perception and interpretation of the world and affects the choices we make and the understanding that we are able to develop in all of the activities of our lives, from parenting and education to business and governance. At the most fundamental levels, our chosen paradigms control our emotions and appetites and impose lenses between our eyes and the world. They dictate what we are allowed to know, what we accept as worth examining and embracing, where we put our energy and resources, and what we see as possible or plausible. They frame and are in turn framed by the cosmologies of

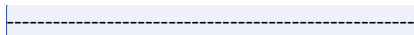
religions and tribes that shape our collective ways of living. They direct how we raise and educate our children and frame how we as leaders engage our workforces and even our customers. Left unexamined, they blind us far more than they inform us.

The Four Modern Paradigms

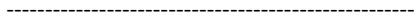
I call the four governing paradigms of modern living, *Extract Value*, *Arrest Disorder*, *Do Good*, and *Evolve Capacity*. They run from the most pervasive to the least influential and understood and from the oldest historically to most recently articulated (although they have existed in parallel for decades, generations, and in some cases, centuries). Most of us today think and behave inconsistently because, although we are in general governed by one of the four, we are constantly influenced by all. We don't reflect on them and don't perceive them ruling us, and therefore we aren't able to sort out and order ourselves.

Figure 1: The Four Modern Paradigms Framework

Evolve Capacity—Know by examining the dynamics of living systems



Do Good—Know by moral teachings and metaphors



Arrest Disorder—Know by scientific method with sensorial inputs



Extract Value—Know by accepting the authority of those with power over us

Extract Value

In business settings, the Extract Value paradigm assumes some people—such as powerful civic and religious leaders—know more than others. We accept what they focus us on, which is

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primarily getting the most out of people by employing their human skills for the benefit of the powerful, with insufficient thought to the return workers receive beyond pay or professional experience. In physical terms, we get the most from materials by using them efficiently and from resources by not worrying about how they will be replenished. In businesses ruled by this paradigm, workers may see managers as the benevolent sources of rewards, while managers tend to see workers as interchangeable cogs in a machine. Management may offer skills training, but with the intention of improving the performance of a machine, rather than benefiting human lives.

This paradigm is built on the assumption that powerful businesses own the labor of their employees through processes of transactional exchange—human knowledge, effort, and energy are purchased; employment contracts are drawn up; employee manuals are signed onto. “What is good for General Motors is good for the rest of us.” Managers have the right to control the behaviors and attitudes of workers because their time and skills are bought and paid for. As concerns materials and resources, the assumption is that Earth belongs to humans who have paid for its lands and waters and thus have the right or obligation to dominate their nonhuman assets and use them for human benefit.

Arrest Disorder

The Arrest Disorder paradigm limits knowledge to what can be learned by following the scientific method. In any study, a question is asked that includes only a single variable; a control group not subject to the variation is set up for comparison; and thus exploration is limited to a narrow focus on a single, isolated aspect of the subject under examination. This way of seeing only the limbs on trees in a vast forest results in narrow understanding and a bias toward problem solving that neglects the larger, dynamic context of living wholes. More importantly for our understanding here, it leads to work on making problems less bad, rather than making whole systems more fully alive.

Limited by the scientific method, we have no way to know if we have selected the right variable or if our work has been effective in making the whole work better. The only framing allowed by this paradigm is to seek change by starting from the definition of a problem. This allows for no other way forward than to solve the problem. Not until we get beyond problems, variations from the ideal, as the way to determine what we can work on will we ever get beyond arresting disorder and on to making real, beneficial changes.

The shift from Extract Value to Arrest Disorder is the shift from the assertion that “only experts and other authorities know the truth” to the belief that “anyone can define a problem and work on solving it.” Arresting disorder activates us to work primarily on imperfections or variances from targets or ideals. It is based on standards and best practices defined by the organization, which everyone involved is expected to pursue and achieve. The focus is on set tasks and measurable behaviors, which gives a sense concrete reality. Leaders operating from this paradigm tend to regard people as having fixed personalities and unalterable intelligence levels, and thus manageable only by external interventions targeting changes in behavior. Emphasis is placed on solving personnel problems, reducing shortfalls, and setting workers on right performance paths. In ecosystems, the Arresting Disorder paradigm focuses on reducing harm by limiting negative impacts on living aspects of the landscape. It drives the sustainability, circular economy, prevention, restoration, and resilience movements.

Do Good

The Do Good paradigm calls on us to use culturally accepted ideals (e.g. competencies) as the basis for defining what is worth promoting and contributing to. Its epistemology acknowledges *moral* boundaries to what can be known and held as true. Individual communities determine their own moral good and work to convince others that it alone is the true good. Doing good invites us to hold the belief that people are able to change and become both more responsible and more skilled over time, and it is the source of social rules and “good management guidelines.” These are seen as universal and applicable to all persons and situations and are

developed in line with the intention to make meaningful contributions to something valuable and to benefit persons we care about.

The Do Good paradigm is the source of the feeling that philanthropy and volunteering are rewarding and worthy of approbation. It is a heart or feeling orientation that generates work assessed in terms of its effect on the organization and its stakeholders. We become passionate about our causes. When we give an employee a review and observe their response or when we see an employee we have been coaching achieve a goal, we are most likely engaging from the Do Good paradigm, the essence of which is achieving standardized, generic ideals of good. In ecosystems, this paradigm focuses on restoration—for example, replanting forests, revivifying riparian systems, putting private lands into conservation trusts, and legislating to preserve public lands as wilderness preserves. The shift from Arrest Disorder to Do Good is from defining a problem as the motivation for creating good in the world to acknowledging that change for the better is the effect of the capacity of every person to be their own researcher and searcher for truth. The Doing Good paradigm dictates decisions based on moral choices that affect whole communities. Its source of knowing is the self-examination of individuals and communities.

Evolve Capacity

In business, the Evolve Capacity paradigm fosters commitment to the development of capacity in every employee and company team, focusing on their potential to evolve themselves and contribute to the living systems in which they are nested. Its methodology is continual regeneration. Managers focus on the *essences* of the persons whose work they oversee, the individuals who are evolving *right in front of us, now, today*, seeking to bring forward and develop each person's unique potential. They support the growth and development of employees in ways that allow their essences to be increasingly expressed. This entails becoming fully present with one person or group and acting in the specific situation, with the intention of enabling them to act from personal agency, to become more uniquely themselves, and to achieve more. When an employee discovers something that might be called "her true self," and

then reveals new capacity and takes on ever-bigger challenges, she is likely to be working in an organization committed to evolving capacity.

The shift from Do Good to Evolve Capacity is from individual moral compass to the working of living systems. In the entire process of our human collective development, we are required to move our boundaries from the authority of power to starting from problems to moral choices by individuals and collectives to imaging the working of whole, living systems. The Evolve Capacity paradigm requires a much greater ableness than the other paradigms to see the potential effects of our actions. Most often, this is a capability that we have to consciously develop in ourselves in order to exercise it more often and more completely in all of our activities. It also requires moving away from standardized ideals and projections of our personal or cultural standards on others. Self-directed responsibility arises in people when we connect them to external effects and their potential to contribute to them.

The Evolve Capacity paradigm is especially concerned with the consideration of communities and ecosystems. Every community and every watershed—or really, every *lifeshed*—is unique, with an essence and distinctive potential of its own. When working regeneratively, there can be no standardized management practice. Like every other living entity, each watershed demands that we approach it individually, using the first principles of regeneration to guide an exploration of *this specific place* in order to reveal and support its unique potential. The overarching intention is to assist in the evolution of this life form to express this potential on its own and as part of the larger living system within which it is nested. To diminish with extraction, to restore or sustain by arresting harm, or to impose a uniform set of ideals is at odds with the unique essence and the underlying wholeness of every particular place, community, and person.

Five Worldviews from the Perspective of Work Settings

Living inside a paradigm, we form a way of organizing actions and pursuing them—a worldview. Worldviews, the cosmologies for coherence in living, are the practical day-to-day coherence we create to enable social communities. It is possible to see immediate correlations between worldviews and paradigms, but they are not perfectly aligned. I will relate the formations and characteristic experiences of worldviews in terms of work settings, which are familiar to all of us, and I will offer a bit of a history as I go along.

It may be helpful for you to hold two things in mind as you develop a sense of worldviews in relationship with each other and with paradigms. First, before you read further, select a work practice that seems completely up to date or that is among the most popular or, in your experience, the most useful. Spend a moment or two assessing it. I'd like for you to challenge yourself, to just see how open and honest you can be. Come up with a program, a practice, or a process that you would stand up for, one that would inspire you to say, "I'll stand for this. I'll fight for it. I'll claim it as the best we can do on work design."

Second, think for a moment about when and how this practice originated. In which century do you think it was created? Then as you read through the following pages, examine it going back in time through the eras in which each of the five worldviews originated. Pause along the way to note how your understanding of it is developing, and what might be changing in your attitude toward it.

Figure 2: Five Worldviews

Living Systems

Human Potential

Behavioral

Machine

Aristocracy

Aristocracy Worldview

The wisest and usually most powerful individuals have control over ownership of assets.

The first worldview in the framework originated in the era when city-states, nations, and religions were governed by aristocracies, when in particular the Catholic Church was influencing the development of cultures throughout the Western world. Work design today is based on hierarchies because religion based its work design on hierarchies that it adopted from royal courts. The belief here is that a select few people, either through birth or ordination, were smarter than everyone else and endowed with higher authority.

We forget how much of business management today derives from the churches and courts of old, some of which still exist. In the sixteenth through nineteenth centuries, churches were governed as firmly entrenched hierarchies, as were governments led by royal families. Over time these were challenged by the rebels and revolutionaries who left the Catholic Church and/or fled from Europe to the New World, rejecting aristocracies of all kinds and government by unelected authority. The archetype of the rugged individual at odds with external authority was brought into being in the sixteenth and seventeenth centuries by those who challenged aristocratic tyranny and by the Protestants sects, which rejected priests and popes as intermediaries between themselves and their God.

The rejection of hierarchy birthed the era of the craftsman, and for a period of time, the prevailing commercial practice was to make a living person-to-person. Today we call this “small business.” If a man made a leather coat, he made it for someone specific. He did not sell it off the rack or make it for the shelf. He made it for an individual, as a birthday or wedding gift, to meet a specific need, or as part of an arranged trade. He raised the cattle, and slaughtered them, tanned the hides and tended the pond where the tanning solution was dumped (or didn’t

tend it, which was common). Then he cut the coat to a common pattern, seamed it, finished its edges, and delivered it with great pride to be worn for decades. He probably may also have repaired it from time to time.

That kind of handicraft was common to all enterprise in the crafts era. There were silversmiths, and blacksmiths, spinners and dyers, weavers and seamstresses, cheesemakers, butchers, brewers, basket makers and barrel makers, carvers, joiners, farmers, and herders—all mostly learning a variety of skills from older relatives and relying on extended family members for whatever their own household couldn't produce. One person or one family unit saw each product through, from raw material to polished object, and as a result a much higher level of quality was suddenly the norm. Exquisite handiwork was common because craftspeople cared about what they made. They knew they were going to see their work walking around on the backs or in the hands of people familiar and sometimes dear to them, and so they wanted the coat or the basket or the ax handle to be extraordinary. They lived with their work and saw it at market or at church.

In this era people grew up seeing the wholes of things. The aristocratic worldview was in suspension, and for a short time the notion of the self-reliant, robust, courageous, and nimble-fingered pathbreaker took its place. Today this short-lived but unforgotten archetype is associated with the entrepreneurial worldview, which evolved alongside the larger, still predominate worldviews that came into being in later eras.

In the craft era, authority was based on land ownership, which also determined which families received the right to vote as democracies emerged. Land and control over assets, the ability to produce wealth, was the basis of governing power. Land and the beings it supported, including human tenants, were perceived to be inert or soulless, subject to the will of the landowner. This notion is still inherent in the practices of industrial agriculture, mining, and chemical refining, which are based on the view that soil nutrients, minerals, and fuels are present on Earth solely to be extracted and exchanged.

Machine Worldview

People are cogs in mechanical processes.

The English economic historian Arnold Toynbee announced in the 1850s that in the past hundred years Europe had experienced an Industrial Revolution. Technological changes—such as the invention of new machines and mechanical systems, advances in transportation, and the shift of work from workshops to factories—had brought about mass production of manufactured goods. These changes also resulted in an economic and management revolution. In Britain and the United States, people without the means or skills to create their own craft workshops joined assembly lines.

In a short time, the shift in work design from handcraft to routinized assembly led to loss of connection with the whole—whole worker, customer, economy, and community. Although much good came from the Industrial Revolution, most importantly the creation of the middle class, in general working people came to be regarded as machinery to be managed and manipulated. The dominant worldview shifted from makers as controllers of land and resources to individuals as cogs in machines. The human relationship to ecosystems under this view remained the same as it had been in the era of the aristocracy worldview, with the exception that now more people could own and extract value from land.

The machine worldview was shaped by the Extract Value paradigm and infused by its way of knowing and understanding. Its architect was Frederick Taylor, who created what we now call “scientific management.” He proposed that work could be done more efficiently and at less expense, if the production process was broken into small pieces and assigned, one each, to workers who could learn them easily and repeat them uniformly over and over again.

Taylor was a fan of the economist Adam Smith’s treatise on capitalism, which described this way of working as a narrowing of focus or fine tuning. Smith imagined the human mind as a kind of clockwork and the universe as an infinitely complicated machine, set in motion by God

and left to run on its own. Living systems and processes could be fully understood and mastered through the sciences of physics, chemistry, and mechanics. The machine worldview that grew out of this paradigm reduces workers to interchangeable parts in machines connected in linear manufacturing processes. Work becomes rote, and because workers are replaceable, their safety and wellbeing are disregarded.

Google co-founder Larry Page tells a story that illustrates the effects of the machine worldview. His grandfather always carried to work with him an old metal rod soldered to an iron ball because, in the factory where he worked, supervisors regularly beat men for not doing their jobs as management saw fit. Page's grandfather and his fellow employees were seen as machine parts to be hammered into line. After years of abuse, they seized control of the factory and locked out management in a successful strike that led ultimately to the creation of the United Automobile Workers Union. This was a major accomplishment and a step in the progression beyond the Extract Value paradigm and the machine worldview. But still today, these ways of knowing and living prevail around the world and are the primary sources of authority that we think of escaping when we speak of making a paradigm shift.

Behavioral Worldview

Human behavior is controlled by external conditioning.

In the machine worldview, humans were interchangeable parts and so management and the idea of management had to do with production and how quickly it could proceed. The mechanical worldview started giving way in the 1920s to a behavior modification worldview. John Watson, a psychologist at Johns Hopkins University, was mindful of the numbers of unhappy industrialists who were having a hard time getting their workers to do what they were told to do. Workers were rebelling. They were unionizing. They were considered lazy and ungrateful for the opportunities offered them. Watson proposed that if industrialists funded a research laboratory for him, he would give them control over labor. He would provide ways to manipulate employees that would consistently result in their doing everything management asked for, on demand.

Money poured in. Watson built his lab and spent a few years determining what really motivates people. The workplace, and eventually schools and families, were flooded with ideas derived from the “ABC theory”—antecedent, behavior, consequence. Provide an enticement and a behavior will result in response, which can then be re-enforced or extinguished with an appropriate consequence. Pretty soon businesses and the military, and not long after that the educational system, and eventually parents were all trying to figure out what actions and re-enforcement were needed to control people's behavior. Whole generations were treated with rewards and punishments in attempts to motivate them to comply with the demands of managers.

But, one little flaw in Watson’s research was that all of it was based on the study of rats and how they moved through mazes. He never questioned whether his results translated to human minds and behavior. Recent research is making it clear that they don’t transfer well and only in some instances, and that as regards the development of human capacity, they are often simply irrelevant. However, this has been ignored, and the behavioral worldview continues to claim that humans are like rats to be manipulated with incentives, rewards, and punishments.

In ecosystem terms, the aristocracy worldview continued to be preeminent and was extended. Ownership of natural resources included the right to subject nonhuman mammals to laboratory study, disregarding the effects on individuals and family groups (e.g. prides of lions, herds of elephants, and troops of gorillas). Animals were perceived to be extant primarily for use by humans, not only as providers of food, clothing, and other materials, but also as stand-ins for human subjects in medical and other research.

Human Potential Worldview

All people have free will and can develop the capability to motivate and develop themselves.

By the 1960s a large group of people, led by humanists and a few psychologists, could see that the assembly line and rats-in-mazes metaphors for humans were incomplete. Behaviorists

believed that if we gave people more rewards and made them feel better, work in the factory and at school would improve and life would get better in general. Humanists reacted to this and argued that behavioral research was only of value to those who chose to think of themselves as living among and managing rats. This revolt led to what we now call the Human Potential Movement, which basically set about studying human motivation and cognition in a more direct way than Watson had.

Watson believed that you could not study anything intrinsic or unmeasurable in physical terms. You could not, for example, study consciousness or internal processing, only behavior and the effects on it of controlled conditioning. The humanists did not accept that worldview. They related to people as human individuals, not as machines or rats. Their movement was concerned with self-mastery; it posited that people can be self-aware and self-directed, and experience intrinsic motivation. They researched ways to get people to take on their own behavior modification, such as goal setting and personal rewards. They used such processes as affirmations—for example, the repetition of personal mantras based on aspirations as a way to effect different behaviors and outcomes. “I can do this!” “Just say yes.” “Let it go.” Their big shift, in human relationships and organization management, was away from the ABC theory of conditioning to the position that personal agency makes intrinsic motivation practicable and delivers a much better result.

Behaviorists believed that humans could not motivate themselves because they had no self-control or self-determination. Individuals were completely at the mercy of their environment and what they received from others. Behavior was always only a reaction to something outside. But the early humanist psychologists—Virginia Satir, Carl Rogers, and Abraham Maslow—and eventually hundreds of others in the field, posited that this was not true. They developed their own research methods (they are also paradigm dependent) and demonstrated that people can observe themselves, make conscious choices, and become self-directed. They argued that all people have free will, not just the aristocracy or the well-educated or those who have succeeded in becoming wealthy. They claimed that all individuals could bring about change in

themselves, and this became the starting point of the self-help movement and the industry that grew out of it.

Living Systems Worldview

Regeneration is the core characteristic of living systems, including human systems.

There has always been a worldview more immediately connected to nature and natural systems than the aristocracy, machine, behavioral, and human potential views. It has persisted for centuries in limited communities, and mostly in the spiritual practices of people who believe that they can change themselves through everything from communing with nature to meditation to psychedelic substances. These were early expressions of what has come to be understood as a living systems worldview. Now, with science and technology making it possible to study life, a completely modern paradigm and a worldview based on it have developed.

In the first years of the twenty-first century, a leap in the understanding of living systems has occurred. New research findings are reported almost every day. For example, we learned not so long ago that a starfish can regrow a tentacle. Now, we also that a new tentacle is never exactly the same as the one that was lost, but is shaped in part by current conditions. The place in which the starfish dwells, its state of health, and its life stage influence the regeneration, and in turn, the regeneration process affects other parts of the starfish.

We know the same is true in the regeneration of other living systems. For instance, if a forest is attacked on one side by a disease or an infestation of insects, changes in structure begin to occur on its other sides, in trees that can be hundreds of miles away, as they begin to prepare themselves for what's coming. The forest uses biological patterns to re-express its whole being. It remains itself, and at the same time it has regenerated and become more resilient.

Regeneration, connecting to and re-expressing the unique pattern of the whole, is the core characteristic of a living system. In the living systems that are individual humans—and in the individuals of many other animal species—it extends beyond physical DNA and patterning into

the unique essence of a self. The humanists gave us this understanding, but they failed to grasp that it is true for nature as well. Learning to see all living beings in this way is much easier said than done. We are so conditioned by the machine and behavioral worldviews—which dominate our parenting, schools, and organizations—that we look at life as fixed, predetermined, and fragmented, and often fail to develop the capability to see the living wholes in life processes.

Regeneration is the innate ability of a living system to bring itself to a new level of organization and expression after it has been destabilized or disrupted. When a forest is attacked, it rebuilds and becomes healthier and more resilient than it was before. Likewise, when a person recovers from an emotional loss, she becomes better able to be fully alive and confident as she faces the future. This kind of renewal requires that the living system reconnect to the core of its life—what it is in its essence. It is possible for two reasons.

First, every living system has a unique core, each natural system—such as a human body, a forest, or an ecosystem—at a physical level and each person at a psychological level. Every form has its own pattern. When it regenerates, it is not creating a brand new, unrelated part or aspect of itself. Rather, it is actualizing the potential that was always there, bringing it forward into a new moment or context. Some works of art, music, and literature, for example, are manifestations of regeneration—produced in response to transformative events (destabilizations) experienced by their creators.

Second, every individual is always nested within a larger system that it contributes to and is nurtured by in return. This reciprocity *invites* the expression of the individual's essence. Regeneration is the expression of essence in service to the whole systems that it depends on to thrive. This is why understanding regeneration requires understanding the working of living systems and the systemic reciprocity they offer to each of the living entities within them.

The regenerative way of understanding is a particular philosophy, which differs considerably from the human potential movement and radically from behaviorism, and mechanism. Each of

these forms the basis for different ways of working, and out of each a comprehensive worldview gets formed and human characters get shaped. A worldview gives people a way to agree on the truth. They live by that truth whether it's substantiated or not; they agree on it, and often it becomes the only lens through which they are able to see the world.

Worldviews Summary

We have looked briefly at four dominant paradigms that determine how we study and make sense of the world (epistemologies), and we have seen how they shape cultural and religious worldviews (cosmologies). We have looked at five worldviews that give us a practical way to organize life on a daily basis and live in communities of shared understanding. Both paradigms and worldviews are implicit to our thinking and acting, but paradigms are less visible than worldviews, shaping how and what we can use to form truth and providing the basis for agreements on how to live together within a shared understanding. Looking from one nation to another, we can quickly see how much more or less freely some peoples are allowed to accept teachings and ideas or reject them based on their sources of knowledge. We can also see that in current years both paradigms and worldviews are becoming more fluid, as media in all of its forms exposes us to foreign ideas and the internet becomes a shared way to discover and validate truths.

Because worldviews are the practice and day-to-day world side of thinking and because paradigms have been slower to change until recently, worldviews shape human interactions more directly, including work design in businesses and other organizations. For example, dictated by the machine worldview, work design controls people by placing them in positions of subjugation, based on a static view of life, with disregard for their safety or innate integrity. Employees are good or bad. If you hire bad ones, you get rid of them. You spend your human resource energy on figuring out how to hire and promote the good ones. You pay them more. Because intelligence is fixed from birth, it's worth investing time and effort to hire the best. The machine worldview does not even entertain the idea of inducing better performance by

offering incentives. Once you've hired a great brain, you own it and, if necessary, you can punish it into submission.

From the behavioral point of view, others are ours to manipulate and our job is to avoid being manipulated. It's fascinating to watch the spam that shows up in an average businessperson's email. "Do you want to learn how to influence others for your benefit?" "Do you want to learn how to bring about beneficial changes in the environment by incentivizing other people?" These materials are based on the view that we are externally determined and that we can learn how to determine the behaviors of other people. We can learn the trick of manipulation because people are driven solely by pain and pleasure.

There's some truth to this, of course, but it's an incredibly limited understanding. We know now from recent history that people can rise above the most horrible conditions—wars, natural disasters, concentration and refugee camps—and be fully human and whole in the process. Through self-development, we can engage parts of our brains that are above their reptilian and mammalian parts and manage ourselves from the neocortex. But the behavioral worldview persists, and on a daily basis our thinking and other behaviors persist with it.

The human potential view leads us to the idea that personal agency is possible and only has to be unlocked. Different people have different ideas of what the key is, everything from meditation to education to travelling around the world taking on evermore demanding cultural and intellectual challenges. This is a radical contradiction of the behavioral worldview and probably the first view to effectively counter work systems based on assembly lines and division of labor. It asserts that people don't do their best when they're following procedures. They do their best when they can bring some essential part of themselves to their work.

The Primary Worldview of Current Work Design

Amelioration—this is the prevailing worldview or mindset that we live with now. Behaviorism reigns. Ameliorate harmful human behavior by managing people differently. And if the new management program has side effects, create a yet another program to manage that.

For example, until recently feedback was used in most businesses as a tool to change unwanted behavior. But it had a negative impact on spirit, and so people added their own comments to their reviews. And then feedback was invited from all directions, 360 degrees, as a way to avoid bias. In this practice, managers were always trying to fix a problem, and then the side effects of fixing the problem, and then the side effect of fixing the side effects. The intention was to make behavior less bad, to bring it back to some acceptable norm, to some ideal. What resulted when human resource departments managed work design by building off the paradigms underlying the behavioral worldview was a never-ending effort to fix people or manipulate them to unlock their human potential. Those efforts left us with a need to ameliorate all kinds of problems.

Think about where you have worked. The jobs you had were likely at places where people spent time designing and implementing programs to manipulate you and your coworkers based on the behavioral worldview. Incentives, rating, and ranking were the norm. You were manipulated with pay, with recognition, with rewards—all intended to manipulate you into better performance. One of the major downsides of the behavioral worldview and its practices is that they make us more and more susceptible to external stimulation. They literally reprogram our brains.

And think about your education. When people are treated with manipulative practices throughout their childhoods, they do not learn to think for themselves. They become workers and citizens who do not consider the implications and effects of their actions. They become susceptible to fear mongering and the bad health that accompanies the stress it causes. Graduating into workplaces governed by the machine or behavioral worldview, they eventually lose the ability to step up to challenges. When a person is treated as a machine or a rat in a

maze, they do not feel like a part of a larger whole. This diminishes their capacity to be self-managing.

One of the reasons why my favorite work is to engage directly within companies is that I get to help bring human beings back to wholeness. We expose paradigms and the resulting worldviews that perceive and engage people as machines or rats. We undo the practices that cause negative side effects that demand continual amelioration. You can't have good businesses or a good educational system or a democracy that works—you can't even really have happy families, if people can't think critically and be self-managing, if they are always reactive.

Extraordinary Outcomes of the Living Systems Worldview

Every company that I have worked with to build regenerative work systems from the living systems world view has been seeking extraordinary, seemingly impossible outcomes—ones way beyond the usual notions of continuous improvement. They were interested in establishing very rapid rates of change, way beyond the usual.

For example, I worked with Kingsford Charcoal, which owned Hidden Valley Ranch Dressing. When they bought the business, it was pretty average in the food industry. That meant it was taking two to five years to get a great product idea into the market. We changed that, moving to a six-month cycle from ideation to execution. There was also no developed capacity in the business to displace then current salad dressing leaders. In our change process, we moved to Hidden Valley dressings to numbers one, two, and three within a year and a half. These illustrate the kind of returns I'm talking about, when I propose that we shift to the living systems world view and start thinking regeneratively. And it doesn't end with a bestselling salad dressing. Whatever you're working on, you need to be ready to take what Google's leaders call a "moonshot" and go for it. Once you have set up your regenerative work system, the next

thing you want to do is shift to an *urgent and compelling expectation for changes in social and planetary imperatives*.

That's a big, fancy set of words. What I mean by social imperatives are the nonnegotiable changes required if our society is ever truly going to work well. For example, we must create the conditions that will make it possible for all people to become self-managing and develop critical thinking skills—the basic conditions required in order for democracies to work well (as you have probably noticed). Planetary imperatives are the changes that will keep us in right relationship with Earth, many of which are absolutely necessary. For example, we must stop extracting resources at rates that exceed their ability to replenish themselves. We must stop creating toxins and dumping them where they can do no good. You want to acknowledge ambitious imperatives like these and you want your business to go after some of them.

Regeneration takes an organization or community beyond the ideas of “being less bad” and “doing good.” You want to pursue what makes your people and your business whole and healthy. Let go of outmoded practices such as hiring A-level talent. Business leaders often ask me, so what does the hiring process look like from a living systems perspective. I reply that the regenerative path is to build, not buy, talent. Human beings all have innate talents waiting to be developed. Each one of us is unique and capable of growing. We have learned this from one research study after another. But we haven't let this knowledge shift our hiring practices from the older worldviews.

The very best talents you can employ are the talents you build, not the talents you hire recruiters to buy for you. Every one of your employees is unique and has still more potential to be realized over time. Understanding this is foundational to regenerative business practices built from the living systems worldview and the Evolve Capacity paradigm. And hiring talent is only one of hundreds of current practices developed from outdated paradigms and worldviews.

Regenerative practices use living systems ways of thinking and engaging in order to develop people's capabilities, not only to increase the wealth of human talent. Developing people enables them to exceed all the goal markers thought possible, and this inspires their loyalty. And there are even more extraordinary effects; when you develop an entire organization, you create a revolution. When you begin to see all people and activities through the developmental lens, not only your own people, but also your suppliers and distributors begin to grow beyond whatever they thought they could. Your own and your employees' families, your children's schools, and your local government may as well. With an Evolve Capacity approach, everyone in the market and community has the idea that they are a force, a united team that can grow together in order to produce extraordinary results. Life appears as it actually is, dynamic rather than fixed. Everything becomes alive to you.

If this possibility does not appeal to you, if these changes are not the sort that you want to make happen with work design, then you probably ought to opt out of regenerative work because you won't be able to implement the practices I'm going to describe. You cannot, unless you are pushing for changes so big that they seem almost impossible.

Regeneration as a Practice

I believe that the Evolve Capacity and the living systems worldview are the basis of regenerative practice. This is not the same as designing in imitation of what nature does. Humans are nested in living systems, which are not separated into two realms, natural and human. We create false ideas when we try to mimic nature. There is a wonderful quote on this subject by Buckminster Fuller, "Work against 'Life Centered' principles, and you will find yourself thwarted at every turn. Work with 'Life Centered' principles, and the Universe itself pitches in to help." To work with life centered principles, we must understand how life works in a dynamic, engaged way as nested systems.

I will now spend a moment discussing the First Principles of Regeneration, which I suggest for use in any situation in which you wish to create integrity and universal meaning. First principles serve for sourcing creation or an examination or evaluation of material or thinking. They are basic, foundational, self-evident propositions or assumptions that cannot be deduced from any other propositions or assumptions. In philosophy, first principles were first formalized by the Aristotelians. First principles thinking, which is sometimes called reasoning from first principles, is one of the most effective strategies you can employ for conceptualizing and understanding complex situations and then generating original solutions.

The first principles approach has been used by many great thinkers, starting with the philosopher Aristotle and including the inventor Johannes Gutenberg and the military strategist John Boyd. The person in modern times who most embodies first principles thinking as a guide to producing more effective outcomes is entrepreneur Elon Musk, the business magnate, engineer, and inventor who founded SpaceX and Neuralink, and cofounded Tesla Inc., SolarCity, Zip2, and PayPal.

Several years ago, working with a cadre of scientists, ecologists, and naturalists, I articulated and began working with the Seven First Principles of Regeneration. These principles can be used to enliven and promote living systems understanding of people, watersheds, businesses, communities, and most other systems on Earth, not including computer or machine systems.

The 7 First Principles of Regeneration

1. Image a whole at work. A living system is a *whole*, defined by natural boundaries. It cannot continue to live if it is broken into parts or fragments. To see or know the working of a living system it is necessary to image it engaged in being alive. Only a whole system can be imaged at work.

For example, a frog is a living system when it is living in a pond nested in a specific lifeshed or ecosystem, able to jump around, feed itself, and reproduce. It is not a whole when it vivisected

and then dissected in a laboratory. When my daughter was a biology major at Swarthmore College, she refused to do dissections but nevertheless managed to graduate Phi Beta Kappa with honors. She arranged to use an MRI machine to study living animals because she understood that you can't study life if you aren't studying it alive.

We can explore any system at work, from markets to economies, citizens to nations, neighborhoods to ecosystems. We can understand it firsthand by using first principles to examine it directly, imaging its work as it engages in transactions with others, transitions through time, even transforms from one state of being to another. This understanding will far surpass any insight we might gain by explaining it within the context of static, pre-established thought structures (e.g. anatomy books, psychological treatises, engineering schematics, statistical analyses).

Original thinking about living systems becomes impossible when we break them into unnatural parts, cutting them apart rather than imaging them whole and healthy, alive and working. We now have whole groups of scientists who study rivers as if they existed independently of watersheds and lifesheds, and trees as though they lived apart from the forests and ecosystems they grow in. The same is true with children, who can only be understood within the context of their families, neighborhoods, and schools. I always think, when I talk about what it means to image a whole, of how every child is a whole and how a mother or father is readily able to connect with their child, even before it is born, as a unique essence, fully alive and fully expressive.

We can do the same with all living systems, from smallest to largest, and this can be reflected in how we speak about them. I use the word "lifeshed" instead of "watershed" because watershed is an anthropocentric term that cuts waters away from their living ecosystems, conceiving of them as resources. "My water!" Sometimes people say "airshed" or "foodshed." But no—water, air, food are always integral within whole natural systems: lifesheds.

2. *Work toward potential not ideals.* The second principle is to see the uniqueness of the whole and its distinctive potential. The opposite is to think in terms of ideals or problems, which leads us to ask if a person or city matches our ideal. Comparisons immediately drop out when we think in terms of potential because potential can only be conceived of concretely, inherent within one life form, one person or community.

We have created a mess by imposing ideals on children, First People, people of other faiths than our own. We establish ideals as a way to certify and license them. This can only diminish living systems, and even deliver a death blow. There is no practical generic ideal in any area of life.

First principles are guides rather than ideals, ways to test our ideas about living entities not ways to control them. When a new person or community comes into play, there is no transferability of knowledge, except in the process of examining one's own ideas and actions towards them in light of the first principles.

A second way we undermine potential is by defining everything in terms of problems, without awareness that the problem-solution concept derives from the machine worldview and the Arrest Disorder paradigm. It inevitably reduces living beings to machine parts within unnatural schemas. This paradigm is still dominant in some businesses, so much so that their people conceive of problems as the *only* places to start and cannot grasp my meaning when I state that they are bad places to start. Defining problems and working with standards and ideals inevitably means starting from current existence and limiting ourselves to improving rather than regenerating.

My favorite illustration of this limitation is parents who look at their own children as if they were little bundles of problems. They talk back, make messes, don't do their homework; they fall short in a score of other ways. When the parents try to fix these problems and teach children to overcome their failings, endless battles ensue. To work on problems splinters

children's lives and denies their unique potential; it casts them into the generic role of troublemaker.

Problem solving and problems are always defined in terms of variation from an ideal. In order to get past the trap of the problem perspective, in order to really bring it into view, I might point out that, throughout history, ideals have led to colonization and often to genocide and the eradication of entire cultures. This is also true of certification programs. I have been asked why I don't offer certification for the work that I do. My answer is that the only reason to certify is to make money.

Certification entails the creation of ideals and the selection of a list of fragmenting items by which to judge people, as a way to convince them that you know the best ways to do what they want to do. This shuts out all questions and denies the potential of unique individuals. In the past we have collapsed the cultures of many indigenous peoples by imposing ideals of language and behavior. If people accept that they need other people's approval, adopting their ideals and the lists that go with them, then they stop reflecting and finding out who they are and what living systems they wish to serve. They lose their authenticity. The second principle of regeneration guides us away from problems and ideals to the discovery of potential in each of the people and all of the other living systems that we encounter in our work and home lives.

3. Reveal and Express Essence. Everything that is alive has a unique essence. Every being, every critter. Last night I flew home so that I could see my cats. I kept thinking about the differences between them. I practice this all the time: what is the essence of this being? What is the essence of this system? What is its essence thinking? What is its core, the heart of it?

If we don't start from essence, our work gets scattered, and as a result we try to categorize things. We put them into boxes based on patterns that we invent. An example is personality tests. You've probably taken one that defines you as one of four types. We all want to know what makes us who we are, and we are raised to expect to see our essence from in the

feedback and observations of others. You may also have taken a test in some job or other to certify your strengths—even though your strengths are mostly socially conditioned and can change easily when situations change. The drive seems to be to contain people in boxes that make them easier to manage.

Essence is behind our socially conditioned selves and beyond our personalities. Understanding this is core to practicing regeneration. Personality and other typologies work against revealing essence. Yet the essences of living systems are everywhere around us, inviting us to know them. Every material and every living system has an essence—there are essences of mountains and forests and of species and minerals. You can learn to recognize the essences of Yosemite and Yellowstone parks, for example, revealing how different each is from the other and from any other place on Earth.

If you define an entity by its type, then you have missed its life, its uniqueness, and reduced it to a thing among similar things. The third principle of regeneration is core, and it is one that is dropped out completely in the Doing Good and Arrest Disorder paradigms. That is, it has no place in sustainability practices. Learning to do essence thinking is what discernment is really about.

4. Engage with living systems developmentally. The capabilities described by the first three principles are foundational to shifting thinking toward the living systems worldview and the practice of regeneration. Learning to reveal essence and then finding ways to develop and express the potential of a whole is the basis for regenerative work. When we have learned to reveal essence, we can see core patterns that make development possible. Developmental work makes essence expression possible for anyone, removing all the veils, particularly personality traits, that otherwise inhibit it.

We have been examining how regenerative practices affect humans, especially in work settings, which are the places where most people are able to make regular, beneficial contributions to

the lives of others. In a business, there are two arenas of developmental practice that serve to benefit the organization and have the potential to improve societies and democracies. These also benefit the family lives of individuals and help make them more effective in all of their activities.

The first of these arenas is the development of critical thinking skills, which currently are not routinely taught in family, school, or work settings. This includes primarily building the capacity for discernment and complex systems thinking. The principles and practices that you are reading about here are examples of ways to improve discernment and thinking; when engaged in routinely by an organization, in the course or regular work events and with reflection on how they were handled, they increase the ability of participants to see how they are thinking and to know whether they are whole and complete in their decision making and execution.

The second arena for development is that of personal mastery and the ability to manage one's state of being in difficult situations. Learning to see our own mental and emotional processing and to monitor interaction with others is core to working together effectively. With education and reflection, we can learn to recognize what upsets us, what energizes us, and how to manage our reactions—core skills of well-functioning individuals. But again, these are skills are developed only haphazardly throughout our lives. We rarely have opportunities to learn them intentionally. In an organization committed to working regeneratively, personal development can be integrated into daily work. When development becomes a focus, it establishes the foundational abilities necessary to practice the other six principles.

By practicing critical thinking and self-mastery, we learn to know ourselves and to see the effects of our actions on other people and the outcomes that result. In particular, we develop the ability to experience these in real time and to change our choices of words and actions, and our decisions, in order to purposefully alter the effects that we see unfolding in the moment. In my experience, building such skills in organizations has made them resilient and produced

innovations at much higher rates than would have been possible had employee education been limited to functional skills only.

5. Design from an awareness of nestedness. Living wholes are always nested within and among one another. Nothing exists independently. A family is nested in a community, which is nested in a society, which is nested in a culture. The only way to really know a living system is by imaging it within nested systems—the frog within the pond within the meadow within the lifeshed.

Nesting is defined as the interrelationships and interdependencies among smaller and larger wholes. It is the opposite of ranking, in that it does not discriminate based on size and position but understands the interbeing or interweaving of whole systems. This is true across the board in all situations. You have probably had a job at an organization where you were ranked within a hierarchy. Yet, in truth, no one in a company is more important than anyone else except insofar as a ranking is imposed on them. Business organization is a living system of people and processes at work with one another to improve the lives of customers and other stakeholders.

Another example of nested systems is communities within ecosystems on Earth. There are strong implications for the interactions and effects among these nested systems. Regeneration takes into account this nestedness and the effects of one system on another. From the perspective of the living systems worldview there is no desire to break wholes apart or to disengage one from another. Instead, there is always an imperative to understand the work of systems in terms of reciprocal relationships. We human individuals are nested in families, and those families have unique essences and look very different from one another depending on how individuals connect within them and how they move about in the world. But all families exist in communities and nations and within a global whole.

In the businesses I work with, employees are always organized within teams, and these teams are always nested within stakeholder groups—customers, suppliers, distributors, investors,

local communities, and lifesheds. They are not nested in the company, as you might expect, because in fact they are integral to the whole that is the company—they are the company. The next ring out from any team is its stakeholders. The quality of reciprocal relationships with them is what determines how well the business does.

6. Intervene at systemic nodes. The idea of working nodally is challenging for the same reason that all of the seven principles are. It requires imaging a system that is alive and dynamic and engaged in reciprocal relationships with other living systems. Life moves and changes based activity at nodal points, not in scattered parts.

Nodal interventions are the foundation of acupuncture, for example. You do not place needles in all the places that hurt or are off balance. You put them where energies cross, intersections through which the system as a whole can be affected. Our senses can connect us only with small aspects of a whole working system. When we are considering negotiations between nations, looking for an intervention that is likely to shift all conversations going forward, or when we are working on the health of a human body, where core changes can reverse illness and promote wellness, we are looking for the confluence of energy where an intervention can effect a change.

Nodal intervention is not about priorities or leverage because living systems have no priorities. It is working in a way that is whole and systemic all the time, looking for nodes where relatively small actions can effect large, whole-system changes. We have borrowed this idea as a metaphor for the way technological networks function. In nature it works less as a template and is far more complex. When you consider a lifeshed and its health, for example, you have only to examine the wetlands, which can tell you everything you need to know about the state of the whole. They, in their total living complexity, constitute a nodal point.

We do not fully understand nodes in ecosystems or in terms of how human communities or the entire planet work. We don't understand them in business terms, either. When I work with

Europeans, one of the things that fascinates me is their understanding of nodes. They speak about them directly. For example, most Europeans agree that free education, when it is done right, is a nodal intervention with great potential to improve the health of societies and economies. Free education is a node where individuals can make contributions with the potential to change society for the better. Education is core, foundational to life, and therefore it is a node.

Another example is healthcare. A society cannot work if its people are unhealthy, but public healthcare is hugely controversial, even in Europe where it has been implemented. Where should money be spent? Who should be in charge? How do we tax appropriately and fairly in order to produce adequate funding? The basic question is what intervention will produce health, life, and equity among all beings? It's impossible to work on everything, but where can we find a node that will enable a whole-systems effect? The interventions that attract many Europeans are free health care, to make society's foundation strong, and free education, to develop the capacity for democracy. Those are the keystones, the *nodal* interventions with the potential to produce a vital and viable nation.

7. Innovate for systemic reciprocity. This principle is the opposite of "every man for himself," which you can see is an utterly unviable position, if you look at it through a living systems lens. The nested nature of life makes us all interdependent, and this is the source of living systems thinking: systemic reciprocity, rather than transactional engagements with one or more entities for our exclusive benefit. Through transactions, we do not benefit the whole systems we inhabit, and therefore we do not stabilize our own benefit.

In order to find nodes, we need to understand how the systems that we participate in benefit each of their stakeholders and the larger system that contains them as a whole. This is the guide for locating nodes. In ecological terms, you look to keystone species, such as the wolves in the Yellowstone National Park ecosystem. We know that entire lifesheds die, ecosystems die, when a keystone species is removed or becomes extinct. We know that when wolves were

removed from Yellowstone, the elk population exploded and riparian systems were devastated, degrading the habitats of fish and other aquatic animals, including beavers. Beavers themselves are a keystone species, whose presence in the Yellowstone lifeshed created habitat for other animals. These animals also suffered from habitat degradation. Pretty soon, Yellowstone's rivers began to decay.

After much consideration, wolves were returned to Yellowstone. Relieved of the impacts too many elk, beaver populations were restored, and over time the presence of both wolves and beavers returned the park and its surroundings to a working ecosystem. But even so, there were still challenges to the system because there were farmers and ranchers in the vicinity of the park whose livelihoods seemed threatened by wolves and other predators. There was more work to be done in order to fully regenerate Yellowstone's nested systems and its potential to serve all of life.

The core to systemic reciprocity and the regeneration of whole systems is not to take on the work of others, but instead to evolve their capacity to be fully capable participants in the systems they are nested in. This is the principle through which regenerative interventions do the work of the Evolve Capacity paradigm. Innovating for systemic reciprocity focuses on evolving capacity of the system and all beings in the system. Stepping in for others, making improvements for them, is the practice of other paradigms—Doing Good, Arresting Disorder, and even sometimes Extracting Value. And although we may sometimes benefit people as a way to further the aims of these paradigms, we are not truly evolving capacity in living systems until everyone involved is making their own, self-directed contribution to regeneration. This is how potential is expressed, in the collective, regenerative endeavors of unique individuals expressing their essences and becoming more able through the effort. And this is also how we stop the depletion of—or the extraction of value from—people who are only giving.

The 7 First Principles as Capabilities

Working from principles is a unique capacity that is currently not being developed in most people. Instead, we are educated to follow specific sets of rules based on someone else's idea about what is right for the groups they took into account. We are not using systemic mental frameworks to build the capacity for reflection and discernment that is required to think regeneratively. For living systems, there can never be one right answer for every situation. And this is true even for mechanical systems, because machines will always require human engineers and operators.

Working with principles requires consciousness, the ability to separate from a situation while being in it, to discern how things are working, use judgment to locate nodes, and to predict the likely effects of an action or decision. We must learn as individuals how to do these things in real time in the midst of real work, and then we must make it possible for whole organizations to learn how to do them. The highest aim of regenerative practice is to evolve capacity in the beneficiaries of our offerings so that they can contribute from their essence to the vitality, viability, and evolution of the systems that are being actualized.

The 7 First Principles as a System at Work

Each of the 7 First Principles is an opportunity to develop capability. We have been so thoroughly educated and conditioned to work from the older, less complete, paradigms and worldviews that we must now develop almost from scratch the full complement of regenerative capabilities. The way our uneducated brains work is by seeking and confirming what is familiar. Preservation is the goal of the undeveloped brain and it either does not see anything new and worth exploring or it rejects it in order to preserve the safety of adopted ideas and practices.

Figure 3: The 7 First Principles of Regeneration at Work

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Comment: You had "Graphic 4" here, but I think it must be Figure 3, because we have only two other graphics.

I can't insert the graphic you sent because it's a pdf and I have no way to convert it to a jpg or other picture file. Do you want to ask Shannon for help with this?

This is why a developmental culture and community is needed. Businesses and organizations are ethically called to create growth environments, rather than ones that reaffirm and deliver on unexamined ideas. The 7 First Principles of Regeneration cannot be brought into a community unless they are coupled with intensive personal and organizational development processes. They simply won't be useful with the minds, infrastructure, and work designs that are mostly in place now. A conversion to regenerative practices will require deep questioning and rethinking, a process to evoke in people a consciousness of the effects of and outcomes from all of their actions.

You cannot set up a department or a program, such as sustainability or corporate citizen, to accomplish this. The process must be strategically embedded in the *way* work is done and in *how* everything is carried out. This is why most of my life's work has been about designing and engaging organizations in a developmental way of working and doing business, a process that develops individuals' critical thinking skills and personal mastery through education and reflection, and pushes across restraints by connecting every person in the organization directly to external effects. This enables an organization's people to see that they are serving customers and other stakeholders, not the organization, except when they go outside to represent it.

The new way of working to regenerate requires setting up systems for each person to find a way to contribute, and that creates daily destabilization of people's certainty, comfort, and ideation process. It takes them off automatic and hands them the controls. This is what is required to bring about real change.

For videos, books, and articles on regenerative business practices, visit www.CarolSanford.com.