

FORGING A POST-COVID ECONOMY WITH NATURE AS OUR GUIDE

CONTRIBUTORS

Sallie Calhoun
and Deborah Frieze

First published in June 2020
by *The Performance Theatre*

HOW DO WE KNOW WHEN A SYSTEM HAS FALLEN APART?



Historically, pandemics have forced humans to break with the past and imagine

their world anew. This one is no different. It is a portal, a gateway between one world and the next. We can choose to walk through it, dragging the carcasses of our prejudice and hatred, our avarice, our data banks and dead ideas, our dead rivers and smoky skies behind us. Or we can walk through lightly, with little luggage, ready to imagine another world. And ready to fight for it.”

—Arundhati Roy
The Pandemic is a Portal

Those who study complex, adaptive systems tell us that a chaos cycle gets triggered by changes in the environment that force the system to abandon its old ways and respond to the new. In her book, *Who Do We Choose to Be*, Margaret Wheatley describes the rise and fall of civilizations, including those moments that portend the system’s transformation. “Everything that held it together—its beliefs, meanings and structures—no longer work now that the environment has changed,” she writes. “As the system descends into chaos, it reaches a bifurcation point where it has two choices: Either it can reorganize using new beliefs and structures that work well in the changed environment. Or it can insist on the old ways, fail to reorganize itself and die.”

The chaos generated by COVID-19 is shining a light on the underlying order of our global economic and social systems, revealing the fragility and endemic inequality that says only some of us are worth saving. In today’s systems, resources accumulate in the hands of the few at the expense of the many. Most financial growth is speculation and bears little relation to the real wealth of the planet. The communities from which wealth has been extracted can no longer produce the goods and services they need because their natural

and human capital has been diminished. With the onset of COVID-19, the ever-widening gap in our global culture between the Haves and Have-Nots has suddenly become a yawning chasm absorbing a landslide of the world's poor.

For many of us, it's becoming apparent that we can't simply grow our way out of this mess. We can't donate or stimulate or triage our way out of it. Perhaps we've come to that moment when dragging an economic system modelled on infinite growth, accumulation and dominion over nature through the pandemic portal is more likely to kill us than the pandemic itself.

This is our bifurcation moment.

There are those who will respond by doubling down on our existing system, advancing a kind of surveillance capitalism in which governments tear down civil liberties and human rights while protecting banks and billionaires. And then there are those of us who are willing to trailblaze a new path, to forge a new social contract that includes all of us, equally.

To do that, we are profoundly in need of a guide—something that can orient us, point us toward true north, give us the capacity to wander through uncharted territory without succumbing

to fear or retreating to the safety of familiar ground. The kind of guide we need is one that has responded and adapted to systems collapse time and again for 3.8 billion years. That guide is Nature herself.

JUST ASK NATURE

The term biomimicry was popularized by scientist Janine Benyus in her 1997 book, *Biomimicry: Innovation Inspired by Nature*. It is the practice of taking inspiration from nature's designs and processes to solve human problems. Its goal, according to the Biomimicry Institute, is to create products, processes and policies—new ways of living—that solve our greatest design challenges. If you want to design a strong but elastic fiber, study spider silk. If you want to manage building ventilation, study honeycomb. If you want to understand inclusive resource allocation in a community, study the way trees, fungi and soil interact in a forest.

Nature operates with principles rather than plans. These principles are expressed through her capacity to

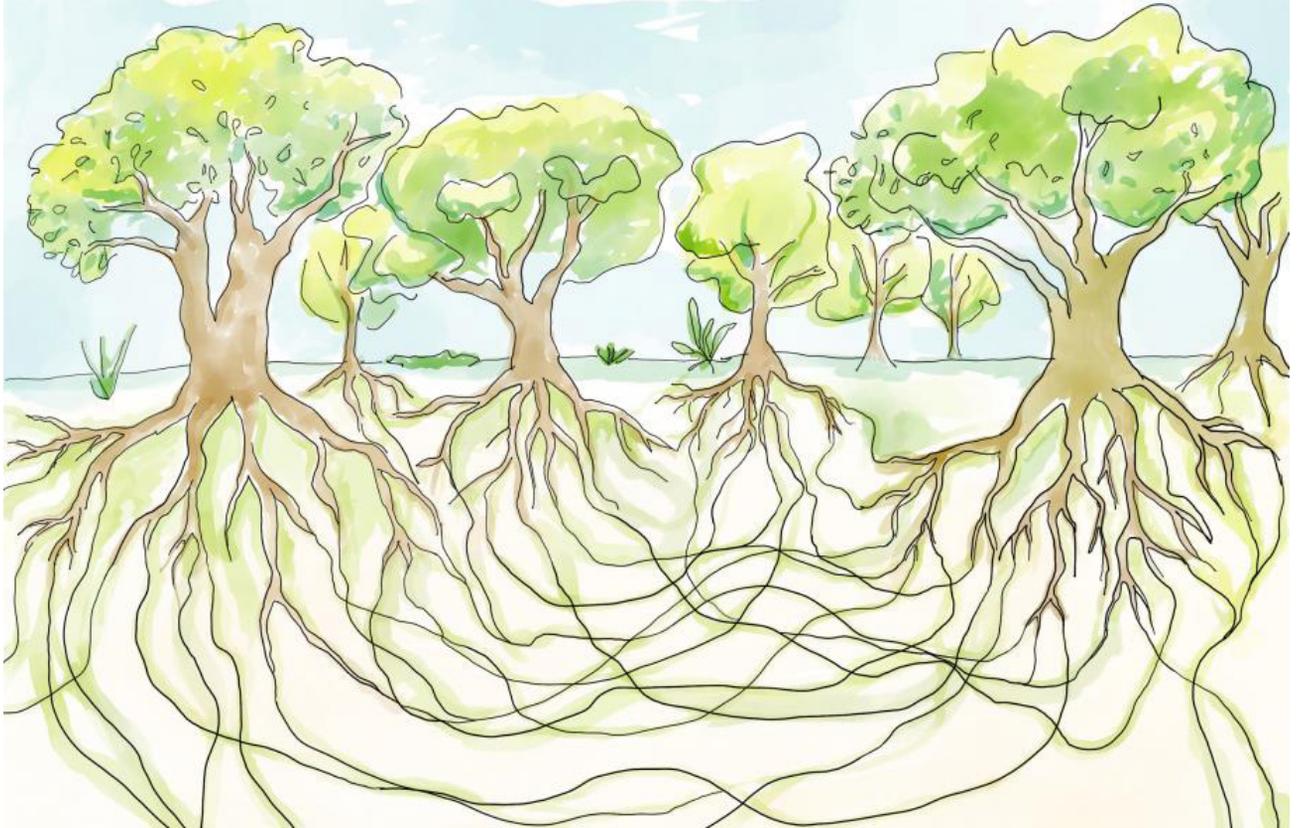
continuously adapt to changing conditions, no matter how unpredictable, widespread or complex. Learning and adapting to change is, in fact, the nature of life. By observing Nature's principles in action and applying them to our ferocious design challenge of regenerating our economy, we may learn how to imagine another world.

Part I of this paper is an invitation to step into the future, to get a glimpse of how our organizations would behave under a social contract that values everyone equally—whether or not our governments come alongside. We begin by applying each natural principle to our own organizations. Part II will address the pathway of remediation, practices that enable us to travel from where we are today to this imagined future.

PRINCIPLE #1: NATURE REDISTRIBUTES RESOURCES

In southern New England, where one of us authors lives, mature hardwood forests are made up predominantly of oak, maple, white pine, hemlock and birch trees. The oak tree, the king of the forest, sends its roots as much as 15 to 20 feet down and brings up water that it shares with other plants in the forest. With its magnificent canopy, it intercepts sunlight and produces carbon to feed soil microbiology.

The oak tree isn't out for itself; it's out for the forest. The oak tree doesn't go, "Mine, mine, mine" when it pulls up water or distribute it only to its pet plants. It releases water into the ecosystem, allowing a plurality of species to thrive, exchange nutrients and protect one another from pathogens. It has access to resources that most of the plants in the forest don't, and its job is to anchor and feed the rest of the forest. An oak tree that has hoarded its resources



would soon find itself standing on bare ground and would not survive.

In nature, resources often flow to where they're needed most. Imagine a world in which big banks, global corporations and the one percent functioned like oak trees, serving as an integral part of the community, redistributing financial capital to support productive capacity throughout the entire system.

In most countries today, government is playing the lead role as we pass through the first and most urgent phase of pandemic recovery. The rapid infusion of stimulus money into our economies could have created an

opportunity to rebalance the system's resilience by ensuring all parts of the economy gained equitable access. Unfortunately, in the U.S., once again big corporations and banks have claimed the lion's share of stimulus money (see the [Billionaires Bonanza report on pandemic profiteering](#)) while small businesses close down, millions of workers lose their jobs and black and brown populations die at alarming rates.

This is what it looks like when a system insists on its old ways and fails to reorganize itself, as Meg Wheatley teaches. If we want to create something

different, first we need to know where we're going, then we need to figure out how we're going to get there.

If we were to operate in alignment with the principle, Nature redistributes resources, then here are some of the indicators we can expect to change.

COMPENSATION RATIO

Compensation ratios can be used to compare the salaries of the highest and lowest paid workers or highest paid men to highest paid women. In the United States, CEO pay averages 278-to-1 over typical workers. (The highest recorded CEO pay ratio is 5,908-to-1.) Back in 1965, that ratio was only 20-to-1 and even as recently as 1989, was 58-to-1. An organization that applies Nature's principle of redistributing resources would see its compensation ratio be restored to at least 1980s levels.

PROFIT MARGIN

Conventionally, enterprises seek to buy low and sell high in order to maximize profit margins. That may work well enough in times of abundance. But when the system is stretched, looking after our own self-interest at the expense of those around us will prove costly. An oak tree will survive drought, storms and other climate disruptions far better when it's in the forest than alone on a hillside. Healthy ecosystems arise from cooperation; they are destroyed by overzealous predators and invasive species. An organization operating in alignment with this principle of redistribution would recognize its interdependence with its suppliers and customers. It might choose to pay its suppliers more and charge its customers less. Yes, short-term profit margins will go down and growth may slow, but the resilience of the system—its capacity to absorb shocks and maintain its integrity—will increase. All parts of the economic ecosystem would be in mutually beneficial relationships.

PRINCIPLE #2: NATURE INVESTS IN THE WHOLE ECOSYSTEM

It turns out that virtually all land plants in the world are connected by a fungal network. These invisible underground networks either enter or wrap around the roots of the plants to distribute water, carbon, nitrogen and other nutrients and minerals throughout the forest. Carbon atoms (marked by researchers for tracking purposes) photosynthesized by a tree in one part of the forest have been found up to a quarter mile away.

The fungal web also serves as an information superhighway (giving rise to the nickname, the Wood Wide Web), helping plants prepare themselves to conserve water in response to drought or to collectively ward off invasive species by spreading toxic nutrients. Again, the oak tree's access to this distributed intelligence benefits the entire ecosystem. It has been observed that when the climate is changing and the

oak tree no longer occupies a place conducive to its growth, it invests its remaining resources throughout the fungal network to keep the forest living even as it dies. Put another way, no oak tree is too big to fail.

In conventional finance, the goal of investors is to find the single best enterprise they can and support it in crushing the competition so they can extract financial value. They are completely unaware of and unconcerned with the invisible web of life that allowed this company to thrive: the laborers in the supply chain, the resources extracted from the planet during production, the competitors whose jobs they've wiped out. They put all their resources into the winners, losers be damned.

What would it look like for us as leaders to become fungal-friendly?

To acknowledge, invest in and support the extraordinary and often invisible efforts of the less eye-catching initiatives among us? For they, too, are an essential part of a thriving ecosystem. In her book Owning Our Future, Marjorie Kelly writes, "We can no longer participate in the myth that investing is about 'looking for deals.'

The industrial worldview looks at investing as a product. The systems worldview asks, ‘Who else is here?’” And to that, we authors add, an ecological worldview asks, “How is everyone doing?” As organizational leaders, we need to recognize our place in a complex and interdependent ecosystem of relationships.

LABOR ACCOUNTING

Despite how often companies proclaim their workers as their greatest asset, labor generally lives on the liability side of the balance sheet. While companies are required to make detailed accounting disclosures about executive compensation, there is little to no reporting on how they treat the rest of their human capital. In our current economic system, the most vulnerable people, those already bearing the most risk, are the least valued; they are expendable, replaceable and the first to bear the burden of structural failure, as we’ve witnessed in the inequitable distribution of harm conferred by the biologically impartial coronavirus.

Moving labor to the asset side of the balance sheet is an indicator that the

corporation acknowledges its interdependence: that its ability to survive and thrive depends upon the well-being of the whole community.

In other words, the health of the whole depends on the health of the parts. With labor viewed as an asset, the corporation would increase wages, expand training, strengthen workplace safety, provide paid leave and top up retirement plans.

ALLIES AND ENEMIES

Despite the abundance of war metaphors, business is not a zero-sum game. More often than not, one company’s innovation creates value for many. But as in war, most corporations break the world up into two sides: These are the good guys, my allies and partners with whom I collaborate; those are the bad guys, my enemies and competitors whom I seek to neutralize and defeat. Who in our ecosystem do we consider an enemy? Is it the unions? Government regulators? Large-scale competitors? Small, agile newcomers?

An indicator that an organization is operating in alignment with this natural

principle is that it considers everyone a prospective partner in sustaining the ecosystem's well-being. We would see organizations partnering with unions to help shape the long-term resilience of the workforce, with regulators to co-create policies that maintain ecological and community health, with competitors to up-level the sector's performance, with newcomers to advance innovation.

PRINCIPLE #3: NATURE THRIVES ON BIODIVERSITY

No matter where we look, we'll find some organism taking advantage of every resource, in every niche, in every environment. Nature abhors a monoculture. There are no forests uniquely made up of oak trees. And yet, we spend billions of dollars on chemicals designed to fight this compulsion of nature. Our conventional approach to agriculture, for example, deploys toxic

fertilizer and pesticides and destroys soil microbiology, leaving the world with less than 60 years of topsoil remaining. But despite our money, our chemicals and our genetic engineering—every effort we make to impose control—nature appears to outsmart us every time. Nature's resilience arises from the capacity of diverse organisms to self-organize and cooperate.

Healthy soil is teeming with billions of bacteria, fungi and other microbes that form a vital ecosystem that feeds and sustains all plants, animals and humans. No one is organizing, controlling or dictating microbial behavior. The brilliance of natural systems is their capacity to process information and adapt with a fit response. Working with rather than against nature means giving up on the idea of mastering our own species' diversity through centralizing control and taming divergence.

Here are some indicators that organizations are operating in alignment with this natural principle.



DIVERSITY, EQUITY AND INCLUSION

This may sound counterintuitive, but one indicator that an organization has fully embraced the rich intellectual and cultural diversity our species has to offer is that its DEI efforts would no longer exist. The reason so many companies have to spend so much time and money trying to recruit, promote and retain women and people of color is because they have historically functioned like monocultures. Recruiting diverse talent may not be sufficient to break up homogeneity, especially if people are asked to conform to the existing culture.

Enterprises that embrace gender, racial and ethnic diversity increasingly outperform their more traditional peers. But diversity isn't a performance strategy; it's a condition that enables all life to thrive.

GOVERNANCE

Conventional wisdom holds that to create order out of chaos, we need to impose control. That's why most organizations are built in layers of hierarchy with fewer and more powerful voices toward the top. The presumption is that the people at the top know more

than the people on the bottom and therefore are best positioned to make decisions on behalf of the whole. But Nature has a different strategy for creating order, which is through self-organization. Organisms act in accordance with simple rules that govern their behavior, relying on feedback loops to adjust their behavior in response to changing conditions.

Indicators that an organization is behaving in alignment with this principle is that there are fewer layers of hierarchy, decisions are broadly distributed, and information flows rapidly and transparently throughout the system so participants can choose for themselves how best to adapt.

WHERE DO WE GO FROM HERE?

These indicators point to an economic system that is organized around the values of interdependence, cooperation and resilience, and operates within the resource limits of a finite planet. That system may seem a long way off from where we are today. But as we collectively stand at this bifurcation point, the whole world holding its breath to find out which path lies ahead, we have to stop long enough to choose where we want to go before we design how we're going to get there.

When confronted with that choice, we can start by asking one simple question: What would Nature do?

We invest in opportunity for all people—especially those most oppressed or abandoned by our current economic system—to lead a dignified and productive life.

B **OSTON**
IMPACT
INITIATIVE
INVESTING FOR JUSTICE

bostonimpact.org



[@bosimpact](https://twitter.com/bosimpact)



[@bostonimpactinitiative](https://facebook.com/bostonimpactinitiative)