

## Proceedings of the 2020 Pathways to Planetary Health Symposium

In early March, 2020, just as the covid-19 pandemic was beginning to grip the U.S., the Garrison Institute held a symposium on “Pathways to Planetary Health: Ethics in the Age of the Anthropocene” at its renovated monastery on the Hudson River in Garrison, New York. It was a by-invitation, three-day meeting of over 50 leading practitioners of applied ecology, conservation, impact investing, and sustainable business together with cosmologists, ethicists, journalists, meditation teachers, Native American elders, philosophers, physicians, researchers, students, theologians, and writers. The program was grounded in the Institute’s mission: to apply the wisdom that arises from contemplation and insights derived from science to today’s pressing social and environmental issues to create a more compassionate resilient future.

The symposium took place at a pivotal, disrupted time in history, situated on a line of demarcation between two epochs, seeking fresh insights into what had come before and grappling with what was coming soon after. It was one of the last in-person, face-to-face gatherings before the COVID-19 lockdown, exploring what it would take to reorient societies toward planetary health, grounded in the inseparability of ecological and human systems. On the cusp of massive social unrest, just days before the death of Breonna Taylor and ten weeks before the murder of George Floyd, the symposium strove to articulate a path to social, economic and environmental justice.

Within a few weeks, the lockdown would illustrate how changing human behavior at scale, could have immediate, positive ecological impacts on everything from reductions of greenhouse gas emissions to wildlife resurgence. But the long-term effects of our decades of behaviors also manifested in a summer of record heat, storms, fires, and other climate-related disruptions.

Unfortunately, these COVID 19 declines in environmental impacts were matched by the economic declines, closing millions of small businesses, and putting up to 40 million people out of work.<sup>1</sup> More than one quarter of American people suffered from food insecurity,<sup>2</sup> at the same time dairy farmers dumped tens of millions of gallons of milk because of the lack of infrastructure to get it to those in need. Meanwhile, the nation’s health care systems struggled to keep up with the pandemic’s waves.

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<sup>1</sup> <https://www.wsj.com/articles/how-many-u-s-workers-have-lost-jobs-during-coronavirus-pandemic-there-are-several-ways-to-count-11591176601>

<sup>2</sup> <https://www.cnbc.com/2020/06/04/1-in-4-americans-skipping-meals-or-relying-on-food-donations-amid-pandemic.html> I think this is a stretch.. another article says maybe 23% so I would probably use that number instead of more than one quarter of Americans

These conditions have exacerbated the growing anxiety about the results of human management of the planet, and a deep yearning for pathways that could heal our social, economic, and ecological ills.

Although we didn't know then exactly how the multi-layered crisis we're now living through would unfold, symposium participants were well aware of the momentousness of the time. We talked explicitly, almost presciently, about how those who live through epoch-making transitions rarely see their full historical import, which often only becomes clear in hindsight.

Today, it's clearer than ever that the discussions at the 2020 Pathways to Planetary Health symposium contained some insight into our disrupted, transitional time in history, illuminating how this period of crisis and existential threat, might also become the springboard to a more resilient, regenerative future.

## I. Promoting Health in the Anthropocene

Though it may seem hard to recall now amid the crises of 2020, at the end of last year, *New York Times* columnist Nicholas Kristoff wrote that 2019 had been "The Best Year Ever" in terms of child mortality, life expectancy, literacy, escaping extreme poverty, and a host of other metrics. At the same time, it was also the second-hottest year on record, and the hottest ever in Australia, where unprecedented bushfires were among the many indicators of accelerating climate change and environmental damage worldwide.

Now 2020 seems to many like the worst year ever. As the covid-19 pandemic and social unrest play out amid wildfires, hurricanes, derechos and other severe climate impacts, our sense of multi-layered crisis may overwhelm any sense of the progress Kristoff described, while fallout from the pandemic has blunted the positive indicators he cited. Nonetheless, we're still living through a paradoxical moment, in which the dominant paradigms of our civilization have been wildly successful in one sense, delivering unprecedented progress for some, while failing spectacularly in other senses, posing disruptions and threats to us all.

At the Pathways to Planetary Health Symposium, Sam Myers, MD, PhD, director of the Planetary Health Alliance consortium of universities and NGOs, and a member of the PPH steering committee, picked up that thread and looked more closely at the dark side of human "progress," including population growth from 1 billion circa 1800 to 7.8 billion today and per capita GDP rising by a factor of 11 over the same period. Together they have driven an explosion in humans' ecological footprint, accelerating our exploitation of water, forests, fossil fuels, plastic, fisheries – virtually every resource – to critical levels. We are driving extinction at

1000 times the baseline rate, and threatening a million different species with annihilation. In fact, we are disrupting every natural system: climate, water, biodiversity, biochemical, nitrogen and phosphorous cycles, and others.

In doing so, we're threatening ourselves. These various disruptions all interact with each other in complex ways to affect core conditions for human health and well-being, including communicable and non-communicable diseases, food security, weather, air quality, habitability. In that sense, human stewardship of the planet in the Anthropocene "has become a matter of urgent self-interest," Myers said, "because if we continue on this trajectory, there will be extraordinary suffering of people as well as the impacts on the rest of the biosphere. We now recognize eco-crisis is precipitating human health crisis."

This applies equally to the pandemic as to environmental and social conditions for human health. Covid-19 incidence and morbidity is connected to climate change, because it's more severe in areas hit hardest by climate change, and in areas with the worst air pollution. And like other zoonotic diseases it is connected to population and consumption growth, which lead humans and animals to interact more closely. Lethal infectious diseases have arisen more and more frequently since the mid-20<sup>th</sup> century, when the global population was 2.5 billion. Other threats to human health and well-being -- conflict, economic inequality and disruption, mass migration and displacement -- are similarly linked to population growth, resource scarcity and environmental degradation.

But this is a highly anthropocentric view -- one of the conceptual liabilities of the Anthropocene era. "The Anthropocentric posits such a thing as a separate person not embedded in ecosystem," said Myers. But since there is no such thing, the term doesn't really make sense. In fact, the science of planetary health holds that human health and well-being can't be separated from the health of ecosystems.

To restore it, as Myers says, "We need to do everything differently: food, chemicals, manufacturing, cities, business, economics. It's not hard to imagine a beautiful aspirational future." We know how to do most of what would be required. We can choose to stabilize population growth and bring it down, for example by educating and empowering women and girls in developing countries. We know a lot about how to decarbonize energy, shrink resource consumption in food and manufacturing and extractive industries, minimize individual footprints by rethinking the human-nature interface and migrating to cities.

In terms of human knowledge and capacity, planetary health the Anthropocene is achievable. On the other hand, there are also human obstacles in the way. Human beings have the ability

restore ecosystems. But with our choices making decisive impacts on the planet, restoring the health of ecosystems depends in part on human moral, ethical, psychological and/or spiritual health which underpins our relationship to nature. That, too, is in crisis. “How did it get to be okay to treat our oceans and atmosphere as dumps, or to drive species extinction?” Myers asked. “Isn’t there something wrong and broken about our relationship with the natural world?”

Repairing that relationship was an overarching theme of the symposium, often invoked as the key condition for a livable future. Its core proposition was that progress toward human and planetary health is possible, but would require a new mental framework and a new set of ethics for the Anthropocene, derived from a sense of our place in the world and our interconnectedness with nature. We need a system, Myers said, within which it would be unethical and impermissible to degrade or disrupt natural systems, both because of the impact on the biosphere and because of the impact on human well-being.

It would have to respect and reintegrate a holistic understanding of human embeddedness as part of the natural world. For a “successful planetary occupation,” argued Garrison Institute co-founder Jonathan F. P. Rose, we need to “learn from geohistory,” and adopt solutions modeled on the successful adaptations of life on earth. Once cells evolved into differentiated parts that work together cooperatively – RNA, mitochondria, and then multicellular organisms which emerged 1.7 billion years ago – life on earth proliferated rapidly. Once humans developed the capacity for language, art, and symbolic thought (sometime between 50,000 to 70,000 years ago judging from the oldest symbolic artifacts) human migration spread across the planet.

One the archetypal images of that development is the famous cave painting of many stenciled hands in Perito Moreno, Argentina. The hands overlap, interlace and superimpose – an image of collectivity, conveying the sense that we are all here together, that individual identity is constituent of a holistic view. This is the solution we need today, Rose argued. Our differentiation and individuality are strengths, but they helped us succeed evolutionarily only when they were balanced and integrated into holism. Our economic system should therefore be integral and holistic, too.



### Capitalism at the Root

Instead of a holistic, integral economic system, we have capitalism, which protects and multiplies capital, and rewards selfish individualism. “Don’t we need a human-ism or natur-ism?” Myers asked. “Shouldn’t our economic system reflect the world we aspire to?”

Capital is a human construct, so when we debate ways of reforming capitalism, we’re debating reforming accounting system for something that doesn’t exist, except by shared convention. Capitalism has its benefits, and more efficient global allocation of capital may deserve some of the credit for recent gains in living standards and health. But they have come at an untenably high cost to the planet, and the outcome of an economic system, Myers argues, must be planetary health.

Symposium participants discussed at length capitalism’s role in reducing our relationship with the natural world to property rights and relentless exploitation of resources, alienating haves from have-nots, ignoring long-term prosperity of the many in favor of short-term profits for a

few, and fragmenting and destroying natural systems in the name of economic growth. In neoclassical economics, capitalism is supposed to maximize social utility via rational actors. But today's ecological and social crises hardly bear the theory out. On the contrary, there's a strong case to be made that capitalism has violated both social utility and rationality, and that its overweening focus on profit and growth has brought us to the current pass.

Impact investor and economist John Fullerton told the symposium the story of William Nordhaus, who won the Nobel prize in economics for his work on global warming. In a 1991 paper "To slow or not to slow," Nordhaus maintained optimal warming would be 3.5 degrees Celsius, because holding global temperatures to anything lower than that would cost too much, be inefficient, and undercut economic growth. Nations should not sacrifice economic growth to reduce carbon emissions he argued, because that would cost economies more than the effects of global warming would. "Don't let anyone distract you from the work at hand," Nordhaus told his students on winning the prize, "which is economic growth."

The problem with this argument is that widespread scientific consensus holds that above 1.5 degrees Celsius, global warming will cause catastrophic effects for people and the planet. But that didn't stop the Nobel committee from awarding Nordhaus the prize in 2018.

Many symposium participants were financial professionals and investors, working to generate financial returns for their clients or themselves. They're successful at it, but aware of the inherent contradictions of capitalism. "How can we 'succeed' in a system that is failing?" one financial professional asked.

Some participants even held that capitalism has devolved into a kind of mental disorder. "We are destroying the place we live," said a physician. "Whatever name you put on it, it's a form of insanity. Some are being hurt more than others. For some, there are so many rewards, so much wealth, along the way. It's as if we are paranoid schizophrenics having an episode with a massive playground." Another participant brought up Bernie Madoff, and said that the financial profession attracts more than its share of psychopaths and sociopaths: "It's like people with epilepsy flying planes – not a good idea."

Yet it's not as if we can simply jettison capitalism. Other participants made the case that capitalism consciously applied is key to solving our problems. Some, including Fullerton, have spent their careers identifying and working to correct the "fatal flaws"<sup>14</sup> of the finance system,

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<sup>14</sup> Fullerton's list includes: misaligned incentives; confusing means and ends; confusing speculation with investment in something that has value; the inability of markets to set limits (i.e. carbon pricing may help constrain greenhouse

and Fullerton says we need a “product recall” of conventional finance. But they also point out that, for better or worse, the flow of capital will determine what kind of systems we will build going forward, so leveraging capitalism and putting it to work for planetary health is mission-critical. In fact, Fullerton argued, “controlling how capital gets invested is now the most important question.”

Still others took a long, historical view of capitalism, which had a complex evolution along with the rise of the nation-state and the bourgeoisie, and the worldviews and competitive ethos that went with it. Many pointed out colonialism and the founding of the United States were imbued with slavery, stamping our economic and social systems with violence.

This, too, has a history. It may encode as a kind of cultural or epigenetic memory the violence of centuries of war in Europe between Catholics and Protestants starting in the early 16<sup>th</sup> Century. “Puritans coming to America brought with them all the trauma, sense of domination and conquest that often flows from people who were traumatized,” said theologian Serene Jones. Some argued this helps explain Europeans’ history in the New World, and the propensity of European people and the ideas they brought with them to enslave, exploit, commodify, consume, and destroy.

With respect to capitalism, that history is complex. For example, settlers at Plymouth Rock first tried collective land ownership (a form of communism) and the experiment failed. When United States Constitution and Bill of Rights were written, industrial pollution was all but unknown, water and air were clean, ecosystems were intact. There was no recognition capitalism and industrialization could eventually change that, and use up natural and social capital.

Today there are efforts underway to account for this by rewriting and amending constitutions. Many US states are debating, and Pennsylvania adopted, Environmental Rights Amendments to their constitutions. In 2008 Ecuador became the first country to recognize the Rights of Nature in its constitution.

### Glimpsing Alternatives

Yet it seems unlikely we can fix capitalism or repair the damage our economic system and the mental models behind it has wrought by constitutional or policy fiat, using the same mental constructs and institutional models that gave rise to it. Symposium participants imagined and

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gas emissions, but can’t impose a quota, which is what the climate needs); and the overshoot inherent in positing exponential growth, which he says will ultimately either crash asset prices or destroy the planet.



sought models for the large transformations that rethinking our relationship to the natural world and restoring planetary health would require.

There was a widely shared sense that the changes we need can be positive, and that “having a good Anthropocene” is possible if we make the right choices. But there was also a shared sense of the need for them to feel tangible and viable, and for a positive vision and some direct experience to affirm that alternative approached might be as good or better than what we have now.

In the covid-19 pandemic’s early days at the time of the symposium, something like that sense of possibility had begun to emerge. Decreased mobility and depressed economic activity caused distress and suffering for many. But they also marked a radical departure from business as usual in just a few weeks, which we previously imagined policy measures would have taken decades to bring about. This afforded a glimpse of an alternative to the status quo, and prompted visible signs of resurgence of the natural world.

“What’s happening Hong Kong Harbor amid all the decreased commercial activity is that the dolphins have come back for the first time in decades,” one participant reported. “To get an inkling of an alternative way to live, you have to start to have an experience of something else that looks equally satisfying or more satisfying than what you think you’re giving up.” Soon after, Venice’s canals ran clear and filled with fish, and wild mountain goats walked the streets of a Welsh town. Energy demand in industrialized countries fell, global greenhouse gas emissions declined 5.5%.

Those effects were temporary. GHG emissions quickly rebounded, and even the modest temporary mitigation of GHG emissions came at an exorbitant economic cost in lost GDP, perhaps an order of magnitude higher than could have been achieved with renewables.

But it illustrated the point: we’re far from helpless; in fact in the Anthropocene our choices have decisive impacts and will determine our human and planetary future. The question is, pandemics and other tragic disruptions aside, what can lead us to step outside of our existing frameworks and make the right ones?

## II. Shifting Consciousness, Reintegrating the Natural World

One recurrent theme running throughout the symposium was a deeply personal sense of one’s own place in the natural world. As they introduced themselves to the group, virtually every



participant talked about a personally moving experience of nature or a significant natural place in their own lives.

For ecological restoration and regenerative design expert Keith Bowers, it's his home ground of South Carolina's Lowcountry outside of Charleston. A landscape of long leaf pine forests and tidal marshes, home to American alligators and bottlenose dolphins, the Lowcountry is a one million-acre remnant of an ecosystem which once covered 90 million acres from Virginia to Texas. Charleston was also once the port of entry for 40% of enslaved Africans brought to the United States. The legacy of that history, and of white settlers' treatment of indigenous people there, is part of the lived relationship with the land today. Residents are still trying to come to terms with it.

This is where Bowers says that the pathway to restoring ecosystems begins: inside ourselves, with our own personal sense of place and relationship with nature. He speaks with authority because he's at the forefront of applied ecology and sustainable design. His work spans local and regional ecosystem restoration projects, conservation planning and green infrastructure and urban ecology planning for cities across the country.

#### From Anthropocentric to Eco-centric

Bowers is the founder of and president of the ecological design firm Biohabitats. "I have one foot in restoring ecosystems and another in capitalism," he said, "because I started a company to do it." He acknowledges the tension between the two: capitalism requires short-term returns; ecosystem restoration takes centuries. Nonetheless, ecosystem restoration is a \$25 billion industry employing more Americans than coal, timber, and steel.

Although he's one of the field's most accomplished and knowledgeable practitioners, Bowers says, "for me, knowledge will never replace respect for life and ecological process. We need to re-teach our children about what nature really is." His heroes are the Deep Ecologist thinkers like Arne Naess, John Seed, and George Sessions, who opened his eyes to how the language of "the environment" and "natural resources" posit the natural world as something separate from ourselves, there for our taking or use. Even well-meant terms like "ecosystem services" and "stewardship" convey this sense.

Objectively speaking, the opposite is true. Human beings are emanations of the natural world, inseparable from it, interdependent with it. We're not only connected to all other organic life on earth, we're composed of the earth itself. In *Thinking Like a Mountain*, John Seed wrote, "The distinction between life and lifeless is a human construct. Every atom in this body existed

before organic life emerged 4000 million years ago. Remember our childhood as minerals, as lava, as rocks? Rocks contain the potentiality to weave themselves into such stuff as this. We are the rocks dancing. Why do we look down on them with such a condescending air? It is they that are an immortal part of us.”

Bowers argues that we can reclaim wildness, as in E. O. Wilson’s concept of “half earth,” a call to set aside half the land and sea area of the earth for wildlife, free of humans, to protect disappearing biodiversity. But we can’t take ourselves out of the equation, as if what we’re protecting is “out there,” separate from ourselves. He believes we must also reclaim wildness in the landscapes where we live and work, in the places and ecosystems we’re personally intimate with and care most about. The key, he argues, is re-forging our own personal relationship to the natural world and recognizing our own integral participation in it. He says we need to shift our awareness “from the Anthropocentric to the eco-centric.”

Could capitalism be compatible with such a shift? Bowers isn’t sure yet. “We’ve all seen those VEN diagrams of sustainability with people, planet, and prosperity, or earth, culture, and economy,” he said. “The sweet spot [where the three circles overlap] is supposed to be sustainable. But that’s superficial. We can’t have it all without restored ecosystems... I have my own VEN diagram that I put on the wall 15 years ago: capitalism, altruism, and activism. The sweet spot between those [is] recognizing that business alone can't change things, maybe activism alone can't change things, [and] we have a long way to go with altruism. How do those three things come together to make change for the good of the earth and for our relationship with the earth? What parts of these paradigms may not work or need to change?”

### A “Riot of Reciprocity”

The interaction between these elements of natural systems, human intervention and personal mindset is dynamic and complex. Bowers uses permaculture pioneer Tim Murphy’s phrase “riot of reciprocity” to evoke the interplay between scale, living systems, and personal compassion that regenerative design requires.

Reciprocity is a core value in Native American cultures. Taking and giving back to the earth and one another suffuses indigenous social, economic and environmental practices. The “three sisters,” an indigenous pattern of planting corn, beans and squash together, is often cited as an example. The corn stalk supports the bean’s trailing vine, the bean plant fixes nitrogen in the soil for the plants to use, the squash provides ground cover, keeps the soil moist, and deters animals with its spines. The produce is perfect combination of proteins for nutrition. In fact,

that's an oversimplification of the many complex layers of reciprocity to the method. It's a fully regenerative system, integrating human needs and human agency with natural systems.

Grandfather T8amink (the Algonquin spelling of "Dominique") Rankin, an Elder of the Anishinaabe people, spoke the symposium about the indigenous view of reciprocity between humans and the earth, which is both regenerative and deeply personal. "The earth is not a business," he said. "Give love to it. It is not an object. It is a mother. And when she suffers, we suffer. And when you suffer, she suffers."

Born in the forests of northern Abitibi in Western Quebec to a family that preserved his ancestors' nomadic ways, at age seven Grandfather (as he prefers to be called) was appointed to take over from his father as hereditary chief. From early childhood, he was placed on a path of learning with the elders of his community. "It took me 50 years of study, from seven to 58, to officially become a chief," he told the symposium.

But along the way he became one of the roughly 150,000 indigenous children forced to attend residential schools funded by the Canadian Department of Indian Affairs and administered by the Catholic Church. The schools were designed to separate indigenous children from their culture and forcibly assimilate them. They were rife with abuse.

Grandfather's journey from that experience to chief was about his own personal, spiritual regeneration as well as renewal of his people and regeneration of the earth. He harbors no grievances about what he went through. He learned from his elders to "accept what is happening today, never be angry or aggressive." He has no animosity for those who oppressed his people, in fact, he stresses our commonality, and our shared predicament: "You are Anishinaabe, a human being. It is not about your color, but your blood. We all have the same prehistorical blood. Ancient people walked on the earth. Today we can't, everything is polluted, and you can hurt yourself."

And although it's not easy to describe, Grandfather's presence communicates the sense that his personal equanimity and compassion for others is of a piece with his attuned, intimate relationship with the earth. For him, the personal and the planetary aren't different; they're the same thing, and that basic truth makes the path to regeneration and health self-evident. "It is simple, not complicated," he said. "When we have too many questions, we get lost. We must act now."

### A Copernican Shift

For those whose worldview derives from the European tradition, admittedly it can be more complicated than that. But like other cultural and wisdom traditions, the Western thought and heritage also contain elements that can help us reconnect our personal relationship with the natural world, and cultivate regeneration.

Marcelo Gleiser is a renowned theoretical physicist and a professor of Natural Philosophy at Dartmouth. He has a keen interest in cosmology and astrobiology, the study of life in the universe. He wove for the symposium of a kind of scientifically informed creation myth, which began, “Five billion years ago, our grandmother, the galaxy, was floating...”

He narrated the formation and dissolution of stars, and the formation and ejection into space of atoms of carbon, calcium, magnesium, gold, iron, and all the other elements which congealed into planets including Earth, and eventually formed our own bodies. Most of Earth’s water also came from space in the form of ice on comets. Gleiser covered the advent of bacteria, then cyanobacteria and photosynthesis, which generated Earth’s atmosphere and transformed the planet. Then came the Cambrian explosion of new life forms, the appearance of trees 350 million years ago, and finally, orders of magnitude more recently, humans.

As a scientist with a long view, the language Gleiser uses to describe this history doesn’t sound all that different from indigenous teachings: “The earth is part of a big cosmic dance of energy and matter....We’re only 200,000 years old – nothing compared to trees. They developed smart strategies; they have a lot to teach us....We were blind and pretentious, thinking our way of knowing is the only way....Differentiating ourselves, we started to manipulate nature to serve us, and we became arrogant.”

In Western cosmology and the history of science, Copernicus marks a crucial turning point. His argument, published in 1543, that the earth revolves around the sun was later termed the Copernican Revolution (though it didn’t originate with him), a forerunner of the Scientific Revolution. Copernicus was a polymath who also formulated important economic theories including the “quantity theory of money” relating pricing to the money supply. And he had a profound effect on Western philosophy: Kantian idealism in which the human mind shapes the sensory world of objective reality rather than the other way around (which is also related to his moral philosophy where reason is the source of morality), is known as Kant’s Copernican Revolution.

“Before Copernicus, the earth was the center of the cosmos,” said Gleiser. But after the Copernican Revolution, our ideas about our place in the universe and human subjectivity became de-centered and inverted. It ultimately meant that “we’re just another planet, not so

central after all. That narrative colored the way we started to think about the planet,” paving the way to see the earth a commodity that can be exploited since there is nothing special about it.

Gleiser is working to articulate what he calls “a post-Copernican narrative” of “a new myth of creation for our time,” a narrative that can restore our sense of the earth as special, central or even sacred. Thomas Berry wrote in *The Great Work*, “We will recover our sense of wonder and our sense of the sacred only if we appreciate the universe beyond ourselves as a revelatory experience of that numinous presence whence all things came into being. Indeed, the universe is the primary sacred reality. We become sacred by our participation in this more sublime dimension of the world about us.”

Astrobiology’s search for life on other planets offers a post-Copernican confirmation of the sacredness of the Earth and our participation in it. “In last 20 years, we’ve found all these other worlds to confirm how special this world is,” Gleiser said. “Other planets may have water and carbon, but the odds are heavily against having anything like we have here. We must understand our planet’s importance, understand the precarious way we are treating it. We must profoundly change the way we relate to each other and the planet... This would be the foundation perhaps for a new ethics, a post-Copernican ethics of how we should behave as protectors of this planet, because it's such a unique thing.”

Gleiser argues that in this way, “science can actually inform a moral imperative.” That’s an unusual role for science, which is normally concerned with objective facts rather than subjective decision making or personal creed. But reconnecting the two is a “a new way of thinking,” a kind of second Copernican Revolution in consciousness, which Gleiser believes is possible, and which others believe may be already underway.

### A Mystery to Ourselves

The Rev. Dr. Serene Jones, president of Union Theological Seminary, started out as a Reformation scholar. She immersed herself in the history of the post-Copernican world, a watershed of what we now recognize as a revolution in consciousness encompassing Renaissance and Enlightenment, the shift from feudalism to capitalism, the rise of nation states, the dissemination of knowledge through printing, and a new understanding of humanity and our place in the world. But historical eras are demarcated long after the fact, and those who lived through those epoch-making transitions rarely recognized how profound the shift was. “They were in the midst of a huge transformation, but they did not know that,” Jones told the

symposium. “They did not think they were giving us the Reformation. Only in hindsight could history see the magnitude of the change. That’s true of us too.”

She describes the Reformation as a “slow process of information and subsequent relationships changing” which to contemporaries remained unremarkable, or even unconscious, until it reached a tipping point, past which everything changed, visibly and rapidly. She believes an analogous process is happening in our own times, pregnant with changes in consciousness we don’t fully recognize. “We’re in an almost unconscious state of the building change,” Jones said. “I think we’re getting closer to that tipping point than we realize. It’s interesting in this post-Copernican time to think about how the collective unconscious works. What is it that we know, but we don’t even know we know it? But it’s influencing how we act and the decisions we’re making.”

Jones gave a deeply personal example of an evolution in consciousness percolating in an unknown, mysterious way. When she spoke to us, her father, also a theologian and professor, was in hospice care in Oklahoma. In moments of lucidity he told her that he realized he had lived his life in three modes: mind, will, and body. Now, he said, at the end of his life, he felt he was living in a fourth mode: a non-linear experience of time, a sense of unity interconnection suffused by love, “all of me in one simultaneous moment.”

This inkling of a different consciousness came only at the end of life, in the face of non-being. Jones describes the fourth mode as “coming to grips with what life consists of at the very moment we reckon with death.” Even then it remained less than fully conscious or articulable. It reminded her of a conference she had attended where technology experts predicted artificial intelligence would never be able to replicate human abilities, because we ourselves don’t even know what those abilities are. “We don’t have the slightest idea who we are,” she said. “We are a mystery to ourselves.”

There’s an analogy with the way epoch-making turning points in history are imperceptible to those who live through them, and typically happen when faced with disruption, threat, and loss. That idea is found in many wisdom traditions, for example “following the tracks of the ox” in Buddhism, where loss is often the beginning of the spiritual path. If we are gestating some decisive, positive shift in consciousness in our own time, that process can’t be separated from the very real existential threats we face. “We can’t talk about pathways to planetary health without reckoning with our own potential for non-being as a species and a planet,” Jones said. “We could cease to exist. It’s powerful to open this space up; it can lead to radical change. Those cracks and fissures, grabbing us, will not let us go until we take the greatest stride humanity ever took.”

John Fullerton put it this way: “We are not living in an era of change, but a change of era, an epochal shift. It’s not just the [arrival of the] Anthropocene, but also a shift from the modern age to something like the integral age.” This envisions a positive, salutary shift in our consciousness already underway, but it’s also fraught with existential threat. “We are going through something like this time’s version of the Dark Ages, where we’ll either collapse or rethink and reinvent everything.”

The comparison with the Dark Ages might extend to pandemics, then and now. Covid-19 is just one of many cracks and fissures to navigate in our time, but already seems epoch-making, dividing our awareness into what came before and what may come after. Will it be collapse or reinvention? Those who lived through the plague in the 14<sup>th</sup> century faced a similar blind curve, sensing that the old order was disrupted, but not able to see if a new one was emerging. Historian Barbara Tuchman wrote that “people envisioned the possibility of change in a fixed order, the end of an age of submission came in sight, the turn to individual conscience lay ahead. To that extent the Black Death may have been the unrecognized beginning of modern man.”

### III. Values and Ethics for the Anthropocene

In a session on “Shared Wellbeing: Growing Altruistic Societies,” Serene Jones, Karennia Gore and Mary Evelyn Tucker mined values and mental models from the world’s faith and wisdom traditions for lessons they hold for the Anthropocene.

Each of them are thought leaders in the overlapping fields of religion, ecology, and ethics. The Rev. Dr. Serene Jones is the first woman president of the 182-year-old Union Theological Seminary (UTS), and her scholarly work is deeply grounded in theology, ethics, history, politics, economics, women’s studies, and race studies. Karennia Gore is the founder/director of the Center for Earth Ethics at UTS, which bridges religion, academia, policy, and culture “to discern and pursue necessary changes to stop ecological destruction and create a society that values the long-term health of the whole community of life.” Mary Evelyn Tucker co-directs the Forum on Religion and Ecology at Yale, where she is a Senior Lecturer and Senior Scholar teaching in a joint MA program between the Yale Divinity School and the Yale School of Forestry and Environmental Studies.

Together they explored spiritual values and concepts from a wide range of traditions like grace and wonder, justice and mercy, compassion and altruism, and many others. As Karennia Gore said, echoing a point Serene Jones made in her book *Trauma and Grace*, it’s habits of the heart



and imagination that bring healing, not doctrines. But as habits or practices, which values and concepts might help us model and bring to consciousness the shifts in awareness that healing requires? Which might form elements of a new ethics that could help us heal our personal relationship with nature and help our societies live in a more reciprocal, regenerative way?

Healing and regeneration are subjective matters of creed, faith, values, or ethics, as opposed to objective matters of science or policy, for two main reasons:

First, as environmental journalist and originator of the term “Anthropocene” Andrew Revkin pointed out, science and policy are often far from objective, and can be deeply informed by values. For example, the Obama administration determined that the “social cost of carbon” at \$42 a ton, which sounds very technical and objective. But a close read of the National Academy of Sciences analyses that led to that number reveals many subjective, value-driven decisions went into it, for example how much weight to give to lost US GDP vs. impacts of sea level rise on people in Bangladesh. Such decisions are laden with value judgments and reflect the values we hold. Marcelo Gleiser stressed the need for a new way of thinking that reconnects science and values, so that “science can actually inform a moral imperative.” But it also works the other way: values deeply inform science.

“I’m a science writer – at least I thought I was a science writer for 30 years,” Revkin told a group of symposium participants. “Then I got more involved in the behavioral sciences and deeper constructs around what the Anthropocene can be like.” Those constructs are often based on subjective values. Vox energy reporter David Roberts points out that values-based decisions often lurk behind what purport to be objective scientific or technical questions. “That’s why the conversation here [around values and ethics] is so deeply important,” Revkin said.

The second reason why values, ethics and subjective narratives matter deeply to our planetary future is because they matter deeply to us. Our purpose as humans, and perhaps only unique ability as humans, Mary Evelyn Tucker says, is that we are dream-making, symbol-making animals. She cites as “the mantra for our time” the poet Adrienne Rich’s line, “My heart is moved by all I cannot save. So much has been destroyed I cast my lot with those who, age after age, perversely, with no extraordinary power, reconstitute the world.” This refers to a symbolic, subjective reconstitution, human beings reimagining the world and retelling its story, a subjective framing that conditions objective reality.

Tucker is the co-author of a biography of Thomas Berry, whose most famous phrase is, “The universe is a communion of subjects, not a collection of objects.” Berry went on to write that

“The devastation of the planet can be seen as a direct consequence of the loss of this capacity for human presence to and reciprocity with the nonhuman world.” Repairing the devastation and reestablishing presence with the nonhuman world is a subjective, symbolic act of communion.

That being the case, to find pathways to planetary health, it’s appropriate – even necessary -- to seek guidance from the world’s spiritual traditions, and to connect them to science and ecology. “The new story is the old one,” Tucker says. Science may elucidate the objective facts of our ecological predicament, but we still have a need and a predisposition to understand it subjectively and symbolically, “with spirituality and human dignity and emotional sensibility.”

To the extent that ecology, science and spirituality remain apart, that disconnect is a source of confusion and despair for Tucker’s students. The longing to make symbolic sense of the losses and disruptions of our time runs deep. But on some level, she says, these different elements are interacting now as “juicy, fecund resources already leavened in our consciousness.”

### Grace and Justice

One spiritual value that lends meaning to disruption and disconnect is grace. “Every book I wrote has the word ‘grace’ in the title,” said Jones, whose most recent book is her memoir *Call It Grace: Finding Meaning in a Fractured World*. She defines it as “the reality that all that exists is loved, simply loved, and that love is a gift. It is the bond out of which we come and return.”

Unlike justice, grace doesn’t distinguish between the deserving or the undeserving. It falls on the just or the unjust alike. It cannot be earned or deserved or bought, only freely given, and all may receive it. Jones calls this a “radically egalitarian” dimension of grace, which stands over and against concepts like consumption and capitalism. “It erases all the standard measurements we use to calculate value in our lives,” she said.

Grace is inclusive and exists in many wisdom traditions worldwide. Symposium participants from different cultural and linguistic backgrounds said it was easy to find a translation for it, including in Native American traditions, whereas translating “justice” is more difficult. “Justice is at home in Abrahamic traditions,” Jones said, “but in East Asian traditions, ‘justice’ might not be the right word.”

Regarding the all-enveloping nature of grace, Gore recalled Grandfather Rankin’s words that the earth was not a business, but a mother, and asked how issues of gender or patriarchy may figure in exclusive vs. inclusive values.

In matriarchies, Jones said, strict binarism between male and female didn't exist, whereas in patriarchal society, it's firmly embedded. She cited as a particular influence French post-structuralist theorist Luce Irigaray's writings on gender, which includes the idea of gender fluidity. Hard and fast distinctions like gender binarism reflect what Jones called our society's "mechanical" view of reality. "We think of people and objects with edges, borders, solid, and we think about how they should connect like parts of machine," she said. "But what if we replace this with fluidity, and think about how fluids work, always permeable boundaries?"

That would be an inclusive model of identity and relationship compatible with grace, and with Thomas Berry's "communion of subjects," or as Jones put it, "not a relationship of solidity and boundaries, but a fluid boundary where we swim together." Rather than a collection of separate objects, ranked and distinguished by calculations of value, it views humans and nonhumans as connected subjects, awash in the same all-encompassing reality.

Berry wrote that such an intersubjective view was necessary to recover our sense of wonder the sacred. Since childhood, Karenna Gore felt a sense of wonder before nature, and she evoked it for the symposium by citing Rachel Carson, Terry Tempest Williams (who participated in the symposium and read her work to us), and the 7<sup>th</sup> Century Byzantine theologian St. Maximus the Confessor, who said, "only wonder can comprehend [God's] incomprehensible power."

As a young child Gore also "wondered" about how to live and behave in contexts she couldn't yet fully comprehend. If she cut the leaves of plants with her scissors, was it wrong? How was she supposed to behave towards homeless people she encountered in Washington, DC? In an analogous way, many of us also struggle to know how we should behave toward the planet when we can't see the ramifications of our actions outside our personal lives clearly. "In this crisis," she said, "Many people are simply wondering, what are our moral obligations across space, time, and species? This is the field of ethics."

But there's a certain veil of confusion, cognitive dissonance, or lack of comprehension drawn over the ethical status of our society's choices, because they are out of step with our innate sense of right and wrong, yet they present themselves as acceptable, even good. "Drivers of destruction now are mostly perfectly legal and encouraged by the culture," Gore said.

She cited Cynthia D. Moe-Lobeda's book *Resisting Structural Evil: Love as Ecological-economic Vocation*, which affirms the moral/ethical imperative of "unmasking systemic evil that masquerades as good." Learning to see what we think of as "structural injustice" as "structural

evil” is essential, Moe-Lobeda argues, because it “divulges its propensity to hide and its devious means of doing so,” unmasking its concealed violence.

“So we must unmask how we are growing selfish societies,” Gore said. “It’s important to “do it without shame, blame, hypocrisy, but we must not be so afraid of those things that we don’t penetrate and refute this...We often confuse money and virtue now -- who does ‘well.’” Stock market and economic growth often continue “regardless of inequity, pollution, depletion – part of structural evil.”

Climate change disproportionately impacts the poor and marginalized. Nine million people die from air and water pollution annually. Because of their disproportionate exposure to pollution, in the U.S., African American children are ten times more likely to die of asthma than white children. The number one indicator of where toxic sites are located in the U.S. is the race of the people living nearby. In Louisiana’s “cancer alley,” an 85-mile stretch of predominantly black communities along the Mississippi lined with petrochemical plants and oil refineries, with more being proposed all the time, cancer rates are 50 times the national average. It also includes the county with the highest per capital death rate from covid-19. “How can we [continue to] accommodate this in the market?” Gore asked.

Justice is therefore an important concept to lift up for planetary health, she argues. “Any conversation about it should have three empty chairs for the poor and marginalized, future generations, and all non-human life.” She quoted Isaiah 28:17: *I will make justice the measuring line and righteousness the plumb line; hail will sweep away your refuge, the lie, and water will overflow your hiding place.* “I want to posit environmental justice should be a plumb line for planetary health,” she said.

Justice and righteousness are very different values from grace, since they draw hard lines of distinction and include notions of judgment, transgression and punishment. One participant said that as a Buddhist practitioner, he found the whole concept of justice baffling. Compassion and love he understood as fundamental, unconditional values, whereas justice, his teacher once said, is determined by whoever holds the sword.

But for Jones, justice, love, compassion and grace are interconnected. She pointed out many traditions pair justice with mercy, which tempers the application of justice and like grace, falls on the just on and the unjust alike. And like grace, ultimately, justice as an act of unmasking and discernment, exposing and redressing evil, can also be an act of love. She quoted James Baldwin’s *The Fire Next Time*: “Love takes off the masks that we fear we cannot live without and know we cannot live within.”

Many participants found that quote especially moving, and resonant with their own lives. It illuminates our own suppressed self-knowledge and self-acceptance, the way we remain masked or mysterious to ourselves as we navigate an ethically confused world where evil masquerades as good. But Baldwin also names the remedy: love. “I experienced this personally; it’s the truth,” one participant said, “but it never occurred to me that the absence of love is what’s keeping us in this structural evil.”

If we accept love, Jones argues, justice follows naturally. “[Justice] is simply what it means to be the community that is loved,” she said. “On a personal level, if we are able to accept how radically interconnected we are, that our lives and planet are all loved...it is out of our hands, but we will all be okay. A sort of relief comes, then it allows you to be an activist for change out of calm and plenitude rather than out of fear and panic.”

By letting go and accepting grace, we can actually become more powerful as agents of change working for justice. “We aren’t in control,” Jones said. “We need to work hard, but we in this room can’t suddenly figure it out and fix it.” The notion that we can master the problem and impose a solution comes from the mindset and language of empire, she said. Jones prefers the language of love, and a mindset of subjective process rather than imposing an objective end-state. She recommends the saying, “justice is love with legs.”

### Reclaiming Confucian Cosmology

The symposium touched on other traditional concepts and mental models that framed similar issues, including some less familiar and non-European ones: “indigenous technologies” as described by Malidoma Patrice Somé, author of *The Healing Wisdom of Africa*; the Hebrew *shalom*, the right order that allows all to flourish, and *tikkun olam*, repair of the world; the Hindu/Buddhist/Jainist *ahimsa*, non-harming or nonviolence towards all beings, which Bill McKibben describes as one of the two great “technologies” along with solar panels; the concept of *kinosis* or self-emptying, which Sallie McFague uses to urge restraint in consumption in her book *Blessed Are the Consumers*.

Mary Evelyn Tucker proposed the Chinese traditions of Confucianism and Taoism as particularly relevant models that merit reexamination now. With the exception of indigenous cultures, they are the oldest traditions that continue to exert influence today. They may be less familiar to Westerners than some other traditions because translations are so difficult. Tucker recently finished one that took her 26 years. But European Enlightenment thinkers including Leibnitz admired them, and it’s worth understanding them better today.

Confucianism and Taoism are the applied side of Chinese thought, focusing on the common good, covering in detail systems of government, civil service, agriculture. “Confucian thinkers were all about putting theory into practice,” Tucker said. She described the tradition’s three governing metaphors:

- Concentric circles -- rippling out as when a pebble is dropped in a pond, connecting self, family, friends, society and the cosmos, in a deeply relational, fluid way;<sup>15</sup>
- Cultivation -- watering, weeding and growing seeds of virtue<sup>16</sup> in ourselves, which we’re born with, but which require tending, with moral and spiritual cultivation in the heart of the circles; and
- The cosmic family -- heaven, earth and humanity, where the cosmos is the father, earth is the mother, and humans, the children, complete the triad by their alignment with both.<sup>17</sup>

“This is an extraordinary image of who we are,” Tucker said. It’s a symbolic linkage of human consciousness to the largest, most expansive identity we can imagine or reimagine for

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<sup>15</sup> One of the most famous passage from Confucius runs, “Those in antiquity who wished to illuminate luminous virtue through the world would first govern their states, wishing to govern their states, they would first bring order to their families. Wishing bring order to their families, they would first cultivate their own persons. Wishing to cultivate their own persons, they would first rectify their minds. Wishing to rectify their minds, they would first make their thoughts sincere. Wishing to make their thoughts sincere, they would first extend their knowledge. The extension of knowledge lies in the investigation of things.” The structure then reverses, like the ripples in a pond running backwards to their source: “It is only when things are investigated that knowledge is extended; when knowledge is extended that thoughts become sincere; when thoughts become sincere that the mind is rectified; when the mind is rectified that the person is cultivated; when the person is cultivated that order is brought to the family; when order is brought to the family that the state is well governed; when the state is well-governed that peace is brought to the world.”

<sup>16</sup> The fourth century Confucian philosopher Mencius wrote, “All human beings have the four beginnings or innate seeds of virtues: the heart (xin 心) of commiseration, the heart of shame and dislike, the heart of deference and compliance, and the heart of right and wrong. The heart of commiseration is the beginning of benevolence. The heart of shame and dislike is the beginning of righteousness. The heart of deference and compliance is the beginning of propriety. And the heart of right and wrong is the beginning of wisdom.” (Mencius, 2A:6).

<sup>17</sup> One of the most quoted passages in the Confucian tradition is by 11<sup>th</sup> century philosopher Zhang Zai: “*Heaven is my father and Earth is my mother, and even such a small creature as I finds a small place in their midst. Therefore, that which fills the universe I regard as my body and that which directs the universe I regard as my nature. All people are my brothers and sisters, and all things are my companions. The great ruler (the emperor) is the eldest son of my parents (Heaven and Earth) and the great ministers are his stewards.* Respect the aged – this is the way to treat them as elders should be treated. Show deep love to the orphaned and the weak – this is the way to treat them as the young should be treated. Even those who are tired, infirm, crippled or sick, even those who have no brothers or children, wives or husbands, all are my brothers who are in distress and have no one to turn to.”

ourselves. It also connects us to the greatest, most expansive virtues, which are variations on altruism, such as the Buddhist *karuṇā*, compassion or self-compassion. Tucker identified it with humaneness, where “to be humane is comprehensive compassion for the whole, [and] you are in resonance with the creativity of the universe.”

This is of course an aspirational view. In theory, humans are supposed to cultivate their inborn seeds of virtue and weed their gardens, in practice, they may pull up garden plants and cut down forests in an overweening monoculture of the self. But the Confucian vision of the cosmos, the earth and humans as part of a single, seamless system with no division has huge implications for what it could mean to be human, Tucker says, and is worth retrieving and reconstructing for our time.

### Cultivating Virtue and Shared Well-Being

“Remember when you didn’t know how to tie your shoes?” Bill Vendley asked the symposium. “You were learning the exquisite choreography of nerves and muscles. Once you really learned, you could do it in any position. It became effortless, because you developed the learned habit. The habit had to be patiently acquired. We call this a skill.”

Skills are adaptive and deal with tasks, he said. But applying values, ethics, or virtues is a different sort of endeavor. Instead of accomplishing a specific task, working to live one’s chosen values is a practice, never really finished or accomplished. “Kindness, grace, generosity, love, mercy -- those bring us to states of being which we can fall out of,” Vendley said. “Our task is [applying] the ethics of Anthropocene. Technique is important, but not sufficient. It requires virtues, both ancient and emerging.”

He recalled a story Grandfather Rankin had shared about heading off in a canoe as a pre-teen for a coming-of-age ritual. It was a personal journey, not just an arrival. “He was being inculcated in virtuous habits,” Vendley said.

Vendley, Grandfather Rankin, and over 1000 other religious leaders from 100 countries – women, men, and youth – participate in the World Conference of Religions for Peace, of which Vendley is the Secretary General Emeritus. It is a global coalition of diverse religious communities working to stop war, end poverty, and protect the earth. The UN, national governments and scientists are also involved. When the Conference sought common language for a shared vision of peace, it settled on the term “shared well-being,” where “sharing” had the sense of an inclusive community of being, human and nonhuman.



“They agree there is something called human dignity,” Vendley said. “We aren’t just means, we are also ends.” They also agree that “there is an unbreakable link across the community of being, which requires the cultivation of virtue to unfold,” he said.

In this crisis, Vendley said, we need to recover and practice virtue together across the “fourfold community of being” – the individual, society, the earth, and the sacred. It’s a view which the Greek philosopher Diogenes expressed 2400 years ago with the aphorism, “I am a citizen of the cosmos.” Philosophic traditions like cosmopolitanism teach that the world belongs equally to all its inhabitants, human and otherwise, that humans belong to the entire world, and that to be citizens of it requires the practice of virtue. Many contemplative traditions teach that seeking our own place in the fourfold community entails wonder and mystery.

But what Vendley called “the cult of progress,” which has obtained for only the last 200 years, is inimical to these teachings. It submerges the subjective elements of wonder and mystery and the personal cultivation of virtue in favor of an overweening focus on measurable progress toward an objective goal. This cult “was experienced as a religion,” he said. “It said, in effect, ‘We can work this out. We’ll design it. There’s no need for mystery or virtue. We’ll go back to skills, like tying shoes. We’ll have progress on our terms.’ But that cult is disappointing us.”

Some renovated form of progress is clearly necessary, Vendley said. But if we’re to build the fourfold community and a livable world, we need a “profound repositioning” and a different understanding of what progress means.

### Altruism and Its Alternatives

The symposium’s discussion of values and mental models was originally billed as a search for “shared wellbeing” and ideas conducive to “growing altruistic societies.” But “altruism” is problematic as a framing word. As Karenna Gore said, many of us wonder about our moral obligations to others across space, time and species. Altruism can connote a kind of catch-all obligation whereby we owe them everything we can give, as if our sense of self is submerged in favor of the needs of others, or completely annihilated in an identification with the other. That may not lead us to the ethics we need.

Jonathan F. P. Rose described a discussion he once had with deep ecologist Joanna Macy, who didn’t recommend “altruism” because, she said, it had an “I” in it, and conveyed a sense of personal identification with the other she thought too “cozy.” Some symposium participants

connected altruism with sacrificing oneself to save others, which may not be the most promising model for the Anthropocene.

Andrew Revkin pointed out that in practice, even modest forms of altruism like the Paris accords to protect our climate future or schemes for wealthy countries to give hundreds of billions of dollars to developing countries to mitigate climate change or adopt clean energy (e.g. REDD+ or the proposed Green New Deal) haven't worked so far. Parties to the Paris agreement are nowhere close to meeting emissions reduction targets, and most of the funding for developing countries hasn't materialized.

Others proposed various alternatives to "altruism" as a framing word. Joanna Macy had recommended "care" over "altruism," because "care" evokes our sense of relatedness to others. Some participants felt "care" risks sounding weak compared to the magnitude of the problems we face. But Serene Jones said to "care" about the future was the prerequisite value we needed, prior to all others. "We have to actually *care*, and feel interconnection to the whole human world and the whole planet, in order for justice claims to make sense as a sort of secondary layer."

Another participant recommended karma, the idea that what we personally do, say and think sets up causes and conditions we generate that profoundly affect the world, as a prior frame and prerequisite for subsequent models. "We can easily go into big systems thinking [without] connecting moment to moment to karma, our own decisions and our actions," she said. Often, our actions arise from conditioning, values and mental frameworks which are completely unconscious and which we don't even realize we hold. She quoted the philosopher and spiritual teacher Jiddu Krishnamurti: "You think you're thinking your thoughts. You are not; you're thinking the culture's thoughts." Contemplative practices can help bring those unconscious mental frameworks to light, she said.

This is why the words, stories and framing we use matter. Part of the point of consciously examining and choosing which values and mental models to adapt for the Anthropocene is that we're already harboring unconscious ones that have led us to the current crisis. But if we change the framing, consciously choose our values, and recognize and shift the conditions we unconsciously create, then we can change the world.

## IV. Applying Ethics, Evolving Solutions

Beyond the question of which values and mental models we choose, or how we reframe and restore our personal relationship with the natural world, there's a broader, societal question of how these understandings can be applied in practical ways to the pursuit of planetary health.

One participant asked, "Even before getting to thinking about the overall structure of society and what would be the right kind of relationship or what would be the right economic model, I was wondering how these concepts apply to environmental remediation or ecological restoration...or something very straightforward like amending the soil." Can establishing the "right" sort of relationship with nature help us decide on technological questions like biomimicry vs. geoengineering? Would it rule out genetic manipulation to restore endangered species as a form of human dominance of nature?

A majority of the symposium participants are either in the financial field, specializing in impact investing, or lead some form of sustainable business. As investors and innovators, they are working on practical applications of values which are different from the dominant ones of profit and growth, pioneering alternative models for business and finance that are less destructive and more restorative. These models are relatively new, and their full potential and impacts remain to be seen. But they are important experiments in shifting our prior frameworks in practical ways toward planetary health.

### Regenerative Economics

John Fullerton is the founder and president of the Capital Institute, a leading impact investment firm. He had a successful 20-year career on Wall Street, and was a Managing Director of what he called "the old JPMorgan," but grew troubled by the contradictions and the unsustainability of an economic system where unrestrained profit and continuous economic growth were the dominant values, pursued and rewarded by the wealthy at the expense of the planet.

In 2001 he walked away "on a hunch and a calling" that he should think through alternative approaches. Shortly after, he experienced 9-11 first hand, an outcropping of the veiled social costs and violence of the system. He likened the "violence" of the financial system to the violence of the residential schools Grandfather Rankin attended, and cited Buckminster Fuller's last book *GRUNCH of Giants*, a modern allegory which traces the evolution of multinational corporations from the postwar military-industrial complex to the corporate megaliths increasingly controlling daily life. It's a takedown of the corporate system. "GRUNCH" stands

for “Gross Universal Cash Heist.” But at the end of the book, Fuller also argued that if we aligned our economy with sustainable systems, humanity would be a success.

After leaving Wall Street, Fullerton went on retreat, spent years studying and grappling with these issues, and came up with a new economic model, aligned both with wisdom traditions and the latest understanding of living systems. He called it “regenerative economics,” defined as “the application of nature’s laws and patterns of systemic health, self-organization, and self-renewal to the vitality of socio-economic systems.”

He presented its core values to the symposium, which he also laid out in a seminal 2015 paper, ["Regenerative Capitalism: How Universal Principles and Patterns Will Shape Our New Economy."](#) They include, among others:

- Right relationship -- understanding that humanity is an integral part of an interconnected web of life in which there is no real separation between “us” and “it,” and damage to any part of that web ripples back to harm every other part.
- Balance -- harmonizing multiple variables instead of optimizing single ones. A Regenerative Economy seeks to balance efficiency and resilience, collaboration and competition, diversity and coherence, and small, medium, and large organizations and needs.
- Honoring community and place –nurturing healthy and resilient communities and regions, each one uniquely informed by the essence of its individual history and place.
- Holistic participation – where all parts are “in relationship” with the larger whole in ways that not only empower them to negotiate for their own needs, but also enable them to add their unique contribution towards the health and well-being of the larger wholes in which they are embedded.

With these values in mind, Fullerton is working to reimagine finance, and move it toward an integral or systemic theory of investment. In conventional finance, the internal rate of return is what matters, and externalizing costs like pollution or exploitation serve to make investors rich. Activist hedge funds go after companies for short-term extractive profit, and are “happy to ruin your life and your families to make a buck,” Fullerton said. “But what if we had a regenerative rate of return?” It would make for a fundamentally different, more integral portfolio theory.

Fullerton is trying to demonstrate the theory with his own portfolio. Instead of taking the internal rate of return as the main driver, he gives it last priority, as a floor-level constraint to provide liquidity and meet expenses. He keeps 21% of the assets in cash, and 8% in public equities. The rest are allocated to unlock the regenerative potential of investment: renewable infrastructure, regenerative land and real estate, private equity “moonshots” in sustainable food systems.

### Finance in Transition

Fullerton’s ideas have influenced the field, and some financial firms are slowly beginning to integrate more sustainable values. There are impact investment funds which specialize in solutions-oriented businesses such as KKR Global Impact, passive investment vehicles focused on ESG (environment social governance) metrics, and green bonds, all of which Fullerton says are steps in the right direction. “They are getting to pre-sustainable and on their way to regenerative. But they are baby steps still.”

Meanwhile, the vast majority of the field remains stuck in the conventional paradigm, and attracts the vast majority of capital, which only reinforces the paradigm. Nili Gilbert is the co-founder and portfolio manager of Matarin Capital, a boutique, \$1 billion employee-owned impact investment firm which is values- and mission-driven. By contrast, she points out that the three biggest asset managers in the world, BlackRock/iShares, Vanguard, and State Street Global Advisers, account for \$12.763 trillion or 60% of all mutual funds.

The bigger the investment fund, Gilbert says, the more aggregated the investments, and the more intently focused fund managers are internal rate of return, the more disconnected they become from the end-users –teachers and firefighters who need a pension – and the more insulated they are from the larger social and environmental impacts of their work.

In the US, passive investing which automatically tracks market indexes now controls nearly half the stock market, and has surpassed investment in active funds where stocks are being picked thoughtfully. That means that the majority of US assets are blindly invested in business as usual, chasing higher returns with no regard to broader impact. “With passive assets, if you look the social and environmental impacts, it’s utterly bleak,” Gilbert says. Such investment patterns reinforce business as usual, and we’re on track for 3 to 4 degrees of warming (as Nordhaus recommended) and social upheaval if we stay the current course.

Like Fullerton, Gilbert says investors need new benchmarks and criteria to define and account for social and environmental impacts, which in the current system are externalized rather than

priced in. Businesses need to maximize stakeholder value as opposed to shareholder value, since few of them will thrive if democracies break down or coastal cities are under water.

We also need to distinguish between short-term vs. long-term returns, because in the long-term, sustainable investments get more attractive. In Canada, Gilbert found managers' investment portfolios are less focused on short-term return, and are further along the sustainable investment curve, largely because they discovered in the 2008 financial crisis that certain types of sustainable and responsible investments underperformed less than other stocks. To that extent, she said, "[looking at] ESG stocks is another way of looking at high-quality stocks." If you know you'll be invested for many years (and the planning horizon of some institutional investors like pension funds and insurance companies is 50 or 100 years), it makes sense to ask how your investments will prepare you for a changing future. Given the urgency of climate change, more long-term investment could be used to leverage more near-term action.

In discussions symposium participants brought up evidence of both "astounding" progress and continued retrenchment in business and finance. In an unlikely alliance, McKinsey & Company and Woods Hole Oceanographic Institute issued a joint report on climate science. The CEO of Chubb Insurance announced it would discontinue flood and fire insurance in vulnerable zones – an official recognition and pricing-in of the reality of climate change. University endowments and municipal pension funds are increasingly divesting from fossil fuels. In his annual CEO letter, BlackRock's Larry Fink recently pledged his company would make climate change the focal point of its \$7 trillion investment position and change its asset allocation accordingly.

On the other hand, these changes came about largely through public pressure rather than a voluntary expression of social or environmental responsibility. And they may not be immune to Cynthia D. Moe-Lobeda's critique of structural evil masquerading as good. Despite the Fink letter, BlackRock continues to make harmful investments. Yale University is working on divesting its endowment from fossil fuels, but it also accepted the largest donation in its history from Steve Schwarzman, CEO of Blackstone, which profited from, and some say was largely responsible for, the 2008 financial crisis.

Some impact investment funds genuinely prioritize impact, though one financial professional told us you have to "cherry pick" to separate the "sheep" from the "wolves" and find the ones that live up to their stated impact mission. Because they're constrained by the need for sufficient revenue and cash-flow, over time impact investment funds may add investments that guarantee short-term returns to their portfolios, which tends to erode their mission.

Participants registered a concern that impact investing is far from the “product recall” Fullerton advocates, and adds little more than a veneer of sustainability that ultimately perpetuates a fundamentally unreformed system. “We’re playing into the [existing] system of finance,” one said, “adding some principles to it, but we’re using the same old language.” Others pointed out that impact investing hasn’t transcended the elitism of Wall Street and for the most part remains accessible only to wealthy and institutional investors. Even DIY sites like AngelList and RobinHood offer few points of entry for average 401k investors, since many of the ventures they list require a minimum investment of \$100,000. To change this would require a distributed system of finance that doesn’t exist today.

Even supposing the financial field were genuinely transformed in favor of widespread, sustainable investment, some question what the ultimate impacts would be. Paris accords and other climate goals call for cutting emissions 50% by 2030. There was consensus among the group that that won’t occur, and we’ll overshoot emissions targets. Some in the financial field report “whispers” of shifting climate-conscious investment from mitigation to adaptation, such as building sea walls or more resilient electric grids. Such infrastructure projects are important, but at the same time, there’s a kind of stigma against “admitting defeat.” “Who’s going to invest in that?” one asked.

Some argued the NGO sector or public sector were better placed than the retrenched financial sector to push for the solutions we need. But one participant reported that the billions the German government invested in sustainability sometimes yielded perverse results. For example, government funded efficiency upgrades to housing were intended to save energy and money, but prompted landlords to raise rents, which hurt tenants. “In Berlin now there’s a famous saying,” he said: “it’s good for the climate, but very bad for people.”

Some participants felt the slow pace of change, and the perverse incentives that remain in the way, call for more public pressure to break through them. “Nothing will happen because we wish it,” said one. “Any change requires some level of sacrifice, and people don’t sacrifice unless they are under pressure,” said another, “and with climate change issues, that pressure’s not tangible.” Others believe changes we need could be motivated positively, and recalled how the moral force of religious communities drove divestment from defense and tobacco stocks.

One financial professional predicted that climate change will reach a tipping point and transform the financial field: “It’s going to come in and hit everything,” he said. “It’s going to change modern portfolio theory, asset allocation and risk reduction return. We’ll try mitigation for a while, but then I think we’ll be rushing to adaptation, because the planet is moving faster than the markets are...It’s interlaced in the regenerative principles...where the [most important]



measure is about planetary systems, society, humanity, ecosystems. They [will] become the fundamental factors driving everything else. That's when I think we finally going to shift and move to a new paradigm."

### Learning from Patagonia

Patagonia, an outdoor apparel company, is America's best known socially responsible business. With revenues of \$600 million, it's not on the same scale as market movers like the \$7 trillion BlackRock. But it pioneered sustainable business before models like ESG companies and B corporations existed, and it's an iconic example of how businesses can be values- and mission-driven and succeed.

Vincent Stanley is Patagonia's "director of philosophy," its informal chief storyteller and has been with the company since its founding in 1973. He shared with the symposium his thoughts on sustainability and economics from the hands-on perspective of making clothing and equipment, managing supply chains, and marketing to and educating consumers.

That's a very different viewpoint from working in finance or academia. For example, Stanley relates climate change's global impacts to the company's direct experience of them in Ventura, California, where 75% of its employees were displaced by smoke from the California wildfires. "We cleaned up from that, then had a 500-year event of boulders tumbling to the sea, killing people and blocking highways."

Stanley's critique of capitalism is rooted in his experience in the clothing industry. He quoted Marx, who wrote in *The Poverty of Philosophy*, "Without slavery there would be no cotton, without cotton there would be no modern industry." He described how industrialization accelerated clothing production and demand for cotton, and since England lacked the land to grow it, so they shipped cotton produced by American slaves to England for manufacture. "This model has no conscience," he said. "It is based on relentless expansion."

Like other symposium participants, Stanley cited deep ecologist thinkers, and quoted Aldo Leopold's essay "The Land Ethic:" "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

Patagonia strives to put such ethics into practice. From its inception it was values- and mission-driven. It started by making mountain-climbing equipment for a small, close-knit community of

climbers whose values the company shared. “If you are a climber you go a mile from the road and your experience of life changes,” Stanley said. “You’re at once more vulnerable and more self-reliant.” For them, having high-quality, durable equipment can be a matter of life and death. “You had to make best quality because customers’ lives depend on it,” he said. “It was a small world so I would have known who would have died.”

Although Patagonia was profitable, “we didn’t get rich quick, partly because we had a sense of mission. We worried about the environmental and social implications of what we were doing.” In the 1980s, the company became aware of the harmful footprint of cotton production. In the US, it’s the third largest user of pesticides (after corn and soybeans) and requires a disproportionate amount of harmful agricultural chemicals and water compared to other crops.

The company decided to eliminate conventionally grown cotton by 1996, and began by switching to organic cotton. But organic cotton in addition to being harder to find and more expensive to buy, is also harder and more expensive to work with. “When we bought the organic cotton we lost the supply chain for spinning and weaving,” Stanley said. “So we asked our workers to invent a whole new system.”

It was a lot to ask. To eliminate conventional cotton, Patagonia’s employees would have to reinvent the supply chain and manufacturing process, which would necessitate raising prices for consumers who hadn’t asked for the change. The company decided that telling them to find a way wasn’t sufficient; it had to *show* them why it was necessary.

“We rented buses and took them to the cotton fields,” Stanley recounted. “The first thing you notice is the smell. The whole Central Valley smells of phosphates.” Cotton monoculture has exhausted and damaged the soil. “The only reason the dirt still holds the cotton plants is that they are held in mechanically and given water and fertilizer.”

That firsthand experience gave Patagonia’s staff a personal stake in the impacts of cotton production, and helped generate the engagement and commitment required to find and implement solutions. They developed new ways to make clothing out of synthetic materials made out of recycled plastics. The company reached its goal of eliminating conventional cotton by 1996. It made the environmental footprint of its operations public, and offered clothing made from recycled materials.

“We took responsibility for everything that went into the clothes, including labor,” Stanley said. “But the hardest question to ask ourselves is, how do we change the relationship with how our clothes are bought? How do we address consumption?”

On Black Friday 2011, Patagonia launched its famous “Don’t Buy This Jacket” campaign with an ad in *The New York Times*. It broke all the rules of conventional advertising by urging customers to purchase less, and reuse what they already owned (in 2005 the company instituted “cradle to cradle” repair shops which repaired customers’ worn or damaged Patagonia clothing for free). The ad asked readers “to reflect before you spend a dime on this jacket or anything else. Environmental bankruptcy, as with corporate bankruptcy, can happen very slowly, then all of a sudden. This is what we face unless we slow down, then reverse the damage.”

“The jacket we showed was among the most environmentally benign products,” Stanley said. “At end of its life can be melted down and recycled. But producing it generated 23 times its weight in GHG and two-thirds its weight in waste products, and used enough water to supply a village. We didn’t know how to give back as much to the planet as we took to make it.”

# DON'T BUY THIS JACKET



It's Black Friday, the day in the year retail turns from red to black and starts to make real money. But Black Friday, and the culture of consumption it reflects, puts the economy of natural systems that support all life firmly in the red. We're now using the resources of one-and-a-half planets on our one and only planet.

Because Patagonia wants to be in business for a good long time—and leave a world inhabitable for our kids—we want to do the opposite of every other business today. We ask you to buy less and to reflect before you spend a dime on this jacket or anything else.

Environmental bankruptcy, as with corporate bankruptcy, can happen very slowly, then all of a sudden. This is what we face unless we slow down, then reverse the damage. We're running short on fresh water, topsoil, fisheries, wetlands—all our planet's natural systems and resources that support business, and life, including our own.

The environmental cost of everything we make is astonishing. Consider the R2<sup>®</sup> Jacket shown, one of our best sellers. To make it required 135 liters of water, enough to meet the daily needs (three glasses a day) of 45 people. Its journey from its origin as 60% recycled polyester to our Reno warehouse generated nearly 20 pounds of carbon dioxide, 24 times the weight of the finished product. This jacket left behind, on its way to Reno, two-thirds its weight in waste.

And this is a 60% recycled polyester jacket, knit and sewn to a high standard; it is exceptionally durable, so you won't have to replace it as often. And when it comes to the end of its useful life we'll take it back to recycle into a product of equal value. But, as is true of all the things we can make and you can buy, this jacket comes with an environmental cost higher than its price.

There is much to be done and plenty for us all to do. Don't buy what you don't need. Think twice before you buy anything. Go to [patagonia.com/CommonThreads](http://patagonia.com/CommonThreads) or scan the QR code below. Take the Common Threads Initiative pledge, and join us in the fifth "R," to reimagine a world where we take only what nature can replace.

**COMMON THREADS INITIATIVE**


**REDUCE**  
WE make useful gear that lasts a long time  
YOU don't buy what you don't need


**REPAIR**  
WE help you repair your Patagonia gear  
YOU pledge to fix what's broken

**REUSE**  
WE help find a home for Patagonia gear you no longer need  
YOU sell or pass it on\*

**RECYCLE**  
WE will take back your Patagonia gear that is worn out  
YOU pledge to keep your stuff out of the landfill and incinerator

**REIMAGINE**  
TOGETHER we reimagine a world where we take only what nature can replace

  
patagonia  
patagonia.com

  
TAKE THE PLEDGE

\*If you sell your used Patagonia product on eBay® and take the Common Threads Initiative pledge, we will co-list your product on patagonia.com for no additional charge.

Today, Patagonia is continuing to learn how. It's pioneering ways of deriving nylon from non-fossil fuel sources, including methane. And it got into the food business, making organic food bars. "When you get involved in agriculture, you can make changes that give back as much as you take," Stanley said. The company is finding ways to use Kernza<sup>®</sup> perennial grain, a hybrid plant with roots that go 17 feet deep into the ground. "It regenerates topsoil faster than anything," he said, "but we couldn't buy it. Farmers wouldn't plant it because there was no market for it. So we decided to make beer out of it, and got 200 acres planted."

"The agriculture business has a kind of genius [for becoming] regenerative," Stanley said. "You can make activities become self-sustaining, and don't need grants or infusions of money. When you bring soil back to health, you are reducing water use and pollutants and you are sequestering carbon. Now any business venture we make aims at solving some problem in agriculture—soil, crop rotation, proper treatment of workers, standards for animal treatment."

Patagonia also launched a small investment company. "We invest in companies that are part of our values," Stanley said. "You have to know the managers, the products and the companies. That is a completely different story from a Bloomberg terminal." The investors are patient in the matter of returns. "If you know the "Biggest Little Farm" movie, it took seven years for that farm to turn a profit. That's often the time horizon."

Like its community of customers, the company is involved in advocacy on environmental and climate issues. For example, it supports youth activists fighting oil drilling, calls attention to

environmental justice issues, and it is suing the Trump administration for cutting Utah's Bears Ears National Monument by 85% and Grand Staircase-Escalante National Monument by half.

So what are some of the lessons other businesses can learn from the trail Patagonia blazed?

For one, Patagonia "lifted the cover off," as one participant said. It unmasked negative impacts and "structural evils" of the industry it worked in, and conveyed those impacts and the company's positive values to employees and customers in direct, experiential ways. "It's so important is that things become tangible," Stanley said. "If you talk about how much of the bad chemicals are used in cotton and how much could get reduced, so what? But when you talk about the land, and how you can't stand to breathe when you're driving [through cotton fields], that's another story. I think it's important that we connect to people on the basis of experience. Connecting tangibility with values in the way that we communicate what we're learning is really essential."

For another, Patagonia's approach is not incompatible with capitalism's standards of success, even if it doesn't always fit with the standard KPI framework. Before the "Don't Buy This Jacket" campaign launched, board members asked Stanley what its metrics for success were, and he laughed. How could there be a metric for success for asking customers not to buy your product? If sales went up, would the company be greenwashing? If they went down, would it be able to pay its bills? If they stayed flat, then the campaign got its message across, but was that "success?"

In the two years following the launch of the ad, Patagonia's sales grew 40%. Over the past decade, its annual growth rate has varied between 8% and 20%. Stanley said businesses in general feel obliged to grow. "Their costs keep going up, and also they feel pressure from competitors so if they're not growing they don't get as much attention...But we also asked the question, could [Patagonia] survive negative growth? Could we be financially healthy, be healthy as a community, without growing? We haven't answered that."

That prompted a discussion alternative models of growth, including the economic concept of "deep growth," and the ecological concept of maturity as opposed to growth. Is it strictly necessary for a mature company to keep expanding? Can B Corporations can go public and still stay on mission? Instead of maximizing growth, could companies see right-sizing as a fiduciary duty, for example by paying out dividends to shareholders rather than plowing revenue back into growth?

For now, Patagonia has chosen to keep growing at a healthy though not rapid rate. “You want to train people properly, so you don’t want to grow too fast, you need to take on a lot of new employees to grow,” Stanley said.

Patagonia could scale up into a much larger brand, but it made the conscious decision not to. “Say we decided on a big scale, we might have to make jackets kind of like ours that are cheaper and lower quality, where we're not paying our labor as well.... If you started to accelerate that you'd have to drive it. We'd be getting billboards on the backs of buses and ads in *The New Yorker* and we would be creating a kind of false relationship with customers at that point. We'd start to have customers who are not engaged very much.”

Could other, much larger companies follow Patagonia’s example and leverage sustainable impacts and consumer education on a much larger scale? Andrew Revkin cited the example of Nike, which has annual revenues of almost \$40 billion. A Nike executive told him that when the company tried to market products to its customers as sustainable, it backfired, because the customers assume “sustainable” means a compromise in quality.

Stanley’s advice to companies that want to scale up sustainability is to focus on the two or three things that have the biggest environmental footprint, and invest in fixing those. Whether or not they’re marketable as selling points to consumers, they are investments that will eventually pay off. Patagonia’s customers hadn’t asked for them to eliminate conventional cotton from their supply chain. “What we did with [cotton] was an investment. It did [pay off] after a few years. If you think of it as a sacrifice without an eventual return, that's hard for people to do. But if you think of it as an investment leading to a better outcome, that’s easier.”

## V. Object vs. Process

In what sense and to what extent are we making “progress” towards the objective of planetary health? There are emerging models that envision it, such as regenerative economics, but they are only just beginning to be applied and the results remain to be seen. There are promising models and examples of values- and mission-driven businesses, but they grapple with issues of scale and meeting the exigencies of capitalism, and after 47 years, even Patagonia is still learning, still seeking ways to balance its values with its business needs and survive. Impact investment is a positive development, but it’s still a long way from transforming the financial system or creating positive social and environmental impacts on a large scale. Ambitious climate goals like the Paris accords or financing schemes to help developing countries aren’t

coming close to reaching their targets, and as climate change accelerates, seem to be receding farther out of reach.

In fact, the whole proposition of a “climate solution” may have been doomed to failure from the beginning, because of the way it’s framed. Seeing climate change as simply a pollution problem, and climate solution as an objective, static end-state where the pollution is reduced below a certain number, is a reductive view leading to false conclusions. In actuality, climate change is much more complicated than that. It’s a dynamic set of processes arising from many causes and conditions that ramify across societies and natural systems in highly complex ways. As John Fullerton said, “We need to move from conventional, mechanistic, reductionist [view]” to sustainability, but sustainability is “an ongoing, ever-evolving upward spiral,” not a steady state or a box to check.

“I’ve been writing about climate change for 35 years,” Andrew Revkin told the symposium. “It hasn’t changed anything about emissions.” By the standards of the cult of progress, if the stated objective is to continue economic activity on the existing model while reducing climate pollution below a certain measurable threshold -- whether it’s 350 parts per million of atmospheric carbon (we’re now at 415 ppm) or 50% reduction in greenhouse gas emissions by 2030 (to reach it we’d have to suddenly accelerate the current rate of carbon-free energy deployment by an order of magnitude) -- we’re clearly failing.

### Object Bias

One of the reasons why public education about climate change and public attitudes regarding climate impacts keep falling so far short of the realities is a deep-seated failure to grasp that climate change (like climate action) is a process, not an object. The same could be said of the broader dimensions of the planetary crisis we’re experiencing, and of its antithesis, planetary health.

In fact, Revkin avoids using terms like “climate crisis” or “climate emergency” because they contribute to this reifying or objectifying tendency to treat climate change as a “thing” or a single entity. He cited a journal article by Joshua L. DeVincenzo<sup>18</sup> worth quoting at length:

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<sup>18</sup> Joshua L. DeVincenzo, “Climate Change and Cognition: Towards A Pedagogy in Journal of International Affairs, Vol. 73, No. 1 (Fall 2019/Winter 2020), pp. 69-86, available at [https://www.jstor.org/stable/26872779?seq=1#metadata\\_info\\_tab\\_contents](https://www.jstor.org/stable/26872779?seq=1#metadata_info_tab_contents)



For many, the understanding of the self in relation to the climate is an enigma. Much as climate change as a concept succumbs to ambiguous oversimplification— often the result of socially embedded analogies in its presentation—approaches to investigating climate change comprehension and risk aversion often fall victim to a similar object bias (a tendency to treat processes as objects), or mistreatment of a complex process as a single entity. Such object bias runs the risk of oversimplifying the complex cognitive processes responsible for encoding the meaning of climate change from analytical, conceptual, and experiential sources. In addition, “[t]his object bias can become a mental block, preventing people from adopting appropriate mental models to analyze climate change.”<sup>19</sup> An understanding of climate change as a process requires a comprehensive appraisal and identification of relevant cognitive dimensions of climate change and conditions necessary for human learning.

“Object bias” is part of a deep tendency toward objectification in the European worldview that cropped up in many different contexts throughout the symposium. Many participants identified it with the history of colonialism, slavery and exploitation that underlie our current economic system. One described it in terms of plate tectonics, since we experience the continents as solid things or steady states, when in fact they are dynamic, continuously changing. “You [would] never [be correct to] say that’s one static continent – that’s Pangea, that’s South America. Only when you’re living in one slice of time would you say this is a static thing, not a process.”

Others connected it to our atomized view of society and one another that reduces human relationships and our vision of community what Thomas Berry called “a collection of objects” as opposed to “a communion of subjects.” “We think of people and objects with edges, borders, solid, and we think about how they should connect like parts of machine,” said Serene Jones. “But what if we replace this with fluidity?”

It’s important to note that this set of questions and problems is not new or unique to our situation. There’s a long European intellectual history behind object bias vs. more subjective, fluid mental models, stretching back to pre-Socratic philosophers and Heraclitus’ aphorism that “No man ever steps in the same river twice, for it’s not the same river and he’s not the same man,” and the Heraclitean fragment *panta rhei* -- “everything flows.”

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<sup>19</sup> Xiang Chen, “Why do people misunderstand Climate Change? Heuristics, mental models and ontological assumptions” in *Climate Change*, Vol. 108, Sept. 2011, available at <https://link.springer.com/article/10.1007/s10584-010-0013-5>.

“Process philosophy” is the strain in the Western tradition, encompassing Plato and Aristotle and extending to German Idealism, which views the world and our participation in it as a dynamic, diachronic process, as opposed to “atomism,” which reduces it to a collection of static individuals and objects. A “processist” view is important to our self-understanding and notions of selfhood. We experience ourselves not as a static field of atomized actions and disconnected occurrences in our lives, but as a process – a set of patterns and traits that emerge and are integrated across our lives, in which we recognize ourselves as personalities, with skills, habits, inclinations, disinclinations and a sense of self-recognition and personal agency as they come into play.<sup>20</sup>

One participant, a philosopher himself, referenced this history, and how it’s encoded in our logic and language, especially concerning the question of “being” as a static, objective steady state vs. an action or dynamic process. “There’s a long history of devolving into an object,” he said. “Language is always vulnerable to this devolution.” He pointed out that Aristotle analyzes the word “being” “in terms of action,<sup>21</sup> as a verb gerund, not a noun.” That sparked a reflection by a participant whose native language is Hopi, that the same tensions surround how we talk about life: “it’s more appropriate to say “living” as a gerund, not “life” as a noun.

### Making the Process Inclusive

Others related the theme of language as active, dynamic, and process-oriented action, to the question of communications, including climate communications. They spoke of the need to transcend the current discourse, which is largely a one-way download of objective, narrowly framed scientific information that fails to connect, even with otherwise well-educated, well-informed people. They underscored the power of storytelling (one said, “whatever compassionate actions we’ve taken together have been consequential because of the stories that are shared”) and the importance of two-way, inclusive dialog, bringing theologians and native elders to the table, working through diverse mental models and worldviews toward a widely shared understanding.

The discourse must actively engage and take seriously not only scientists, academics, thought leaders and other elites, but youth, people of color, low-income communities. “There is a huge

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<sup>20</sup> <https://plato.stanford.edu/entries/process-philosophy/> “Process philosophy is based on the premise that being is dynamic and that the dynamic nature of being should be the primary focus of any comprehensive philosophical account of reality and our place within it. Even though we experience our world and ourselves as continuously changing, Western metaphysics has long been obsessed with describing reality as an assembly of static individuals whose dynamic features are either taken to be mere appearances or ontologically secondary and derivative.”

<sup>21</sup> This relates to speech act theory, which derives from the philosophy of Wittgenstein.

segment of people who can't wrap minds around this conversation," said one participant, an African American divinity student from a low-income community. "Businesses can adapt to systemic change, but people on the ground in inner cities will do whatever they can to survive. I go home where gentrification is happening, and there's a reaction. Fear creates an unsustainable situation which is doing nothing but getting worse. [Planetary health] is not even a topic for them."

Another participant, a financial professional of Tibetan descent, agreed. "As someone from the global South, who's been labeled a person or a woman of color, I oftentimes find that in communities that I'm a member of, we're not asked to lead this conversation. [Regarding] the climate crisis, the leadership has been dominated by certain individuals and by global norms. There is a feeling among my friends and family members of being desensitized since they're not part of the conversation. For the person in my neighborhood, the Latina woman or the guy who just came from Somalia, this is not even a topic of conversation. There's a feeling of being disenfranchised."

She called for a reframing of climate discourse outside the history of colonialism and contemporary corridors of power, and for a "connective tissue" that reaches out beyond elite institutions. In Tibet, 2 million nomads have been internally displaced. The Chinese government called in elite universities and the Brookings Institution to come up with a solution to the problem. "But the first thing I thought was, why don't you ask the nomads?" she said. "They know how to reduce carbon; they know what works in terms of solar power. There's been a foregoing of indigenous knowledge and indigenous wisdom."

### Walking the Path

According to objective metrics, we may not be far along on any of these fronts. When it comes to cutting emissions, retooling markets and economies, adopting integrative solutions, building more caring and inclusive community and effective dialog, or welcoming and activating the contributions of diverse communities and non-elites, there are many hopeful signs, but as yet little in the way of quantifiable, scalable results.

Yet the symposium demonstrated that these processes are underway, and that more people are walking these paths, which are open ended, like Fullerton's "ongoing, ever-evolving upward spiral," rather than teleological. The participants are part of an ongoing learning network and online Pathways to Planetary Health community which is expanding its discourse and its circles, sharing ideas and writings on current configurations of the climate crisis, the covid-19 pandemic and social unrest.

Compared to the accelerating pace of climate change and related crises, “progress” along this path may be slow, but not hopeless, because the processes of planetary health, like the crises disrupting it, aren’t linear and predictable, but dynamic, complex, interactive, and transformative, characterized by feedback loops and threshold phenomena of which we’re scarcely aware.

In the same way that those who live through periods of historical transformation often don’t clearly perceive the epoch-making nature of the events unfolding before them, we may be slow to recognize the full import of changes underway in our own time. But it is possible to be aware of them, and to participate in them with our full humanity and subjectivity, a sense of presence, and a more expansive, holistic view of our place in history and the world.

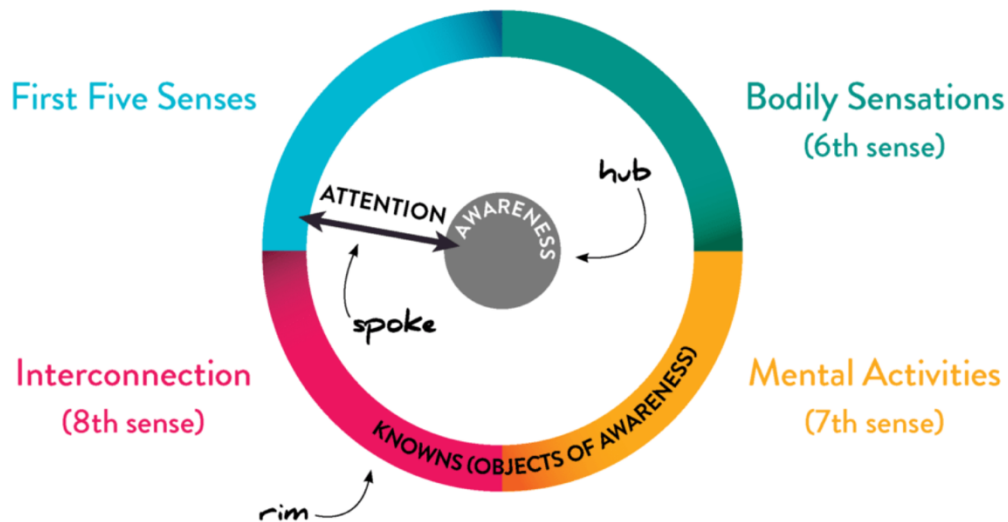
### The Wheel, the Drum, and the Fire Circle

Dr. Dan Siegel is a clinical professor of psychiatry at UCLA, co-founder of UCLA’s Mindfulness Awareness Institute, executive director of the Mindsight Institute, and a trustee of the Garrison Institute. He evolved a contemplative practice he calls “The Wheel of Awareness,” which he led symposium participants in an evening session.

It’s a form of meditation which guides practitioners through a series of visualizations and inquiries. The subjects are asked to imagine their awareness at the hub of a wheel, and picture their attention as a kind of spoke or vector reaching out the periphery. The first object of the vector is tuning into sensations picked up by the five senses, followed by the internal sensations and signals of the body, then one’s own thoughts and mental activity, then one’s relational sense of interconnection with others. Finally, they’re asked to turn that vector of attention back to the center of the circle, resting in “awareness itself.”

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# Wheel of Awareness



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Siegel finds the Wheel a useful visual metaphor for the way the mind works. It embeds our subjective experience into a holistic field which includes others, expanding our sense of presence and self into an awareness of our relationship with others and the world around us. It fully takes in and accounts for objects, but it also transcends object bias, opening us up to our own subjective process. It helps us recognize that the object of awareness is not only the what's on the rim of the wheel, but also the spoke and ultimately the hub – “awareness itself.”

Grandfather Rankin, the Anishinaabe elder, addressed the symposium and opened by singing a traditional song, accompanying himself on a circular frame drum, a sacred object whose story he told. After he left the residential school the Canadian government forced him to attend, he became lost. “I drank. I left my language, culture, medicine, philosophy,” he said. His mother found him and brought him home. “She never scolded me about what will happen if you continue. She just gave me a sack with my drum.”

Grandfather explained the drum's significance in his tradition. In his language, the word for drum is the same as “heart.” “The drumhead is ‘deer’” he said, “proud of itself.” Then he turned it around to show its composition from the back: a circular frame with spokes dividing it into quadrants, representing the sacred Four Directions, which is held by the hub in the center. “We are in the center,” he said. He called the drum a “healing circle,” and indeed, it brought him back to his tradition and set him back on the path to becoming chief. “I never forget my drum,” he said. “It is my medicine, not just a thing.”



The morning after Dan Siegel's Wheel of Awareness session, Grandmother Marie Josee Rankin-Tardif, sang a traditional song accompanying herself on the drum. She then told of her personal journey from being a television journalist in Canada, to becoming an elder of the Algonquin Nation.

Sick of reporting on "all the horrible things humans had done that day," she quit her job, pitched a freelance story about the healing power of sweat lodges, got assigned to write it, and found her way to a sweat lodge where she met Grandfather Rankin. Impressed by his equanimity and forgiveness for those who had oppressed him, she befriended him. Ten years later, tribal elders offered her a Sacred Pipe. Accepting it entailed a lifelong commitment to learn the Anishinaabe language, philosophy, and traditional medicine, which she draws on her skills as journalist to communicate. She eventually married Grandfather Rankin and now teaches alongside him, and together they run a non-profit organization that offers healing trainings and programs for indigenous and non-indigenous people alike.

Grandmother Rankin told the symposium about a prophecy that the Anishinaabe have in common with other indigenous peoples from the Mohawk to the Maori: the Seven Fires prophecy. "They told their children, 'One day white men or mother men will knock and say, we have lost our balance. Can you help us recover it?' The ancestors foresaw white people coming and the difficulties, but also the possibility of light at the other end. One day if we make the

right decisions, they said, and we're not too attached to our technology, there could be a reconciliation coming. And today here we are, white men coming together with us, so we could get to that next step. You are the answer to the ancestors' dream. They have been dreaming of you, waiting for us. Isn't it extraordinary? We can also dream collectively. We have to dream well. It is an exciting moment, all is possible. Do we have to be activists and do everything, or do we have to pray for it? We have to do both."

After she spoke, she and Grandfather Rankin and other indigenous leaders brought the participants outside to a fire ring on the Garrison Institute grounds, a stone's throw from the Hudson River, to close the symposium with a fire ceremony. Grandfather pointed out that the heat of flame at the center of the fire ring had cracked one of the stones on the north side. The crack radiated outward, pointing to the North, the sacred direction of healing, and of the ancestors. "They're here," he said.

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