Seeing Systems

Peace, Justice, and Sustainability

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DISCUSSION COURSE ON

Seeing Systems: Peace, Justice, and Sustainability

Second Edition

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GUIDELINES

FOR THE FACILITATOR, OPENER, AND NOTETAKER

This Ecochallenge.org Discussion Course is designed to be much more than a reader; it is designed to be a guide for community building, transformative learning and life-changing action.

When you break big issues into bite-sized pieces and talk through them with others, you discover insights and inspiration that are hard to find on your own. You learn, together. You build a personal network of shared stories and support that makes it easy to take action. In short, you become part of a community for change.

Below you will find guidelines for three of the roles participants can play in this course: the Facilitator, the Opener and the Notetaker. For each session of this course, one participant brings an "Opening," a second participant facilitates the discussion, and a third participant takes notes on the Group Activity (if you choose to do it) and Actions group members commit to. The roles are designed to rotate each week with a different group member doing the opening, facilitating, and notetaking, so that each participant has a chance to share leadership in the group. This process is at the core of Ecochallenge.org culture — it assumes we gain our greatest insights through self-discovery, promoting discussion among equals, with each person learning with and from each other. Learn more about organizing an Ecochallenge.org Discussion Course at ecochallenge.org/discussion-courses.

FOR THE SESSION FACILITATOR

As Facilitator, your role is to stimulate and moderate the discussion. You do not need to be an expert or the most knowledgeable person about the topic. Your role is to:

- Remind the Opener ahead of time to bring their opening, and remind all participants to read the session before you meet.
- Begin and end on time.
- Ask the questions included in each session, or your own. The Circle Question is designed to get everyone's voice in the room — be sure to start the discussion with it and that everyone answers it briefly without interruption or comment from other participants.
- Remind your group members to log their Actions and Reflections on the Seeing Systems Ecochallenge site (systems.ecochallenge.org).
- Keep the discussion focused on the session's topic. A delicate balance is best — don't force the group to answer the questions, but don't allow the discussion to drift too far.
- Manage the group process, using the guidelines below.

A primary goal is for everyone to participate and to learn from themselves and each other. Draw out quiet participants by creating an opportunity for each person to contribute. Don't let one or two people dominate the discussion. Thank them for their opinions and then ask others to share. Allow several seconds in between questions to allow for quieter participants to respond.

Be an active listener. You need to hear and understand what people say if you are to guide the discussion effectively. Model this for others.

The focus should be on personal reactions to the readings — on personal values, feelings, and experiences. The course is not for judging others' responses. You do not have to come to a consensus on what everyone should say or do.

Each week, course participants will choose an Action goal to complete on the Seeing Systems Ecochallenge platform. Participants are encouraged to set a goal that stretches their comfort zone and makes a difference for themselves, their community and the planet. The Facilitator should remind participants at the end of the session meeting to log into systems.ecochallenge.org to commit to an Action and post a Reflection. It is helpful to allow a few minutes at the end of each session meeting to

allow the group to discuss their progress, successes, and difficulties in taking their selected Actions. Remind people that they can stay connected with each other between sessions by posting at systems.ecochallenge.org.

Your password to log into systems.ecochallenge.org is connectionsPJS2019

FOR THE SESSION OPENER

The purpose of the Opening is twofold. First, it provides a transition from other activities of the day into the group discussion. Second, since the Opening is personal, it allows the group to get better acquainted with you. This aspect of the course can be very rewarding.

Bring a short opening, not more than a couple of minutes. It should be something meaningful to you, or that expresses your personal appreciation for our world. Examples: a short personal story, an object or photograph that has special meaning, a poem, a visualization, etc. We encourage you to have fun and be creative.

FOR THE NOTETAKER

If your group chooses to use the Group Activity in each session, you will need a Notetaker. It is your responsibility as Notetaker to record the group discussion, any resources shared, and commitments to action, as outlined by the particular Group Activity in the session. Send the notes you took on the Group Activity to each person in your group at the end of your group meeting.

COURSE SCHEDULE FOR *SEEING SYSTEMS: PEACE, JUSTICE, AND SUSTAINABILITY*

This course schedule may be useful to keep track of meeting dates and of who is serving in which role for the next meeting.

Course Coordinator: _____ Contact Info: _____

Location For Future Meetings: _____

SESSION	DATE	OPENING	FACILITATOR	NOTETAKER
It's All Connected				
Peace Talks				
Justice for the Whole Community				
Understanding Systems through Conflict Transformation				
Responding to Systemic Violence				
Co-Creating Living Peace				
			PLANNERS	
Celebration and Call to Action*				

*After the last regular session, your group may choose to have a final meeting and celebration. This meeting celebrates the completion of the course, may include a potluck lunch or dinner, and is an opportunity for evaluation and consideration of next steps.

All of us. One better shared future.

Our Vision. We believe in a better shared future, one with fresh air to breathe, clean water to drink, and a stable climate to live in.

Our Model for Change. And we believe that our individual behaviors are pivotal in creating this world, one that is realized by the collective impact of everyday people raising voices and taking action.

Our Approach. We believe in solutions. Through our Ecochallenge Platform and Discussion Courses, we connect you with research-backed actions and with fellow humans who want to take these actions with you. We show you how our collective behavior — and your personal transformation — connect with something big, shared, and better.

Our Commitment to Justice & Equity. Our solutions-focused work encompasses upholding and revitalizing just and equitable systems. We know a better shared future can only exist when we hold in earnest all inhabitants on this dot we call *home*.

Together. We are connecting the dots between our actions, our impact, and our will to create significant global change. Each time our dots are connected, we take another step forward, toward our better shared future. So here we are. Let's begin.

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Together, we're connecting the dots.

ABOUT THIS CURRICULUM

Lacy Cagle (Editor) is the Director of Learning at Ecochallenge.org, where she oversees the development of Ecochallenge.org's Discussion Courses and other educational programs, and co-chairs the Diversity, Equity, and Inclusion Committee. She holds a MS in Educational Leadership and Policy with a focus on Leadership in Sustainability Education from Portland State University. Lacy's expertise is in sustainability pedagogy, transformative learning, and behavior change. When not working on sustainability-related projects, she sustains herself by exploring new and old places, gardening, playing trivia and board games, and hanging out with her amazing rescue pup, Huey, in St. Louis, Missouri.

Margaret Parker (Layout Editor) is a graphic artist in Portland, Oregon. She says that after taking several Ecochallenge.org (formerly NWEI) courses that were "life-changing," she jumped at the opportunity to be involved in the creation of Ecochallenge.org (formerly NWEI) course books. Margaret is a native of the Pacific Northwest, spent a year in Poland, and has lived in Portland for the past 15 years.

Lee Benson (Cover Designer) is a full-time graphic designer living in Portland, Oregon. After obtaining a Bachelor's degree in Film & Digital Media, he moved to Portland to study design. He loves to work with nonprofits that strive to improve quality of life. In his spare time, he enjoys playing board games and watching movies.

CURRICULUM COMMITTEE

This discussion course would not exist without the expertise and time volunteered by the people on our curriculum committee. Ecochallenge.org would like to offer sincere and deep appreciation for the many hours of time they collectively invested in this project.

Amy Dickens is an Educational Assistant at The Emerson School in Portland, OR. She received her BA from Columbia College Chicago in Cultural Studies with a primary focus on environmental issues and the role media plays in exasperating our cultural disconnect between our actions and possible environmental impacts. In her personal life, Amy has been on a journey to lower her impact on the earth and enjoys seeing the ripple effect of her sustainable actions making their way into the lifestyles of those around her.

Rebecca Elder graduated from Truman State University with a Bachelor of Science in Environmental Studies. Rebecca founded the Sustainability Office at Truman State University, and continued to serve as the Sustainability Coordinator after graduating. Rebecca taught the Grassroots Environmentalism course as well as the Sustainability Leadership Practicum, both courses simultaneously engaging students in academic literature on sustainability and service-learning projects in the Northeast Missouri area. Rebecca also worked as the lead coordinator for The Green Thumb Project, a K-12 environmental education non-profit organization in Kirksville, Missouri.

Felipe Ferreira is originally from Brasília, the capital city of Brazil. Felipe received a BS in Environmental and Sustainability Studies from the University of Utah in 2009 and an MS in Educational Leadership and Policy from Portland State University in 2016 with emphases in Leadership for Sustainability Education and Gender, Race, and Nations. Felipe currently teaches Popular Culture and Gender and Sexuality courses in the University Studies program at Portland State University. He also works as a part time faculty and advisor at Wayfinding Academy, a handcrafted, 2-year college program founded on the frustrating realization that our culture of higher education is backwards. As a critical sustainability scholar/educator, his research and teaching interests include productions of nature, popular culture and sustainability, cultural studies, and critical consciousness development. Felipe enjoys geeking out on quantum physics and can often be found in one of Portland's several urban parks meditating on very dense books.

Emily Gaspar is the Director of Accessibility and Disability Services and the Americans with Disabilities Act Compliance Officer at Coastal Carolina University. She leads access and inclusion efforts specifically related to people with disabilities, and co-chairs the CCU Access, Diversity and Inclusion Council. Emily earned an MS in Student Affairs in Higher Education from Colorado State University. She is committed to an intersectional approach to access, and strives to expand her understanding of social justice through experiences such as the Social Justice Mediation Institute. In her free time, Emily practices yoga, savors weekend coffee drinking, and enjoys reading. She lives in Myrtle Beach, SC with her husband and twin step-sons.

Patrick T. Hiller is the Executive Director of the War Prevention Initiative of the Jubitz Family Foundation and teaches in the Conflict Resolution Program at Portland State University. His writings and research are almost exclusively related to the analysis of war and peace, social justice, structural violence and power dynamics with an emphasis on human dignity, solidarity among all peoples and equal participation of all peoples. He contributes to public discourse outside of academia through op-ed commentaries, radio interviews and public speaking. He holds a Ph.D. in Conflict Analysis and Resolution and a master's degree in social Geography. In his free time, Patrick enjoys the outdoors and is a committed triathlete. He lives in Hood River, Oregon with his wife and son.

Zia Laboff is the Sustainability Research Assistant for Ecochallenge.org, where she is responsible for researching and reviewing Discussion Course books and online Ecochallenge events, as well as engaging with participants of those programs. She recently finished her senior year at Portland State University as an International Studies major with a minor in Spanish. During her 3 years at university, Zia has worked in student government holding the position of President as well as Equal Rights Advocacy Director. She has worked with others on campus activist organizations as she strives to advocate for marginalized groups in her community and beyond.

Darian Wigfall is an activist, entrepreneur, and author from the St. Louis metro area. He currently runs a music collective called FarFetched and is the proud new proprietor of the community event space, The Fellowship. Darian has been deeply involved civically and politically in St. Louis for many years and sees systems thinking as a way to alleviate many of the issues many citizens face daily. Darian was featured alongside several of his collaborative partners in the February 2016 issue of Fortune Magazine in an article about the paths young black men are charting for themselves instead of becoming marginalized in a corporate board room.

We would also like to express appreciation to the reviewers and pilot group members who helped us make this course book the best it could be: Allison Allen-Hall, Betsy Asai, Rick Asai, Lisa Cagle, Bea Davis, Andy Heaslet, Jessica Houchin, Janet Johnson, Frances Ku, Jason Lay, David Macek, Josh Newport, Mike Ponder, Betty Shelley, Jon Shelley, Wayne Smith, and Liz Zavodsky.

INTRODUCTION

At Ecochallenge.org, you could say we have an ecosystems worldview — it seems obvious to us that everything is connected. But even for those who share this worldview, it can be difficult for us to see how all the threads connect.

For example, take the tall grass prairies that once covered much of what we now call the United States. If you were to stand in the middle of a prairie, it would seem that you were surrounded by multitudes of individual plants (along with bison, insects, birds and small mammals, to name just a few of the other organisms in the biotic community). But underneath the soil's surface, just out of your vision, there's a vast and complex network of connection. Underneath the surface of the soil, the perennial grasses are woven together via their root systems and mycorrhizae into a thick, strong tapestry. Before the prairies were plowed to plant annuals, these root systems were so thick they'd break plows. In fact, one writer in the 1930s described the prairie sod his grandfather plowed, "driving five yoke of straining oxen, stopping every hour or so to hammer the iron ploughshare to a sharper edge. Some of the grass roots immemorial were as thick as his arm. 'It was like plowing through a heavy woven doormat,' grandfather said."[1]

At the dawn of agriculture around 10,000 years ago, humans chose annuals over perennials because replanting annuals each year allows us to select for traits that fit our desires — bigger seeds, juicier fruit, sweeter varieties, higher production — much more rapidly than with perennials. However, when European immigrants plowed the ancient tall grass prairies to plant annuals, they affected huge unintended consequences — including erosion, significantly reduced soil absorbency, reduced soil quality, and runoff. Those root mats that were so bothersome to plow up were there for a reason — not only did they make the plants themselves more resilient and resource efficient, they had preserved the health of the entire prairie ecosystem, as well as the connected waterways. It was all connected.

The farmers who plowed up the prairies were using the knowledge of their times, the wisdom passed down through their families, the latest science, and their own common sense in their decision-making. Do we not do the same now, with best intention, when making our own decisions?

Like the prairie grasses and the ground below it, we humans are also made of the same atoms, the same energy. Everything that exists is really no more a physical "thing" than it is a web of connections, of relationships. The tall grass prairie was in reality a complicated ecosystem of relationships. Even your body has more microbial DNA in it than it has human DNA in it.[2] That's right — your body is an ecosystem.

Separation is an illusion.

Yet we all feel a sense of isolation, of alienation at times. So many of us care about how we affect others. We really want to make good choices, but our world is set up in such a way that those choices are incredibly complex. It can be difficult to do the right thing, even when we feel like we have a choice, even when we try our best to make the right choice. It can be difficult to connect with others, even when we most want to.

As humans have increased our impact on the planet, we have set up our society in such a way that we're all more interdependent than ever before, but our sense of disconnection has grown at the same time. We've overlaid complex industrial, trade, transportation and economic systems over already complex biological and ecological systems. And they don't always work together — in fact, many times, they directly oppose each other.

Things aren't right with the world. Most people can feel it. The climate is changing rapidly, legislators can't agree on real solutions, kids keep killing each other at school, and opportunities seem to be shrinking. Instead of the 2017 tax cuts for rich Americans and corporations leading to increasing invesments and worker pay as promised, they resulted in massive federal debt and the highest level of wealth inequality in three decades. Both food and money are distributed extremely unequally, with 1.9 billion people struggling with being obese or overweight[4] while 821 million people suffer from hunger worldwide.[5] Taken together, the 26 richest people in the world possess as much wealth as the 3.8 billion poorest people. (This gap is widening — in 2017, it was the top 43 people. In 2013, it was the top 85.)[6] In 2017, the CEO/worker pay gap was nearly nine times larger than in 1980 — US CEOs were paid 361 times as much as average US workers in 2017.[7] And the world is seeing more refugees as internal conflicts, wars, and climate change drive people from the places they have called home.

Sometimes we don't make the connections between these horrible things because we don't see them. Sometimes we don't make the connections because we don't want to acknowledge the severity of our current situation. Sometimes we think that if we ignore oppression and destruction and violence, maybe it will go away, maybe someone else will find a solution. Whether we are directly affected by these injustices or not, we often cope with the tragedy of it all by pushing it aside. When we do acknowledge the connections, our ability to have influence can seem terrifyingly limited.

While many of us probably agree that huge concepts like peace, social justice, and environmental sustainability are inextricably linked, those connections are rarely made for us in news stories, in advertising, or even in the most publicized initiatives to fight hunger or end war. Many people think that addressing global climate change is critical, and that peacefully ending conflicts is important — but how are those two issues related?

In his "A Christmas Sermon on Peace" in 1967, Martin Luther King, Jr. tied it all together beautifully:

"It really boils down to this: that all life is interrelated. We are caught in an inescapable network of mutuality, tied into a single garment of destiny. Whatever affects one directly affects all indirectly… This is the way our universe is structured, this is its interrelated quality. We aren't going to have peace on Earth until we recognize this basic fact of the interrelated structure of all reality." [8]

You might be thinking, "Yes, that's a beautiful quote and those are powerful metaphors, but where is the hope in all of this painful recognition?"

In response, academic and author Jack Nelson-Pallmeyer calls for us to embrace "authentic hope" that "pays attention to problems as they actually are to the best of our understanding, even if problems are grave and solutions are demanding and uncertain." With this authentic hope, we can meet the challenge "to envision pathways to a fairer, more just, and more ecologically responsible economy, to see ourselves as actors capable of tackling problems and to take action because doing so is the right thing to do and because we believe it is possible that our efforts could enhance the quality of life for ourselves and future generations."[9]

People working together can increase their power and impact for positive change. Engaged and inspired citizens, working together, can interact with the systems we've created on multiple levels to make them better and more ecologically sound. Thousands of people have already been doing this all around the globe — crowd-sourcing solutions and impacting their communities positively. You'll find many of their stories in this discussion course.

Recognizing the interconnected systems of our world can be difficult, but it can also be a joyous and empowering realization — through these networks of relationships, people power can expand and together, we can make a real difference for good.

— Lacy Cagle, Editor and Director of Learning

All citations for endnotes throughout this course book can be found on page 136.

S E S S I O N 1

Photo by Kate Rinder

IT'S ALL CONNECTED

The path toward human survival and all forms of equitable justice begins with our willingness to collaboratively and compassionately create a new way of being in relationship with one another and with the rest of creation.

— SHERRI MITCHELL *WEH'NA HA'MU KWASSET*

LEARNING OBJECTIVES

- Recognize the interrelatedness of peace, justice, and sustainability.
- Identify, understand, and articulate values, visions, and frameworks that lead toward a more peaceful, just and sustainable world.
- Identify, understand, and articulate some of the culturally-entrenched values and assumptions that reinforce destructive practices and systems of oppression.
- Practice systems thinking skills for peace, justice and sustainability action.

SUGGESTED GROUP ACTIVITY: SYSTEMS THINKING ICEBERG

Use the Iceberg Activity at ecochallenge.org/iceberg-model to practice systems thinking with your group. Select a recent event that strikes you as urgent, important or interesting. Some examples: a recent hurricane, drought, or winter storm; a controversial Supreme Court decision or a high profile court case; a local policy change; recent military action between nations.

Circle Question

In the opening article for this session, Rachel Alexander speaks of the difficulty and pain in loving something you may soon lose. How do you put love into action when so much we care about is at risk?

Reminder to the facilitator: The circle question should move quickly. Elicit an answer from each participant without questions or comments from others. The facilitator's guidelines are on page 5.

DISCUSSION QUESTIONS

1. How do Thich Nhat Hanh's ideas of 'interbeing' relate to peace, justice and sustainability? How does the concept of interbeing apply to other things (jet planes, your cell phone, the burrito you ate for lunch)?
2. Jeannette Armstrong discusses how the members of her community explicitly identify the roles they are assuming in group dialogue and decision making. Which of these roles would you be likely to take in your own community? Who in your community takes on some of the other roles?
3. Imagine speaking with a child about the topics studied in this week's session. How would a child describe a peaceful, just, and sustainable world?
4. In "Dancing with Systems," Donella Meadows says, "We can't control systems or figure them out. But we can dance with them." Describe a way you could implement one of her "systems wisdom" practices in your own home, work, or community.
5. What are some culturally-entrenched values and assumptions that reinforce destructive practices and systems of oppression?
6. What are some values, visions, and/or frameworks that lead us toward a more peaceful, just, and sustainable world?
7. Nikki Silvestri, Amy Hartzler, and Hosan Lee discuss how to "Resist. Insist. Love." in response to our current times. Which of the three feels the most uncomfortable to you to enact right now? Why?
8. Other than the approaches highlighted in this session, is there an approach you use and trust to stay grounded and hopeful while working for change in our world?

PUTTING IT INTO PRACTICE

Choose an action to commit to this week from the list of possibilities at systems.ecochallenge.org. Reflect on your experience, the difficulties and benefits of your action, and what you learned from taking action by posting to your Feed. You can register for Systems Ecochallenge using the password **connectionsPJS2019**.

ADDITIONAL RESOURCES

Interested in finding out more about the topics presented in this session? Please visit **ecochallenge.org/discussion-course-resources** for suggested resources.

ABOUT THIS SESSION

This is a course about the interrelationships of peace, justice, and environmental sustainability. The readings in this session open the path toward recognizing multiple layers of interconnectedness among peace, justice, and sustainability topics — the obvious and the not-so-obvious ones.

This is also a course about systems thinking.

Each of us is surrounded by and a part of innumerous complex systems — our solar system, our planet, the watershed from which we get drinking water, the food system that grows and transports and processes our food, representative democracy, the economy, our families and other social networks. Even our bodies are ecosystems, with millions of microbes affecting processes like immunity and digestion in both positive and negative ways.

Simply put, a system is multiple elements and processes that interact to form a whole. Systems thinking is a way of seeing and making sense of complex systems and complex problems. We usually attempt to solve problems through analysis — taking apart the pieces of something and attempting to understand the whole through analysis of the parts. Systems thinking requires also paying attention to relationships, patterns and dynamics, as well as individual parts. Systems thinking helps us to integrate various perspectives to better understand complex patterns and structures. It allows us to more effectively interpret and solve complex problems, as well as be more effective in learning and designing.

In order to make positive change, it is vital that we see the relationships between people and between systems that contribute to or prevent peace, justice, and environmental sustainability. While we need to be cautious to avoid a meaningless catch-all perspective of connectedness, developing thinking and action outside of mental silos is important when we constructively seek to address peace, justice, and the environment. These readings do not deny the immense challenges we are facing, but they all offer authentic forms of hope which we can embrace and act upon.

Through systems thinking, not only can we more accurately identify the massive and interconnected problems we face, we can also learn from our mistakes to design more peaceful, just, and sustainable systems that are better for us all.

DEFINITIONS

Global Civil Society refers to the aggregate of groups and individuals in society that operate across borders and independently of governments to further the will and interests of citizens.

The **Global Peace System** consists of numerous evident trends in the areas of global collaboration, constructive conflict transformation and social change. While significant in themselves, all are connected and part of the whole.

Globalization is the development of an increasingly integrated and interdependent global economy. Economic globalization has occurred through increasing free trade, free flow of capital, and the utilization of cheaper foreign labor markets.

Nonviolence is the practice of using peaceful means instead of force to resist oppression and bring about political or social change.

Peace can be used to describe a personal state of tranquility or a group's (e.g. national, societal, cultural) state of freedom from war, violence, and/or destruction.

Systems thinking is a way of conceptualizing and understanding the world that focuses on how various elements within a system — which could be an ecosystem, an organization, or something more dispersed such as a supply chain — are related to and influence one another. In systems thinking, seeing the relationships between the parts of a whole is as important as seeing the parts themselves.

War is the sustained and coordinated militarized combat between groups leading to large numbers of casualties.

World Peace is a process where we continuously take steps to promote the existence of all human and environmental components in a web a life that sustains us within its workings.

HOW DO YOU LOVE WHAT YOU MAY SOON LOSE?

By Rachel Alexander

When my wife and I learned that I was miscarrying, we drove to the ocean. We walked by the water and let the grief rock out of us to the beat of our steps, to the beat of the waves.

Half a year later, I was pregnant again, and just like the first time, five weeks in, the bleeding began. This time, the doctors were less certain of the cause. "We'll just have to see what happens," they told me. One day during those tense weeks, I went to the ocean again. The weather was cool and gray; in the sand were beautiful shells and stones. In the water was something I'd never seen before — a dark, shiny porpoise that would surface and sink and surface again. I talked to my baby. "If you stay," I said, "I'll show you all of this. If you stay, I'll show you this incredible world." And this baby did stay. Eight months later, my son was born.

Now, as my child practices his first steps, I'm worried about the world I promised him. Recently, for instance, Californians received news that our population of famed monarch butterflies has plummeted. And of course, there's last fall's climate change report that essentially said, as someone flippantly put it to me, that we have a decade left. That's the span of my son's childhood. Less, actually.

Much of the time, when my kid toddles into the room, I involuntarily stop whatever I'm doing and grin at him. I love him wholly, with a vulnerability that, when I stop to think about it, feels almost ridiculous. Because the best-case scenario — the one I hope for — is that he'll grow into a successful adult and leave me. Looming behind that, though, are the specters of things that could snatch him in scarier ways: illness, addiction, an accident. The reality, of course, is that over the course of my son's life, there's little of his thriving and safety that I can truly control.

These days, loving the planet feels similar: a foolish attachment in the face of staggering and imminent loss. I often find myself wondering: How do I love what I may soon lose?

Importantly, it reveals my immense privilege that

this feeling — love as a danger — is so new to me. In my almost four decades of life, I haven't had to worry about family members being taken from me because of police violence or by ICE raids. My family's relative privilege has also largely protected me from life-threatening illness, from incarceration, from the innumerable tragedies that break hearts every day.

In addition, until recently, I had the privilege of being willfully ignorant of climate change. Pretending that a warming world wouldn't affect the people I love required both a desperate suspension of logic and a purposeful hardening of the heart. Recently, when a days-long downpour led to a falling tree that killed an unhoused person in my neighborhood, my first thought was, "Well, I can make sure that my son never lives next to a freeway."

Though, of course, I can't. Not really. Or else all parents would. Just like there wasn't much I could do that smoky night during the Camp Fire, when Northern California's air quality was rated the worst in the world and I woke to my son's labored breathing. The air purifier in his room couldn't fully protect him then, either.

So what do we do? How do we love — our children, the planet they'll inherit — when the threat is so real?

Like many people, I've been reading a lot of work by the poet Mary Oliver, who died last month. In particular, I've been re-visiting what she had to say about endings. And in response to the aforementioned question, I think that she'd have two things to say.

The first: "My work is loving the world … / Let me / keep my mind on what matters / which is my work / which is mostly standing still and learning to be astonished."

Put differently, we don't get to choose whether to love our kids. We love them because we're wired that way. Because it's our work. We love them because it helps us achieve that elusive sense of connection to the universe, a feeling that you can also sometimes catch when you're peering down at a carpet of evergreens from the top of a peak, or when you're standing at the edge of the water next to thunderously crashing surf.

We'll hold the precious things of the Earth gently, while we still have them — not to prevent them from breaking, but because we know that, eventually, they will.

We love our kids like we'll have them forever, though we know that we won't. We cherish the moments we can: resist the pull of technology and to-do lists, get down on the floor and play with them, hold them as they fall asleep.

Maybe this is also what I'll teach my son about loving the planet. We'll go to the ocean and stand before it, astonished. We'll hold the precious things of the Earth gently, while we still have them — not to prevent them from breaking, but because we know that, eventually, they will.

And the second thing from Oliver: "I tell you this / to break your heart / by which I mean only / that it break open and never close again / to the rest of the world."

Here, Oliver acknowledges that the abundance of suffering in the world can lead many of us to narrow the scope of our care to just a few people. For some, the nucleus of this care is their families. *The wind outside may howl, we think, but if we can build our little house and lock the doors tightly and huddle closely together, we'll be okay.*

Central to this line of thinking is the fallacy of control: that our actions — including stockpiling resources for only our loved ones — can shield us from harm. Climate change is one thing that upends this belief. While those without money and power will suffer more than those who have them, the truth is that nobody is really safe.

Indeed, this is the terror of climate change. But it may also be its promise, ushering people like me into the sense of existential vulnerability that many have known for a long time. This vulnerability demands that we expand our circle of empathy — reevaluate who merits our love and, in turn, our care. It means acknowledging that, in some ways, people dying of air pollution in a seemingly faraway land aren't so different from the man who lived next to the highway, or from my son who has trouble breathing when there are wildfires.

With this more expansive vision of care comes more responsibility — not just to love the world, but also to protect it, because what you do for your neighbor is also what you do for yourself.

So my family will follow Oliver's advice: We'll witness the beauty of what we have while it's ours, and act to protect and repair where it's possible to do so. We'll also choose to look at loss head-on, because telling the truth, even when it's scary, is part of loving, too.

Rachel Alexander is associate director of New America CA. Alexander has dedicated her career to the social sector, with a focus on opening institutional opportunity for people systemically denied access to power. Most recently she worked at US2020, an initiative addressing inequity in STEM careers via mentoring and hands-on learning opportunities for youth.

INTERBEING

By Thich Nhat Hanh

If you are a poet, you will see clearly that there is a cloud floating in this sheet of paper. Without a cloud, there will be no rain; without rain, the trees cannot grow; and without trees, we cannot make paper. The cloud is essential for the paper to exist. If the cloud is not here, the sheet of paper cannot be here either. So we can say that the cloud and the paper inter-are. "Interbeing" is a word that is not in the dictionary yet, but if we combine the prefix "inter-" with the verb "to be," we have a new verb, inter-be.

If we look into this sheet of paper even more deeply, we can see the sunshine in it. If the sunshine is not there, the forest cannot grow. In fact, nothing can grow without sunshine. And so, we know that the sunshine is also in this sheet of paper. The paper and the sunshine inter-are. And if we continue to look, we can see the logger who cut the tree and brought it to the mill to be transformed into paper. And we see wheat. We know the logger cannot exist without his daily bread, and therefore the wheat that became his bread is also in this sheet of paper. The logger's father and mother are in it too. When we look in this way, we see that without all of these things, this sheet of paper cannot exist.

Looking even more deeply, we can see ourselves in this sheet of paper too. This is not difficult to see, because when we look at a sheet of paper, the sheet of paper is part of our perception. Your mind is in here and mine is also. So we can say that everything is in here with this sheet of paper. We cannot point out one thing that is not here — time, space, the earth, the rain, the minerals in the soil, the sunshine, the cloud, the river, the heat. Everything co-exists with this sheet of paper. That is why I think the word inter-be should be in the dictionary. "To be" is to inter-be. We cannot just be by ourselves alone. We have to inter-be with every other thing. This sheet of paper is, because everything else is.

Suppose we try to return one of the elements to its source. Suppose we return the sunshine to the sun. Do you think that this sheet of paper will be possible? No, without sunshine nothing can be. And if we return the logger to his mother, then we have no sheet of paper either. The fact is that this sheet of paper is made up only of "non-paper" elements. And if we return these non-paper elements to their sources, then there can be no paper at all. Without non-paper elements, like mind, logger, sunshine and so on, there will be no paper. As thin as this sheet of paper is, it contains everything in the universe in it.

From *The Heart of Understanding: Commentaries on the Prajnaparamita Heart Sutra* by Thich Nhat Hanh. Thich Nhat Hanh is a Vietnamese monk, a renowned Zen master, a poet and a peace activist. He was nominated for the Nobel Prize by Martin Luther King, Jr., in 1967, and is the author of many books, including the best-selling *The Miracle of Mindfulness*.

EN'OWKIN: WHAT IT MEANS TO A SUSTAINABLE COMMUNITY

By Jeanette Armstrong

The word *En'owkin* comes from the high language of the Okanagan people and has its origin in a philosophy perfected to nurture voluntary cooperation, an essential foundation for everyday living.

The term is based on a metaphorical image created by the three syllables that make up the Okanagan word. The image is of liquid being absorbed drop by single drop through the head (mind). It refers to coming to understanding through a gentle integrative process.

En'owkin is also the name given our education center by elders of the Okanagan; it is meant to assist and guide us in restoring to wholeness a community fragmented by colonization.

To the Okanagan People, as to all peoples practicing bio-regionally self-sufficient economies, the knowledge that the total community must be engaged in order to attain sustainability is the result of a natural process of survival. The practical aspects of willing teamwork within a whole-community system clearly emerged from experience delineated by necessity. However, the word *cooperation* is insufficient to describe the organic nature by which members continue to cultivate the principles basic to care-taking one another and other life forms, well beyond necessity.

Having been born into such a living community, albeit one becoming more fragmented, I have come to the conclusion that its philosophy is supported by an infrastructure that governs the imperatives by which choices are made, and that this structure solicits desired results. In this particular living community, the structure that implements the principles could be described as an organizational process, one profoundly deliberate in insuring an outcome that results in a community strengthened by the dynamics of deep collaboration — that is, collaboration at all levels over generations.

En'owkin, practiced as a rules-to-order technique, solicits voluntary deep collaboration. As such, En'owkin is engaged in by the community as a customary procedure in order to insure that the principles of sustainability will be incorporated in decision-making. The customs are cultural traditions arising as a worldview. In the En'owkin process, we do things in a way that enables us to experience collaboration as the most natural and right way to do things. To me the principles of the process seem simple: because they are so deeply imbedded, I cannot see how community could operate other than within these principles. Yet, through articulating them, I have come to discern the complexity and depth of their significance. The principles are most easily represented in a schematic, rather than in words, displaying the structurally integrative nature by which they intersect all levels of human experience.

INDIVIDUAL LAND FAMILY COMMUNITY

What can we come to expect from practicing these life principles? First, we can expect each individual to fully appreciate that, while each person

is singularly gifted, each actualizes full human potential only as a result of physical, emotional, intellectual, and spiritual well being, and that those four aspects of existence are always contingent on external things.

Second, as an individual, each person is a single facet of a transgenerational organism known as a family. Through this organism flows the powerful lifeblood of cultural transference designed to secure the best probability of well being for each generation.

Third, the family system is the foundation of a long-term living network called community. In its various configurations this network spreads its life force over centuries and across physical space; using its collective knowledge to secure the well being of all by the short- and long-term choices made via its collective process. Finally, a community is the living process that interacts with the vast and ancient body of intricately connected patterns operating in perfect unison called the land. The land sustains all life and must be protected from depletion in order to insure its health and ability to provide sustenance across generations.

It is imperative that community — through the family and the individual — be seen as a whole system engaged in maintaining the principles that insure its well being. En'owkin is, to me, a philosophy expressed in the process of being part of a community. The idea of community, as understood by my ancestors, encompassed a complex holistic view of interconnectedness. Within a contemporary Okanagan context, En'owkin achieves a process of inquiry and decision-making intended to continuously challenge complacency and rigidity.

I have found that it solicits a non-adversarial approach to collaborative decisionmaking culminating in true consensus making, which in turn encourages both harmony and empowerment.

The holistic parameters of En'owkin demand our responsibility to everything we are connected to — the heart of sustainability. I have most often observed its workings as a governing process, because En'owkin was most visibly engaged during decision-making in my community.

The word *En'owkin* in the Okanagan language elicits the metaphorical image of liquid being absorbed drop by single drop through the head (mind). It refers to coming to understanding through a gentle process of integration.

The Okanagan people used this word when there was a choice confronting the community. An elder would ask the people to engage in En'owkin, which requested each person contribute information about the subject at hand. What took place was not so much a debate as a process of clarification, incorporating bits of information from as many people as possible, no matter how irrelevant, trivial, or controversial these bits might seem, for in En'owkin, nothing is discarded or prejudged.

The process deliberately seeks no resolution in the first stage. Instead, it seeks concrete information; then inquires how people are affected and how other things might be affected, both in the long and the short term. It seeks out diversity of opinion. Persons with good analytical skills or special knowledge are usually given opportunity to speak, as are spokespersons for individuals or families. Anyone may speak, but only to add new information or insight.

The next stage "challenges" the group to suggest directions mindful of each area of concern put forward. The challenge usually takes the form of questions put to the "elders", the "mothers", the "fathers", and the "youth". Here, the term *elders* refers to those who are like-minded in protecting traditions. The group seeks their spiritual insight as a guiding force of connection to the land. The term mothers refers to those who are like-minded in their concern about the daily well-being of the family. The group seeks from the mothers sound advice on policy and on workable systems based on human relations. The term *fathers* refers to those who are like-minded in their concern about the things necessary for security, sustenance, and shelter. Usually the group seeks from the fathers practical strategy, logistics, and action. The term *youth* refers to those who are like-minded in their tremendous creative energy as they yearn for change that will bring a better future. Usually the group seeks from the youths their creative and artistic prowess in theorizing the innovative possibilities and their engagement in carrying it out.

Using this process does not require a rigid meeting format in which information is solicited. Rather, it is imperative that each person play his or her strongest natural role, because that is how each person can best contribute to the community. Persons speaking usually identify the role they've assumed by saying, for example, "I speak as a mother," and proceed to outline what is understood that *mothers* are being challenged to contribute. Each role is then valued as indispensable to the unit.

YOUTH – innovative possibilities

FATHERS – security, sustenance, shelter

MOTHERS – policy, workable systems

ELDERS – connected to the land

Stated and unstated ground rules of the process "challenge" each member of the group to be considerate and compassionate to all others in the solution building. The process asks that each person be committed to creatively include in his or her own thinking the concerns of all others. It requires each person's understanding to expand to accommodate the whole of the community. The point of the process is not to persuade the community that you are right, as in a debate; rather, the point is to bring you, as an individual, to understand as much as possible the reasons for opposite opinions. Your responsibility is to see the views of others, their concerns and their reasons, which will help you to choose willingly and intelligently the steps that will create a solution — because it is in your own best interest that all needs are addressed in the community. While the process does not mean that everyone agrees — for that is never possible — it does result in everyone being fully informed and agreeing fully on what must take place and what each will concede or contribute.

The action finally taken will be the best possible action, taking into consideration all the short-term, concrete social needs of the community as well as long-term psychological and spiritual needs, because all are essential to a healthy community and to sustainability. This is where diversity of thought and ingenuity resides. The elders describe it as a decision-making process of the group mind at its best. The word they use means something like "our completeness." It creates complete solidarity in a group moving in the direction suggested, at the same time opening the door to a collaborative imagination and innovation much more likely to produce the best answer.

It seems to me that in diverse groups the En'owkin process is even more useful because there is a greater possibility of differing opinions. In modern decision-making, the "Roberts rules of democratic process," in carrying out the will of the majority, creates great disparity and injustice to the minority, which in turn leads to division, polarity, and ongoing dissension. This type of process is in fact a way to guarantee the continuous hostility and division that give rise to aggressive actions that can destabilize the whole community, creating uncertainty, distrust, and prejudice. Different religions and ethnic origins, inequality of income levels, and inaccessible governing are the best reasons to invoke the En'owkin process.

Real democracy is not about power in numbers, it is about collaboration as an organizational system. Real democracy includes the right of the minority to a remedy, one that is unhampered by the tyranny of a complacent or aggressive majority. The En'owkin process is a mediation process especially designed for community. It is a process that seeks to build solidarity and develop remediated outcomes that will be acceptable, by informed choice, to all who will be affected. Its collaborative decision-making engages everyone in the process; decisions are not handed down by leaders "empowered" to decide for everyone. It is a negotiated process that creates trust and consensus *because* the solution belongs to everyone for all their own reasons. The process empowers the community, creating unity and strength for the long term. Because land is seen as a fundamental part of the self, along with family and community, it requires and insures sustainable practice in its practice.

En'owkin as a community-building process makes even more sense as communities grow ever more diverse. While the human mind is naturally focused on survival; community-mind can be developed as a way to magnify the creativity of an individual mind and thus increase an individual's overall potential. A critical component of leadership today is the profit motive that affects us all at every level.

Our original communities have disintegrated; the long-term condition of the human species, and other life forms, has become secondary to short-term profit for the few, allowing for poor choices that have altered the health and lives of millions. I have come to understand that unless change occurs in the ways in which communities use the land, the well being and survival of us all is at risk. We can change this. For these reasons, I choose to assist in changing the paradigm by joining in a collaborative process to devise a better future.

My contribution in the En'owkin process undertaken by the Center for Ecoliteracy is to share my insight and to assist with my view of an ages-old technique perfected by my ancestors for building sustainability principles into community process. Today we human beings face the biggest of obstacles, and so the greatest challenges, to our creativity and responsibility.

Let us begin with courage and without limitations, and we will come up with surprising solutions.

Jeannette Armstrong is an Okanagan author and spokesperson for Indigenous peoples' rights. She was born and grew up on the Penticton Indian reserve in British Columbia's Okanagan Valley. This is an excerpt from the publication *Ecoliteracy: Mapping the Terrain.*

THE HOPEFUL ALTERNATIVE — GLOBAL PEACE SYSTEM

By Patrick T. Hiller

Let's face it. Things are not going too well. Humans screwed up. We are facing a planetary crisis which we created in a fragment of the earth's existence. Most of us are living and promoting lifestyles that are incompatible with sustainable life on Earth for all living beings, we have built social systems where the status quo accepts social injustices, and, to top it off, we have invented the horrendous institution of war. Yes, we invented it. War is not part of human nature, nor is it inevitable.

I promise to offer some thoughts about how to get out of this crisis. But first we need to do an honest, often painful analysis.

- The climate crisis we face acts as a multiplier of stress on societies, especially vulnerable populations.
- There is extreme global inequality in which 80 individuals own as much wealth as half of the rest of the world.
- We are experiencing a global refugee crisis — partially caused by wars — brought to us by many complex factors, including the rising of right-wing nationalism, the political fostering of fear of "the other," and dehumanization of those who are different than us.
- We are "led" by individuals who have threatened each other, comparing the sizes of their nuclear weapons launch buttons; or have vowed to open up the Brazilian Amazon rainforest to economic development — which would be a catastrophe for the indigenous people and a man-made (I am using this term consciously) environmental catastrophe.
- A global war system dominates, upheld by global structures of violence.

Aren't we looking at different sets of issues here? Shouldn't the peace movement take care of war, all those individuals struggling for justice focus on their causes, and all of us make sure to take care of the environment? Not quite. These areas are intrinsically connected. Solutions to those multiple crises must be connected as well.

Conflict transformation scholar Tom Hastings advises us that, "The only cure for war's impact on the Earth is to prepare for peace instead of war — prepare, that is, to pursue our objectives by any nonviolent means at our command." But how can we prepare for peace when we are led to believe that the world is more violent than it has ever been? How can we prepare for peace when there is an overwhelming war system upholding and reinforcing the myths of war? How can we prepare for peace with such a dark and narrow vision of the future?

It's an old story, but it's no longer the only story. Another is in the making, although most educators, the media, and even presidents don't know about it. It is a story told by historian Kent D. Shifferd, who, in his book *From War to Peace* refuses to submit to the narrative of inevitable war and its consequences on humans and the environment. On the contrary, he demonstrates that a real, active, alternative paradigm is emerging, where issues of peace, justice and sustainability are strongly interconnected — the Global Peace System.

In contrast to the advocated and perceived military security offered by the prevailing international system, the peace system provides greater justice, economic well-being, and ecological security. The Global Peace System is not a static end-product of a peaceful world, but a dynamic, imperfect process of human evolution which leads to an increasingly nonviolent world with more equality. Numerous, undeniably demonstrable trends leading us toward the evolution of a Global Peace System are already evident.

GLOBAL TRENDS

The concept of the global peace system is grounded in the "recognition of some very real, revolutionary historic trends that began in the early nineteenth century with the appearance

of the world's first peace societies and then in the twentieth century with the development of international institutions aimed at controlling war, the evolution of nonviolence as a real-world power shifter, the rise of global civil society, the growing permeability of the old national boundaries, and a number of other trends." The trends transcend what one traditionally might consider to be the concept of peace. Instead, the Global Peace System covers the major areas of global collaboration, constructive conflict transformation and social change

While all are connected as part of the evolving system, each trend is significant in itself. Several might seem familiar and obvious, yet they are rarely looked at in terms of an evolving system of global peace.

GLOBAL COLLABORATION

The world has gotten smaller — certainly not a surprising statement which commonly accompanies the catch-it-all term 'globalization.' For many of us, globalization means the merging of global markets and trade driven by transnational corporations or supra-national trade bodies, as well as instantaneous communication through the internet. This neoliberal scenario created both proponents and opponents. The smaller, globalized world, however, offers far more.

Global collaboration manifests itself in many formal and informal ways. We might think of the United Nations which was founded — just like the League of Nations before — as an entity whose goal to prevent war by negotiation, sanctions, and collective security was revolutionary in the long history of warfare. We also can see more recently how a civil society campaign like the International Campaign to Abolish Nuclear Weapons (ICAN) has driven advocacy efforts resulting in an overwhelming majority of the world's nations adopting a landmark global agreement to ban nuclear weapons, known officially as the Treaty on the Prohibition of Nuclear Weapons. There are also stories of unarmed civilian peacekeeping in conflict zones such as that of the Nonviolent Peaceforce in South Sudan or Iraq, which

FIGURE 1. GLOBAL PEACE SYSTEM

While all are connected as part of the evolving system, each trend is significant in itself. Several might seem familiar and obvious, yet they are rarely looked at in terms of an evolving system of global peace. We can see them in stories, many stories.

is not only nonviolently standing between conflicting parties, but taking part in dialogue processes to reconstruct the social fabric. Global collaboration also led to the so-called Paris Agreement, considered the backbone of international climate action, the Iran Nuclear Deal on curbing the Iranian nuclear program, and the Christchurch Call, a unique commitment by governments and online service providers to eliminate terrorist and violent content online.

CONSTRUCTIVE CONFLICT TRANSFORMATION

As expressed by many win-lose metaphors "conflict" is warlike and violent, explosive, a struggle, an act of nature, a communication breakdown and more. At the same time, there are positive metaphors which now view conflict as an opportunity, a bargaining table, a dance, or as making a quilt. It is in our own power to view conflict in a negative, a neutral, or a more positive light. What we do know, however, is that there now are many forms of constructive conflict transformation which do not contain violence and which lead to more sustainable and positive outcomes for all.

Contemporary activists build and expand on the lessons of previous nonviolent struggles, sometimes even with the direct help from those who have contributed to large changes. For example, Civil Rights Movement leader Reverend James Lawson uses his institute to advance the practices of nonviolent action and organizing in the contemporary context. Nonviolent action is proven to be an effective and proactive form of conflict transformation that is taking place all the time and everywhere. When I ask 30 students in my conflict resolution course to identify a current ongoing nonviolent campaign, I usually get 30 different examples ranging from the Movement for Black Lives, Extinction Rebellion, the struggle for same-sex marriage in the US and #MeToo all the way to local efforts to keep housing affordable.

Conflict transformation is also illustrated by the story of formal negotiation at the domestic and international level. Former UN Deputy Secretary General Jan Eliasson, for example, created common ground between unyielding and uncommunicative negotiators from Iraq and Iran during the First Persian Gulf War over a "confidential" breakfast. These practices and theories of mediation, negotiation, reconciliation, facilitation, and peacebuilding have created and informed the field of peace and conflict studies which is now found

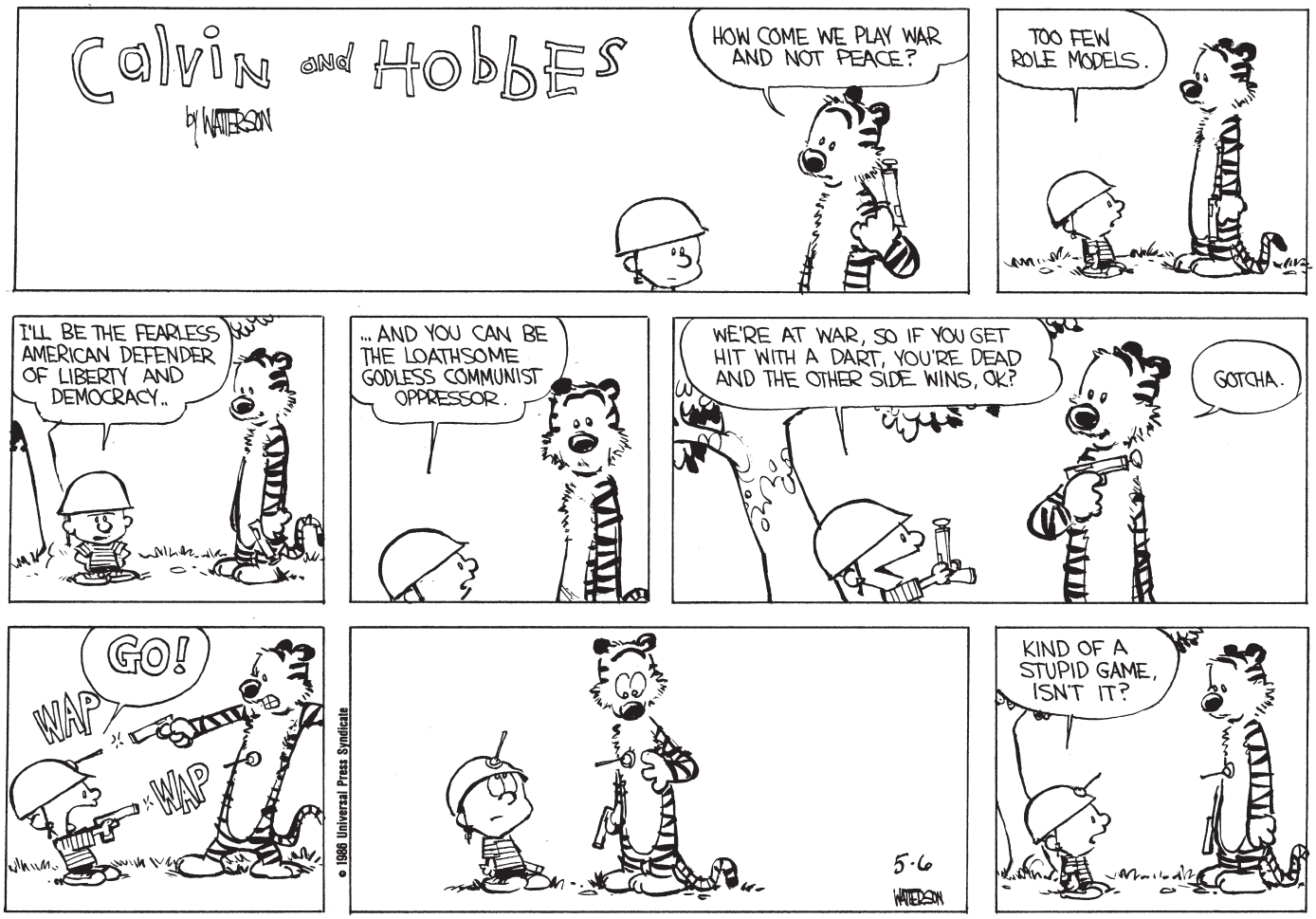
in hundreds of colleges, universities and schools providing peace education courses, as minors, majors and graduate level degrees.

SOCIAL CHANGE

How do we find a way to understand, accept or bring about social change, if all societies and cultures are so fluid and ever-changing? We can start by looking at those kinds of changes that go against long-held practices and beliefs which often were originally considered unchangeable. Take slavery, for an example. This human-invented practice was used worldwide, deeply embedded in economies and even sanctioned by religious scriptures. Nowadays slavery is outlawed globally and those who engage in any way or form in this practice are considered savage and usually operate within the realm of illegality. The abolition of slavery was certainly one of the historically more significant changes; however, not all changes are so drastic. We should also look at the many subtle and less subtle developments that have been directly contributing to the evolution of the Global Peace System.

One example is the institution of war itself. Once considered necessary for the health and security of a nation and glamorized by the heroic sacrifices of its soldiers, we now bear eyewitness to the stories of the so-called "Winter Soldiers" – veterans from Vietnam, Afghanistan and Iraq who debunk the myth of war as a glorious and noble enterprise. In fact, these stories and the increasing public awareness that U.S. warfare, in particular, is a corporate-driven endeavor hallowing out national economies, shows that neo-imperialism may be in its final stage. Nations that try to police the world eventually go bankrupt. Regions of long-term peace, like the European Union, North America, and Scandinavia, have shown us that peace can actually be self perpetuating.

In addition, human consciousness has evolved to a higher level as evidenced by many political and social movements like #Metoo (movement against sexual harassment and assault), the Movement for Black Lives (a response to the many forms of violence against black communities), Extinction Rebellion (an international movement responding to the risk of human extinction and ecological collapse), and the



indigenous water and forest protectors. It is inspiring to see so much organized action in struggles for democracy, economic justice, the environment, gender and sexuality, health care, housing, indigenous rights, migration, militarism and racial justice. All those are responses to the destructive systems we have created in many societies; all those are responses that contribute to change toward more just and equal systems.

All these changes, whether large or small, truly reflect the gradual rise of planetary loyalty, where people have begun to see themselves as citizens of the globe sharing a common need to protect global ecosystems with the rest of humanity. The emergence of a globally-linked world society is well underway.

CONCLUSION

Through the examples above, we see that the Global Peace System is not only an abstract, wishful concept, but a reality exemplified by numerous global trends. These trends demonstrate that there is an alternative story in the making. It is one in which all of us can participate, and one in which we recognize that our efforts are not isolated in one area. The dots are connected, which allows us to broaden our sense of community as changemakers. While they do not achieve peace as a perfect end-product, these trends are dynamic processes creating a more just and peaceful world. They show us that different societies and humanity as a whole are experimenting with alternatives to war and violence. Peace and justice, like war and injustice, are realities in the lives of humans. Key components in this transformation process from war to peace involve recognizing the reality of the trends, teaching them and understanding the Global Peace System concept as a whole. Finally, we need to embrace the reality of a Global Peace System not as a signal for complacency, but as a call to action to participate in the creation of the new paradigm of a world without war, allowing us to shift our attention and resources fully toward issues of justice and sustainability.

Patrick T. Hiller is the Director of the War Prevention Initiative by the Jubitz Family Foundation and adjunct faculty at the Conflict Resolution Program at Portland State University. His writings and research are almost exclusively related to the analysis of war and peace and social injustice and, most often in the form of structural violence and power dynamics with an emphasis on human dignity, solidarity among all peoples, equal participation of all peoples, the role of the governments and the promotion of peace.

PRINCIPLES OF EARTH DEMOCRACY

By Vandana Shiva

Earth Democracy is both an ancient worldview and an emergent political movement for peace, justice, and sustainability. Earth Democracy connects the particular to the universal, the diverse to the common, and the local to the global. It incorporates what in India we refer to as *vasudhaiva kutumbkam* (the earth family) — the community of all beings supported by the earth. Native American and indigenous cultures worldwide have understood and experienced life as a continuum between human and nonhuman species and between present, past, and future generations. An 1848 speech attributed to Chief Seattle of the Suquamish tribe captures this continuum.

> *How can you buy or sell the sky, the warmth of the land? The idea is strange to us.*
>
> *If we do not own the freshness of the air and the sparkle of the water, how can you buy them?*
>
> *Every part of this earth is sacred to my people. Every shining pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people. The sap which courses*

through the trees carries the memories of the red man.

This we know; the earth does not belong to man; man belongs to the earth. This we know. All things are connected like the blood which unites our family. All things are connected.

Earth Democracy is the awareness of these connections and of the rights and responsibilities that flow from them. Chief Seattle's protest that "the earth does not belong to man" finds echoes across the world: "Our world is not for sale," "Our water is not for sale," "Our seeds and biodiversity are not for sale."

In contrast to viewing the planet as private property, movements are defending, on a local and global level, the planet as a commons. In contrast to experiencing the world as a global supermarket, where goods and services are produced with high ecological, social, and economic costs and sold for abysmally low prices, cultures and communities everywhere are resisting the destruction of their biological and cultural diversity, their lives, and their livelihoods. As alternatives to the suicidal, globalized free market economy based on plundering and polluting the earth's vital resources, which displaces millions of farmers, craftspeople, and workers, communities are resolutely defending and evolving living economies that protect life on earth and promote creativity.

Corporate globalization is based on new enclosures of the commons; enclosures which imply exclusions and are based on violence. Instead of a culture of abundance, profit-driven globalization creates cultures of exclusion, dispossession, and scarcity. In fact, globalization's transformation of all beings and resources into commodities robs diverse species and people of their rightful share of ecological, cultural, economic, and political space. The "ownership" of the rich is based on the "dispossession" of the poor — it is the common, public resources of the poor which are privatized, and the poor who are disowned economically, politically, and culturally.

Patents on life and the rhetoric of the "ownership society" in which everything — water, biodiversity, cells, genes, animals, plants — is property express a worldview in which life forms have no intrinsic worth, no integrity, and no subjecthood. It is a worldview in which the rights of farmers to seed, of patients to affordable medicine, or producers to a fair share of nature's resources can be freely violated. The rhetoric of the "ownership society" hides the anti-life philosophy of those who, while mouthing pro-life slogans, seek to own, control, and monopolize all of the earth's gifts and all of human creativity. The enclosures of the commons that started in England created millions of disposable people. While these first enclosures stole only land, today all aspects of life are being enclosed — knowledge, culture, water, biodiversity, and public services such as health and education. Commons are the highest expression of economic democracy.

The privatization of public goods and services and the commoditization of the life support systems of the poor is a double theft which robs people of both economic and cultural security. Millions, deprived of a secure living and identity, are driven toward extremist, terrorist, fundamentalist movements. These movements simultaneously identify the other as enemy and construct exclusivist identities to separate themselves from those with whom, in fact, they are ecologically, culturally, and economically connected.

New intellectual property rights enclose the biological, intellectual, and digital commons. Privatization encloses the water commons. The enclosure of each common displaces and disenfranchises people, which creates scarcity for the many, while generating "growth" for the few. Displacement becomes disposability, and in its most severe form, the induced scarcity becomes a denial of the very right to live.

On the streets of Seattle and Cancún, in homes and farms across the world, another human future is being born. A future based on inclusion, not exclusion; on nonviolence, not violence; on reclaiming the commons, not their enclosure; on freely sharing the earth's resources, not monopolizing and privatizing them. Instead of being shaped by closed minds behind closed doors, the people's project is unfolding in an atmosphere of dialogue and diversity, of pluralism and partnerships, and of sharing and solidarity. I have named this project Earth Democracy. Based on our self-organizing capacities, our earth identities, and our multiplicities and diversity, Earth Democracy's success concerns not just the fate and well-being of all humans, but all beings on the earth. Earth Democracy is not just about the next protest or the next World Social Forum; it is about what we do in between. It addresses the global in our everyday lives, our everyday realities, and creates change globally by making change locally. The changes may appear small, but they are far-reaching in impact — they are about nature's evolution and our human potential; they are about shifting from the vicious cycles

of violence in which suicidal cultures, suicidal economies, and the politics of suicide feed on each other to virtuous cycles of creative nonviolence in which living cultures nourish living democracies and living economies.

Living economies are processes and spaces where the earth's resources are shared equitably to provide for our food and water needs and to create meaningful livelihoods. Earth Democracy evolves from the consciousness that while we are rooted locally we are also connected to the world as a whole, and, in fact, to the entire universe. We base our globalization on ecological processes and bonds of compassion and solidarity, not the movement of capital and finance or the unnecessary movement of goods and services. A global economy which takes ecological limits into account must necessarily localize production to reduce wasting both natural resources and people. And only economies built on ecological foundations can become living economies that ensure sustainability and prosperity for all.

Earth Democracy enables us to envision and create living democracies. Living democracy enables democratic participation in all matters of life and death — the food we eat or do not have access to; the water we drink or are denied due to privatization or pollution; the air we breathe or are poisoned by. Living democracies are based on the intrinsic worth of all species, all peoples, all cultures; a just and equal sharing of this earth's vital resources; and sharing the decisions about the use of the earth's resources.

Living cultures are spaces in which we shape and live our diverse values, beliefs, practices, and traditions, while fully embracing our common, universal humanity, and our commonality with other species through soil, water, and air. Living cultures are based on nonviolence and compassion, diversity and pluralism, equality and justice, and respect for life in all its diversity.

Living cultures that grow out of living economies have space for diverse species, faiths, genders, and ethnicities. Living cultures grow from the earth, emerging from particular places and spaces while simultaneously connecting all humanity in a planetary consciousness of being members of our earth family. Living cultures are based on multiple and diverse identities. They are based on earth identity as both the concrete reality of our everyday lives — where we work, play, sleep, eat, laugh, or cry — and the processes which connect us globally.

"All things are connected," Chief Seattle tells us. We are connected to the earth locally and globally. Living cultures based on the recovery of our earth identity create the potential for reintegrating human activities into the earth's ecological processes and limits. Remembering we are earth citizens and earth children can help us recover our common humanity and help us transcend the deep divisions of intolerance, hate, and fear that corporate globalization's ruptures, polarization, and enclosures have created.

Earth Democracy, in the contemporary context, reflects the values, worldviews, and actions of diverse movements working for peace, justice, and sustainability. Earth Democracy allows us to reclaim our common humanity and our unity with all life. Earth Democracy relocates the sanctity of life in all beings and all people irrespective of class, gender, religion, or caste. And it redefines "upholding family values" as respecting the limits on greed and violence set by belonging to the earth family. Family values of the earth family do not allow for the privatization of water or the patenting of life, since all beings have a right to life and well-being. In the earth family that acknowledges, as Chief Seattle did, that "all things share the same breath, the beast,

the tree, the man.... The air shares its spirit with all the life it supports," one part of the international community cannot destabilize the climate, enclose the atmospheric commons, or ignore the rights of other species and other countries by creating 36 percent of the world's CO2 pollution.

Earth Democracy protects the ecological processes that maintain life and the fundamental rights that are the basis of the right to life, including the right to water, the right to food, the right to health, the right to education, and the right to jobs and livelihoods. Earth Democracy is based on the recognition of and respect for the life of all species and all people.

Earth Democracy connects us through the perennial renewal and regeneration of life — from our daily life to the life of the universe. Earth Democracy is the universal story of our times, in our different places. It pulsates with the limitless potential of an unfolding universe even while it addresses the real threats to our very survival as a species. It is hope in a time of hopelessness, it brings forth peace in a time of wars without end, and it encourages us to love life fiercely and passionately at a time when leaders and the media breed hatred and fear.

PRINCIPLES OF EARTH DEMOCRACY

1. All species, peoples, and cultures have intrinsic worth.
2. The earth community is a democracy of all life.
3. Diversity in nature and culture must be defended.
4. All beings have a natural right to sustenance.
5. Earth Democracy is based on living economies and economic democracy.
6. Living economies are built on local economies.
7. Earth Democracy is a living democracy.
8. Earth Democracy is based on living cultures.
9. Living cultures are life nourishing.
10. Earth Democracy globalizes peace, care, and compassion.

Vandana Shiva is a world-renowned environmental leader and thinker and director of the Research Foundation on Science, Technology, and Ecology. She is author of numerous books. Shiva has also served as an adviser to governments in India and abroad as well as NGOs, including the International Forum on Globalization, the Women's Environment and Development Organization and the Third World Network.

DANCING WITH SYSTEMS

By Donella Meadows

THE DANCE

People who are raised in the industrial world and who get enthused about systems thinking are likely to make a terrible mistake. They are likely to assume that here, in systems analysis, in interconnection and complication, in the power of the computer, here at last, is the key to prediction and control. This mistake is likely because the mindset of the industrial world assumes that there is a key to prediction and control.

I assumed that at first too. We all assumed it, as eager systems students at the great institution called MIT. More or less innocently, enchanted by what we could see through our new lens, we did

what many discoverers do. We exaggerated our own ability to change the world. We did so not with any intent to deceive others, but in the expression of our own expectations and hopes. Systems thinking for us was more than subtle, complicated mindplay. It was going to Make Systems Work.

But self-organizing, nonlinear, feedback systems are inherently unpredictable. They are not controllable. They are understandable only in the most general way. The goal of foreseeing the future exactly and preparing for it perfectly is unrealizable. The idea of making a complex system do just what you want it to do can be achieved only temporarily, at best. We can never fully understand our world, not in the way our reductionistic science has led us to expect. Our science itself, from quantum theory to the mathematics of chaos, leads us into irreducible uncertainty. For any objective other than the most trivial, we can't optimize; we don't even know what to optimize. We can't keep track of everything. We can't find a proper, sustainable relationship to nature, each other, or the institutions we create, if we try to do it from the role of omniscient conqueror.

For those who stake their identity on the role of omniscient conqueror, the uncertainty exposed by systems thinking is hard to take. If you can't understand, predict, and control, what is there to do?

Systems thinking leads to another conclusion–however, waiting, shining, obvious as soon as we stop being blinded by the illusion of control. It says that there is plenty to do, of a different sort of "doing." The future can't be predicted, but it can be envisioned and brought lovingly into being. Systems can't be controlled, but they can be designed and redesigned. We can't surge forward with certainty into a world of no surprises, but we can expect surprises and learn from them and even profit from them. We can't impose our will upon a system. We can listen to what the system tells us, and discover how its properties and our values can work together to bring forth something much better than could ever be produced by our will alone.

We can't control systems or figure them out. But we can dance with them!

I already knew that, in a way before I began to study systems. I had learned about dancing with great powers from whitewater kayaking, from gardening, from playing music, from skiing. All those endeavors require one to stay wide-awake, pay close attention, participate flat out, and respond to feedback. It had never occurred to me that those same requirements might apply to intellectual work, to management, to government, to getting along with people.

But there it was, the message emerging from every computer model we made. Living successfully in a world of systems requires more of us than our ability to calculate. It requires our full humanity–our rationality, our ability to sort out truth from falsehood, our intuition, our compassion, our vision, and our morality.

I will summarize the most general "systems wisdom" I have absorbed from modeling complex systems and from hanging out with modelers. These are the take-home lessons, the concepts and practices that penetrate the discipline of systems so deeply that one begins, however imperfectly, to practice them not just in one's profession, but in all of life.

The list probably isn't complete, because I am still a student in the school of systems. And it isn't unique to systems thinking. There are many ways to learn to dance. But here, as a start-off dancing lesson, are the practices I see my colleagues adopting, consciously or unconsciously, as they encounter systems.

1. GET THE BEAT.

Before you disturb the system in any way, watch how it behaves. If it's a piece of music or a whitewater rapid or a fluctuation in a commodity price, study its beat. If it's a social system, watch it work. Learn its history. Ask people who've been around a long time to tell you what has happened. If possible, find or make a time graph of actual data from the system. Peoples' memories are not always reliable when it comes to timing.

Starting with the behavior of the system forces you to focus on facts, not theories. It keeps you from falling too quickly into your own beliefs or misconceptions, or those of others.

Starting with the behavior of the system directs one's thoughts to dynamic, not static analysis–not only to "what's wrong?" but also to "how did we get there?" and "what behavior modes are possible?" and "if we don't change direction, where are we going to end up?"

And finally, starting with history discourages the common and distracting tendency we all have to define a problem not by the system's actual behavior, but by the lack of our favorite solution. (The problem is, we need to find more oil. The problem is, we need to ban abortion. The problem is, how can we attract more growth to this town?)

2. LISTEN TO THE WISDOM OF THE SYSTEM.

Aid and encourage the forces and structures that

help the system run itself. Don't be an unthinking intervener and destroy the system's own self-maintenance capacities. Before you charge in to make things better, pay attention to the value of what's already there.

A friend of mine, Nathan Gray, was once an aid worker in Guatemala. He told me of his frustration with agencies that would arrive with the intention of "creating jobs" and "increasing entrepreneurial abilities" and "attracting outside investors." They would walk right past the thriving local market, where small-scale business people of all kinds, from basket-makers to vegetable growers to butchers to candy-sellers, were displaying their entrepreneurial abilities in jobs they had created for themselves. Nathan spent his time talking to the people in the market, asking about their lives and businesses, learning what was in the way of those businesses expanding and incomes rising. He concluded that what was needed was not outside investors, but inside ones. Small loans available at reasonable interest rates, and classes in literacy and accounting, would produce much more long-term good for the community than bringing in a factory or assembly plant from outside.

3. EXPOSE YOUR MENTAL MODELS TO THE OPEN AIR.

Remember, always, that everything you know, and everything everyone knows, is only a model. Get your model out there where it can be shot at. Invite others to challenge your assumptions and add their own. Instead of becoming a champion for one possible explanation or hypothesis or model, collect as many as possible. Consider all of them plausible until you find some evidence that causes you to rule one out. That way you will be emotionally able to see the evidence that rules out an assumption with which you might have confused your own identity.

You don't have to put forth your mental model with diagrams and equations, though that's a good discipline. You can do it with words or lists or pictures or arrows showing what you think is connected to what. The more you do that, in any form, the clearer your thinking will become, the faster you will admit your uncertainties and correct your mistakes, and the more flexible you will learn to be. Mental flexibility–the willingness to redraw boundaries, to notice that a system has shifted into a new mode, to see how to redesign structure — is a necessity when you live in a world of flexible systems.

4. STAY HUMBLE. STAY A LEARNER.

Systems thinking has taught me to trust my intuition more and my figuring-out rationality less, to lean on both as much as I can, but still to be prepared for surprises. Working with systems, on the computer, in nature, among people, in organizations, constantly reminds me of how incomplete my mental models are, how complex the world is, and how much I don't know.

The thing to do, when you don't know, is not to bluff and not to freeze, but to learn. The way you learn is by experiment–or, as Buckminster Fuller put it, by trial and error, error, error. In a world of complex systems it is not appropriate to charge forward with rigid, undeviating directives. "Stay the course" is only a good idea if you're sure you're on course. Pretending you're in control even when you aren't is a recipe not only for mistakes, but for not learning from mistakes. What's appropriate when you're learning is small steps, constant monitoring, and a willingness to change course as you find out more about where it's leading.

That's hard. It means making mistakes and, worse, admitting them. It means what psychologist Don Michael calls "error-embracing." It takes a lot of courage to embrace your errors.

5. HONOR AND PROTECT INFORMATION.

A decision maker can't respond to information he or she doesn't have, can't respond accurately to information that is inaccurate, can't respond in a timely way to information that is late. I would guess that 99 percent of what goes wrong in systems goes wrong because of faulty or missing information.

For example, in 1986 new federal legislation required U.S. companies to report all chemical emissions from each of their plants. Through the Freedom of Information Act (from a systems point of view one of the most important laws in the nation), that information became a matter of public record. In July 1988 the first data on chemical emissions became available. The reported emissions were not illegal, but they didn't look very good when they were published in local papers by enterprising reporters, who had a tendency to make lists of "the top ten local polluters." That's all that happened. There were no lawsuits, no required reductions, no fines, no penalties. But within two years chemical emissions nationwide (at least as reported, and presumably also in fact) had decreased by 40 percent. Some companies were launching policies to bring their emissions down by 90 percent, just because of the release of previously sequestered information.

6. LOCATE RESPONSIBILITY IN THE SYSTEM.

Look for the ways the system creates its own behavior. Do pay attention to the triggering events, the outside influences that bring forth one kind of behavior from the system rather than another. Sometimes those outside events can be controlled (as in reducing the pathogens in drinking water to keep down incidences of infectious disease.) But sometimes they can't. And sometimes blaming or trying to control the outside influence blinds one to the easier task of increasing responsibility within the system.

"Intrinsic responsibility" means that the system is designed to send feedback about the consequences of decision-making directly and quickly and compellingly to the decision-makers.

Dartmouth College reduced intrinsic responsibility when it took thermostats out of individual offices and classrooms and put temperature-control decisions under the guidance of a central computer. That was done as an energy-saving measure. My observation from a low level in the hierarchy is that the main consequence was greater oscillations in room temperature. When my office gets overheated now, instead of turning down the thermostat, I have to call an office across campus, which gets around to making corrections over a period of hours or days, and which often overcorrects, setting up the need for another phone call. One way of making that system more, rather than less responsible, might have been to let professors keep control of their own thermostats and charge them directly for the amount of energy they use. (Thereby privatizing a commons!).

Designing a system for intrinsic responsibility could mean, for example, requiring all towns or companies that emit wastewater into a stream to place their intake pipe downstream from their outflow pipe. It could mean that neither insurance companies nor public funds should pay for medical costs resulting from smoking or from accidents in which a motorcycle rider didn't wear a helmet or a car rider didn't fasten the seat belt. It could mean Congress would no longer be allowed to legislate rules from which it exempts itself.

7. MAKE FEEDBACK POLICIES FOR FEEDBACK SYSTEMS.

President Jimmy Carter had an unusual ability to think in feedback terms and to make feedback policies. Unfortunately he had a hard time explaining them to a press and public that didn't understand feedback.

He suggested, at a time when oil imports were soaring, that there be a tax on gasoline proportional to the fraction of U.S. oil consumption that had to be imported. If imports continued to rise the tax would rise, until it suppressed demand and brought forth substitutes and reduced imports. If imports fell to zero, the tax would fall to zero.

The tax never got passed.

Carter was also trying to deal with a flood of illegal immigrants from Mexico. He suggested that nothing could be done about that immigration as long as there was a great gap in opportunity and living standards between the U.S. and Mexico. Rather than spending money on border guards and barriers, he said, we should spend money helping to build the Mexican economy, and we should continue to do so until the immigration stopped.

That never happened either.

You can imagine why a dynamic, self-adjusting system cannot be governed by a static, unbending policy. It's easier, more effective, and usually much cheaper to design policies that change depending on the state of the system. Especially where there are great uncertainties, the best policies not only contain feedback loops, but meta-feedback loops–loops that alter, correct, and expand loops. These are policies that design learning into the management process.

8. PAY ATTENTION TO WHAT IS IMPORTANT, NOT JUST WHAT IS QUANTIFIABLE.

Our culture, obsessed with numbers, has given us the idea that what we can measure is more important than what we can't measure. You can look around and make up your own mind about whether quantity or quality is the outstanding characteristic of the world in which you live.

If something is ugly, say so. If it is tacky, inappropriate, out of proportion, unsustainable, morally degrading, ecologically impoverishing, or humanly demeaning, don't let it pass. Don't be stopped by the "if you can't define it and measure it, I don't have to pay attention to it" ploy. No one can precisely define or measure justice, democracy, security, freedom, truth, or love. No one can precisely define or measure any value. But if no one speaks up for them, if systems aren't designed to produce them, if we don't speak about them and point toward their presence or absence, they will cease to exist.

9. GO FOR THE GOOD OF THE WHOLE.

Don't maximize parts of systems or subsystems while ignoring the whole. As Kenneth Boulding once said, Don't go to great trouble to optimize something

that never should be done at all. Aim to enhance total systems properties, such as creativity, stability, diversity, resilience, and sustainability–whether they are easily measured or not.

As you think about a system, spend part of your time from a vantage point that lets you see the whole system, not just the problem that may have drawn you to focus on the system to begin with. And realize, that, especially in the short term, changes for the good of the whole may sometimes seem to be counter to the interests of a part of the system. It helps to remember that the parts of a system cannot survive without the whole. The long term interests of your liver require the long term health of your body, and the long term interests of sawmills require the long-term health of forests.

10. EXPAND TIME HORIZONS.

The official time horizon of industrial society doesn't extend beyond what will happen after the next election or beyond the payback period of current investments. The time horizon of most families still extends farther than that–through the lifetimes of children or grandchildren. Many Native American cultures actively spoke of and considered in their decisions the effects upon the seventh generation to come. The longer the operant time horizon, the better the chances for survival.

In the strict systems sense there is no long-term/short-term distinction. Phenomena at different time-scales are nested within each other. Actions taken now have some immediate effects and some that radiate out for decades to come. We experience now the consequences of actions set in motion yesterday and decades ago and centuries ago.

When you're walking along a tricky, curving, unknown, surprising, obstacle-strewn path, you'd be a fool to keep your head down and look just at the next step in front of you. You'd be equally a fool just to peer far ahead and never notice what's immediately under your feet. You need to be watching both the short and the long term — the whole system.

11. EXPAND THOUGHT HORIZONS.

Defy the disciplines. In spite of what you majored in, or what the textbooks say, or what you think you're an expert at, follow a system wherever it leads. It will be sure to lead across traditional disciplinary lines. To understand that system, you will have to be able to learn from — while not being limited by — economists and chemists and psychologists and theologians. You will have to penetrate their jargons, integrate what they tell you, recognize what they can honestly see through their particular lenses, and discard the distortions that come from the narrowness and incompleteness of their lenses. They won't make it easy for you.

Seeing systems whole requires more than being "interdisciplinary," if that word means, as it usually does, putting together people from different disciplines and letting them talk past each other. Interdisciplinary communication works only if there is a real problem to be solved, and if the representatives from the various disciplines are more committed to solving the problem than to being academically correct. They will have to go into learning mode, to admit ignorance and be willing to be taught, by each other and by the system.

It can be done. It's very exciting when it happens.

12. EXPAND THE BOUNDARY OF CARING.

Living successfully in a world of complex systems means expanding not only time horizons and thought horizons; above all it means expanding the horizons of caring. There are moral reasons for doing that, of course. And if moral arguments are not sufficient, then systems thinking provides the practical reasons to back up the moral ones. The real system is interconnected. No part of the human race is separate either from other human beings or from the global ecosystem. It will not be possible in this integrated world for your heart to succeed if your lungs fail, or for your company to succeed if your workers fail, or for the rich in Los Angeles to succeed if the poor in Los Angeles fail, or for Europe to succeed if Africa fails, or for the global economy to succeed if the global environment fails.

As with everything else about systems, most people already know about the interconnections that make moral and practical rules turn out to be the same rules. They just have to bring themselves to believe that which they know.

13. CELEBRATE COMPLEXITY.

Let's face it, the universe is messy. It is nonlinear, turbulent and chaotic. It is dynamic. It spends its time in transient behavior on its way to somewhere else, not in mathematically neat equilibria. It self-organizes and evolves. It creates diversity, not uniformity. That's what makes the world interesting, that's what makes it beautiful, and that's what makes it work.

There's something within the human mind that is attracted to straight lines and not curves, to whole numbers and not fractions, to uniformity and not diversity, and to certainties and not mystery. But there is something else within us that has the

opposite set of tendencies, since we ourselves evolved out of and are shaped by and structured as complex feedback systems. Only a part of us, a part that has emerged recently, designs buildings as boxes with uncompromising straight lines and flat surfaces. Another part of us recognizes instinctively that nature designs in fractals, with intriguing detail on every scale from the microscopic to the macroscopic. That part of us makes Gothic cathedrals and Persian carpets, symphonies and novels, Mardi Gras costumes and artificial intelligence programs, all with embellishments almost as complex as the ones we find in the world around us.

14. HOLD FAST TO THE GOAL OF GOODNESS.

Examples of bad human behavior are held up, magnified by the media, affirmed by the culture, as typical. Just what you would expect. After all, we're only human. The far more numerous examples of human goodness are barely noticed. They are Not News. They are exceptions. Must have been a saint. Can't expect everyone to behave like that.

And so expectations are lowered. The gap between desired behavior and actual behavior narrows. Fewer actions are taken to affirm and instill ideals. The public discourse is full of cynicism. Public leaders are visibly, unrepentantly, amoral or immoral and are not held to account. Idealism is ridiculed. Statements of moral belief are suspect. It is much easier to talk about hate in public than to talk about love.

We know what to do about eroding goals. Don't weigh the bad news more heavily than the good. And keep standards absolute.

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This is quite a list. Systems thinking can only tell us to do these things. It can't do them for us.

And so we are brought to the gap between understanding and implementation. Systems thinking by itself cannot bridge that gap. But it can lead us to the edge of what analysis can do and then point beyond–to what can and must be done by the human spirit.

Dr. Donella H. Meadows, a Pew Scholar in Conservation and Environment and a MacArthur Fellow, was one of the most influential environmental thinkers of the twentieth century. After receiving a Ph.D in biophysics from Harvard, she joined a team at MIT applying the relatively new tools of system dynamics to global problems. She became principal author of *The Limits to Growth* (1972), which sold more than 9 million copies in 26 languages. She went on to author or co-author eight other books before her death in 2001.

RESIST. INSIST. LOVE.

By Nikki Silvestri, Amy Hartzler, and Hosan Lee

In our friendships, and with family and colleagues, we've been seeing a lot of resistance. Elders are taking up Twitter to comment on our current government. Daughters, mothers, and aunts are attending marches for the first time. Our communities are concerned and angry.

This inspired a conversation among the three of us — a communications firm principal, a climate solutions advocate, and a tech entrepreneur — about the nature of resistance. When does it work? How does it work? How much is too much? What happens next?

In the end, we grounded ourselves in cycles. These are undoubtedly times of crisis. And even in crisis, natural rhythms of change and transition are at work. Destruction leads to creation; new creations

are sustained; and when creations outgrow their relevance, the cycle begins again.

This is our meditation on how to approach these times. This is what's keeping us grounded right now, so we can continue caring for ourselves and those we love.

RESIST: DESTROY

There is a difference between indiscriminate destruction and the natural (if uncomfortable) breaking down of one system, as it gives way to another.

Consider controlled burns in forests, where fires release seeds from pods and clear out dense growth that crowds the next generation of life.

It is necessary and healthy to reject cruelty and inequality. We must oppose forces that prevent us from reaching our potential, as individuals and a country. We must resist the seduction of old assumptions, and stories that don't align with the world we see or want to create.

Our basic perception of reality outweighs unscientific propaganda that suggests the natural world isn't changing. From species loss, temperature swings and increasing drought to radical shifts in long-term agricultural patterns, our physical environment is signaling breakdown.

Man-made systems are also showing cracks. Ava DuVernay's *13th* and Michelle Alexander's *The New Jim Crow* expose our current system of mass incarceration for what it is: an extension of historical, systemic, morally corrosive (and taxpayer-paid) monetization of bodies of color. Meanwhile other aspects of the built environment — from schools and hospitals to roads and bridges — are in desperate need of resources.

As we see the ways our systems are not serving us, we are waking up: at last, a death to the apathy and overwhelm that has allowed so much suffering to persist. This is where the "how" of resistance

NOBEL LAUREATES LOOK AHEAD

At a symposium celebrating the 100th anniversary of the Nobel Prize in December, 2001, 100 Nobel Laureates from around the world issued the following statement:

The most profound danger to world peace in the coming years will stem not from the irrational acts of states or individuals but from the legitimate demands of the world's dispossessed. Of these poor and disenfranchised, the majority live a marginal existence in equatorial climates. Global warming, not of their making but originating with the wealthy few, will affect their fragile ecologies most. Their situation will be desperate and manifestly unjust.

It cannot be expected, therefore, that in all cases they will be content to await the beneficence of the rich. If then we permit the devastating power of modern weaponry to spread through this combustible human landscape, we invite a conflagration that can engulf both rich and poor. The only hope for the future lies in co-operative international action, legitimized by democracy.

It is time to turn our backs on the unilateral search for security, in which we seek to shelter behind walls. Instead, we must persist in the quest for united action to counter both global warming and a weaponized world.

These twin goals will constitute vital components of stability as we move toward the wider degree of social justice that alone gives hope of peace.

Some of the needed legal instruments are already at hand such as the Anti-Ballistic Missile Treaty, the Convention on Climate Change, the Strategic Arms Reduction Treaties and the Comprehensive Test Ban Treaty. As concerned citizens, we urge all governments to commit to these goals that constitute steps on the way to replacement of war by law.

To survive in the world we have transformed, we must learn to think in a new way. As never before, the future of each depends on the good of all.

From TIMELINE, January/February, 2002. Statement initiated by John Polanyi.

SUGGESTED GROUP ACTIVITY: LOOKING AHEAD FOR PEACE

In the preceding article, a group of 100 Nobel Laureates "looks ahead" from 2001. Imagine you are the new group — draft a statement looking ahead in light of the contemporary context. What should we be paying attention to? What action is needed?

becomes crucial.

Indiscriminate destruction and blind opposition breaks family, community and country apart.

Mindful, sacred destruction looks like the resistance movements we see rising up everywhere.

The #GrabYourWallet campaign is helping people avoid businesses and brands that provide direct financial benefit to our current political leadership. Our justice system is being activated on all levels, challenged by anti-democratic and unconstitutional rule by fiat, as lawyers flood airports to provide pro bono immigration support, and appointed officials defend the rights our founders guaranteed. Journalists continue to make fact-based reporting available for concerned citizens and neighbors, despite being labeled as "opposition."

As we resist old paradigms, we can also watch for moments when creation arises. The disparate pieces of natural, necessary destruction begin to form different pictures, ones that breathe new momentum into existing efforts and begin new weaving together.

When we miss these moments, we do so at our own peril. Destruction is exhausting, emotionally, physically and spiritually. We resist when we encounter threats to our humanity; when we fear for our children; when we are being physically harmed — all of which are happening to those we love right now. These grief-provoking experiences drain us. Fighting for our human rights drains us. Inevitable losses along the way can bring us to our knees.

Capturing the moments when destruction becomes creation is the salve for our souls that carries us forward. We see what we're building. We experience hope.

INSIST: CREATE

There is a fluid relationship between destruction and creation: they are in constant, natural rhythm. When one thing breaks down, something else emerges.

As we stand against what we know is wrong, we must also insist on what is right.

Perhaps you are one of the millions of people in this country being targeted by our elected officials.

Perhaps you have become slowly outraged and now activated to stand in solidarity with the overwhelming, crushing majority of us, who are not being well-served by current leaders.

Perhaps you're motivated by your faith, recognizing that "pro-life" is not the same as anti-abortion, and reflecting on what it means to consider the conditions for life, all lives, in all forms — from immigrants and the unjustly incarcerated to the natural world.

Perhaps you're concerned about the resources we all rely on, no matter our color, wealth or politics, to provide nourishment, and the healthy water and land required for healthy people and places.

From gun control and immigration to healthcare, and even widespread disapproval of current leadership, most of us agree on a lot. Whatever motivates you — whatever it is that you insist on creating more of in this world — it is time to build together.

That means paying attention to other builders and supporting their efforts. It's easy to become fixated on systems primed for destruction, especially in times of chaos and crisis. Ensuring that we recognize and lift up creation will ensure that we have somewhere to recharge our batteries and regenerate.

#LeadWithLove provides many channels for creating what we want, grounded in shared values. The Business Alliance for Local Living Economies supports leaders, entrepreneurs, and investors who are building local economies that work for all. With Backing Black Business, Black Lives Matter hopes to build economic resilience in African American communities through an interactive database of Black-owned businesses.

The three of us build in our respective careers, and we love connecting with others doing the same. Amy's firm, Do Good Better, accelerates the positive impact of entrepreneurs and NGOs through communications and campaign strategy. Hosan's business, TABLETRIBES, connects people for face-to-face conversations that matter, in politics, family, and life. Nikki's firm, Silvestri Strategies, supports regional economic development that builds healthy soil and promotes social equity.

As we invest in creation, we also invest in ourselves — we sustain.

LOVE: SUSTAIN

All of this — the conditions for life — a healthy balance of systems breaking down and new systems emerging — would mean little without love.

It isn't light or easy, the stuff of teddy bears or heart-shaped boxes of chocolate. Love is what makes life worth living, and what fundamentally animates us. Love keeps us laser-focused on defending what we care about. Love becomes the toughest filter we use when we consider what we choose to build, protect and share.

Love provides balance, in a world that is breaking down and building up. Love sustains us.

And this is the hardest part. New paradigms are still in their infancy — they need tenderness and

nurturing to sustain and grow. And as with any stewardship process, this is not irresponsible or blind. This is a facilitative, wise love that maturely attends to conflict; that has the tools to stay in relationship through difficult growth periods; that understands the true nature of governance, that of compromise and generosity.

Sustaining life with love requires us to begin with our own blind spots when faced with conflict. It requires an orientation toward stewardship over ownership.

Love requires care and tenderness toward self. It requires time for sweet looks with loved ones, for quiet moments with the sun, for putting children to sleep. It requires an understanding that if we attempt to destroy or create from a place of depletion, we risk breaking relationship and ourselves unnecessarily.

Signs of this love are all around us. Van Jones' #LoveArmy is bringing together large and small conversations about the #messytruths of our country and finding ways forward. Today, Revolutionary Love is hosting a day of action to celebrate one another's humanity as we call Congress and act to protect one another.

This kind of love is a practice.

THIS MOMENT IN TIME

Make no mistake. These are history-making times.

We can be wise as we steward the transitions underway. When we choose to flow with the cycle of destruction, creation, and sustenance, we choose connection. We become nuanced and aware of when we are acting, or reacting, and how.

The risks of not doing so are real. They are personal, and at least one degree of separation from a neighbor, family member or colleague.

So, resist. Take to the streets. Vote with your dollars. Reinforce our struggling democracy. Support organizations and our judicial system, as they protect our most vulnerable citizens.

And also, insist. Build and create. Look to local economic development leaders fighting to ensure well-being for all Americans. Invest in those working for equitable health and wealth.

And just as importantly, love. Sustain and persevere. Care for yourself now more than ever, fiercely and often. Protect the small moments of joy and laughter, to remember when you feel you can't go on. Practice loving people while working to end their destructive behaviors — even if it's messy at first, and again.

And then start over.

We are with you.

Amy Hartzler heads up the Washington D.C. office for Free Range Studios, a creative communications firm that collaborates with visionary changemakers working to create a better world. She develops storytelling strategies for organizations like the Rockefeller Foundation, the Great Place to Work Institute, and Global Zero, a campaign to eliminate nuclear weapons worldwide.

Based in Oakland, Nikki Silvestri is a thought leader in creating social equity for underrepresented populations in food systems, social services, public health, climate solutions, and economic development. She had the honor of being named one of The Root's 100 Most Influential African Americans in 2014.

Hosan Lee is CEO and founder of TableTribes, an information-sharing platform that facilitates face-to-face conversations around common discussion topics using food and drink as a vehicle. She also co-founded The Hero Project, a platform created to share stories about the heroes hidden among us.

Today we are faced with a challenge that calls for a shift in our thinking,
so that humanity stops threatening its life-support system.
We are called to assist the Earth to heal her wounds
and in the process heal our own —
indeed to embrace the whole of creation in
all its diversity, beauty and wonder.
Recognizing that sustainable development, democracy
and peace are indivisible is an idea whose time has come.

— WANGARI MAATHAI