

SEEING SYSTEMS

PEACE, JUSTICE & SUSTAINABILITY



Northwest
Earth Institute
DISCOVER CHANGE, TOGETHER.

D I S C U S S I O N C O U R S E O N

SEEING SYSTEMS: PEACE, JUSTICE AND SUSTAINABILITY



Northwest
Earth Institute
DISCOVER CHANGE, TOGETHER.

Copyright 2014

By



Northwest Earth Institute
107 SE Washington St., Suite 235
Portland, OR 97214
(503) 227-2807
contact@nwei.org
www.nwei.org

Requests for permission to reproduce any materials
in this course book should be directed to
Northwest Earth Institute.

See "Permissions" page for information
on reading materials; these cannot be
reproduced without permission.

Layout and Typography: Margaret Parker
Cover Design: Lee Benson, City Limit Design

Curriculum Development and Editing: Lacy Cagle

*This publication was printed using 100% post consumer waste, FSC certified recycled paper
and vegetable inks and is 100% process-chlorine free.*

CONTENTS

ABOUT THIS CURRICULUM	5
GUIDELINES	7
EVALUATION	9
INTRODUCTION	11
SESSION ONE: IT'S ALL CONNECTED	13
"Spray Glue Goes. Maggots Stay." by Carly Lettero	16
"Interbeing" by Thich Nhat Hanh	18
"Authentic Hope" by Jack Nelson-Pallmeyer	18
"The Hopeful Alternative — A Global Peace System" by Patrick T. Hiller	24
"Principles of Earth Democracy" by Vandana Shiva	27
"Dancing with Systems" by Donella Meadows	30
"Nobel Laureates Look Ahead" by Nobel Laureates	34
"You Are Brilliant and the Earth Is Hiring," The Commencement Address by Paul Hawken to the Class of 2009, University of Portland, May 3, 2009	35
SESSION TWO: PEACE TALKS	37
"Constructive Communication" by Joanie Connors	39
"Six Habits of Highly Empathetic People" by Roman Krznaric	44
"Transforming Enemy Images" by Marshall Rosenberg	46
"Dropping Walls Takes Care, Time" by Bob Welch	48
"Transforming Destructive Worldviewing in Conflict" by Patrick T. Hiller	49
"Through My Enemy's Eyes" by Troy Chapman	50
SESSION THREE: JUSTICE FOR THE WHOLE COMMUNITY	53
"Everyday Hero: Dr. Robert D. Bullard" by Katrina Fried	55
Foreword to <i>Moral Ground</i> by Desmond Tutu	58
"Hurricanes, Typhoons, and the Climate Change Narrative" by Ryan Bartlett	59
"About Water: A Conversation with Maude Barlow" by Helen Caldicott	60
"True Costs of So-Called Cheap Food" by Ellen Gustafson	65
"CAFOs and Environmental Justice: The Case of North Carolina" by Wendee Nicole	66
"Argentines Link Health Problems to Farming Chemicals" by Michael Warren and Natacha Pisarenko	66

“Environmental Reparations” by Robin Morris Collin and Robert Collin	68
“I, River: In New Zealand, the Whanganui River Becomes a Legal Person” by Alison Fairbrother	69
“Wild Geese” by Mary Oliver.....	70
SESSION FOUR: PEACE AND SUSTAINABILITY IN THE MIDST OF CONFLICT	71
“A Safe and Just Space for Humanity: Can We Live Within the Doughnut?” Oxfam, 2012 Report summary.....	73
“Rethinking How to Split the Costs of Carbon” by Eduardo Porter.....	77
“Shifting the Pain: World’s Resources Feed California’s Growing Appetite” by Tom Knudson.....	79
“An Elephant Crackup?” by Charles Siebert	82
“Wangari Maathai and the Greenbelt Movement” by Phil Harris.....	89
“Restoration of the Iraqi Marshlands” by Sharon Delcambre.....	91
“Gaviotas” by Phil Harris.....	92
“A Vision” by Wendell Berry.....	94
SESSION FIVE: RESPONDING TO STRUCTURAL VIOLENCE.....	95
“The Hidden Violence of Structural Violence” by Dick Dorworth	98
Excerpt from “Ecopsychology and the Deconstruction of Whiteness: An Interview with Carl Anthony” Interview by Theodore Roszak.....	100
“No, The Poor Will Not Always Be With Us” by Paul Gilding.....	101
“Why MLK’s Dream Took on Poverty and War along with Racism” by Drew and Walter Dellinger	105
“Where Dignity Is Part of the School Day” by Fania Davis.....	106
“Disturbing the Peace” by Ibrahim M. Abdil-Mu’id Ramey.....	109
SESSION SIX: NOW WHAT? CO-CREATING LIVING PEACE.....	113
“The Optimism of Uncertainty” by Howard Zinn.....	115
“Adam Hochschild: We Can End Slavery — Again” by Christa Hillstrom.....	118
“Reconciliation through New Community Meetings” by Bob Keefer	120
“How to Be More than a Mindful Consumer” by Annie Leonard.....	122
“Healing the Past” by Lisa Gale Garrigues.....	125
“Once Upon a Time... In Israel and Palestine” by Shira Herzog.....	127
“A Caring Economy Requires Building Bridges — Not Burning Them” by Sally Kohn.....	128
“From Scaling Up to Scaling Across” by Margaret Wheatley and Deborah Frieze	131
“From Hero to Host” by Margaret Wheatley and Deborah Frieze	133
CELEBRATION AND CALL TO ACTION.....	135
ENDNOTES.....	136
BECOME A MEMBER.....	137
PERMISSIONS	139

ABOUT THIS CURRICULUM

Northwest Earth Institute (www.nwei.org) was founded in 1993 with a simple objective: to give people a framework to talk about our relationship with the planet and to share in discovering new ways to live, work, create and consume. It turns out that within that simple objective is a recipe for powerful change. During the past twenty years over 140,000 people worldwide have discovered powerful change in their own lives through NW Earth Institute's discussion course programs and our annual EcoChallenge.

CURRICULUM COMMITTEE

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

Alison Allen-Hall is a *nepantlera*, a social scientist and often Adjunct Professor of various social issue courses at several colleges and universities in the US. Her work has included research on identity construction as well as studies on social inequalities. She is a recent transplant to the Pacific Northwest where she continues to explore intersecting ways of being and hopes to contribute to creating paradigm shifts that eventuate local and global peace, social justice and environmental sustainability.



Lacy Cagle is the Director of Curriculum and Community Engagement at Northwest Earth Institute, where she oversees the development of NW Earth Institute's discussion course books and other educational programs. Before joining NW Earth Institute in 2011, Lacy worked for several years in higher education administration, teaching and research, at Greenville College and at Portland State University. She holds a Master's degree in Educational Leadership and Policy with a focus on Leadership in Sustainability Education from Portland State University. She has been the Director at the Zahniser Institute since 2010. Lacy's personal goal is to help others find the joy of being agents of positive change in their own communities.



Sharon Delcambre, PhD, is an atmospheric scientist living in Portland, OR. Her interests include community-based sustainability, regional climate impacts, and urban farming. Sharon is a jet stream expert, teacher, and volunteer at Northwest Earth Institute. She is inspired by people who thoughtfully articulate and then act out their beliefs. Follow her on Twitter @SharonDelcam.



Phil Harris is a professor in the General Studies Department at Oregon College of Art and Craft, in Portland, Oregon, where he currently teaches art history, social history and literature. After earning his MFA in Imaging Arts from Rochester Institute of Technology, he ran the Photography program at OCAC for 9 years, subsequently moving over to chair the General Studies Department. Along the way, he developed an abiding passion for the outdoors, gardening, history, systems thinking 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. He holds a PhD in Conflict Analysis and Resolution and a MA in Human Geography. 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. Having lived in Germany, Mexico and the United States, he is passionate about making a humble contribution to the growth of planetary loyalty.



Christopher Layton was born in Portland, OR, and desires to live nowhere else. He is a MA student in EcoTheology at George Fox University, and his BA, from Portland State University, focused on Medieval Literature and Cultural Studies. Christopher has been a teacher, a pastor, a woodworker, and currently is a copy editor at Wipf and Stock Publishers. He was NW Earth Institute's curriculum intern for this discussion course. He still doesn't



know what he wants to be when he grows up: perhaps a professional reader, if there is such a thing. Christopher enjoys cooking, biking, exploring the NW wine country, and spending time with his wife and son.

Anne Millhollen, PhD, is a Courtesy Research Associate at the University of Oregon. Professionally, Anne is a biologist who studies ringtailed lemur communication and territoriality, issues that are actually related to her focus on peace and sustainability. She is also Executive Director of Beyond War Northwest, which is based in Eugene, Oregon, and dedicated to education about conflict transformation as an alternative to war.



Lena Rotenberg, MS, LLB, MEd, is a Brazilian-born educational consultant who moved from São Paulo to the US at age 33. She enjoyed two decades teaching critical and interdisciplinary thinking skills to teenagers and adults in three continents, mostly in association with the International Baccalaureate Organization. In 2005 Lena moved from the DC area to rural Washington County, Maryland, where she became a Master Gardener and



co-founded a local food cooperative called Valley Co-op, two volunteer activities that have rooted her closely to the soil. She was inspired to educate others about sustainability after taking a NW Earth Institute course in 2002, and co-founded a NW Earth Institute partner in the Washington D.C. area called Simplicity Matters Earth Institute. Since moving to the countryside she has participated in several NWEI curriculum teams as the disembodied voice coming out of the phone.

Betty Shelley has been a Northwest Earth Institute volunteer since 1994. During that time, she has served on numerous discussion course curriculum committees. Betty often tells people, "NWEI has changed my life." In addition to her extensive volunteer work with NW Earth Institute, Betty is a Master Recycler and a Recycling Information Specialist for Metro Regional Government in Portland, Oregon. She and her husband have produced just one 35-gallon can of garbage per year since 2006. Betty teaches classes in the Portland area on reducing resource use.



PARTNER

The Jubitz Family Foundation (<http://www.jubitzff.org/>) enhances the communities in which we live by strengthening families, by respecting the natural environment, and by fostering peace. NW Earth Institute is grateful for the financial and educational support offered by the Jubitz Family Foundation and their War Prevention Initiative (<http://warpreventioninitiative.org/>) in the development of this course.



SPECIAL THANKS

NW Earth Institute is deeply grateful for the educational support offered by numerous pilot group participants and Beyond War NW (<http://beyondwarnw.org/>), a nonprofit organization and educational resource for living the principles, practices, and core values that guide how we work together in moving the world beyond war.

We would also like to give special thanks to Christopher Layton for his help with proof reading, copy editing and permissions contracts.



GUIDELINES

FOR THE FACILITATOR, OPENER AND NOTETAKER

This discussion course is designed to be much more than a reader. We've put a lot of thought and time into designing this course as a guide for transformative learning.

When you break big issues into bite-sized pieces, and talk through them with people you trust, you discover insights and inspiration that's hard to find alone. 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 roles needed for each session of 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 each person's commitment to action. The roles rotate each week with a different group member doing the opening, facilitating and notetaking. This process is at the core of the Earth Institute culture — it assumes we gain our greatest insights through self-discovery, promoting discussion among equals with no teacher. Learn more about organizing a NW Earth Institute discussion course at www.nwei.org/get-started.



FOR THE SESSION FACILITATOR

As facilitator for one session, 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 designated person ahead of time to bring an opening.
- Begin and end on time.
- Ask the questions included in each chapter, 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.
- Make sure your group has time to talk about their commitments to action — it is a positive way to end each gathering.
- Keep discussion focused on the session's topic. A delicate balance is best — don't force the group into 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 another person to share.

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.

Consensus is not a goal.

The facilitator should ensure that the action item discussion:

- allows each person's action item to be discussed for 1-2 minutes;
- remains non-judgmental and non-prescriptive;
- focuses on encouraging fellow group members in their commitments and actions.

FOR THE SESSION OPENER

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 the natural 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.

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.

FOR THE NOTETAKER

At the end of each session, each participant will commit to one action item they will complete before the next meeting. They will share their action with the group, and it is your responsibility as notetaker to record each person's commitment to action.

Each week the notetaker role will rotate. During the portion of discussion focused on action items, the notetaker from the previous meeting will read aloud each person's action item, and group members will have the opportunity to share their successes and struggles in implementing their actions. The new notetaker for that week will then record each person's commitment for the next meeting.

COURSE SCHEDULE FOR SEEING SYSTEMS: PEACE, JUSTICE AND SUSTAINABILITY

This course schedule may be useful to keep track of meeting dates and of when you will be facilitating or providing the opening.

Course Coordinator : _____ Phone : _____

Mentor (if applicable) : _____ Phone : _____

Location For Future Meetings : _____

CLASS SESSION	DATE	OPENER	FACILITATOR	NOTETAKER
It's All Connected	_____	_____	_____	_____
Peace Talks	_____	_____	_____	_____
Justice for the Whole Community	_____	_____	_____	_____
Peace and Sustainability in the Midst of Conflict	_____	_____	_____	_____
Responding to Structural Violence	_____	_____	_____	_____
Now What? Co-Creating Living Peace	_____	_____	_____	_____
			PLANNERS	
Celebration*	_____	_____	_____	_____

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

S E E I N G S Y S T E M S :
P E A C E , J U S T I C E A N D S U S T A I N A B I L I T Y

EVALUATION

You can choose to complete this evaluation online at www.nwei.org/evaluations

PART 1. PLEASE FILL OUT WEEKLY. Rate the six sessions.

	POOR CHOICE ----- EXCELLENT					COMMENTS:
1. It's All Connected	1	2	3	4	5	
2. Peace Talks	1	2	3	4	5	
3. Justice for the Whole Community	1	2	3	4	5	
4. Peace and Sustainability in the Midst of Conflict	1	2	3	4	5	
5. Responding to Structural Violence	1	2	3	4	5	
6. Now What? Co-creating Living Peace	1	2	3	4	5	

Were the following articles helpful? Circle "Y" if we should use the article next time or "N" if we should look for better reading material. Leave blank if you didn't read it or have no opinion.

COMMENTS:

1. It's All Connected

"Spray Glue Goes. Maggots Stay" Y N
 "Interbeing" Y N
 "Authentic Hope" Y N
 "The Hopeful Alternative — A Global Peace System" Y N
 "Principles of Earth Democracy" Y N
 "Dancing with Systems" Y N
 "Nobel Laureates Look Ahead" Y N
 "You Are Brilliant and the Earth Is Hiring" Y N

2. Peace Talks

"Constructive Communication" Y N
 "Six Habits of Highly Empathetic People" Y N
 "Transforming Enemy Images" Y N
 "Dropping Walls Takes Care, Time" Y N
 "Transforming Destructive Worldviewing in Conflict" Y N
 "Through My Enemy's Eyes" Y N

3. Justice for the Whole Community

"Everyday Hero: Dr. Robert D. Bullard" Y N
 Foreword to *Moral Ground* by Desmond Tutu Y N
 "Hurricanes, Typhoons, and the Climate Change Narrative" .. Y N
 "About Water: A Conversation with Maude Barlow" Y N
 "True Costs of So-Called Cheap Food" Y N
 "CAFOs and Environmental Justice:
 The Case of North Carolina" Y N
 "Argentines Link Health Problems to Farming Chemicals" Y N

COMMENTS:

"Environmental Reparations"	Y	N
"I, River: In New Zealand, the Whanganui River Becomes a Legal Person"	Y	N
"Wild Geese"	Y	N
4. Peace and Sustainability in the Midst of Conflict	Y	N
"A Safe and Just Space for Humanity: Can We Live Within the Doughnut?"	Y	N
"Rethinking How to Split the Costs of Carbon"	Y	N
"Shifting the Pain: World's Resources Feed California's Growing Appetite"	Y	N
"An Elephant Crackup?"	Y	N
"Wangari Maathai and the Greenbelt Movement"	Y	N
"Restoration of the Iraqi Marshlands"	Y	N
"Gaviotas"	Y	N
"A Vision"	Y	N
5. Responding to Structural Violence		
"The Hidden Violence of Structural Violence"	Y	N
Excerpt from "Ecopsychology and the Deconstruction of Whiteness"	Y	N
"No, The Poor Will Not Always Be With Us"	Y	N
"Why MLK's Dream Took on Poverty and War Along with Racism"	Y	N
"Where Dignity Is Part of the School Day"	Y	N
"Disturbing the Peace"	Y	N
6. Now What? Co-creating Living Peace		
"The Optimism of Uncertainty"	Y	N
"Adam Hochschild: We Can End Slavery — Again"	Y	N
"Reconciliation through New Community Meetings"	Y	N
"How to Be More than a Mindful Consumer"	Y	N
"Healing the Past"	Y	N
"Once Upon a Time... In Israel and Palestine"	Y	N
"A Caring Economy Requires Building Bridges — Not Burning Them"	Y	N
"From Scaling Up to Scaling Across"	Y	N
"From Hero to Host"	Y	N

PART 2. PLEASE COMPLETE AT END OF COURSE.

Has the course made a difference in your life? Yes No Please describe what actions you are taking or you plan to take in response to this course. _____

What has been the most valuable aspect of this course? _____

Please list other articles or books that should be included in the course. Identify chapter(s)/page(s) and the session where they should be included. _____

Please send your completed evaluation to NWEI, 107 SE Washington St., Suite 235, Portland, OR 97214.
Thank you for your participation!



INTRODUCTION

Here at NW Earth Institute, 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, congress can't agree on real solutions, kids keep killing each other at school, and opportunities seem to be shrinking. While 2013 was a record year for corporate profits, worker wages have continued to drop.³ Both food and money are distributed extremely unequally, with 1.46 billion people struggling with being obese or overweight⁴ while 842 million people suffer from hunger worldwide.⁵ Taken together, the 85 richest people in the world possess as much wealth as the 3.5 billion poorest. In the US, the wealthiest one percent of the population has gained 95 percent of post-financial crisis wealth growth, while the poorest 90 percent became poorer.⁶ A president who won the Nobel Peace Prize in 2009 in the last five years has escalated drone strikes in Pakistan that have killed hundreds of civilians, including children.

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 so 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."⁷

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."⁸ 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 Curriculum Director

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



Photo by Kate Rinder

IT'S ALL CONNECTED

We are caught in an inescapable network of mutuality, tied into a single garment of destiny. Whatever affects one directly affects all indirectly. . . . We aren't going to have peace on Earth until we recognize this basic fact of the interrelated structure of all reality.

— MARTIN LUTHER KING, JR.

LEARNING OUTCOMES

- Recognize the interrelatedness of peace, justice and sustainability.
- Discover individual opportunities for positive social change despite the big challenges.
- Apply systems thinking for peace, justice and sustainability action.



SUGGESTED GROUP ACTIVITY: SYSTEMS THINKING ICEBERG

Use the Iceberg Activity at www.nwei.org/resources/iceberg 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.

Thanks to **Rich Sessions and Julia Surtshin** for providing support for this session.

Circle Question

What gives you authentic hope in the face of the seemingly insurmountable challenges we face?

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 7.

DISCUSSION QUESTIONS

1. If you were to write a story about your own experience similar to Carly Lettero's "Spray Glue Goes. Maggots Stay," what would you keep and what would you get rid of? What legacy would you like to leave?
2. 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)?
3. Jack Nelson-Pallmeyer says that, "To be authentic, hope must be embodied through creative, persistent engagement." In what ways do you live out your hope "through creative, persistent engagement"?
4. In "Authentic Hope," Nelson-Pallmeyer claims that our culture is "receptive to war." Explain if you agree or disagree. What keeps the military-industrial complex in place?
5. What examples can you give of other peaceful changes that have taken place in addition to the examples in "The Hopeful Alternative"? In your opinion, why do these changes not receive more media attention?
6. The authors in this session illuminate systems in various ways through their writings. Use one of the articles in this session to illustrate one of Donella Meadows' "systems wisdom" practices.
7. 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.

8. Imagine you are part of the class of 2009 in Paul Hawken's speech — regardless of your age. What does this speech mean to you?



PUTTING IT INTO PRACTICE

Choose one action to commit to this week, then share your struggles and successes with your group at your next group meeting. Here are some ideas to get you started:

- Identify one simple act you could do that "makes things better for future generations." Do that one thing this week.
- Before you buy anything or throw anything away this week, apply some of Donella Meadows' systems thinking practices to consider its production and use. For example, how can you "close the system" and "expand time horizons" to reduce waste? Ideas might include composting your food waste, choosing an option with less packaging, or buying something locally produced or from a local business.
- In "Spray Glue Goes. Maggots Stay," Carly Lettero says, "To leave things better for the future, I need to hand down traditions, like polka dancing and garage sale hunting and knowing what to do in the moment of death. Traditions take time and repetition and witness and careful attention to details." Prioritize tradition in your life this week: make a favorite family recipe, teach your friends one of your favorite childhood games, learn a cultural dance, or create a new Earth-friendly tradition with loved ones.
- Vandana Shiva tells us that saving seeds is a revolutionary act. Find a seed library, or start one with friends who garden.

ADDITIONAL RESOURCES

Interested in finding out more about the topics presented in this session? Please visit www.nwei.org/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.

Each of us is surrounded by and a part of innumerable 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.

This is also a course about systems thinking.

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

The **Commons** are resources shared by all members of a society, and are not privately owned. The commons can include natural resources like water, air, and public land; cultural resources like software, literature and music; and public goods like public education and public infrastructure. Enclosure is used to describe the process of commonly held property being turned into private property, or privatized.

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.

Nonviolence is a tradition of social struggle and a way of life which embodies a culture, in the words of Gandhi, “as old as the hills.” This culture is in search of social justice, not through the use of violence to destroy an adversary, but through seeking to positively transform him by exerting social, moral and material pressures, expressed through bodies that search “truth.”

Peace is both a means of personal and collective ethical transformation and an aspiration to end human-inflicted destruction.

Systems thinking is a way of approaching problems that focuses on how various elements within a system are related to and influence one another. The system in question could be organic like an ecosystem or organism, structured like a business or manufacturing process, or more dispersed such as a supply chain. 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 of life that sustains us within its workings.



SPRAY GLUE GOES. MAGGOTS STAY.

By Carly Lettero

My mother touched a drop of holy oil to my grandfather's forehead as he took his last breath. She leaned over him to whisper the Lord's Prayer. My sister held his hand, which stopped shaking for the first time in nearly a decade. My aunt stepped away from his bed. *Is it over yet?* she asked. *Is it over?* I watched the color drain from his face, caught my sister's glance, listened to my mother pray in a shaky whisper. Yes. It was over.

My grandfather's death marked the end of a generation in our family. His was a generation of devout Ukrainian Orthodox who wore suits on Sundays and danced the polka in the smoky church basement. His was a generation that worked hard in Chicago's factories and commuted home to the suburbs. His was a generation of acquired things — of big houses full of knickknacks and overflowing closets and stockpiled basements.

I did not know what to do in the moment of death. The hospice nurse announced the time — ten p.m. exactly. An early winter snow flurry pushed across Lake Michigan. In a few minutes we would call my cousins and uncle, and they'd be on their way. Then the undertaker would come. But the still moments after death were uncharted territory for me, so I followed my mother's lead.

She stood next to the bed, calmly watching as the hospice nurse began to wash my grandfather's body. He lost nearly one hundred pounds in the last few years. Only his face and hands were recognizable now. The nurse pulled on a pair of rubber gloves. I wondered if there was an afterlife. I wondered what my grandfather would have said if he had been able to speak these last few years. The

nurse tore open a package of hermetically sealed cotton swaps. I wondered if my grandfather was reuniting with my grandmother in some joyous swirl of energy above us. I wondered if Parkinson's disease was lurking in my genes too. As the nurse ripped into a package of individually wrapped wipes and plastic padded sheets, my wonder turned to irritation. Why on Earth was he using so much disposable crap to give my grandfather his last bath?

Moments after my grandfather's death and I was thinking about garbage. What was wrong with me? I deliberately thought of things I was grateful for instead. Thank you for my mother, for my blue eyes, for the pocket full of candy you always carried. Thanks for teaching me to spit watermelon seeds, hook a worm, and appreciate garage sales. But the nurse stuffed my grandfather's hospital gown into the garbage bag, and I lost my train of thought. Why shouldn't I think about garbage? Why should I think about it only when it's convenient? Shouldn't garbage be a consideration in every moment, especially the ones that are sacred?

The nurse finished, the undertaker came and went, and I drove home long after midnight. As I tried to fall asleep, I remembered finding the body of a sea lion on the Oregon coast. Waves had rolled it from the saltwater suspension of the ocean onto the windswept beach. Sand pooled around its thick black skin and buried its flippers. Turkey vultures pecked into its stomach and chest, and black fluid flooded the holes. Closer still and the holes were crawling with bugs. Maggots slithered through the black liquid and burrowed into the soft tissue. Flies swarmed above the body, landed, got swept down the beach by a gust of wind, and swarmed again. So much life spiraled out from this one dead animal. In stark contrast to my grandfather's death, nothing was wasted.

I woke the next morning, ironed my black suit, and drove to the funeral home. My family gathered on the mauve and gray couches to meet with the funeral director. My aunt, the executor of the will, laid out the necessary paperwork and updated us on the state of my grandfather's affairs. Everything was in order. After all the hospital bills and funeral expenses, we would each receive a modest inheritance. He always hoped to leave us something, and I was thankful he could.

But there was no mention of the other things he'd left us. My generation learned how to pronounce "Chernobyl" in middle school. In high school, we watched birds suffocate in the black oil of the Exxon Valdez. We are the heirs to garbage piles that leach toxic chemicals into our groundwater and soil, an atmosphere choked with unprecedented levels of carbon dioxide, mountains that have been destroyed for coal and metal. This list, as we all know, goes on and on. I am not thankful for these things. I am heartbroken.

Sometimes I am confused too. I do not understand how

previous generations could have let things go so terribly wrong. I am furious that I cannot drink water from streams, that I will never hear the call of the Atitlan grebe, and that Montana's glaciers will disappear before my unborn kids get to see them. Sometimes I am devastated. I have fantasized about snuggling into a bed of old-growth moss and forgetting about all this.

But I cannot forget. I feel obligated to make things better for future generations. Not just to leave things as I found them but to do everything I can to help water run cleaner and wilder and to help dwindling populations of owls thrive and to defuse the time bomb of climate change. I feel obligated to do something all the time. As burdensome as the obligation feels some days, it also empowers and guides me. I am grateful to be alive when my studies and career and votes and everyday decisions can help the natural world. I am hopeful that my generation is increasingly more conscientious about how our actions reach into the future and shape the planet our grandchildren and great-grandchildren will be born into. I am curious about how and where and when we will find solutions.

My sense of obligation to the future, and the slurry of emotions that goes along with it, arises out of my reverence for life. All of life. For the life of my grandfather, the [sea lion], the turkey vultures, and the maggots. For the generations I carry in my genes and will carry in my womb. For the life of the churning glaciers, the silenced Atitlan grebe, and the rushing water. And for the life of the soil, where our garbage is buried. These other expressions of life nourish my body and mind and spirit. I want to reciprocate.

We drove through the wrought iron gates of the cemetery in a funeral procession. The road wound past the graves of my great-grandparents and great-aunts and — uncles and ended in front of the mausoleum. The cemetery was in the direct flight path of Chicago's O'Hare airport, and as the priest began the funeral, the white belly of a jumbo jet began its climb over us. The priest chanted in Ukrainian, then English; swung a ball of incense; drew crosses in the air with his open hands; then placed a spoonful of dry dirt on my grandfather's casket. *From the Earth we came*, he said, *and to the Earth we must all return*.

But my grandfather will not be returning to the Earth anytime soon. It seems he took every possible precaution to avoid it. He was laid to rest in a metal casket. When the priest finished the ceremony, two men who smelled like cigar smoke and fresh dirt filed into the room. They pulled a white bag of impermeable plastic over the casket and sealed the edges with spray glue. They spoke to each other in rushed Ukrainian and managed to carry the casket outside and hoist it onto a hydraulic lift. They raised the whole package precariously toward the cold afternoon sky, slid it into a cement wall, and closed it in with a sheet of Styrofoam, a thick piece of marble, and four screws. Were

bugs able to squeeze through the fortress, they would die of formaldehyde poisoning from the embalming fluid. This body entombed in a wall was no longer my grandfather. It had become toxic waste.

My mother, sister, and I huddled together, our pockets stuffed with crumpled Kleenex. Family and friends joined us and said what they could. *Eighty-seven years of a wonderful life. I'm glad his suffering is over. He left us with so many memories*. And they were right.

On the drive to the funeral luncheon at a local Polish restaurant, my thoughts turned to garbage again. Not the garbage of that moment, but the rotting trash of all the moments leading up to that one. A lifetime of cereal boxes and plastic wrap, televisions and transistor radios, ties and dress shoes, flocked synthetic Christmas trees and wrapping paper, Tupperware and microwaves, cars and tires and barrels of gasoline.

If I am to leave future generations a world that is better than the one I am inheriting, I am going to have to change almost everything, from the way I live to the way I die. It is not a matter of simply handing down a new policy or new technology. To leave things better for the future, I need to hand down traditions, like polka dancing and garage sale hunting and knowing what to do in the moment of death. Traditions take time and repetition and witness and careful attention to details. It is not easy. But my grandfather, and the generations before him, did lots of things that were not easy. They fought two world wars, survived the Great Depression, and sent a man to the moon. Can't my generation stop throwing stuff away, curb greenhouse gas emissions, and ban pollution? Thomas Jefferson once said that every generation needs a new revolution. I believe this is ours.

My grandfather handed down many of the values I'll need in these revolutionary times — hard work, steadfast determination, persistence, patience, faith, and even humor. He smiled easily, and I imagine he would smile at this too. It is a time of moral spring cleaning. It is hard to get started, but once it gets going, it feels so good. It is time to reinvent the way we live in the world and get rid of everything that is not working. The spray glue goes. The maggots stay.

When I die, wash my body with a cotton cloth. Bury me in a splitwood coffin crafted from trees that died a natural death. Lay me to rest in clothes I have already worn thin. Do not seal out the water and bugs and burrowing critters. Let me be absorbed back into the Earth. Let my body turn to soil. Even when I'm dead, let me nourish the future.

Carly Lettero is a writer, interdisciplinary researcher, and environmental activist. She founded the Campus Carbon Challenge, a grassroots initiative encouraging people to reduce their carbon dioxide emissions by making changes to their daily routines.

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*.



AUTHENTIC HOPE

By Jack Nelson-Pallmeyer

The world hasn't ended, but the world as we know it has even if we don't quite know it yet. — Bill McKibben

It's the end of the world as we know it (and I feel fine).
— R.E.M.

We can't know the content of a future that is yet to be lived, but many people sense, rightly I think, that the world and nation we've known are coming to an end. Present political, economic, ecological, and foreign policy problems are converging in ways that make it clear that the future will deviate significantly from what we have come to experience as normal. There are clear signs that we are entering a difficult transition period leading to an uncertain future that is likely to be very different from common expectations rooted in the recent past.

Bizarre weather events throughout the United States and much of the world have resulted in unprecedented heat waves, extended droughts, severe flooding, hurricanes, destructive tornadoes, famine, and rising food prices. These events verify deeper concerns expressed by scientists that the negative consequences of climate change are already present and that we will either act boldly to reduce greenhouse gas emissions or face a bleak future. As a leading US climate scientist warns, "If human beings follow a business-as-usual course ... life will survive, but it will do so on a transformed planet. For all foreseeable human generations, it will be a far more desolate world."

Climate change concerns are not the principal sources of anxiety and uncertainty for most Americans. Millions of Americans [have lost] jobs, benefits, homes, and hope at the same time government services that might have cushioned these blows are being cut. The US economy is in deep trouble, and there is little credible evidence that a lasting

recovery is possible within the confines of traditional approaches. Debts, deficits, social cutbacks, a reckless and unaccountable financial sector, high unemployment, record home foreclosures, stagnant wages, expensive or unavailable health care, rising oil prices, threatened cuts to social security, deteriorating infrastructure, dysfunctional politics, disappearing safety nets, and the economic fallout from damaging weather events (climate changes) all contribute to anxieties that will deepen until we address structural problems. These include unprecedented levels of wealth and income inequality; ecological limits to growth; problems with oil use, supply, and dependency; the destructive political influence and priorities of moneyed interests and corporations; and the distorted priorities of a national security state that privilege expenditures for war and war preparation over other important needs.

The high human, social, and economic costs of war are other reasons for concern. The United States spends almost as much on its military sector as the rest of the world combined. Unprecedented military capabilities and global reach have long been viewed as visible expressions of US power, but they are bringing about a rather speedy end to America's global dominance. As we will see, it was only a few years ago that American pundits and leaders spoke openly about empire and confidently about the effectiveness of US military power to reshape the world. For many decades America's claim of moral, political, and economic superiority (American exceptionalism) was used to justify frequent wars, aggressive interventionism, and nearly unlimited military expenditures under the banner of national defense.

A culture receptive to militarization, war, and patriotism rooted in the idea of American exceptionalism is beginning to fray. Excessive military spending and interventionist foreign policies are making our nation less secure. They fuel international animosity and enormous budget deficits, cripple investments in essential infrastructure, and accelerate the pace of social, ecological, and economic decline. Unfortunately, the primary purpose of the Department of Defense isn't to defend America. As the conservative Cato Institute notes: "The United States does not have a defense budget. The adjective is wrong. Our military forces' size now has little to do with the requirements of protecting Americans." In fact our "global military activism wastes resources, drags us into others' conflicts, provokes animosity, drives rivals to arm, and encourages weapons proliferation. We can save great sums and improve national security by adopting a defense posture worthy of its name."

Like it or not the US global role will change significantly in years ahead (it is the end of the world as we know it). American militarism won't be tolerated by other nations. Also, the United States lacks the economic capacity or moral authority to continue aggressive, militarized policies.

Whether the United States acts prudently to embrace a more modest foreign policy, reject militarization, and redirect resources to meet pressing needs remains to be seen. There are powerful groups resistant to change who benefit from excessive military spending and war, but soft landings are possible. There are many positive outcomes associated with the transition from militarized priorities to more modest foreign policies rooted in global partnerships. Our ability to be authentically secure as a nation depends on redirecting resources from war to solving pressing social, economic, and ecological problems. It is our responsibility as citizens . . . to work toward that end.

The dysfunctional state of US politics adds to the anxieties felt by many Americans. Elected officials at all levels of government seem incapable of responding creatively and effectively to present challenges. Their diagnoses of problems and proposed solutions are often influenced or dominated by moneyed interests and corporations that prefer to stay on present pathways even if doing so undermines the common good and endangers the future. The problems we face are daunting but solvable. Solutions are possible but not within the parameters of present-day American politics. Elections don't have to be high-stakes auctions, and governance can be more than managing austerity.

LIFTING THE FOG

I write *Authentic Hope* in this context of deep and profound anxieties that envelop our nation like a thick, unwanted fog. I write because I see good reasons to be hopeful. As individuals and as a nation, we are living in a difficult transition period marked by disruption and discontinuity. The central premise of *Authentic Hope* is that we have an opportunity and a responsibility to shape the *quality* of our yet-to-be-determined future.

We are creative, resilient people. It is possible that we will see signs of crisis as opportunities and act accordingly. A collective awakening could allow us to change course, achieve soft landings, and enhance the quality of life even as we make profound changes in lifestyles, economies, foreign policies, priorities, and governance. Events five, ten, or thirty years from now can play out according to our better selves instead of our worst fears. This depends on our capacity to face problems honestly and courageously, envision and embody creative alternatives, and cultivate and sustain hope.

It is also possible, some would say likely, that the end of the world as we know it will be experienced as a series of unimaginable human tragedies. There are realistic scenarios in which the future is marked by nations struggling to deal with hundreds of millions of climate refugees and/or fighting a series of exhausting wars over shrinking supplies of oil, water, and other resources. There are already disturbing signs that US military and civilian leaders are



treating climate change as a *military* challenge and are preparing to wage an endless series of counterinsurgency wars. There is also much evidence to suggest that in the United States and elsewhere economic anxieties and fear provide fertile ground for mean-spirited politics. We cannot dismiss ugly scenarios because they are unpleasant. Neither should we see them as inevitable.

The good news is that when we act constructively to engage any one of [the problems we face] we create favorable conditions for resolving the others. Addressing climate change will require international cooperation and will be part of broader efforts to reposition economics within an ecologically responsible framework. Building an ecologically sensible economy will be conducive to peace because it requires greater equity and justice, and it reduces the likelihood of resource wars. Redirecting human

and financial resources away from militarization and war will give us a realistic chance to deal with climate change and to enhance authentic security. Revitalizing politics and reining in corporations will require a compelling vision of a good society, a fundamental reassessment of values and current priorities, and a vibrant social movement with sufficient power to demand and guide the multiple changes we need within the limited time frame we have for effective action.

PAINFUL POSITIVES: MOVING OFF DEAD-END ROADS TO AUTHENTIC HOPE

When I speak about “the end of the world as we know it,” I am not suggesting that we are fated to an apocalyptic end or some other national, international, or cosmic disaster. A high-quality future is possible if we abandon the dead-end

Our challenge is 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.

— JACK NELSON-PALLMEYER

roads on which we are traveling and if we embrace new pathways. When I speak about “dead-end roads” I mean to suggest that continuing to pursue policies and practices that cause serious problems won’t lead to viable solutions. It is much more likely that staying on a problematic road will take us in the direction we are headed, which in the case of climate change, financial deregulation, economies divorced from equity and ecology, or aggressive wars, is over a cliff.

When I speak about “painful positives” I mean to suggest more than the fact that it isn’t easy to discover that conventional wisdom may be wrong and that things we thought imminently reasonable turned out to be the source of major problems. I mean that we should be grateful for new knowledge that if taken seriously can prevent greater problems and open up possibilities for constructive change in the future. When I speak of “authentic hope” I mean hope we embody in all aspects of our lives in response to problems we have examined honestly, courageously, and rigorously.

GATEWAYS TO NEW POSSIBILITIES

The fact that we are being forced off familiar roadways (experiencing the end of the world as we know it) is good news even though it requires difficult adjustments. Staying on existing roads is the equivalent to driving willfully over a cliff. When we pay attention to the economic, ecological, and human consequences of climate change then both our generation and future generations won’t have to deal with worst-case scenarios. When we stop attempting foolishly through militarism and war to secure oil and other resources, expand influence, dominate international affairs, or reduce terror then we can enhance real security, diffuse anti-American hatred, and revitalize the US economy. When we pursue alternatives to energy and resource-intensive economic growth, then we can reduce the likelihood of resource wars and expand arenas for international cooperation. When we respect the ecological limits of a finite planet then we can promote ecologically sustainable development, build green economics, re-envision prosperity, and address pressing social problems. When we offer compelling alternative visions and rein in corporate interests that dominate politics and distort solutions, then we can reduce wealth and income disparities, lessen poverty and social tensions, address social problems, and enhance prospects for peace. We can revitalize democracy, unleash meaningful reforms, and overcome political cynicism with a politics of hope.

Using present dead-end roads as pathways to building a hopeful future is about as sensible as constructing new houses on quicksand. Attempts to stay the course guarantee that problems will worsen. Being forced off a dead-end road is a painful positive. It is disruptive, but it opens up avenues to authentic hope. Leaving dead-end roads opens critical gateways to new possibilities. We may

be able to achieve a “graceful decline” in which the transition to a very different future improves the quality of life for present and future generations.

AUTHENTIC HOPE

Addressing serious problems and repelling despair requires authentic hope. The opposite of authentic hope isn’t despair. It is inauthentic hope. Inauthentic hope is optimism disconnected from reality.

Authentic hope pays attention to problems as they actually are to the best of our understanding, even if problems are grave and solutions are demanding or uncertain.

Many of us who pay close or even partial attention to grave problems can easily feel overwhelmed. We may not be experts on economics or war or climate, but we know on some level that our nation isn’t doing well and that local and global problems are getting worse. We fear that our lives and our nation may be headed over a cliff. Crashes aren’t pretty, however, and so we turn away and push aside troubling thoughts.

Some of us are angry at the way things are and fearful about the future, but we pay little attention to the causes of serious problems. We are susceptible to hope peddlers who offer false and easy solutions or to fear peddlers who masterfully shift our gaze away from causes to other things. They provide us easy outlets for our anxiety and easy targets to scapegoat or to blame.

Another factor feeding our reluctance to face serious problems is that daily life and troubles are challenging enough. We worry rightfully about how to make ends meet. We fret about finding or keeping a job. We struggle to





find affordable health care and housing. We worry about quality education for our children and wonder how to pay for college. We face many uncertainties as we approach retirement. Sufficiently preoccupied, many of us minimize the seriousness of the threat or we trust naively that others, including business leaders and government officials, will find appropriate solutions without organized pressure to force them to do so. Our deepening insecurities are directly related to the troubling issues named above, but the immediate impact of experiencing greater stress and uncertainty in our daily lives is that we have less time, energy, or inclination to engage larger systemic problems.

Another obstacle to honest sight is our inability to see ourselves as agents and architects of meaningful change. We avoid looking closely at warning signs that pop up along dead-end roads because we are discouraged and don't see how to avoid the approaching cliff. Some of us are fearful, cynical, or nearly devoid of hope that things will ever change. Our challenge is 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.

There are also cultural factors that feed our reluctance to face unpleasant realities. The allure and momentum of the consumer culture delivers novelty and temporary fulfillment along with a whole host of problems. Addictive consumerism drives the resource-intensive economy, discourages political engagement, and fuels debt and environmental degradation. It also fails ultimately to satisfy deep human desires for meaning and for purposeful living. Consumerism, even among those who seek "green" alternatives, can distract us and divert our gaze from problems that seem intractable, from possibilities beyond the reach of our imaginations, and from our responsibilities as citizens and people of faith.

Equally problematic on the cultural front is that we have internalized views and values that reinforce military priorities and war. The two dominant and defining features of American life today are national arrogance (hubris) and militarism. Arrogance is manifested in an exaggerated sense of national pride and an inflated sense of national purpose often referred to as American exceptionalism. Militarism finds expression in the inflated view of the usefulness of military power to provide security, defeat injustice, or promote goodness. Together American exceptionalism and militarism distort our sight and undermine our capacity for empathy and compassion. They

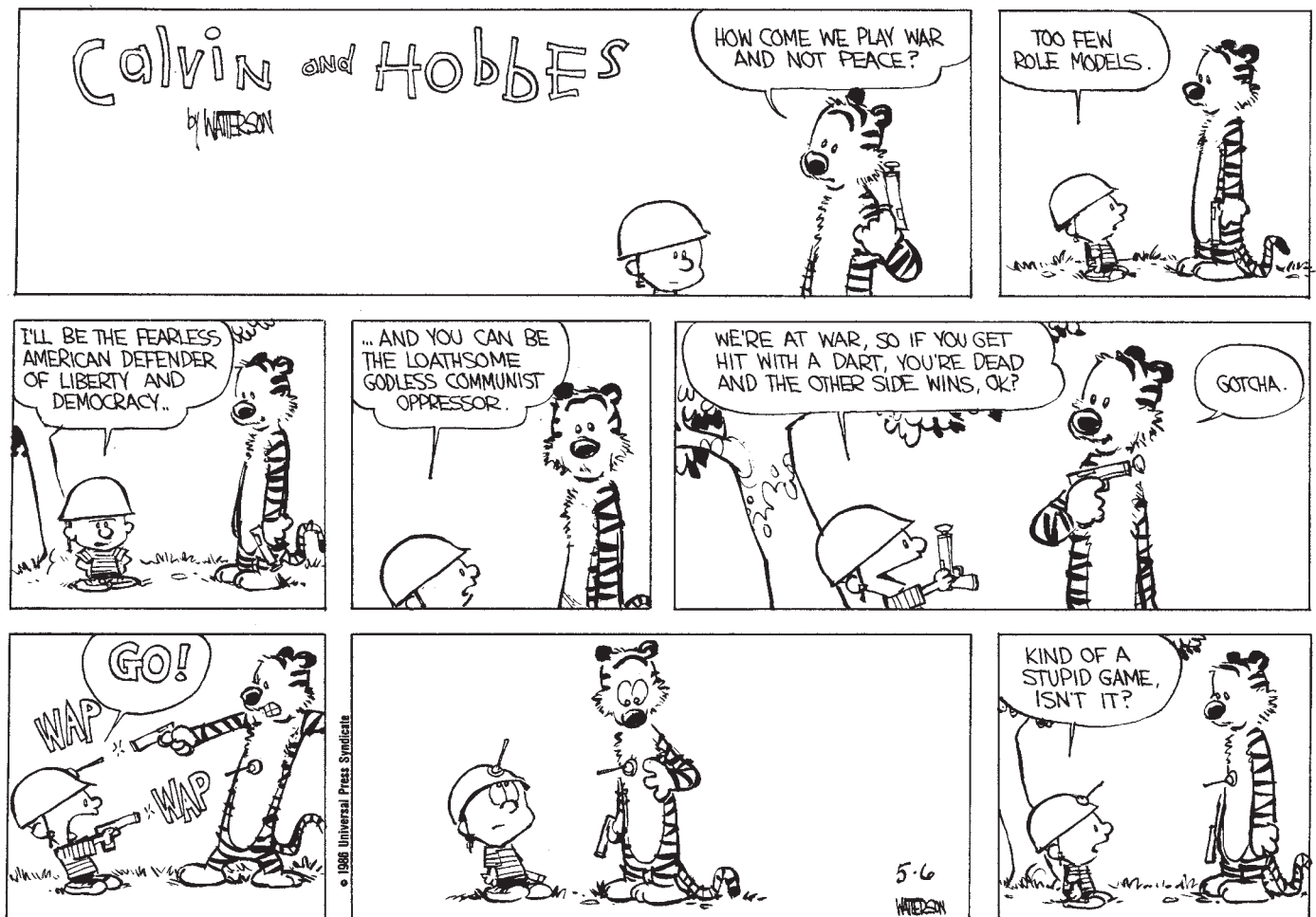
discourage self-reflection and self-criticism. They prevent an honest reckoning of who we have become and where we are headed. They foreclose on any realistic possibility of transformation. Our cultural mindset turns US soldiers into a strange hybrid of Rambo and Mother Teresa. As retired Lieutenant Colonel William J. Astore writes:

We wage war because we think we're good at it — and because, at a gut level, we've come to believe that American wars can bring good to others (hence our feel-good names for them, like Operations Enduring Freedom and Iraqi Freedom). Most Americans are not only convinced we have the best troops, the best training, and the most advanced weapons, but also the purest motives. Unlike the bad guys and the barbarians out there in the global marketplace of death, our warriors and war fighters are seen as gift-givers and freedom-bringers, not as death-dealers and resource-exploiters. Our illusions about the military we "support" serve as catalyst for, and apology for, the persistent war-making we condone.

Finally, our reluctance to truly face grave, life-threatening problems reflects an absence of authentic hope. To the degree that we recognize that problems are rooted in

entrenched systems the more we feel the inadequacy of our individual responses. The vastness of the problems contrasts with our smallness. We feel insignificant in light of urgent needs that require profound changes. The refrain "I can't make a difference even if I want to" rings in our heads like an echo chamber. If it is true, and I believe it is, that hope requires honesty, then it is equally true that honesty requires hope. We are much more likely to face difficult problems and come to terms with the end of the world as we know it if we believe in the possibility of soft landings and that our political and life choices matter. All changes, big and small, depend on each of us choosing to live authentic lives. Hope is more than an idea we come to after weighing all the pros and cons. Hope is ultimately a choice we make that leads to action. To be authentic, hope must be embodied through creative, persistent engagement.

Jack Nelson-Pallmeyer, MDiv, Associate Professor of Justice and Peace Studies at St. Thomas, is a nationally recognized teacher, writer, public speaker, and activist committed to nonviolent social change. He has focused his life and work on showing linkages between faith and critical political, economic and social issues. He has written extensively on issues of hunger, poverty, US foreign policy, the historical Jesus, problems of God and violence, and authentic hope.



CALVIN AND HOBBS © 1986 Watterson. Reprinted with permission of UNIVERSAL UCLICK. All rights reserved.



THE HOPEFUL ALTERNATIVE — A GLOBAL PEACE SYSTEM

By Patrick T. Hiller

Let's face it. We screwed up. 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.

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 for 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.

Large shifts have taken place in terms of global collaboration, constructive conflict resolution and social change. 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."¹ Initially Shifferd considered 23 trends; currently the Global Peace System is made up of 28 trends in the major areas of global collaboration, constructive conflict transformation and social change.²

GLOBAL COLLABORATION

The world has gotten smaller — certainly not a surprising statement, and one which commonly accompanies the catch-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 has created both proponents and opponents. The smaller, globalized world, however, offers far more.

Looking at global collaboration 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 can also look at how individuals like Jody Williams harnessed the power of global citizen-diplomacy to help the international community agree on the global ban on land-mines. There are also stories of unarmed civilian peacekeeping in conflict zones such as that of the Nonviolent Peaceforce in South Sudan, which is not only nonviolently standing between conflicting parties, but taking part in dialogue processes to reconstruct the social fabric.

Global collaboration also allowed Puhuy, a Pataxo Indian and one of the leaders of the International Indigenous Commission, to share his voice at the 1992 Rio Summit which ultimately led to a dramatic directional shift toward the elimination of toxins in production technologies, the development of alternative energy and public transportation, reforestation, and a new realization of the scarcity of water. Rotary International, one of thousands of international non-government organizations — albeit a very large one — is a global collaboration whose members aim to advance international understanding, goodwill, and peace.

CONSTRUCTIVE CONFLICT TRANSFORMATION

As expressed by many win-lose metaphors, "conflict" is warlike and violent, explosive, a struggle, an act of nature,

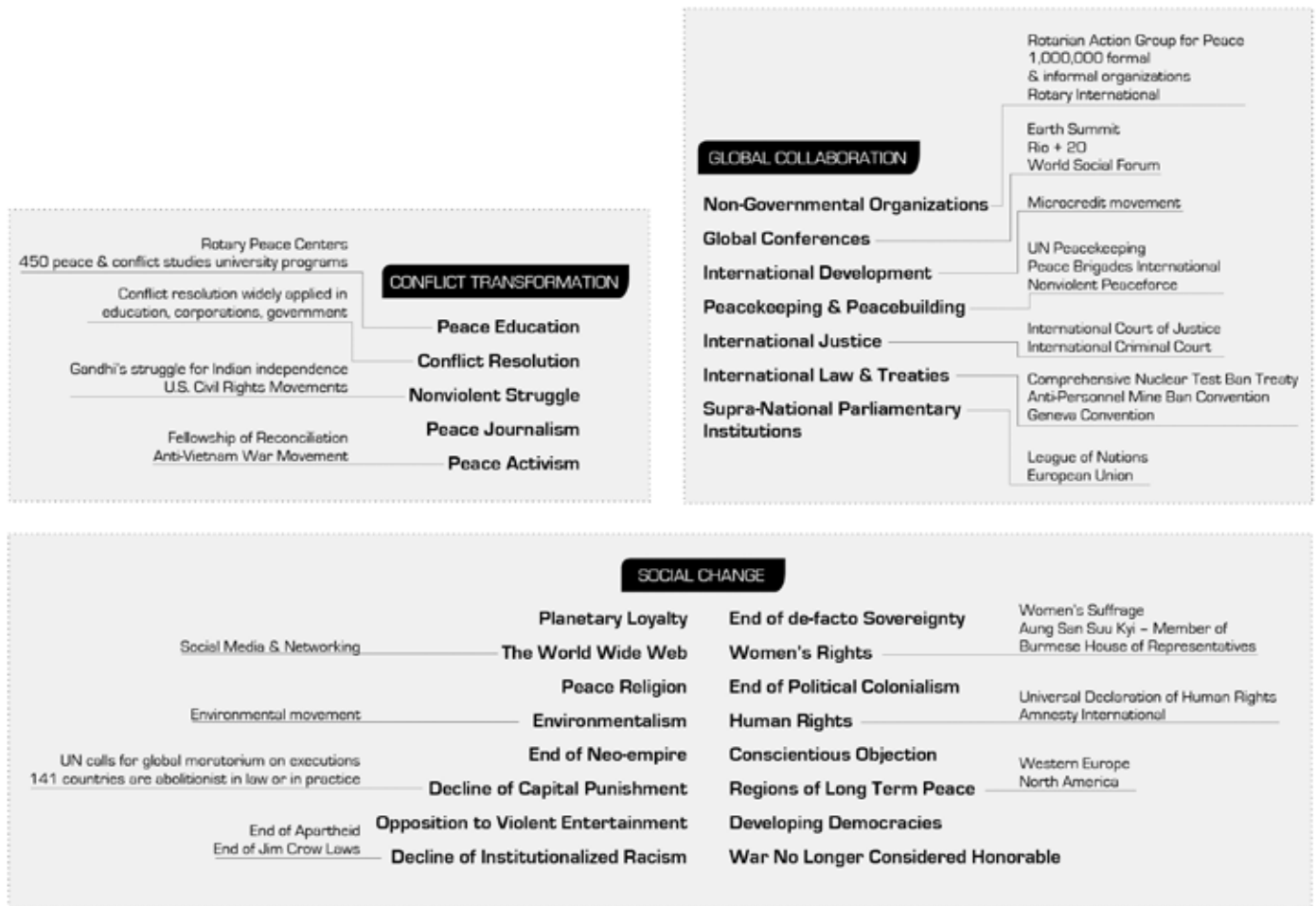


Figure 1 — Global Peace System. While all are connected as part of the evolving system, each trend is significant in itself. Several might seem familiar and obvious, yet they are rarely looked at in terms of an evolving system of global peace. We can see them in stories, many stories.

a communication breakdown and more. At the same time, there are positive metaphors that now portray conflict as an opportunity, a bargaining table, a dance, as making a quilt and much more. 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.

Individuals like Father Daniel Berrigan, whose commitment to organized peace activism not only led to countless arrests and prison sentences for civil disobedience, but whose actions also contributed to the process of nuclear disarmament, have demonstrated how pro-active nonviolence is not only a preferable but also a more powerful force for transforming conflict. Nonviolence has even been scientifically proven to be a more effective form of dealing with social conflict in many different contexts. Conflict transformation is also illustrated by the story of UN Deputy Secretary General Jan Eliasson, who 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 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 form of 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 look at the many subtle and less subtle developments that have been directly contributing to the evolution of the Global Peace System.

Just look at 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 US warfare, in particular, is a corporate-driven endeavor hollowing 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 aimed toward defending women’s rights, elimination of racial segregation, and the humane treatment of prisoners, to name just a few. We also no longer consider capital punishment as an acceptable crime-fighting and prevention strategy. Worldwide only 58 countries maintain capital punishment, 95 have outlawed it, and 35 maintain it but have not carried out an execution for at least ten years. It is generally considered immoral punishment and is no longer accepted in many parts of the world.

Once confined to the fringes of consumerist societies, the modern environmental movement is not only a necessary, but an increasingly popular response to our planetary crisis. 350.org is a prime example of an inspiring, energetic movement allowing millions of people to connect worldwide and solve the climate crisis through public actions and online campaigns. The latter, along

with other modern communication technologies which have been evolving faster than most users can keep up with, have increased transparency of government and corporate actions. These new forms of communication are force multipliers for the work of peace, justice and environmental protection.

CONCLUSION

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. 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, like war, is a reality in the lives of humans. Key components in this transformational 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." This response to privatization under the insane ideology known as corporate globalization builds Earth Democracy. Corporate globalization sees the world only as something to be owned and the market as only driven by profits. From Bangalore in 1993, when half a million Indian peasants pledged to resist the classification of seeds as private property required by the Trade Related Aspects of Intellectual Property Rights (TRIPS) agreement of the World Trade Organization (WTO) to Seattle in 1999 and Cancún in 2003 when protests stopped the WTO ministerial meetings, the corporate globalization agenda has been responded to creatively, imaginatively, and courageously by millions of people who see and experience the earth as a family and community consisting of all beings and humans of all colors, beliefs, classes, and countries.

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,

*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.*



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. This false separation results in antagonistic and cannibalistic behavior. The rise of extremism and terrorism is a response to the enclosures and economic colonization of globalization. Just as

cannibalism among factory-farmed animals stops when chicken and pigs are allowed to roam free, terrorism, extremism, ethnic cleansing, and religious intolerance are unnatural conditions caused by globalization and have no place in Earth Democracy.

Enclosures create exclusions, and these exclusions are the hidden cost of corporate globalization. Our movements against the biopiracy of neem, of basmati, of wheat have aimed at and succeeded in reclaiming our collective biological and intellectual heritage as a commons. Movements such as the victorious struggle started by the tribal women of a tiny hamlet called Plachimada in India's Kerala state against one of the world's largest corporations, Coca-Cola, are at the heart of the emerging Earth Democracy.

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. Our economies are not calculated in the short term of corporate quarterly returns or the four- to five-year perspective of politicians. We consider the evolutionary potential of all life on earth and re-embed human welfare in our home, our basic security; ecological identities are our most fundamental identity. We are the food we eat, the water we drink, the air we breathe. And reclaiming democratic control over our food and water and our ecological survival is the necessary project for our freedom.

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. She has received numerous awards, including 1993 Right Livelihood Award (Alternative Nobel Prize) and the 2010 Sydney Peace Prize.



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. It's amazing how many misconceptions there can be. People will swear that rainfall is decreasing, say, but when you look at the data, you find that what is really happening is that variability is increasing — the droughts are deeper, but the floods are greater too. I have been told with great authority that milk price was going up when it was going down, that real interest rates were falling when they were rising, that the deficit was a higher fraction of the GNP than ever before when it wasn't.

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.

If I could, I would add an Eleventh Commandment: Thou shalt not distort, delay, or sequester information. You can drive a system crazy by muddying its information streams. You can make a system work better with surprising ease if you can give it more timely, more accurate, more complete information.

For example, in 1986 new federal legislation required US 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 US 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 US 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.



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.

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?



YOU ARE BRILLIANT, AND THE EARTH IS HIRING

Commencement Address to the Class of 2009,
University of Portland, May 3, 2009

By Paul Hawken

When I was invited to give this speech, I was asked if I could give a simple short talk that was “direct, naked, taut, honest, passionate, lean, shivering, startling, and graceful.” No pressure there.

Let’s begin with the startling part. Class of 2009: you are going to have to figure out what it means to be a human being on earth at a time when every living system is declining, and the rate of decline is accelerating. Kind of a mind-boggling situation... but not one peer-reviewed paper published in the last thirty years can refute that statement. Basically, civilization needs a new operating system, you are the programmers, and we need it within a few decades.

This planet came with a set of instructions, but we seem to have misplaced them. Important rules like don’t poison the water, soil, or air, don’t let the earth get overcrowded, and don’t touch the thermostat have been broken. Buckminster Fuller said that spaceship earth was so ingeniously designed that no one has a clue that we are on one, flying through the universe at a million miles per hour, with no need for seat belts, lots of room in coach, and really good food — but all that is changing.

There is invisible writing on the back of the diploma you will receive, and in case you didn’t bring lemon juice to decode it, I can tell you what it says: You are Brilliant, and the Earth is Hiring. The earth couldn’t afford to send recruiters or limos to your school. It sent you rain, sunsets, ripe cherries, night blooming jasmine, and that unbelievably cute person you are dating. Take the hint. And here’s the

deal: Forget that this task of planet-saving is not possible in the time required. Don’t be put off by people who know what is not possible. Do what needs to be done, and check to see if it was impossible only after you are done.

When asked if I am pessimistic or optimistic about the future, my answer is always the same: If you look at the science about what is happening on earth and aren’t pessimistic, you don’t understand the data. But if you meet the people who are working to restore this earth and the lives of the poor, and you aren’t optimistic, you haven’t got a pulse. What I see everywhere in the world are ordinary people willing to confront despair, power, and incalculable odds in order to restore some semblance of grace, justice, and beauty to this world. The poet Adrienne Rich wrote, “So much has been destroyed I have cast my lot with those who, age after age, perversely, with no extraordinary power, reconstitute the world.” There could be no better description. Humanity is coalescing. It is reconstituting the world, and the action is taking place in schoolrooms, farms, jungles, villages, campuses, companies, refugee camps, deserts, fisheries, and slums.

You join a multitude of caring people. No one knows how many groups and organizations are working on the most salient issues of our day: climate change, poverty, deforestation, peace, water, hunger, conservation, human rights, and more. This is the largest movement the world has ever seen. Rather than control, it seeks connection. Rather than dominance, it strives to disperse concentrations of power. Like Mercy Corps, it works behind the scenes and gets the job done. Large as it is, no one knows the true size of this movement. It provides hope, support, and meaning to billions of people in the world. Its clout resides in idea, not in force. It is made up of teachers, children, peasants, businesspeople, rappers, organic farmers, nuns, artists, government workers, fisherfolk, engineers, students, incorrigible writers, weeping Muslims, concerned mothers, poets, doctors without borders, grieving Christians, street musicians, the President of the United States of America, and as the writer David James Duncan would say, the Creator, the One who loves us all in such a huge way.

There is a rabbinical teaching that says if the world is ending and the Messiah arrives, first plant a tree, and then see if the story is true. Inspiration is not garnered from the litanies of what may befall us; it resides in humanity’s willingness to restore, redress, reform, rebuild, recover, reimagine, and reconsider. “One day you finally knew what you had to do, and began, though the voices around you kept shouting their bad advice,” is Mary Oliver’s description of moving away from the profane toward a deep sense of connectedness to the living world.

Millions of people are working on behalf of strangers, even if the evening news is usually about the death of strangers. This kindness of strangers has religious, even

mythic origins, and very specific eighteenth-century roots. Abolitionists were the first people to create a national and global movement to defend the rights of those they did not know. Until that time, no group had filed a grievance except on behalf of itself. The founders of this movement were largely unknown — Granville Clark, Thomas Clarkson, Josiah Wedgwood — and their goal was ridiculous on the face of it: at that time three out of four people in the world were enslaved. Enslaving each other was what human beings had done for ages. And the abolitionist movement was greeted with incredulity. Conservative spokesmen ridiculed the abolitionists as liberals, progressives, do-gooders, meddlers, and activists. They were told they would ruin the economy and drive England into poverty. But for the first time in history a group of people organized themselves to help people they would never know, from whom they would never receive direct or indirect benefit. And today tens of millions of people do this every day. It is called the world of non-profits, civil society, schools, social entrepreneurship, non-governmental organizations, and companies who place social and environmental justice at the top of their strategic goals. The scope and scale of this effort is unparalleled in history.

The living world is not “out there” somewhere, but in your heart. What do we know about life? In the words of biologist Janine Benyus, life creates the conditions that are conducive to life. I can think of no better motto for a future economy. We have tens of thousands of abandoned homes without people and tens of thousands of abandoned people without homes. We have failed bankers advising failed regulators on how to save failed assets. We are the only species on the planet without full employment. Brilliant. We have an economy that tells us that it is cheaper to destroy earth in real time rather than renew, restore, and sustain it. You can print money to bail out a bank but you can't print life to bail out a planet. At present we are stealing the future, selling it in the present, and calling it gross domestic product. We can just as easily have an economy that is based on healing the future instead of stealing it. We can either create assets for the future or take the assets of the future. One is called restoration and the other exploitation. And whenever we exploit the earth we exploit people and cause untold suffering. Working for the earth is not a way to get rich, it is a way to be rich.

The first living cell came into being nearly 40 million centuries ago, and its direct descendants are in all of our bloodstreams. Literally you are breathing molecules this very second that were inhaled by Moses, Mother Teresa, and Bono. We are vastly interconnected. Our fates are inseparable. We are here because the dream of every cell is to become two cells. And dreams come true. In each of you are one quadrillion cells, 90 percent of which are not human cells. Your body is a community, and without those

other microorganisms you would perish in hours. Each human cell has 400 billion molecules conducting millions of processes between trillions of atoms. The total cellular activity in one human body is staggering: one septillion actions at any one moment, a one with twenty-four zeros after it. In a millisecond, our body has undergone ten times more processes than there are stars in the universe, which is exactly what Charles Darwin foretold when he said science would discover that each living creature was a “little universe, formed of a host of self-propagating organisms, inconceivably minute and as numerous as the stars of heaven.”

So I have two questions for you all: First, can you feel your body? Stop for a moment. Feel your body. One septillion activities going on simultaneously, and your body does this so well you are free to ignore it, and wonder instead when this speech will end. You can feel it. It is called life. This is who you are. Second question: who is in charge of your body? Who is managing those molecules? Hopefully not a political party. Life is creating the conditions that are conducive to life inside you, just as in all of nature. Our innate nature is to create the conditions that are conducive to life. What I want you to imagine is that collectively humanity is evincing a deep innate wisdom in coming together to heal the wounds and insults of the past.

Ralph Waldo Emerson once asked what we would do if the stars only came out once every thousand years. No one would sleep that night, of course. The world would create new religions overnight. We would be ecstatic, delirious, made rapturous by the glory of God. Instead, the stars come out every night and we watch television.

This extraordinary time when we are globally aware of each other and the multiple dangers that threaten civilization has never happened, not in a thousand years, not in ten thousand years. Each of us is as complex and beautiful as all the stars in the universe. We have done great things and we have gone way off course in terms of honoring creation. You are graduating to the most amazing, stupefying challenge ever bequested to any generation. The generations before you failed. They didn't stay up all night. They got distracted and lost sight of the fact that life is a miracle every moment of your existence. Nature beckons you to be on her side. You couldn't ask for a better boss. The most unrealistic person in the world is the cynic, not the dreamer. Hope only makes sense when it doesn't make sense to be hopeful. This is your century. Take it and run as if your life depends on it.

Paul Hawken is a renowned entrepreneur, visionary environmental activist, and author of many books, most recently *Blessed Unrest: How the Largest Movement in the World Came into Being and Why No One Saw It Coming*. He was presented with an honorary doctorate of humane letters by University of Portland president Father Bill Beauchamp, C.S.C., in May 2009, when he delivered this superb speech. www.paulhawken.com



PEACE TALKS

Out beyond ideas of rightdoing and wrongdoing, there is a field. I'll meet you there.

— JALAL AD-DIN RUMI

LEARNING OUTCOMES

- Recognize the connection between communication and conflict transformation.
- Recognize destructive communication and constructive communication.
- Develop nonviolent communication skills.



SUGGESTED GROUP ACTIVITY: STORY AS ENTRY TO RELATIONSHIP

Listening fully without interrupting can be a powerful experience. The goal of this activity is to get to know someone in your group both by truly listening and by being truly heard.

One person volunteers to be Timekeeper for the group so that the other participants can forget about time and focus on listening to each other. Everyone else finds a partner.

Pair up with someone else in the group, ideally someone who is not like you. For the first 5 minutes, one person (the Listener) will listen — only listen — while the other person (the Storyteller) tells you their story. For the next 5 minutes, the Listener will ask the Storyteller questions about their story, to learn more from the person. Then you will switch

roles, 5 minutes uninterrupted, 5 minutes with interaction. The Listener becomes the Storyteller, and the Storyteller will be the Listener. Don't worry about time. Just focus on each other.

During each portion of listening and inquiry, the Timekeeper announces to the pairs:

(1) When time is almost up: "Take one more minute to finish your present thoughts."

(2) When to transition: "The Listener now becomes the Storyteller, and the Storyteller will be the Listener."

For the Storytellers: You can begin many generations back, or even with your birth — you decide. What did your family experience? What has been inspiring in your life and what has been hard? What have you learned and how have you changed? What has brought you to this point in your life in this room — today?

Now choose a partner. Go to a quiet, comfortable part of the room, and begin.

Afterward, each of you shares what you have learned. Have your feelings toward your partner changed now that you know their story?

(This activity was adapted from an activity developed by Len and Libby Traubman, <http://traubman.igc.org/vidschoolguide.pdf>).

In honor of **Lee Kelly**