

Preface

Today, there are major changes happening inside a select group of the world's largest corporations. In response to the Earth's most pressing environmental problems, a growing number of the most recognizable multinational companies are transforming the way they do business. These new developments hold great potential for our future.

Using a process known as biomimicry, engineers are designing new products based on a more thorough understanding of how nature works. Using a tool known as life-cycle analysis, accountants are measuring the full environmental footprint of products, from resource extraction through the manufacturing supply chain, distribution, disposal and recovery. Large-scale collaborative efforts between multinational companies, environmental nonprofits and governments are leading to new systemic approaches to our most complex global environmental

problems involving the oceans, farmlands, forests, river basins and our fellow species.

However, we all know this has not been close to enough. Whether as sustainability educators, CSR executives, environmental activists or simply concerned citizens, we worry about each new piece of depressing environmental news. For those of us that follow the corporate sustainability movement, we know that only a relatively small percentage of progressive corporations are thoroughly integrating sustainability initiatives throughout their global organizations. We also know that only certain executives within these corporations are fully committed to sustainability as their highest priority. As a result, the quarterly earnings report is still the major driver in the corporate world and CEOs with sustainability at the top of their agenda are few and far between.

A focus on corporate sustainability executives

During the last decade, the sustainability position in multinational corporations has grown considerably in influence. Beginning with the appointment of the first chief sustainability officer in 2004,¹ today there are senior sustainability executives in hundreds of the world's largest multinational companies. In many cases, the chief sustainability officer now reports directly to the CEO. These are highly influential individuals inside today's global corporations.

Behind each major environmental announcement by a multinational CEO, a small group of executives dedicate themselves to a wide range of sustainability initiatives, much of it in the face of strong resistance. Their companies have tens of thousands of employees throughout the world. Their global supply chains affect millions of people. Their customers reach into the billions.

On the one hand, we can blame corporations as a whole for the ecological crisis. However, when we consider their potential to radically reduce their impacts, reinvent their energy sources and repurpose their infrastructure to eventually restore Earth’s ecosystems, the sustainable business movement may be the single most important environmental movement in the world today. When we take into account how this affects the availability of food and water for the planet’s poorest people, a case can likewise be made that it is also the most important social justice movement.	<hr/> <div>The sustainable business movement may be the single most important environmental movement in the world today</div> <hr/>
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Despite the global scale of their companies, the number of executives who champion sustainability initiatives on a daily basis is surprisingly small. Although much has been written about their accomplishments, we don’t know enough about their personal histories, their deeper motivations and how they think. We don’t know enough about how they think about nature, leadership, resistance and change. At its essence, we don’t know enough about what makes these types of global sustainability leader tick.

The limits of “sustainability”

At the same time, we have become aware of the limits of the term “sustainability”. We know that it can mean very different things to different people. We have seen how it can be used narrowly to mean short-term economics, jobs and national security; or it can be used expansively to mean a complete transformation to deeply ecological and restorative business models. Sadly, we have witnessed how sustainability can be misused and misunderstood. In our darkest moments, we fear that the sustainability movement has fallen well short of its overall goal to transform business and society.

We continue to ask ourselves, why? Why, despite all the scientific evidence, don’t all senior executives have a strong sense of urgency about transforming business in response to climate change? Why doesn’t everyone see the clear and deep connections between our traditional ways of doing business and harming the ecosystems we depend on for life? Why is there so much resistance to change? Although we tell ourselves that politics, jobs and our fossil-fuel-dependent economy and culture are the obvious reasons, we continue to search for new answers.

I’ve written this book to offer a new type of answer to these questions and a new place to look for solutions.

Cultivating a new psychology for sustainability

Lester Brown, President of the Earth Policy Institute and author of more than 50 books on global environmental

issues, observes, “Every political movement has its psychological dimension. Persuading people to alter their behavior always involves probing motivations; activism begins with asking what makes people tick? The environmental movement is no exception.”²

Although thousands of sustainability-related books, articles and corporate reports have been published in recent years, today little is known about the deeper psychological motivations of corporate sustainability leaders. Leadership consultant and human development researcher Barrett C. Brown observes that the more we understand how psychology and worldviews drive the behaviours required to lead sustainability initiatives, the more effectively we will be able to cultivate them, especially during times of complexity and rapid change. ³	<hr/> <div>Little is known about the deeper psychological motivations of corporate sustainability leaders</div> <hr/>
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As sustainability educators, executives and activists, we need to develop a new, shared understanding of what sustainability leadership must become. We need a new story, a new language and, most of all, a new psychology.

Ecological worldviews: a missing perspective

The research I share with you in this book draws on eight distinct social science traditions that have not been widely used to study corporate sustainability leadership. These

include eco-psychology, deep ecology, ecological economics, social psychology, environmental sociology, indigenous studies and the new field of integral ecology. I also rely on developmental psychology research about how worldviews are constructed, how we interpret the world around us, and how this can change over the course of our lives.

Using key insights from these disciplines, I include in the book extensive quotations from my interviews with 75 global sustainability leaders in more than 40

multinational organizations. The interviews suggest that many of the most influential corporate sustainability leaders are motivated by their ecological worldviews, which can be thought of as the deep mental patterns and ways of seeing our relationship to the natural

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world. Ecological worldviews can also be thought of as our cognitive and perceptual capacity to see the world through the lens of ecology, which is essentially the relationship of species and their environment.

In the minds of sustainability leaders, ecological worldviews can enhance the perception of our interdependence with the Earth's planetary ecosystems, which can strengthen the depth of their commitment in the face of continued resistance. The interviews further reveal expressions of what developmental psychologists call post-conventional worldviews, which can enhance their ability to effectively communicate to diverse audiences, collaborate across boundaries and unlock capacity to lead large-scale transformational change.

MIT professor emeritus and long-time sustainability scholar John Ehrenfeld reflects that, in order to address sustainability fully and meaningfully, we must make fundamental shifts in the way we think. Referring to our capacity to lead transformational change, he invites us to consider that, in the face of opposition, an individual can always change his or her own worldview.⁴

For too long we have assumed that all multinational corporations, and by default all executives inside them, have the same worldview. If we are to advance the field of sustainability leadership beyond its current limitations, it is vital to understand how global sustainability leaders think, how their worldviews have been formed, and how this influences their actions.

By shining a light on the psychological dimensions of a large group of sustainability executives in multinational corporations, my hope is this book will open up new conversations and new research across a wide range of social science disciplines in the context of corporate sustainability leadership. Ultimately, this can lead to a new psychology for sustainability that can be integrated into public and private institutions everywhere to support the development of the next generation of sustainability leaders for the benefit of all life on Earth.

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Part 1: Introduction

Sustainability is both a badly misused and abused term.

John Ehrenfeld

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Ecologically awake

The roots of this book are in the garden. It was there, ten summers ago, where the fragility of the Earth's ecosystems we depend on for life first became clear. At the age of 45, this realization, and its implications for business, came as a shock.

It started in the spring of 2006, when I became steward of a ten-acre piece of land in the hills above the town of Ashland, Oregon. The land was north facing and densely forested with a mix of ponderosa trees, black oaks, Douglas firs, and western red cedars. Underneath the canopy of trees grew a thick carpet of native grasses, manzanita and wild rosebushes.

The mosaic of the forest made me deeply curious about the landscape around me. What was the history of this land? Why were certain trees healthier than others? Where was water flowing beneath the forest floor? How was the microclimate changing? These types of questions led me to a series of environmental science teachers that started with

an off-the-grid ethno-botanist and permaculture⁵ teacher named Tom Ward. I first met Tom in the old oak grove at the bottom of my property. He wasted no time in beginning my full-immersion course of applied environmental studies.

He started with fire ecology and ethno-botany, the study of relationships between human beings and plants, a field that can be traced back to Pythagoras in the sixth century BC. In the weeks that followed, Tom taught me how to create a perennial food forest and how to build topsoil through cover crops and composting. He showed me how to bring the bees through continuous pollination and support beneficial insects through discontinuous planting patterns.

Tom explained how perennial polyculture and biodiversity create resilience. He described closed-loop systems, waste repurposing, and how to catch rainwater by building bio-swales and small ponds across the land. He explained the historical role of fire in the ecology of the forest. More than through his words, Tom powerfully role modelled how to observe nature closely every day and live more lightly on the Earth.

Later that winter, when the fall rains softened the clay baked hard by the summer heat, we began to survey and dig a series of trails snaking up the hillside through the trees. We used a large supply of partially burnt logs found scattered in the forest to create earthen berms on the downhill side of the trails, using the wet clay to sculpt the trails like cement provided courtesy of nature.

In spring we dug postholes and built a deer fence around one acre for the garden. We created a network of drainage swales and ponds designed to hold water along the hillside

and down in the garden during the rainy season. With the help of several friends, we thinned the densely covered forest, felling hundreds of small diameter ponderosa trees, using draw-knives to peel the bark, and piling the beautiful yellow logs in crisscrossed log decks that resembled rafts.

The following summer we dug test pits and took soil samples of clay and sandstone. We unearthed dozens of large boulders and slabs of sandstone covered with shell fossils, which came from an ancient geological formation when the entire area was covered by ocean.

We found many uses for these stones, from foundations for a greenhouse in the garden, to retaining walls and stepping stones. These fossilized rocks spoke of a time when the valley was covered by sea. They provided hard evidence of geological time.

A big part of those first summers on the land involved learning how to grow food based on principles of permaculture and organic farming. This led to a realization about our industrial food system and the inescapable environmental implications for the planet. Along with Tom's hands-on permaculture teachings, there were several books and articles that completely changed the way I thought about food. First, *The Omnivore's Dilemma* by food writer Michael Pollan explained how our industrial food system was leading to massive soil erosion, vanishing species, the obesity epidemic and a host of other health and economic problems.⁶

Next, *Animal, Vegetable, Miracle* by novelist Barbara Kingsolver and her husband, Steven Hopp, an environmental studies professor, described the full long-term implications

of large-scale industrial, genetically modified and petroleum-driven agriculture. They explained how, through the oil and natural gas consumed by the machinery, fertilizers, pesticides, processing and transportation of large-scale corporate agriculture, we Americans put almost as much oil into our stomachs as into our cars. In fact, Americans consume more than 400 gallons of oil per year per citizen, or almost 20% of our nation's energy use.⁷

Most importantly, a global systems perspective of the Earth's ecological crisis was provided in *Plan B*, the comprehensive assessment of the Earth's natural resources by Lester Brown, President of the Earth Policy Institute.⁸ As one of the world's most influential environmental thinkers, Brown has been synthesizing and communicating the large-scale environmental trends and their implications throughout the world for more than 50 years. In *Plan B*, Brown and his team of researchers present the environmental data, ecosystem by ecosystem, from rising temperatures and sea levels, to melting ice caps and deforestation, to eroding soil and falling water tables. Most disturbingly, they describe how growing food and water shortages are contributing to the increasing political instability we're seeing around the world.

A few summers later, a large wildfire broke out less than a half-mile east of my land. As my friend Aaren and I raced around the perimeter of the house cutting down dozens of ponderosa trees, helicopters and planes loaded with fire retardant flew directly over our heads making laps, dropping their loads on the fire. My adrenaline was flowing, my heart

was racing, and large clouds of billowing black smoke filled the sky and blocked out the sun, adding to the surreal scene.

The wildfire turned out to be the last of that summer's fire season. While it did burn over 200 acres including one occupied home, it never crossed the road to directly threaten our house. However, in its aftermath, something interesting occurred in the forest at the top of the hill on our land.

The following winter, the evergreen needles of hundreds of ponderosa trees turned brown all at once and started dying from the top down. A local arborist helped me identify this phenomenon as the handiwork of the California pine beetle, otherwise known as *Ips paraconfusus*.⁹ Evidently, large swarms of these beetles were flushed out of the forest across the road during the previous summer's forest fire. They then flew west and landed in the trees on my land. Once there, they began to bore holes in the bark, a process that eventually strangles each tree and prevents it from being able to suck water up through its roots to the crown.

These experiences allowed me to comprehend more of the complexity of the natural environment that surrounds us, what physicist and systems thinker

Fritjof Capra calls the "web of life".¹⁰ It made me more aware of how much I had taken for granted about Earth's ecosystems and how far out of balance we had become as a global society. It gave me a glimpse of what changes in these systems could mean for the future of this land and, on a much, much larger scale, for the future of all people.

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It also made me painfully aware of how much I had missed during my own business school education and during my subsequent corporate career as the president and co-founder of several companies, the last of which became a public company in 1998.

In 2005, I left the corporate world to join the faculty of a university business school. This career shift, which coincided with my move to the land, provided me with an opportunity to apply ecological awareness to business education.

1.1 A higher purpose for business

During the first few years I taught courses that were part of the standard curriculum. These included courses on strategic management, organizational leadership and business ethics. However, in the fall of 2007 a pivotal conversation with a friend led me to attend the Bioneers conference in San Rafael, California. Founded more than 25 years ago by Kenny Ausubel and Nina Simmons, Bioneers is one of the first annual conferences that bring together environmental, social justice and corporate responsibility activists under one roof. Based on principles of biological and cultural diversity and biomimicry, the annual event has inspired an entire generation of sustainability leaders.¹¹

My experience at the conference led to a second fundamental truth about sustainability: the interdependence between big business, healthy ecosystems and basic human rights. This is especially important to understand in regards

to multinational corporations and their environmental impacts on developing countries around the world where much of their raw materials are sourced and their products are manufactured.

As a recent graduate from the Presidio Green MBA programme in San Francisco, my friend had his finger on the pulse of the latest sustainability trends. When he invited me I was in the middle of teaching three fall semester classes, and attending this conference had not been in my plans. It was also my eldest daughter Casey's 17th birthday and we had plans to celebrate at home with our family. However, when I told her about the conference, she looked me in the eye and said, "You have to attend this conference, and I'll come with you!"

From the first presentation I found myself thinking, if only this information could be a standard part of the business curriculum, if only these types of presentations could be offered on a broader scale at business schools, if only ...

At Bioneers, I listened to paradigm-shifting talks about biomimicry by Janine Benyus, ecological literacy by David Orr, natural capitalism by Paul Hawken, the mycelial web by Paul Stamets, food policy by Michael Pollan, and indigenous rights by Agnes Baker Pilgrim and the 13 Indigenous Grandmothers.

However, there was one individual who I met at the conference who made the biggest impression on me. His name

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was Ray Anderson and, until his death in 2011, he was the CEO of Interface, one of the world’s largest manufacturers of commercial modular carpet. He was the first CEO of a multinational public company to put a stake in the ground for a zero ecological footprint and adopt a “do no harm to the Earth” policy in a large-scale industrial company. Since the mid-1990s, he had been working tirelessly to help the business world and corporate leaders everywhere fully understand the environmental realities of our planet and the responsibility of big business.

In thousands of speeches, Anderson continually pointed out that business is the most pervasive and powerful institution on the planet and responsible for most of the damage done to the Earth’s ecosystems.

He made a powerful argument that business must take the lead towards sustainability and restoration. Anderson also highlighted that one of the biggest things that need to change is the education system, and observed that universities everywhere are still teaching a system that is destroying the biosphere.¹²

Ray Anderson acted as a powerful role model for what sustainability leadership looks like at the CEO level, by articulating the fundamental responsibility of multinational corporations to lead the way in a transformation of our globalized economic system towards more sustainable world. Beginning in 1994, his company pioneered many of the innovative sustainability strategies

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that were to become more common in the two decades that followed. He was guided by a deep sense that there is no bigger issue for a company than its ultimate purpose and challenged us to understand that business must exist for a higher and nobler purpose than just making a profit.

Much has been written about Ray Anderson and I won't say more here, other than that the short conversation I had with him seven years ago led to the next epiphany for me. I grasped the truth of the ecological crisis and the implications for business. It was at that moment that I decided to join the sustainability movement dedicated to transforming business in service of social and ecological justice.

1.2 Sustainability curriculum 1.0

After returning from the Bioneers conference, I started a new sustainability leadership programme at the university. On one level, my idea was simple: I wanted to get environmental studies and business students in the same room. I felt that by creating new opportunities for students from these two separate schools to come together more frequently, they could greatly enhance each other's education. However, based on the long tradition of organizing universities into separate disciplinary silos, students from these two schools did not have many opportunities to study together. I believed

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strongly that, in order to prepare the next generation of business leaders for future ecological challenges, they needed to have more environmental science in their curriculum.

Using principles of permaculture and natural capitalism as an initial teaching framework, I created two new sustainability-related courses for

business students. Closed loops, service and flow, radical resource productivity, natural building, resilience, repurposing waste, and restoration—all principles of permaculture and natural capitalism—translated into the many ways that sustainability was beginning to be put into practice by multinational corporations.

Principles of permaculture and natural capitalism translated into the many ways that sustainability was put into practice by multinational corporations

The first course focused on the latest sustainability innovations at multinational corporations and was designed to give students a broad overview of the applied areas of sustainability, including alternative transportation, waste reduction, renewable energy, green building, fair trade, life-cycle analysis, water stewardship, carbon footprints and other emerging sustainable business practices. As part of the class we covered more than two dozen corporate sustainability case studies, including Interface, Patagonia, Ben and Jerry’s, Stonyfield Farms, Seventh Generation, TerraCycle, Nike, Starbucks, Unilever and, to the ongoing surprise of many students, even Coca-Cola and Walmart.

The second course, “Sustainability Leadership”, used the same applied areas, but focused on sustainability at

the individual level. Each week, I brought in inspiring guest speakers and facilitated round table discussions with a growing circle of highly knowledgeable teachers and sustainability practitioners from around the Pacific Northwest.

The cornerstone of the course featured weekly personal sustainability projects (PSPs) where students explored sustainability from a different perspective to enhance their awareness of their personal consumer choices and associated ecological footprints. These perspectives included personal transportation, household energy, water and waste management, local organic food, consumer electronics and a variety of other personal practices. Students often experienced “aha” moments through these experiences and I became increasingly aware of the deeper shifts occurring in their minds.

My experience teaching sustainability during the first few years was filled with optimism. Students calculated their carbon footprints and we printed their numbers on the back of T-shirts that we wore during public presentations. Several inspired students created a business plan for a new organic farm and sustainability centre on our campus. They won a small grant in a state-wide competition and even received their award from Nobel Prize winner, Muhammad Yunus. A few years later their vision became a reality on several acres of campus land.¹³

On the national front, President Obama had been elected in the fall of 2008 and passed two new executive orders requiring comprehensive sustainability plans that included a wide range of environmental initiatives to be measured

at all federal agencies. He appointed a new green job czar. In another applied project, my students created a green job database that ended up consisting of more than a hundred promising new sustainability-related career opportunities. Green business was on the cover of *Time* magazine. It even appeared that national climate change and energy policy was making progress in Congress. On a global level, expectations were high that at the Copenhagen summit in 2009 a worldwide climate change treaty would be adopted. The sustainability revolution was gaining momentum.

During the first summer on the land, my son Ted helped me build a deck high up in the woods in a natural clearing we came to call the middle camp. The following spring, it became an outdoor classroom for students from the university. In addition to business and environmental studies students from the sustainability leadership class, students from the Native American studies classes joined us around the fire. MBA, undergraduate business and environmental studies students, inspired by Native American teachings, passed the talking stick and shared their aspirations for business and society. It was a place where we could sit around the fire and imagine a new future based on principles of sustainability.

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