

Sustainability Leadership: Co-creating a Sustainable Future

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ABSTRACT *Sustainability Leadership tests common assumptions about who counts as a leader and proposes that anyone who takes responsibility for understanding and acting on sustainability challenges qualifies as a 'sustainability leader,' whether or not they hold formal leadership positions. They lead 'with' rather than 'over' others in ways that account for the long-term viability of complex, interconnected living systems. Paradox, contradiction, and differing viewpoints are recognized as natural characteristics of healthy systems. Sustainability leaders recognize that the experience of change itself, and the dissonance it creates, fuels new thinking, discoveries, and innovations that can revitalize the health of organizations, communities, and the earth. Finding the balance among and between simultaneous and sometimes contradictory demands for economically, socially, and environmentally sustainable solutions is a compelling leadership opportunity ultimately grounded in a personal ethic that reaches beyond self-interest.*

KEY WORDS: Sustainability, leadership, holistic, environment, social responsibility, complexity

My grandson Sam just celebrated his eleventh birthday. He is filled with curiosity, imagination, and anticipation for what life holds, yet I wonder what kind of world he will inherit. I am not a geologist, meteorologist, economist, or sociologist, but I can look around and clearly *see* for myself the accelerated decline of natural systems in the face of increasing human consumption, and I am ever more aware of the growing economic and social turmoil that holds our planet in its grip. Many of us know that something is profoundly wrong, but who among us will assume responsibility for making things right? Who will lead us into a better, more sustainable future?

If we can, we try to leave something to our children by way of material inheritance, hoping our investments will bear fruit and provide a foundation for the next

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generation. Unfortunately, the condition of our most important investment, the earth, is producing declining returns due to our mismanagement and sometimes-outright squander of its rich portfolio.

No one would want to lead or invest in a company that destroys or wastes the resources upon which it depends; yet we can see evidence of economic growth patterns that perpetuate human consumption beyond the earth's capacity to sustain such consumption. Moreover, while we also have an investment in social stability throughout the world, we see a growing climate of upheaval as millions struggle for a life free of poverty, hatred, and oppression.

Sustainability leadership reflects an emerging consciousness among people who are choosing to live their lives and lead their organizations in ways that account for their impact on the earth, society, and the health of local and global economies. It is both an exciting and daunting challenge to change entrenched, often unconscious patterns of human behavior that tend to *ignore* the impact of our wasteful habits. Yet it is a challenge that we *can do something about*. Those of us living at the dawn of the 21st century are called upon to rethink our definition and experience of leadership and address sustainability challenges in immediate, meaningful, and productive ways. Instead of looking to others for guidance and solutions, we are called to look to the leader within ourselves.

Three critical and interrelated areas require our thoughtful attention if we are to move toward a more sustainable future:

- (1) long-term viability of *natural systems and the services they provide for human existence*;
- (2) unacceptable *social conditions* at home and in communities around the world; and
- (3) local and global *economies and the potential they hold to create a modicum of wealth and prosperity for all inhabitants of the earth*.

The challenges represented in these three interconnected areas require us to rethink the nature of leadership. What must leaders begin to do to affect the magnitude of change – from deeply personal to broadly political – needed to shift the course of human behavior? How can leaders work proactively with others to sustain a future worthy of our grandchildren and their grandchildren; and who *are* these leaders?

This article describes a particular view of leadership¹ that challenges commonly held assumptions, both conscious and unconscious, about (1) who *counts* as a leader; (2) the *roles* of a leader; and (3) *where* a leader stands in relation to those he or she leads and to the holistic interconnections that support life. If we look closely at the language in leadership literature (including models that advocate open communication, collaborative decision-making, servant leadership, organizational learning and so on) and the language and practices of respected leaders, we notice that they tend to reflect assumptions that a responsible 'leader' fulfills a designated role, either assigned or acknowledged, and in that role stands apart from, often metaphorically 'above,' the people and situations he or she is leading. From this position of assumed 'objectivity,' a responsible leader observes and makes sense of complex circumstances, determines the

best course(s) of action, and uses his or her positional or attributed power to ‘manage,’ ‘unleash,’ ‘inspire,’ ‘influence,’ or otherwise ‘direct’ the behavior of others toward an outcome presumed to be most beneficial for everyone involved. This view of leadership can be attributed in part to a deeply held view about how the world works based on the mechanistic models of Newtonian science (Wheatley, 2001).

Emerging discoveries in the complexity sciences (e.g. quantum physics, chemistry, biology, ecology, and social sciences) point us toward a much different view of leadership that holds extraordinary potential for a powerful shift in our collective consciousness and actions. This view assumes that:

- (1) anyone can choose to become ‘a leader’ and take responsibility for fostering sustainable conditions in workplaces, communities and even on a global scale;
- (2) the role of a leader includes capabilities beyond those we currently attribute to leaders, primarily, learning what it means to be a leader ‘with’ others instead of a leader ‘of’ or ‘over’ others;
- (3) a leader cannot effectively operate outside of the holistic interconnections that exist among and between people and natural systems.

Complexity science reveals a radically different worldview that challenges Newtonian assumptions of empirical truth, reductionism, stability, certainty, predictability, and control. Scientists in the complexity arena tell us that truth can take different, sometimes contradictory, forms that are affected by the observer and contextual circumstances. Phenomena cannot be reduced to ‘understandable and manageable parts’ separate from the interactive networks of which they are a part. Instead of stability and certainty, we now know that matter and life, from the subatomic level to the planetary bodies in the universe (which include human beings, organizations and societies) are in constant motion, yielding patterns of behavior that are nonlinear and seemingly random; while at the same time revealing paradoxical states of stability and instability, order and disorder, calm, and turbulence. Given these dynamic conditions, assumptions of certainty, predictability and control are illusionary at best (Stacey, 2002). Instead, certainty is accompanied with a large degree of uncertainty, predictability with unpredictability and control with uncontrollability. This new way of thinking challenges the foundation of what we *know* to be true, and therefore, tends to inhibit our ability to act in new ways.

The principles of sustainability leadership respond to the challenges of an increasingly complex world. Grounded in emerging social science research, they are informed by complexity science models and they offer a powerful view of leadership and human dynamics that could trigger a transformational shift in how we see and function in the world. The very definition of leadership is extended to anyone who seeks sustainable change regardless of role or position. Leaders who adopt this expanded view can engage others using different assumptions about how people interact to create meaningful change.

The Challenge

Two-thirds of ecosystem services on which human society depends are being degraded or used in ways that cannot be sustained (Worldwatch Institute, 2006). The greatest strain on the earth's natural resources comes from developed nations: those living in the richest 20% of the world's nations use 17 times more energy than the bottom 20%. The US alone produces nearly a quarter of the world's greenhouse gases and consumes 25% of the total global biocapacity. During the period from 1950 to 2004, global water use roughly tripled, wood use more than doubled, and consumption of coal, oil, and natural gas increased nearly fivefold (Worldwatch Institute, 2006).

In spite of the global economic explosion, the disparity between rich and poor within and between nations increases. The top fifth of the world's richest countries (as measured by GDP, including the US, China, Japan and India) enjoy 82% of the expanding export trade and 68 percent of direct foreign investment; the bottom fifth sees just over 1%. In addition, the developing world spends about \$13 on debt repayment for every \$1 it receives in grants (World Bank, 2002).²

We can also find similar patterns and variations of these challenges in our local communities. How do we, as citizen-leaders, expand awareness and transform the ways we live and work to build strong, healthy organizations, communities, economies and ecosystems that can be sustained into the future?

Thinking Sustainably

The Brundtland Commission, (World Commission on Environment and Development, United Nations, 1987) is credited for introducing the far-reaching implications of the term, 'sustainable,' in a 1987 report, *Our common future*:

Humanity has the ability to make development sustainable—to ensure that it meets the needs of the present without compromising the ability of future generations to meet their needs.

Sustainability can be described as each of us doing our part to build the kind of world that we want to live in and that we want our children and grandchildren to inherit. It means becoming aware of choices and behaviors that influence the intricate balance of the earth's social, ecological, and economic systems, and then expanding that awareness through conversations that can lead to joint action. For every action a sustainable leader takes, whether personal or on behalf of an organization, they might ask:

- How the action affects the *ecosystem, subsystems and super systems* upon which my family, my organization, my community, the people of the world and myself depend for sustaining life.
- How the action affects my *social well-being* and that of others in my family, my organization, my community and the world.
- How the action affects the *economic stability/growth potential* for my family, my organization, my community, the world and myself.

While most of us are familiar with some variation of the last question, the first two questions are rarely considered on a scale beyond that of immediate experience. We have come to believe that individual actions do not have much affect on an expanded sphere of people around us, or the intricate interconnections of the ecosystems within which we live and work. While we are highly conscious of the way we spend and account for economic capital, we tend to ignore how we spend and account for the social and natural capital we use in organizations and broader society.

Sustainable business and economic conversations focus on ‘triple bottom line’ (Elkington, 1998) outcomes, in which key business strategies are designed to be socially and environmentally responsible as well as economically viable. In fact, business leaders are discovering that *sustainable* business strategies are often the most profitable strategies (Willard, 2002). For example, reducing energy use and materials costs through more efficient product design can lead to more competitive pricing and thus increase the number of sales and satisfied customers. Equally important is the level of commitment and productivity from employees and business partners who appreciate working for and with companies who demonstrate value for people and the environment along with profitability.

People come to this holistic approach with a primary interest in one of three broad areas: (1) environmental awareness and associated activism (including the development and use of innovative technological solutions); (2) social consciousness and social service activities; and (3) responsible business and economic development activities. It is readily apparent, however, that there are many overlaps. For example, an initiative focused on economic development can simultaneously seek to create sustainable jobs for unemployed members of a community while reclaiming a toxic land site for the construction of a new facility.

One can visualize the integration of sustainability activities by way of the triangle diagram shown in Figure 1. Each corner represents a different area of focus – environmental, social, and economic – yet each corner is an integral part of the holistic integration of sustainability knowledge, understanding, actions, outcomes, and impact. When leaders and their organizations pursue objectives and actions in one area without understanding their impact more broadly, they may inadvertently negate or undermine well-considered objectives and actions being pursued by others who are also committed to a sustainable future.

Many of us are beginning to notice how interconnections affect our lives. When New York City faced a potential \$6 to \$8 billion water treatment plant cost to comply with Safe Water Drinking Act standards, planners instead discovered

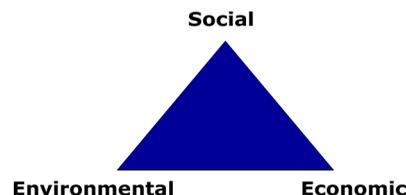


Figure 1. Holistic integration of sustainable development

that they could restore nature's own 'watershed cleansing services' in a 2000-square-mile upstate watershed region for approximately \$1.5 billion. Long-term negotiations among representatives of the city, state, the EPA, numerous upstate communities, and leading environmental groups resulted in agreements to limit new growth in watershed areas and develop buffers of undeveloped land that let nature do its water-purifying work. Through payments to the upstate communities, New York City internalized the costs of providing its inhabitants with naturally clean water. As a result of the watershed conservation program, city residents have become acutely aware of the source of their drinking water, the threats to its purity, and the benefits accrued from a healthy watershed including habitats for birds, fish and wildlife and natural landscapes that enhance the rural culture and restore the human spirit. Understanding interrelationships among sustainable land uses shows how sustainability initiatives in one area can complement, and even accelerate sustainability initiatives in another and lead to mutual economic benefits (Daily and Ellison, 2002).

Translating the idea of sustainability to meaningful action implies a dramatic transformation in human perspective and behavior. We must first acknowledge sustainability challenges, learn their origin and meaning, and then develop appropriate skills and courses of action to meet those challenges. Finding the balance among simultaneous and sometimes contradictory demands for economically, socially, and environmentally sustainable solutions is a compelling *leadership* opportunity.

Rethinking Leadership and Change

Leaders are often described as those who inspire a shared vision, build consensus, provide direction, and foster changes in beliefs and actions among followers needed to achieve the goals of the organization or community. Inherent in this perspective is the assumption that leaders have an enlightened view about what is required for success of the enterprise. From this perspective, leaders are skilled in engaging others in processes for creating a vision and making it a reality through the development and implementation of actions to support goals inherent in the vision. This view of leadership is deeply engrained in contemporary Western society and it has held up well in our experiences of how leaders function within organizations and communities.

People look to leaders for guidance, direction and answers and are often comforted by the sense of stability and predictability that comes from a leader perceived to be 'in control.' However, this belief can result in abdication of personal responsibility, be a barrier to understanding the nuances of complex problem solving, and limit the range of appropriate responses to various challenges. Deferring to leaders often creates a 'learned helplessness' that impedes synergistic momentum needed to generate innovative solutions. In the work of sustainability, there is no room for helplessness; each of us has an opportunity to be *helpful* in working with others on a sustainable course of action.

Implied in our traditional views of leadership are assumptions about how people and organizations change and about the role a leader plays in the process of change. Traditionally, we view change as a linear process, moving from one

state of equilibrium (the old way), through a period of disequilibrium and turbulence (transition), to a different state of equilibrium (the new way). We assume that if the change process is managed well, the end state and the steps required to get there – usually determined before the changes are initiated – are likely to occur as planned. This model of change management is grounded in theories of scientific management derived from the Newtonian science of reductionism – human systems modeled after mechanistic systems. Organizational structures are designed for optimal control of each component, whether a division, department, team or employee, and specialization and efficiency are ‘engineered’ into work processes. Well-managed change is defined as *planned, rational, efficient, aimed toward pre-defined outcomes* and *top leader-driven* (or driven by a top-level leadership-team, often informed by outside experts who provide rationale and guidance for the change being initiated). This view of leadership and change makes sense in a reasonably stable environment.

In today’s world, accelerated change and uncertainty have become the norm in our everyday lives. Many of us describe the various ‘systems’³ of which we are a part (i.e. our families, workplaces, professional organizations, communities, local, and national governments) as increasingly complex. Often, the more chaotic our experiences, the more we grasp for leaders who will take control and provide answers and the more we tend to cling to the rational models of managed change, promising certainty and predictability that have served us in the past.

Models of leadership and change, grounded in the complexity sciences, reveal complex responsive processes of human activity that are much more fluid and unpredictable than previously assumed by traditional mechanistic models (Stacey, 2002). Instead of stable entities that function according to rational, linear patterns of movement toward relatively predictable outcomes, scientists now know that physical, biological, and social systems are dynamic, paradoxical networks of interdependent activity that cannot be controlled or predicted with any degree of certainty. Change is described as continuous, self-organizing and adaptive; incremental and radical transformations occur in the context of this patterned movement. Diversity and paradox, inherent in human interactive processes, contribute to periodic disequilibrium or ‘heat’ (sometimes referred to as chaos) that can result in dramatic shifts in points of view and patterns of behavior, analogous to a shift in the physical structure of a chemical system revealed in Prigogine’s scientific experiments (1996). The self-organizing responses to unpredictable and disruptive changes are natural characteristics of thriving networks of human activity.

Sustainability Leadership

Rather than providing all of the answers, sustainability leaders create opportunities for people to come together and generate their own answers – to explore, learn, and devise a realistic course of action to address sustainability challenges. Instead of giving direction, sustainability leaders develop and implement actions in collaboration with others, modifying them as needed to adapt to unforeseen changes in the environment over time. This approach to leadership does *not* assume an ability to control activity with any degree of certainty and

predictability. Instead, sustainability leaders embrace the inevitability of continually changing dynamics in everyday life, while developing reasonable actions with others within an integrated framework that provides coherent direction, clear accountability, *and* enough flexibility to allow for mid-course corrections. Sustainability leaders recognize that the experience of change itself, and the dissonance it creates, fuels new thinking, discoveries, and innovations that can revitalize organizations, communities, and ultimately the earth (Ferdig and Ludema, 2005).

Anyone who takes responsibility for understanding and acting upon complex sustainability challenges qualifies as a 'sustainability leader' whether or not they hold formal leadership position or acknowledged political and social-economic influence. Sustainability leaders take conscious actions, individually and collectively, leading to outcomes that nurture, support, and sustain healthy economic, environmental, and social systems.

Sustainability leaders make the notion of 'sustainability' personally relevant, grounding action in a personal ethic that reaches beyond self-interest. They recognize that all of us can co-create the future through individual ways of seeing, understanding, interacting and doing. Sustainability leaders are informed, aware, realistic, courageous, and personally hopeful in ways that genuinely attract others to the business of living collaboratively.

Being a sustainability leader means putting away the ego-driven certainty of 'right' answers, and genuinely engaging in the push and pull process of making decisions with others in the interest of individual and joint intentions. Sustainability leaders, informed by an expanded view of how our complex universe operates, know that paradox, contradictions, and differences in points of view are natural characteristics of healthy networks of human interaction. They understand that the tension that comes from differences and the conflict it can generate hold extraordinary potential for breakthrough thinking. Instead of avoiding or 'managing' conflict, they become adept at exploring differences with people in ways that enhance the potential for identifying, understanding, and confronting challenges (Shaw, 2002).

Greater awareness of ever-changing human dynamics and the natural tension and potential for change they create provides insight for understanding and working with shifting power relationships. Sustainability leaders are conscious of how collective understanding can lead to optimal outcomes. For example, an expert hydrological engineer possesses 'informational power' when meeting with a group of local citizens regarding a changing river channel. He can present his expert views in a way that tends to reinforce his power, leaving little opportunity to increase citizen understanding or their role in decision making, both of which could yield new and beneficial information.

A sustainability leader understands that everything is connected to everything else, that we live in a dynamic, ever-changing universe, and that no single action occurs in isolation but it is inextricably linked, often invisibly, to every other action. While this holistic view seems overwhelming at times, it eventually becomes a natural habit and a primary vehicle for understanding the complex layers and immediate, long-term effects of our actions. Thinking holistically helps us make smarter, more reliable and responsive choices that complement

the actions of others who are also striving to meet sustainability challenges. It can result in win/win partnerships and joint strategies that maximize the use of resources needed to initiate far-reaching solutions.

At the core, sustainable leaders possess a spirit of inquiry and learning. They are continually expanding their awareness and experimenting with the best ways to engage in any situation. Sustainability leaders share what they are learning along the way, even when things do not turn out as expected. They model learning in action, and as such, encourage people around them to do the same while developing a deeper understanding of challenges and solutions. Sustainability leaders take informed and calculated risks; they unashamedly learn from their mistakes and tell others about what they discovered in the process.

The attributes and capabilities associated with traditional leadership – strategic thinking, planning for contingencies, communicating, mobilizing action, coordinating and monitoring activities – are more critical than ever. Sustainability leadership, as proposed here, reaffirms their importance while going well beyond currently accepted views of leadership. It represents a *radically expanded* understanding of leadership that includes an enlarged base of everyday leaders in all walks of life who take up power and engage in actions *with* others to make a sustainable difference in organizations and communities. This requires leaders to see themselves in relationships within a broad human dynamic of collaborative experience in spite of, or in the absence of, formal positions of power in order to build synergy and momentum needed to co-create pragmatic responses to complex challenges.

Conclusion

People come to the work of sustainability with a broad range of interests, intentions and experiences, yet they often share a common goal of wanting to create a better world. This unprecedented challenge requires an unprecedented approach to leadership. Drawing from emerging models in complexity science, we can better understand leadership in relation to the natural processes of continuous self-organizing change in the context of complex, interconnected network of human activity. We can acknowledge the paradox, uncertainties, and unpredictability inherent in our organizations and communities and embrace the dissonance that comes from seemingly contradictory truths, knowing the potential it holds for break-through thinking. We can recognize the leader within ourselves and others in our midst regardless of position, and we can expand our views about how a leader engages others to generate workable, sustainable solutions.

My grandson reminds me of the inheritance I want to leave for him and his children, the trust fund of beautiful prairies and forests, clean air, healthy soil, sparkling water and an economically viable human community. It is a legacy in which all can experience meaning and purpose connected to something outside of themselves, a world in which they can feel the cultural trace of human beings who came before. When we comprehend the infinite, interrelated networks of families, work places, and communities at home and around the world, and when we begin to make sense of the menacing patterns of global destruction to which each of us contributes, we can then begin to ask ourselves: ‘How will I participate in a sustainable future? How will I choose to step up to the leadership challenge?’

We can no longer claim ignorance, or innocence. None of us stands outside of the circle of responsibility. Together, we can begin to explore how collaborative, self-organizing leadership can generate innovative and sustainable solutions, and wiser investments, for a more sustainable world.

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Notes

1. Leadership generally described as *thinking and acting as one who assumes responsibility for making things happen*.
2. Half the world – nearly three billion people – lives on less than two dollars a day (Population Reference Bureau, 2006). Approximately 1.3 billion people have no access to clean water; three billion have no access to sanitation (United Nations Environment Programme, 2000); and 1.6 billion have no access to electricity (International Energy Agency, 2005). Approximately 790 million people in the developing world are still chronically undernourished, almost two-thirds of whom reside in Asia and the Pacific (World Resources Institute, 2001). Eighty percent of India's population and 47% of China's population live on less than \$2 a day in spite of the economic growth these countries are experiencing (Population Reference Bureau, 2006). According to a UNICEF study (2005), 30 000 children in the world die each day due to extreme poverty.
3. The word *system* is used to describe complex responsive interactions among and between physical, biological and social entities.

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