REGENERATIVE LEADERSHIP:

A Model for Transforming People and Organizations for Sustainability

in Business, Education, and Community

Executive Summary

Based on a grounded theory two-year study of 24 successful leaders of increasingly sustainable organizations in education, business, and community, this paper offers a coherent framework for regenerative leadership to support the notion that a more prosperous, socially just and environmentally sustainable world for present and future generations can only emerge from a radical transformation of all manmade systems (Brown, 2006; Cortese, 2003; Edwards, 2005; Esty & Winston, 2006; Elkington & Hartigan, 2008; Hawken, Lovins & Lovins, 1999; Laszlo, 2008; Meadows, Randers & Meadows, 2004; McDonough & Braungart, 2002; Robèrt, 1991; Sachs, 2005; Seelos & Mair, 2005). From findings emerging from ongoing research, teaching and consulting in business, education, and communities, the author argues that this transformation cannot come from the increasingly ineffective rational approaches to change that have been used to date, the consequences of which suggest that we may be far less rational than we think we are. This transformation must come from a profound revision of how we perceive and engage reality, starting from the development of a coherent theory and practice of human consciousness that is in harmony with natural and universal law.

As a species we appear incapable and even unwilling to seek ways to prosper in ways that preserve the biosphere for present and future generations. There is, therefore, an urgent need to engage in a profound and honest revision of who we are and how we should act as individuals, as organizations and communities in an increasingly populated, inter-connected global society. This revision also has important implications for what we understand to be the purpose of leadership.

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It is argued here that there must emerge a profound shift in how leadership is developed and performed, grounded in a shift to an increased emphasis on systematic consciousness development that engages all human faculties (Doppelt, 2005; Ferdig, 2007; Scharmer, 2007; Senge, Smith, Kruschwitz, Laur & Schley, 2008; Wilber, 2000). As defined here, consciousness development relates to the "inner work" necessary for individuals and communities to become more fully aware of their own unique nature so that they may access, integrate, and employ all their faculties to engage in purposeful learning that leads to meaningful work aligned with natural law (McEwen & Schmidt, 2007; Senge, Scharmer, Jaworski & Flowers, 2004; Wilber, 2007). The regenerative leadership framework outlined here, while ongoing, emerged from doctoral research conducted from 2007 - 2009 with a range of exemplary people who were willing to share their personal and organizational journeys to creating a better world in business, education, and community. This framework is a tribute to their work.

The Global Context

The consequences of violating natural law, whether inadvertently ignored or deliberately minimized since the Enlightenment and the ensuing Industrial Revolution, are now rapidly becoming apparent (Brown, 2006; Dresner, 2002; Edwards, 2005). Every human system to have emerged from the Age of Reason through the development of technology and driven by cheap energy derived from fossil fuels, while creating the wealthiest societies in history, has overrun the boundaries instinctively obeyed by all other living beings (Capra, 2002). Arguably, the 2010 deep water oil spill in the Gulf of Mexico may be viewed as a symbolic low point in this process, implicating every level of society, not just industry, big business and government, but also the ordinary citizens that continue to depend on the oil, coal, and gas that guarantee the current material standard of living of industrialized countries. In the apparent absence of viable

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alternatives to the free market economy, and fueled by the illusory promise of happiness through unlimited consumption and instant gratification, now even embraced by historically very different cultures and political systems as those of China and India, we appear to have consigned ourselves, and our planet, to an existence of decreasing returns at every level.

The signs that things are not quite right are beginning to have a long overdue effect on our consciousness. With or without the participation of business and political leadership, and fueled by the World Wide Web, an increasingly global conversation is emerging on issues that already are beginning to affect us all and that will affect our children and their children far more significantly. We are at the problematic juncture where the realization that we must change has begun to sink in, but this has yet to be accompanied by new values, skills, and tools needed to make the change possible (Scharmer, 2007; Senge et al, 2008). We must therefore be willing to let go of much if not all of the knowledge and skills that have brought us to where we are, and to create entirely new ways of being and of doing things that will sustain us and the biosphere into the foreseeable future.

Study Assumptions and Rationale

An initial assumption of the study was grounded in the fairly obvious notion that our behaviors can do no more than reflect our state of consciousness, and that the level of our consciousness derives from an evolutionary process grounded in our individual and collective experiences over time. This uninterrupted process over the centuries and across cultures has led to the accumulated knowledge and wisdom that makes up our highly diverse cultural heritage, and informs our sense of identity, of place, and our role in the grand scheme of things. This is the heritage that we value and preserve, and consequently pass on to the next generation, ostensibly to secure an ever more prosperous, enlightened, and peaceful society. However, if the

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sustainability of our world is at serious risk due to human activity, and there is no evidence to show that any other life form threatens the natural equilibrium in this way, it follows that we need to re-examine who we are, why we are here, and what we do if we are to survive, let alone evolve, as a species. The outcome of the United Nations Conference on Climate Change in Copenhagen in December 2009 is but one of the most recent, visible examples that we are far from reaching the critical capacity, on a global level, to act from a higher level of consciousness. We continue to submit to conflicting economic, ideological, and political agendas that serve to confirm that we are seriously out of synch with what needs to be done, and done soon. Only from a profound revision of our deeply held assumptions, values and beliefs can a new, more mindful society evolve that will agree on the best manner in which to take care of all its members and the biosphere that sustains life, so that future generations may inherit a healthy, flourishing, equitable world.

This new mindset is defined here as regenerative leadership, an integral theory of leadership based on the development of a global ethics that balances how we value our subjective and our objective realities, both as individuals and in our organizations and larger social systems. The development of this mindset in our children, families, teachers, artists, professionals, entrepreneurs, and leaders in our communities must be central to this endeavour. It has profoundly important implications for how we design our homes, our schools, our public buildings, our educational systems, our business practices, our industries, and for the manner in which civil societies across the globe engage each other across cultures to manage the natural and social environments as inter-dependent and inter-connected systems.

Achieving such a profound shift in our personal and professional behaviors can and will only be successful through the inner transformation of every individual in that society. This study offers some insights as to what that journey may look like.

The Regenerative Leadership Framework

The regenerative leadership framework emerged from the findings of structured interviews conducted with twenty-four highly successful sustainability leaders in the fields of business, education, and community development. The research methodology applied was the constant comparative method of qualitative analysis known as grounded theory (Glaser & Strauss, 1967). This is the most systematic of the qualitative research methodologies, created by Barney Glaser and Anselm Strauss in their work with terminal cancer patients. The major premise of the method is to allow theory to emerge from the data, rather than seeking to confirm a hypothesis, as in the scientific method. Though this may appear to contradict the scientific method, it ensures that the researcher's bias is minimized, providing for objective findings to be extracted from the data.

Among the most exciting findings was the overall correlation of leadership styles across the three domains of business, education, and community. While each of the approaches to sustainability of the 24 leaders was nuanced towards the most central aspect of their specific field, whether economic, environmental, or social, there was a surprising commonality in how they defined sustainability, how they came to perceive themselves in the context of sustainability and sustainable development, and how this influenced their leadership behaviors. In the course of the interviews, for example, the majority of the respondents shared the basic definition of sustainability, often used interchangeably with sustainable development, of the well-known Brundtland Commission Report of 1987, which considers this to be "development that meets the

needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987, p. 54). However, a number of them were dissatisfied with the term, indicating that we now need to go beyond merely sustaining things, but that there is an urgent need to restore the natural and social environments so that eventually we may reach sustainability. For this to occur, the majority of the study participants also agreed that the greatest challenge to sustainable development and sustainability lay in people's ignorance and resistance to change, grounded in their inability to engage in systems thinking, to recognize the place and role of the human species within the broader context of the biosphere, and the unintended consequences of maintaining current unsustainable practices. They also agreed that the solution lay in awakening people's awareness to these problems through the development of personal and collective mindsets for sustainability, not based on a linear, positivist epistemology which, they considered, has been responsible for bringing us to our increasingly untenable situation.

Given that a coherent approach to leadership did not appear in the literature as a perfect match for the researcher's findings, I have proposed the construct of regenerative leadership as a response to the demands of the current times (see Figure 1). This style is applied by formal and informal leaders at all levels of organizations who engage groups of people in the development of higher levels of awareness that translate into behaviors that seek not merely to preserve existing natural and social resources while ensuring a healthy bottom line, but to restore and create new resources that have become depleted through overuse or misuse. Whereas sustainability is defined colloquially, as one participant asserted, as "doing what you are doing so that you can keep on doing what you're doing," regenerative leadership can be said

to be about putting back more than we took out, and doing it in entirely new ways unconditioned by prior assumptions that may still be economically viable.

With the greatest respect for his work, the study findings were laid over an adaptation of Ken Wilber's (2000) integral vision framework also known as All Quadrants All Levels (AQAL). This adapted framework (see Figure 1) contains four quadrants, each of which displays a distinct dimension of the human experience. For those familiar with the precise location of the AQAL quadrants and for reasons explained below, the quadrants in the regenerative leadership framework have been rotated 90° counterclockwise so that the interior/subjective quadrants are placed at the bottom instead of to the left, and the exterior/objective quadrants are placed at the top. The quadrants on the left therefore collect the findings on the individual and the right side quadrants do the same for the collective. The first quadrant on the bottom left of the diagram (1) represents the subjective reality of the individual, containing the elements of the personal mindset. The top left quadrant (2), displays the individual's objective reality, translated in this case into the behaviors exhibited by regenerative leaders. The right quadrants, beginning at the bottom, display the subjective reality, culture or mindset of the collective (social or organizational) (3), followed at the top by the collective's objective reality or corresponding behaviors (4).

This particular layout of the AQAL quadrants was chosen to allow for the display of a horizontal space between the subjective and objective realities, which I have called the field of engagement and emerging consciousness. This layer of emerging consciousness, or topsoil as Otto Scharmer calls it (Scharmer, 2007), is deeper and more fertile the more individuals and collectives engage not only in rationally-driven behaviors but in the inner, intuitive work necessary to awaken and harness entirely new understandings of who we are in order to

revise, transform, and enact new values, assumptions, and beliefs. This requires paying

attention to and engaging the full range of our human faculties, including our intuition, our

emotional intelligence, and our will to act in alignment with natural law rather than selfish
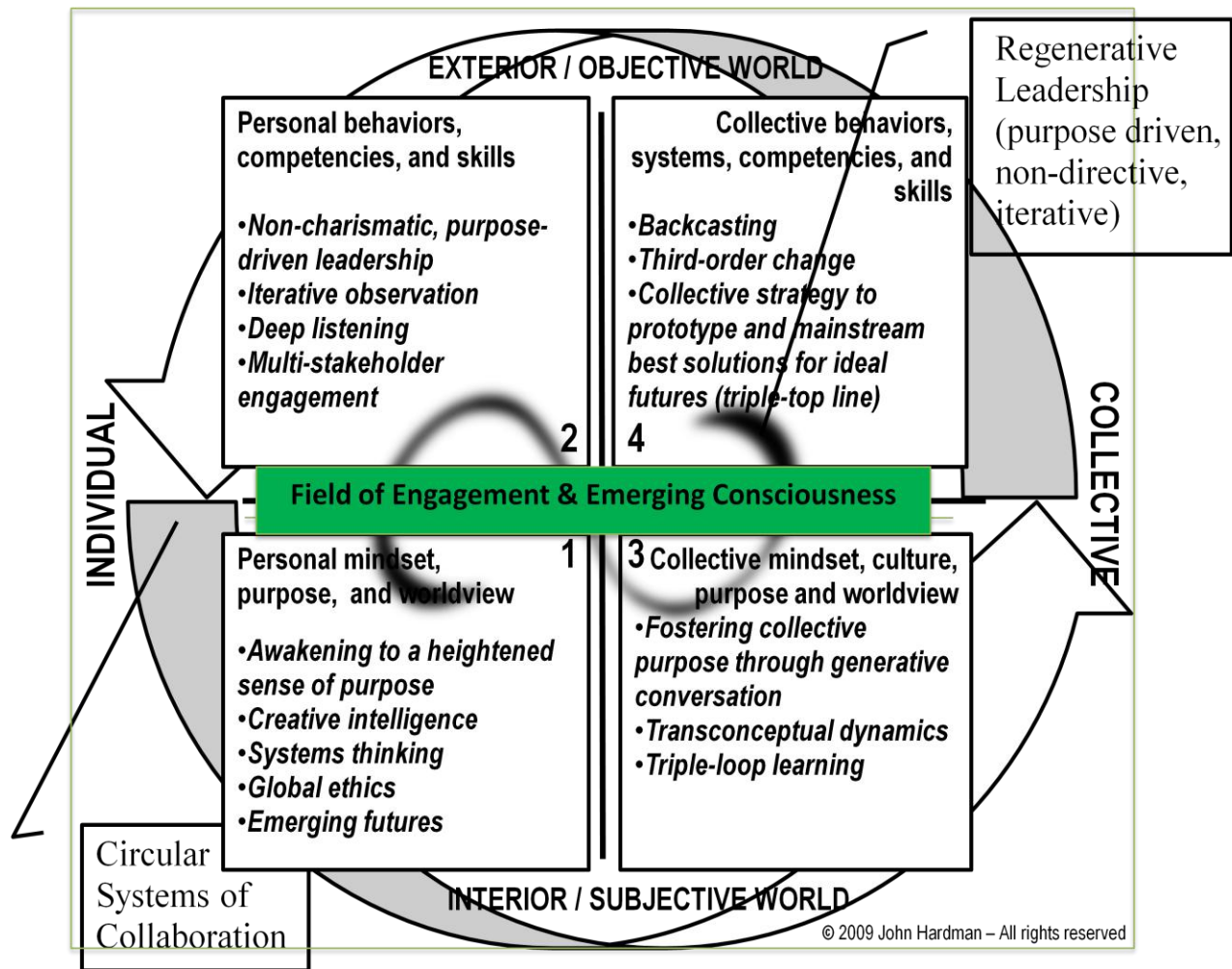
self-interest.

Figure 1.
Regenerative leadership: A model for transforming people and organizations

The regenerative leadership concepts aggregated in the four quadrants may be broadly
conceptualized as follows:

- Quadrant 1 (Individual Interior/Subjective): Facilitating access to the source of

    personal purpose and emerging self;

- Quadrant 2 (Individual Exterior/Objective): Connecting with others through keen observation and deep listening;
- Quadrant 3 (Collective Interior/Subjective): Eliciting collective purpose through generative conversation; and
- Quadrant 4 (Collective Exterior/Objective): Engaging in collective action through third-order change and backcasting to strategize and prototype the best possible solutions to emerging futures.

Quadrant 1 (Individual Interior/Subjective): Facilitating Access to the Source of Personal Purpose and Emerging Self

In this model, the four quadrants provide a viable container for the author's research findings. In quadrant 1, that of the individual's subjective reality, participants across the three domains of business, education, and community demonstrated a high correlation in that they defined their own inner journeys in terms of awakening to a higher purpose when they became engaged in sustainability work. This higher purpose led them to the realization that once they became involved in this work they could not go back to business-as-usual; "you can't just not do it," as one participant expressed it. They also came to appreciate the importance of engaging their more creative faculties in the development of more genuinely sustainable solutions to issues with which they were faced. Similarly, a majority indicated that from the time they began to consider issues of sustainability and regenerative practice, their ethical reasoning had taken on a far broader perspective, leading to what is called here a global ethics. This ethics arose from the recognition that every decision and every action they took in their respective positions affected everyone and everything else in a highly interdependent world. This also was born of a deeper understanding of the systemic nature of reality. From this perspective, they had come to realize that balancing the common good was

equally important to satisfying personal interest. Finally, this recognition of the interconnectedness of all things led to a growing understanding of how decisions and actions have long-term and often unforeseen consequences. Therefore, in their sustainability work it had become standard practice to include future generations as genuine stakeholders with a voice at the decision-making table. From this recognition arose the notion of envisioning desirable emerging futures as an integral aspect of the subjective mindset, which would then have a domino effect on their behaviors and the strategies they embedded in their organizations.

A majority of participants emphasized the importance, for sustainability to be assured, of raising their level of awareness of the interconnectedness of natural and human systems, including their own place in the biosphere. This growing awareness was seen as liberating of a personal sense of purpose and willing engagement in regenerative practices, which they sought to facilitate in others. The rationale supporting this conviction lay in the understanding that this would make it possible for people to engage more effectively in the complex dynamics that connect the natural, social, and economic systems within which they operate. As people become more aware of the types of interactions they sustain within their contexts, and how these can be positive or negative, they begin to attain a more integrated perspective or worldview. These levels of awareness and the worldview that they reflect, therefore, may be expressed as a continuum appropriate for sustainability leadership, measuring levels of engagement that go from fragmentation to integration, as shown in Figure 2.
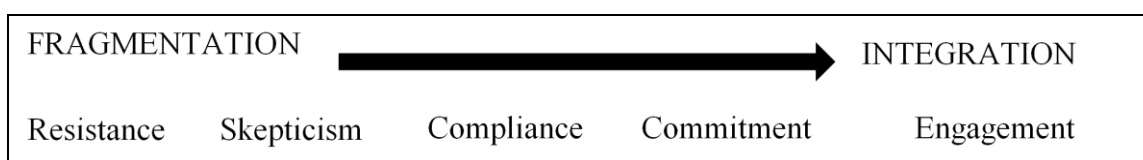
FRAGMENTATION				INTEGRATION
Resistance	Skepticism	Compliance	Commitment	Engagement

Figure 2

Individual and organizational stages of development towards sustainability

These levels of engagement presented some clear properties and dimensions. The conclusion was that as levels of consciousness increased towards an integrated mindset and worldview, people's behaviors reflected more balanced choices, where universal needs and rights became equally important to those of the individual, thereby fostering a greater willingness to engage in sustainability issues. The evolution of people's individual sustainability could therefore be tracked in a progression that began with resistance at the most ignorant level, where the individual possessed a highly fragmented worldview and was stuck within a self-centered, short-term mindset. This was superseded when individuals showed some willingness to engage but still possessed a strong degree of skepticism as to the reality of unsustainable practices and their contribution to this situation. This could be due to their inability to consider the value of their real impact as individuals, or to a distrust of the evidence on issues of sustainability, as demonstrated by the dismissive attitude of some politicians towards the science of climate change (Brown, 2006; Gore, 2006).

At the next level, people engaged in sustainability efforts but mainly in compliance with external policy established by regulatory authorities at the level of local, state, federal, and international government, particularly when these threatened an organization's image or profitability. This also occurred when organizations came under increasing pressure from non-governmental organizations and negative exposure in the media due to poor environmental management or unfair labor practices. This was followed by a commitment to sustainability, supported by the understanding of its importance, though this may not yet have been reflected in consistent personal or professional action. Finally, engagement

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reflected an integrated worldview, a global perspective that combined a high level of awareness with a willingness to modify decisions, choices and behaviors that ensured sustainable and, in the best of cases, regenerative practices.

This increasing willingness to balance the common good with personal needs reflects a reduction of self-centeredness that may be expressed as a simple equation ($S=1/e$), where sustainability (S) is inversely proportional to ego (e). If this relationship is legitimate, then regenerative practice may be viewed as the result of a highly developed personal ethics. This would make it possible for the continuum just described to be considered as a developmental model consisting of five stages, comparable to other models.

Table 1 presents the researcher's levels of engagement as a hierarchy, set against the developmental theories of five renowned thinkers in different fields, Ken Wilber (philosophy), Fritjof Capra (theoretical physics) Abraham Maslow and Lawrence Kohlberg (psychology), and Otto Scharmer (economics and management).

Table 1

Theories of Consciousness and Worldviews

Level of Integration	*Sustainability Mindset*	*Thought Processes*	*Worldviews*	*Theory U*	*Hierarchy of Human Needs*	*Stages of Moral Development*
LEVEL 3 Fully integrated	Engaged	Contextual/ systemic	World centric	Mainstreaming	Self-transcendence	**Post conventional** Universal ethical principles
				Prototyping	Self-actualization	Social contract orientation
	Committed			Crystallizing Presencing Sensing	Self-esteem	
LEVEL 2 Partially Integrated	Compliant	Analytical	Ethnocentric	Seeing Downloading		**Conventional** Law and order
					Belonging	morality Good boy/good girl attitude
	Skeptical				Safety	**Preconventional** Obedience and punishment
LEVEL 1 Fragmented	Resistant	Linear	Egocentric		Physiological	Self-interest
	Hardman	*Capra*	*Wilber*	*Scharmer*	*Maslow*	*Kohlberg*

The highest level of consciousness identified here as engagement is reflected in Steve Seibert's comment on the need for people to "check their egos and their logos at the door," when working on large scale sustainability projects. It is also clearly expressed in the words of Eve Williams, whose new found passion for sustainable construction lay in having engaged in "something more important than me." Tony Cortese related sustainability to the need "to ensure that future generations and all of the species on earth can be sustained as a means to sustaining your organization." More recently, Cortese (2009) called this "the most serious

moral and social challenge that humanity has ever faced." MaryBeth Burton also placed it within this greater context when she asserted that sustainability "comes from the awareness of how globally important this issue is. It supersedes any other issue. It's about human life on earth, the future of human life on earth."

Among the personal practices or inner work most conducive to awakening and deepening awareness and connecting to personal purpose, the participants reported that they set aside time for meditation and yoga (Coleman-Kammula), playing music (Laur, MacGregor, Thomashow), immersing themselves in natural environments (MacGregor, Singer, Thomashow), and engaging consciously in frugal or simple living (Coleman-Kammula, Burton). While recent studies show that leaders have yet to reach the highest levels of consciousness required to move organizations towards sustainability and regenerative practice (McEwen & Schmidt, 2007; Rooke & Tobert, 2005), "we are beginning to understand the interplay of exteriors and interiors, and to recognize that development of interiors is a critical factor regarding large-scale and whole-systems change" (Schmidt, 2007, p. 27). As Schmidt affirms, it is only amid wholeness- in contact with essence, pure consciousness experienced as presence-that we find the fundamental common ground of integral leadership and interior development (p. 28).

Quadrant 2 (Individual Exterior/Objective): Connecting with others through Keen Observation and Deep Listening

Numerous participants described a learning process connected with sustainability that involved suspending judgment after acknowledging that current practices in virtually all domains of human activity are unsustainable. The suspension of judgment pertains to the acceptance that traditional ways of doing things have brought us to the present globally unsustainable state of the economy, the environment, and society. It therefore becomes a pre-

condition for sustainability, and even more so for regenerative practice, that we learn to bring to bear entirely different ontological, normative, and epistemological perspectives to reality. The leadership capacity to be "better able to listen to the whole than anyone else" (Scharmer, 2007, p. 20) involves engaging every aspect of human intelligence, mind, heart, and spirit, in a profound disposition to perceive reality as it is, not as we are conditioned to see it. This involves the capacity to go beyond personal ego and a mechanistic mindset to activate a process of observation and listening to the most advanced practitioners with others, a practice that Scharmer defines as co-sensing and shadowing (2007).

Quadrant 3 (Collective Interior/Subjective): Eliciting Collective Purpose through Generative Conversation

Leadership for sustainability is exercised by engaging people in generative conversations focusing on sustainable development towards sustainability and beyond, to regenerative practice, as a central driving factor. This process is predicated on the genuine engagement of all internal and external stakeholders, and is grounded in the quality of the conversations that are generated, in what Freeman (1984), defined as instrumental stakeholder theory. Recent studies have shown the positive correlation between stakeholder management through corporate social performance and financial performance (Ruf, Muralidhar, Brown, Janney & Paul, 2001). Eschewing an authoritarian approach to change, effective sustainability is attained through the involvement of all players, within and without an organization, in the development of a collective culture grounded in the values of respect for the central importance of the individual's place in ensuring sustainable results. While on the surface this may not appear very different from current decision-making strategies applied in business,

community, and education, the failure of these systems to materialize sustainable outcomes raises important questions regarding their effective implementation.

In the case of Coleman-Kammula's work in plastics, generative conversations took the form of workshops that brought together different industries, automobile, chemical, beverages. The conversation centered around the transformation of waste streams into nutrients, by which the waste of one manufacture could become the raw material of another, thereby eliminating waste, reducing resource extraction and the cost of inputs. In community, an example was provided by Steve Seibert's efforts to implement the goals of the Century Commission for a Sustainable Florida. In one particular case, the generative public conversation centered round a comprehensive strategy for preserving fresh water reserves in critical shortage areas throughout the state, while ensuring a fair distribution to all sectors of the population affected. The initial premise established to ensure a successful outcome was that participants, which included city officials, environmental representatives, and advocacy groups, must "check their ego and their logo at the door." The requirement that all involved had to divest themselves of their status as representatives of particular interests so that they could be objective when considering the perspectives of others, regardless of their position, made it possible for a fair and successful water policy to be enacted through legislation, thereby ending what came to known as the "water wars." In education, this process was epitomized in the implementation process of the curriculum for the Bioregion as described by Jean MacGregor at the Evergreen State University in the Puget Sound. To the extensive listening and discussion process by means of which she and her colleagues engaged faculty in 32 colleges and universities in the region, they added a comprehensive education and

training program that ensured not only the design but the delivery of an integrated sustainability-focused curriculum.

Quadrant 4 (Collective Exterior/Objective): Engaging in Collective Action through Third-order Change and Backcasting to Strategize and Prototype the Best Possible Solutions to Emerging Futures.

Quadrant four displays concepts extrapolated by the author from the findings, discussed first, and re-formulated theoretically from further review of the literature to represent the sustainability behaviors of evolved collectives. Once a collective culture for sustainability becomes integral to the institutional status quo, it becomes possible for an organization to devise a cohesive strategy for sustainability. Unsustainable practices in organizations reflect a deep-seated ignorance of the inevitable long-term consequences of not considering environmental, social, and economic factors in all aspects of their business. At its worst, this can be conceptualized as a single-bottom line operation (SBL). For example, businesses which consider revenue generation and shareholder value, or greed in the definition of some, as their single priority would be classified as such, as the banking and automotive industries have recently demonstrated to such disastrous effect. Similarly, a non-profit organization dedicated to feeding the poor using funding from philanthropy that disregarded environmental concerns and local empowerment while doing so would also be considered an SBL operation. Educational institutions delivering fragmented curricula that ignored an integrative pedagogy promoting equity along with sound environmental and economic practices could also be classified as single bottom line operations.

Sustainable organizations recognize the importance of addressing a triple bottom line balancing ecology, equity, and economics. Regenerative practice, however, does not end here, as

working towards a triple bottom line may not involve restoring or regenerating natural and human habitats, which mounting evidence indicates as a requirement today in order to ensure a similar quality of life for future generations. Beyond the triple bottom line, criteria for success enter the domain of regenerative practice, and can be reported as the triple top line (TTL). The triple top line question *par excellence* is, "How can I grow prosperity, celebrate my community, and enhance the health of all species?" (Cuginotti, Miller, & van der Pluijm, 2008, p. 68). This and other similar questions are an example of the visioning strategy known as backcasting, which involves visualizing desirable futures and working backwards towards the present in order to map the intermediate steps that will make it possible for this future, and not others, to be achieved (Holmberg & Robèrt, 2000; Robinson, 1990). This provides an opportunity for creating real lasting value for present and future generations, as it signals the possibility of acting with positive intentions across a wide spectrum of human concerns without the unintended consequences of strategies that rely on predicting the outcomes of goals established in the present. From a backcasting perspective, assessments of future scenarios "assume that the product or process exists in a sustainable society" (Holmberg & Robèrt, 2000, p. 295). Such practices introduce a new standard of product quality, performance and success (p. 69). Acting on these questions tends to build what McDonough & Braungart (2002) call a "design filter: a filter that is in the designer's head instead of at the ends of pipes" (p. 166).

This concept of regenerative practice was not easy to identify in the organizations reviewed in this study. In business, Nike came closest to developing a regenerative strategy for the corporation. Beginning in 1997, it established its manufacturing strategy around the sustainability goals of "zero toxicity, zero waste, 100% closed loop manufacturing" by 2020. Using a backcasting approach, Nike then developed the goals and objectives most closely

aligned with this end point. Examples of how this is being achieved may be seen in the push to develop products where synthetic and organic materials can be separated and recycled again and again, in a process known as up cycling (McDonough & Braungart, 2002). At a manufacturing plant in Europe waste water output is processed and redirected as input to begin a fresh cycle. Nike also went on to eradicate the unfair labor practices that had been standard practice until the end of the 90s, shifting their corporate social responsibility policy to incorporate fair wages and improved working conditions. But not content with these achievements, the corporation also established a foundation to support young female athletes in the forty poorest countries, as identified by the United Nations. The outcome of these practices, while considered a high financial risk at the time, in effect led to increased revenue through stronger brand identification by consumers.

In community, the most salient example of a regenerative strategy was demonstrated by Nathan Burrell through the Honey Project, a micro-enterprise entirely run by high school students in Broward County, south Florida. Using high tech skills, students have developed an Internet business importing honey from Ghana, Africa, and selling this organic product to a niche market in the United States. The proceeds from the sale of the honey are reinvested in developing the African hives, and with the support of Citrix, Inc., the company has established a training center in the local community in Ghana. This comprehensive strategy can be viewed as an example of regenerative leadership. By means of education and training in business and technology, adolescents have learned the skills of developing a successful business with a social purpose, creating prosperity by empowering a disadvantaged community to develop a self-sustaining, environmentally-sound local economy. Graduates from the program are supported in the development of their own businesses. Some of these have gone in the direction of profit-

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driven enterprises, whereas others have opted to develop new social businesses. Quite recently, the success of the initiative excited the interest of similar organizations in South Africa, and Mr. Burrell and his students received an invitation to present their project at a conference in that country. This opportunity will allow them to visit and work with the bee farmers, and in through contact and observation the students will develop greater capacity to build sustainable social businesses. This project serves to demonstrate that regenerative community development can be promoted through the application of simple but creative ideas that generate revenue for all concerned, raising people's living standards while having a regenerative impact on the environment.

A good example of the integration of sustainability principles – economics, environment, equity – in higher education was provided by Dr. Jaap Vos in his work with farmers in the Netherlands. Several aspects of the project are worthy of mentioning. To begin with, while teaching sustainable farming, Dr. Vos encountered a strongly entrenched mindset in local farmers. Farmers believed that in order to improve revenue, every year they needed to increase their crop yields. This was achieved through increasing the use of fertilizers and pesticides, which entailed more work and higher costs in equipment maintenance, use of fossil fuels, with the subsequent increase in greenhouse gas emissions. Through a systematic process of engagement through conversation intended to generate trust and a willingness to modify their practices, Vos was able to persuade the farmers that it was possible to increase revenue with less work by eliminating the use of chemicals and turning to sophisticated organic practices. By lowering the overall costs involved in treating and maintaining soil, equipment, and storage space, the farmers were able to turn a greater profit at similar and even smaller yields, thereby breaking the cycle of artificial growth that was forcing farmers into ever more unsustainable

practices. Given the drop in chemical runoff into the water table, at the community level these practices led to the improved health of local residents, increased recognition for the region's organic practices and a subsequent increase in the demand and the value of their products.

Regenerative Leadership and Circular Systems of Collaboration

Connecting the four quadrants is the infinity symbol, chosen to represent the continuous process engaged by regenerative leaders in the achievement of sustainable practices at the individual and collective level. The regenerative leadership continuum, following this indirect path, is seen in the research as an iterative developmental process that acts less on the behaviors of others than on their values, assumptions, and beliefs, fostering a deep sense of empowerment and engagement that calls to mind James MacGregor's definition of transformational leadership (Burns, 1978). Regenerative leaders are therefore purpose-driven and non-directive, as they seek to coach others so that they may connect their own inner sense of purpose to their personal behaviors and to those of the organization or system where they work. Finally, the arrows surrounding the figure represent the heterarchical nature of regenerative leadership, labeled here as circular systems of collaboration. As organizations and systems become more inter-dependent, the distribution of power and decision making becomes increasingly diffuse, as collaboration across supply chains, stakeholders within and outside organizations, become the norm rather than the exception in how they operate. Leading across the boundaries of multiple systems, institutions, corporations, communities, requires the ability of leaders to "check their egos and their logos at the door," in the words of a governmental official who participated in the study. In effective sustainability work, all stakeholders are valued and included in the generative conversation that will lead to authentically regenerative practice.

When fully enacted, the framework's stages, strategies and processes create a synergy that integrates the consciousness and actions of all individuals within a group. This synergy has the potential to harness individual and collective "minds, heart, and hands" (Scharmer, 2007) to bring to bear other faculties other than positivist rationality to creation and innovation. This process shows an evolution from the incremental and reflective forms of cognition that Schön (1983) described as single- and double-loop learning, to triple-loop learning, or awareness-in-action, which Starr & Torbert (2005) describe as a kind of "waking up, where you and the phenomenon become unusually present to one another, passing through our perceptual and conceptual filters with less distortion and more wonder than usual" (p. 3). This waking up is represented in Figure 1 by the Field of Engagement and Emerging Consciousness. It is in this space between the subjective and the objective realities of individuals and groups that the potential for creating a new world lies. Therefore, the responsibility of regenerative leaders is to engage themselves and others in the inner work that leads to sustainable behaviors, rather than to control the behaviors themselves. This shift in focus from the objective to the subjective world of values, assumptions, and beliefs, gives rise to a coaching rather than directive approach to leadership. In turn, this facilitates environments where risk taking and innovation become possible, defined here as third-order change. This refers to "a process in which schemata themselves become objects for continuous cognitive innovation and development" (Bartunek & Koch, 1994, p. 25). Bartunek & Koch refer to the first two orders of change as within human cognitive capabilities. Third-order change, on the other hand, is a form of "trans-conceptual" experience, analogous to mystical rather than cognitive experience (p. 25). Third-order change becomes viable when none of the current belief systems or schemata in an organization provide a satisfactory framework relevant to regenerative practice, and an entirely new schema, one that is

disconnected from prior frames of reference, can be entertained. This requires the adoption of a multi-dimensional perspective of human personality that transcends the merely logical empirical approach to change leading to a collective process of inner development that can translate into organized collective behavior for regenerative practice and sustainability. Initially, this process can be enabled through the visioning strategy defined as backcasting. This involves collective envisioning of desirable futures and working backwards to the present in order to map the intermediate steps that will make it possible for this future, and not others, to be achieved (Holmberg & Robèrt, 2000). This provides an opportunity for creating real lasting value for present and future generations, as it signals the possibility of acting with positive intentions across a wide spectrum of human concerns without the unintended consequences of strategies that rely on predicting the outcomes of goals established from the present.

This creative triple-loop learning process brings with it a number of challenges. It requires that we suspend all previous patterns of thinking to engage in a collective process of meaningful or mindful dialog (Isaacs, 2000). This type of work requires a "collective attention and learning." The purpose of conversation in this model is to "create a setting where conscious collective mindfulness can be maintained" (Romme & van Witteloostuijn, 1999, p. 240). This supports the more current trends that have substituted the process of building technical infrastructure to support knowledge capture, dissemination and collaboration, to building a human infrastructure based on dialogue to create a shared field of meaning (Isaacs, 2000).

Conclusion

We need to do things very differently if we are not only to survive but see our world flourishing a hundred years from today. A developmental or evolutionary perspective of human consciousness, as the findings of this author's research has revealed, would suggest that

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individuals and communities can learn to live productively within the limits established by the earth's systems. Were this to come about, then the external manifestations of organized human activity may well have to be very different to the models currently in existence, including the family, schools, communities, nations, and the global society. The regenerative leadership framework offers some insights into how leaders at every level of society may initiate change to attain this critical stasis. It has become clear that the problem and the challenge of sustainability lie not in the consequences of our actions, but in the source within us of the actions themselves. Therefore, it stands to reason that it will be only through a holistic integration of all our faculties and capacities that individuals and societies will develop the expertise and the wisdom to fulfill their destiny to prosper, to celebrate community, and to enhance the health of all species for all time.

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