

# **THE ECOLOGY OF LEADERSHIP: Adapting to the Challenges of a Changing World**

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## **Executive Summary**

Traditional, mechanistic models of leadership are inadequate for dealing with the serious adaptive challenges facing the modern world. The complex, dynamic systems that result when these adaptive challenges interact requires that we draw upon ecological principles to understand the role that leadership processes can play in creating a sustainable, generative future. Ignoring the systemic nature of leadership processes creates an illusion that traditional positional leaders should be the focus of leadership studies. We propose that a more useful focus is the systemic processes out of which leadership emerges. A theory of leadership derived from principles of ecology calls for a radical shift in our perspectives of leadership. It emphasizes individual responsibility, a long term perspective, developing capacities of individuals within organizations, and harmony with nature, while showing the way toward sustainability for future generations.

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What new understanding of leadership of leadership needs to be developed in order for us to create a sustainable, generative future, a future that is able to support and nourish life? The popular notion of leadership depicts one individual in an appointed, elected, or paid position, making the decisions that direct an organization toward success. While highly publicized appointments are made, the recently elected take office, and major corporations hire new CEOs, we see the degradation of our environment, an increasing gap between rich and poor businesses that go bankrupt, and ethical problems in those who hold public offices—all signs of failed leadership. A sustainable world demands new values, attitudes, behaviors, and a greater commitment to cooperative solutions to current challenges. This paper articulates how leadership processes must adapt to a changing world and introduces a conceptualization of leadership based upon ecological principles, individual responsibility, and the development of human capacities.

We begin by making the case for change in the popular notions of leadership. Then, we propose a theory of leadership based upon ecological principles and describe the nature of systemic leadership processes. We discuss some major issues raised by the theory and end the paper with strategies for change derived from the theory.

## **The Case for Change**

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Leadership, based on position and authority, is inadequate for the challenges we face today. We need leadership which increases our capacity to learn new ways of understanding, defining, and solving the complex problems we are facing. Ron Heifetz (1994) calls these complex problems adaptive challenges. They demand leadership models that develop the capacity of organizations and people to respond to these challenges. Waiting for great individual leaders to guide and direct organizations, as well as guarantee our safety and security, is no longer possible.

## **Adaptive Challenges of a Changing World**

Our world is faced with a series of adaptive challenges. These challenges are fundamental global issues with which communities must cope regardless of the nature of leadership in the next century. These challenges are not static. New ones always appear. In the following paragraphs, we discuss five current adaptive challenges and how our conceptualization of leadership needs to change in order to cope with them.

Living and working with a global perspective. This adaptive challenge is to live, work, and learn with a global perspective. Mass communications and the global economy have brought us into relationship with the world. We are all united in a global web of economic, environmental, and cultural interdependence. Despite all the evidence to the contrary, we still like to think in terms of local or national boundaries. In doing so, we avoid

difficult issues, like learning to work with the many different cultures in the world and the continuing tension between rich and poor on individual, national, and international levels. These global tensions will require leadership processes that can adapt to the systemic dynamics of complex, world-wide challenges, such as how the pollution in one country affects another. We will also need to develop new ways to bring the values of justice, equity, and care to the global distribution of economic and natural resources.

Living within environmental limits. The second adaptive challenge is learning to live in harmony and balance with nature. The environment is increasingly stressed by the demands of the world's population. Struggles between economic interests and environmental interests occur over soil erosion, water pollution, endangered species, waste disposal, fishing rights, chemicals which hurt the ozone layer, and other environmental issues. The leadership challenge is to increase our ability to live within the limits of the environment in a way that supports generations of the future (Bowers, 1995; Maynard & Mehrtens, 1993; Sagan, 1994). This will require individual and collective discipline and making choices that are not based on consumption in a world of finite resources.

Transforming information into knowledge and wisdom. Information is being generated at an unprecedented rate. Current estimates suggest the amount of information in the world is doubling every 18 months (Russell, 1992). This volume of information can create an anxiety that we will never know enough about the issues that impact our lives (Wurman, 1989). Misinformation, irrelevant information, and the volume of new information make it difficult to assess the meaning of events in life and work. Mass communication vehicles, like the internet and television, connect, transfer, and amplify information throughout the world (Negroponte, 1995). Identifying relevant information for decisions, finding information that is still needed, discarding misinformation, and comprehending data in a way that increases knowledge and wisdom will all be adaptive challenges for leadership.

Developing the wisdom and ethics to respond to scientific discoveries. The announcement that an adult sheep has been cloned heralds the shape of things to come from genetic engineering. This is just one of the scientific breakthroughs which will reshape many things, including food production and the life span of humans. Discoveries like these bring ethical questions surrounding future applications of scientific knowledge. Research on human biology that is applied to biological warfare is a relevant example. The adaptive challenge is to more fully understand the implications before we decide to use, develop, and disseminate scientific knowledge, and to continually bring ethics and a long-term perspective to scientific breakthroughs.

Developing the capacity to adapt to changes in our social ecology. Social ecology refers to the environments in which people live and work, such as families, churches, schools, government, communities, economies, and cultures. Changes in any one of these systems cause shifts in other systems. For example, when more women entered the United States' work force, this caused stress on organizational cultures and gender roles in both our work and family lives. In Eastern Europe, changes in the governance structure have triggered shifts in education, communities, families, economics, and human development. The adaptive challenge for leadership is facilitating our learning and speeding up responses to shifts in these social systems. We need to develop ecological perspectives in order to understand the ripple effect of change. Further, leadership will need to help create new designs for organizations and communities which can adapt to these kinds of pressures and rapid changes (Clark, 1985; Lipnack & Stamps, 1994; Weick, 1985).

### **Implications for Leadership Processes**

The temptation is to address these adaptive challenges as independent of each other. However, when these challenges interact, they result in an interesting set of emergent properties which have a significant impact on how we need to practice leadership. An emergent property is a pattern that arises out of one or more interacting, complex dynamic systems (Capra, 1996; Lewin, 1992; Wheatley & Kellner-Rogers, 1996). For example, intelligence and thought are properties that emerge from the system of cells, blood, and connective

tissue that make up the human brain. The interactive effect of these five adaptive challenges triggers at least seven emergent patterns which have many direct implications for leadership.

Increasing change. Each adaptive challenge is a complex dynamic system that interacts with the other adaptive challenges. The effects of these challenges combine to amplify the magnitude of change we will experience because these systems are interconnected. Therefore, change will grow in both volume and magnitude (Conner, 1995). It will require leadership that develops organizations with increased flexibility and durability (Waldrop, 1996). It will also require leader-full communities and organizations with many individuals who see the larger picture and have the self-discipline to initiate action around the core values of the community, nation, and world (Chaleff, 1995).

Increasing diversity in our daily lives. Along with immigration and population growth, globalization creates a significant increase in workforce diversity (Johnston & Packer, 1987). Increased diversity in our lives will continue to challenge the assumptions many organizations have used to shape standards of practice. Diversity will need to be seen as a positive asset of our organizations and communities. It will require leadership designed to implement processes which increase inclusiveness and diversity in decision making (Helgesen, 1995; James, 1996; Mai-Dalton, 1993; Weisbord & Janoff, 1995).

Increasing tensions around value differences. There will be more tensions between individual rights and the common good of the larger community. We will be faced with the ethical ramifications of our organizations' decisions as they affect not just the corporation, but the community, and the world. This will require leadership to be practiced with a significant ethical and spiritual dimension which brings our practices into relationship with communal and sustainable principles (Block, 1993; Gardner, 1990; Greenleaf, 1977). Mitchell and Scott (1990) and Mitchell (1993) have argued that American society presently encourages a set of flawed values that they have labeled the "ethic of personal advantage." This ethic is characterized by "(1) a short-term rather than long-term perspective; (2) a focus on the ends rather than the means; and (3) an emphasis on the individual over the community" (p. 23). A system based upon such values is short-sighted and destructive, threatening the long-term survival of our species. Leadership will be challenged to develop ways to facilitate dialogue, discernment, and civil discourse around these difficult and significant value differences (Deutsch, 1993; Isaacs, 1993; Senge, Roberts, Ross, Smith & Kleiner, 1994).

Increasing requirement for organizational learning and personal development. These five adaptive challenges are always in movement and, therefore, knowledge can not remain static. Leadership will be shaped by the ability to continuously learn and evolve. How can the speed and flexibility of individual and organizational learning be increased and how can this learning be brought into relationship with the community (Senge, 1990; Vaill, 1996)? In order to develop our ability to live with each other and the environment, leadership will need to focus on developing human capacity (Allen, 1990). The leadership challenge is to design organizations that facilitate continuous learning and personal growth.

Increasing power of relationships. Traditional assumptions of leadership reinforce the notion of the leader as the "long ranger" single-handedly creating change (Gemmill & Oakley, 1992). The interdependent nature of the five adaptive challenges and their emergent properties means that organizations must depend on groups and coalitions of people sharing in the work of creating change (Rost, 1997). Relationships among lower-order systems define the nature of higher-order systems. Seeing these relationships helps us understand how complex systems interact. As in weather systems, understanding does not come from reducing the system to its parts, but rising above and viewing the relationships between and among systems (Morgan, 1988). For example, weather forecasters take advantage of the view provided by weather satellites. Leadership will be increasingly defined by the process of bringing people, ideas, and other systemic elements into new relationships so organizations can develop the strategies to cope with adaptive challenges.

Increasing need for a long-term perspective. These challenges trigger the need to find long-term solutions (Waldrop, 1996). They also challenge us to learn how to understand implications that unfold over time. The challenge is to avoid being blinded by a consumer and short-term profit bias and to focus on long-term implications, such as environmental degradation and pollution. We need ethics and values which articulate communal virtues against which organizations can measure their actions (Bellah, Madsen, Sullivan, Swindler & Tipton, 1991). Developing this sense of common good depends, in part, on our ability to nurture our organization's spiritual connection to all of life. Traditional leadership models often assume effectiveness in the short term as a measure of success, remaining blind to the long-term implications. Today, we need leadership to think far into the future.

Increasing need for leadership processes that match the complexity of the systems. Each of the adaptive challenges is a complex system in itself. When these systems interact with one another, they create a large, dynamic, non-linear system with smaller non-linear dynamic systems nested within it (Lewin, 1992; Stacey, 1996; Waldrop, 1992). In these systems, cause and effect may be impossible to track and predictions are made with less certainty. Therefore, leadership will need to draw on ecological principles to match the complexity to fully understand the whole system. Thus, multiple perspectives are needed in order to understand and respond to these challenges. Leadership processes will consist of facilitating problem solving processes by bringing individuals together in genuine dialogue where differences are respectfully explored.

Figure 1 provides a visual representation of the adaptive challenges and their implications for leadership. The adaptive challenges form the outer ring. Inside this ring are emergent properties that evolve from these five challenges and directly impact the practice of leadership today.

## **The Ecology of Leadership**

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*"Everything is connected to everything else"* (Commoner, 1968).

The world is faced with a series of adaptive challenges which have critical implications for leadership. The traditional approach to leadership has drawn on machine metaphors and machine-like assumptions (Rost, 1997; Wheatley, 1992). In this view, leadership is understanding what goes wrong in an organization and finding a way to fix it. The leader is an individual working as a technician/manager, fixing the machine/organization. Leadership is viewed as positional, individual, top-down, driven by power for the purpose of control. Yet, in the complex, dynamic world we have described above, a different type of metaphor is required to help us understand leadership.

An alternate approach is the ecological perspective that has been used to understand biological and social systems. The ecological approach inherently recognizes the complexity of our world, which simultaneously helping us understand it. The metaphor is also helpful because its biological roots remind us of the environment challenges that are a key to the survival of the human species. A critical idea in ecology is the notion that there is an interconnection of life forces that cannot be ignored (Kelly, Ryan, Altmann & Stelzner, in press). For example, a current ecological issue is global warming which may have more widespread and systemic effects than simply causing temperatures to rise. Among the many potential outcomes are a radical shift in agricultural zones, and a rise in sea level affecting the viability of coastal cities and breeding areas for wildlife. These changes could disrupt food supplies and cause immense changes in human social structure. Global warming may also have effects that are not predictable given our limited understanding of climate and its impact on ecosystems. Thus, by disturbing processes that stabilize our climate, humans create many potential effects that are a result of the interdependent nature of systems.

If we are to understand the complexity of life, whether it be plant, animal, or human animal, we need to understand the complex systems of which they are a part. Leadership is no different. Leadership takes place in a variety of social and biological systems which are interdependent and mutually influencing. An

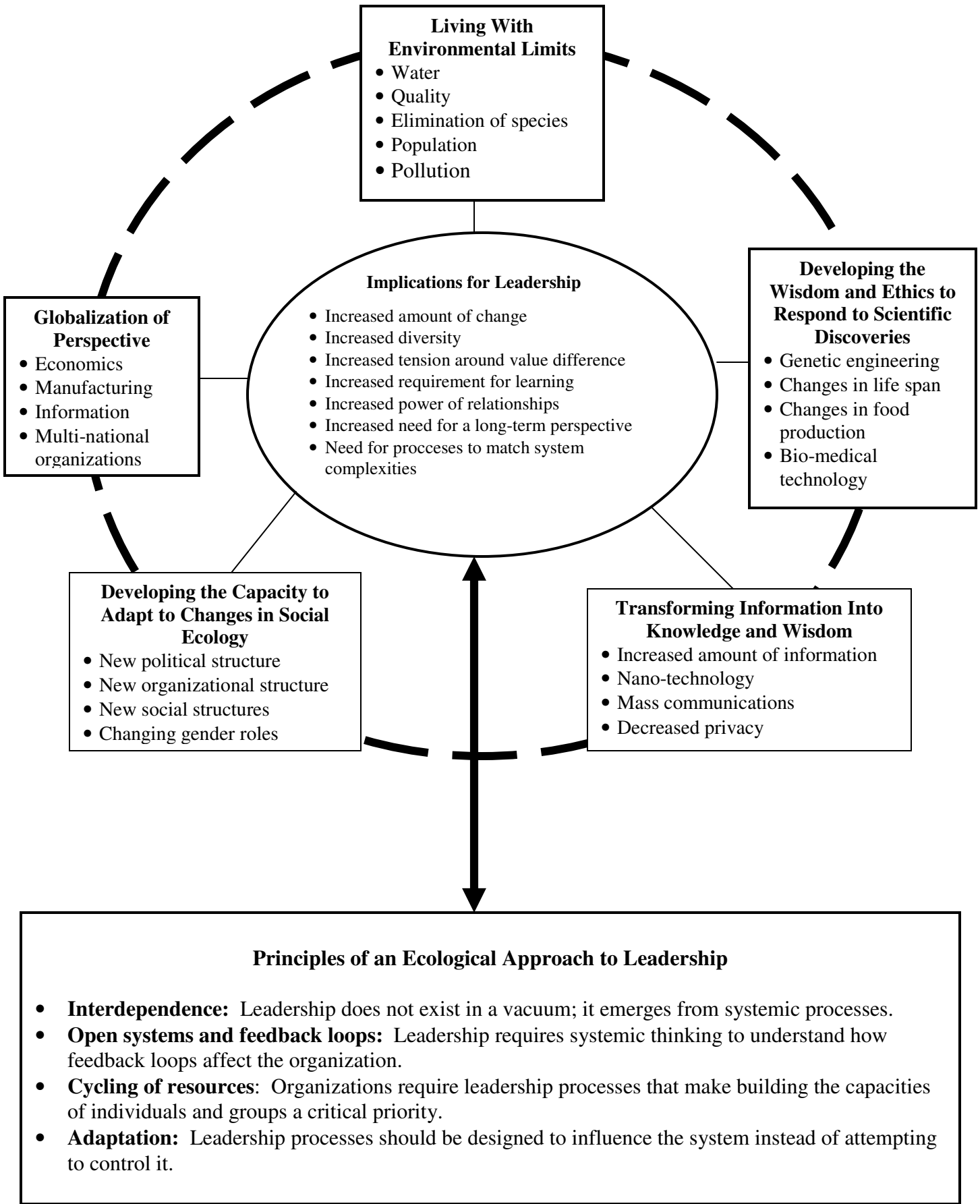


Figure 1. Conceptual Model of the Adaptive Challenges and their Implications for Leadership Processes.

understanding of leadership requires an understanding of relationships interconnection, and context. Leadership does not take place in a vacuum. It is part of a larger system which we must understand in order to understand leadership.

### **Principles of an Ecological Approach to Leadership**

We need a new metaphor for understanding leadership. Mechanistic metaphors assume that an individual leader has the ability to direct an organization independent of other systemic forces that act upon it. What is really needed is a metaphor that more accurately reflects the living systems in which leadership processes operate. Capra's (1996) notion of deep ecology, Bronfenbrenner's ecological theory of human development (1979, 1986, 1995), Kelly's ecological paradigm for a community psychology (1968, 1979; Trickett, Kelly, & Vincent, 1985), and writings on open systems theory (e.g., Katz & Kahn, 1978) lead to principles which help us understand an ecological approach to leadership.

Interdependence. Leadership does not exist in a vacuum, nor does it reside with one individual. Leadership is relational. The networks of relationships which generate leadership are interdependent systems which consist of families, organizations, subgroups within organizations, communities, the natural environment, the economy, and so on. Yet, the interdependence that exists among all systems may be the most neglected element in studying leadership processes. We cannot understand leadership in isolation from the rest of the organization or larger environment. If we are to truly understand leadership, we must remove the focus from the individual leader and look at the web of relationships and conditions which create change.

Often the result we attribute to individuals actually represents the interplay of system dynamics which involves many individuals, and factors such as random luck, timing, economic forces, and other uncontrollable system variables. Interdependence implies that leadership emerges from systemic processes. Interdependence can not be ignored, because a change in one part of a system ripples throughout other systems, either immediately or after a long time delay, interfering with the ability to track causes and their effects. Leadership, therefore, is a process, not the actions of an individual. It is not position based, but emerges out of systemic processes. Practices that could be derived from a theory of systemic leadership processes have been described in some prior writings about leadership. These practices can take many forms, including team leadership, in which there are a number of individuals who lead concurrently, but work together (a presidential cabinet or an organizational task force), complementary leadership, in which different individuals lead at different points in time or in response to a diversity of organizational issues (the employee who heads a project team at one point because of time, expertise, or energy, but "follows" the next time), or collaborative leadership in which each person brings their unique talents to a group that cooperatively pursues a common goal. However, these writings often revert to an individualistic, position-based notion of leadership and do not fully embrace the interdependent, systemic nature of leadership.

Another major implication of interdependence is that it requires leadership processes that span boundaries or recognize that decisions or actions affect other parts of the ecosystem (Kelly, et al., in press). Subsystems affect subsystems (e.g., the finance department affects the marketing department), and larger systems affect other large systems (e.g., there are mutual influences of primary/secondary schools, colleges and universities, and businesses). While this idea may seem obvious, rarely do our traditional concepts of leadership take these realities into account.

Open systems and feedback loops. Capra (1996) suggests an ecosystem consists of interdependent feedback loops, and that the basic pattern of life is a web of relationships, a reality that does not fit with the traditional mechanistic notion of linear pathways that have been used to describe human organization and interaction. This also suggests that ecosystems are open systems where energy is freely exchanged with other systems. There are cyclical paths of energy moving in and out of the system at all times. The systems in which leadership operates are composed of social groupings, and therefore, are a type of living system. Furthermore, these organizational systems are, themselves, part of larger systems (economic, political, social, environmental) which will naturally

impact any organization. Living systems are open systems with feedback loops that lead to self-organizing properties that will allow the organization to adapt to the larger systems of which it is a part. Treating organizations as closed systems does not reflect the human enterprise that is the organization. If we are to understand leadership, we must understand it from an open systems perspective, including the interdependent nature of those systems.

The clear implication is that leadership processes need to be guided by as many feedback loops as possible. For example, open leadership processes enable the organization to more fully embrace or understand the complexity of our world. Issues, problems, new ideas, and varying points of view are given a voice so the organization has an opportunity to function in a way that sustains the organization, the surrounding communities, and our physical environment. Even when this occurs, key feedback loops may be omitted from the equation, resulting in difficulties for the organization. Active participation in leadership processes by as many individuals within the organization as possible is necessary to take full advantage of the nature of systemic leadership processes. With the multitude of resulting voices, the organizational climate may appear to become almost chaotic. However, each voice that is ignored or remains silent places the entire organization in danger, because this voice may have the perspective needed to help the organization cope with the serious challenges of our world. It is through feedback loops that we gain the information we need to respond to the challenges of our world.

Cycling of resources. Leadership processes need to take advantage of the multitude of talent or capacities that exist within the organization. As a result, leadership is developed on an ongoing, long term basis, rejecting the notion that individuals are born to lead, and promoting the possibilities of leadership – i.e., that leadership processes continue to emerge in a variety of situations and contexts if the human resources are allowed to grow and develop. The implication is that leadership is a systemic process. This does not preclude one individual initiating key actions at a particular point in time, but it does suggest that demanding or even requesting that a single individual act as the leadership is both unrealistic given the adaptive challenges and their long-term implications, and inefficient because of the multitude of leadership resources needed to carry on important work over time. A number of individuals and groups can contribute to leadership processes in an active way, depending on the specific context or timing that is required. The adaptive organization or community will make the development of these individuals and groups a critical priority.

Leadership involves the building and maintaining of resources, particularly human resources, thereby creating a capacity to respond to change. This is necessarily a developmental process, since there are many in an organization who have not had the appropriate opportunity or encouragement to participate in leadership processes. In particular, need of attention is the increasing diversity in our organizations. Diversity in all of its forms (e.g., racial, ethnic, gender, sexual orientation, country of origin, age, physical abilities) will need to be seen as a positive asset and a key element in the cycling of human resources. Leadership processes must encourage inclusiveness, which increases opportunities to learn through practice, and increases the quality of decisions by bringing more perspectives to the table.

Cycling of human resources is only part of the equation. Physical resources also need to be cycled and recycled. An ecological metaphor serves to remind us of the environmental issues that must be at the forefront of leadership processes. Without a healthy and healthful physical environment in which to exist, all organizations are at risk. Therefore, organizations must strive to replace the resources that they consume and make “waste” products a source of raw materials for other organizations. Both human and physical resources need to be cycled and recycled.

Adaptation. The greater the shared learning that takes place within the ecosystem, the greater the ability to respond to the adaptive challenges that the organization, community, or larger society encounters. Individuals must continuously learn if they are to function in complex systems with any degree of effectiveness, but structures and processes for learning must be developed throughout an organization so that the system is capable of adaptation to changes in technology, social structures, or economies. In this case, the ecosystem is

renewing itself by developing leadership throughout the system. This is similar to what Senge (1990; Senge et al., 1994) refers to as a “learning organization.”

For example, the adaptive challenge of globalization is critical for many corporations, because they must adjust their way of doing business to accommodate new markets and new cultures. If there is a structure within the organization that promotes continuous learning throughout the system, there will be leadership processes capable of responding to the challenge. The organizational “system” is prepared to interact with new systems. If these structures are not present, adaptation will be difficult at best. When positive personal and community growth occur, greater resources are created and the capacity for adaptation increases. There is an increased chance for renewal of the system. As Capra (1996) has stated “(A) diverse community will be able to survive and reorganize itself...In other words, the more complex its pattern of interconnections, the more resilient it will be” (p.303). Thus, successful adaptation requires greater awareness of the dynamics occurring within the larger system. Organizations can then use this awareness to proactively anticipate and, therefore, maximize their capacity to influence the larger system.

### **Toward a New Theory of Leadership**

*“...(T)o understand a tree, it is necessary to study both the forest of which it is a part, as well as the cells and tissues that are part of the tree” (Odum, 1963).*

Traditional models and theories of leadership have used a lens that focused just on the tree and its cells - i.e., the individual leader’s skills, abilities, or traits. Some approaches have tried to use a wider lens, bringing in contingency variables, such as: position power, task structure, leader-member relations, or subordinate goals (e.g., Chemers, 1997; Fiedler, 1967; House, 1971), but this is akin to widening the lens to include a few square feet of ground around the tree. An ecological theory of leadership assumes that human interaction can only be understood as part of an ecosystem – i.e., the lens adjusts to see the forest, as well as the trees and their cells. An ecological perspective facilitates the creation of structures and processes which are capable of responding to the five adaptive challenges we described earlier, and addresses the implications for leadership which emerge from these adaptive challenges. We are suggesting an ecological theory of leadership that redefines leadership as follows.

1. *Leadership is a process that emerges from individual actions and interactions which influence systems both inside and outside an organization. Each individual action in the system potentially influences the leadership process. Thus, leadership processes evolve in a context of continuous interactions involving the systems in which the organization is embedded.* In contrast to traditional theories, leadership emerges from the interdependent systems and their feedback loops, not the individual leader. We emphasize that the systems are more important than the individual who performs the action. Other theories focus on how to make the individual more effective as a leader. Our theory focuses on the systems and processes of influence, and not control.
2. *Leadership occurs within a wider web of social and biological systems, and the individual actions that influence leadership processes take place within the context of these interdependent systems.*
3. *The adaptability of an organization will be determined by the richness of the feedback loops that influence leadership processes and individual actions.* Feedback loops, by definition, are circular processes in which both the organization and the larger system mutually shape each other. Recall that adaptation is enhanced with increasing interconnections.
4. *The effectiveness of leadership actions needs to be evaluated in terms of how adaptively an organization responds to the challenges of the ecosystem.* Thus, we regard actions that have a negative effect on the long term viability of the human species, ranging from failure to recycle and minimize home waste to developing or using weapons of mass destruction, as indicators of failed leadership processes because such actions have the impact of diminishing any organization’s ability to survive.



5. *Many systemic effects and interactions evolve over the long term, implying that leadership actions can only be understood fully when they are evaluated from a long term perspective.*
6. *Given the above assumptions, we can summarize the characteristics of effective leadership processes as applied by this theory: **Effective leadership processes are characterized by a sharing of responsibility among all participants. This requires a consistent emphasis on human development in order to have the skills present within the organization to recognize, analyze, and adapt to emerging adaptive challenges. The greater the diversity, in terms of skills, cultures, interests, and passions, the more adaptive the organization will be.***
7. *Finally, for heuristic and research purposes, we propose that organizations can be categorized along a continuum anchored at one end by the descriptor “open leadership processes” and at the other end by the descriptor “closed leadership processes” which reflects the degree to which organizational systems are open or closed to feedback loops, diversity, human development, a long term perspective, cooperation, and free flow of information. The greater extent to which leadership processes can be characterized as “open,” the more effective is the organization.*

## **Theory Implications**

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The present section provides a guide to major issues raised by the ecological theory of leadership we are proposing: attributes of organizations with open and closed leadership processes, the importance of a long term perspective, and the purposes of leadership

### **Attributes of Organizations with Open versus Closed Leadership Processes**

We see leadership as a process involving interactions between individuals engaged in seeking information about feedback loops affecting an organization. The key to taking effective action is to recognize that any decision is made in the context of many systems, such as: the environment, the economy, local and world communities, and families, all interacting in highly complex, interdependent ways; and to engage as many feedback loops as possible from these systems into leadership processes. In organizations with closed leadership processes, feedback loops are often blocked or ignored. A leader or administrator in a system practicing closed leadership processes attempts to control information, relationships, and feedback loops. In organizations with open leadership processes, feedback loops are recognized and fostered. When open leadership processes are practiced, the role of a designated “leader” or “administrator” is to facilitate open systemic leadership processes through enhancing the flow of information, fostering relationships, and assisting the emergence of shared purpose (e.g., Wheatley, 1992).

Opening leadership processes to all members of an organization is risky when considered from the perspective of traditional approaches to leadership. Instead of a structured hierarchy which communicates decisions and policies to lower levels of the organization, any member of the organization may contribute to leadership processes. The result is a free flow of information at all levels of the organization. Workgroups form and disperse according to the needs of the organization and transcend structurally defined roles, such as “sales” or “information-processing.” Thus, the organization will reflect the world to which it must respond, it will constantly change, which is necessary to meet the constantly evolving challenges of our increasingly complex world.

Some of the characteristics one might expect to see in organizations with open versus closed leadership processes are shown in Table 1. A preponderance of open leadership processes characteristics would be associated with greater organizational success over the long term. Future research on leadership processes could verify whether these predictions are accurate.

## The Importance of a Long Term Perspective

Unlike theories which are constructed to be value-neutral, the ecological theory of leadership brings long term outcomes into play. Actions which harm either the social or environmental ecosystems diminish the chances of the long term survival of the human species and are, therefore, bad for any organization regardless of the short term success that they bring. Via environmental carelessness, nuclear accident, or purposeful military actions, the human species has the power to wipe itself out. Theories of leadership, then, must provide a lens that holds organizations accountable for processes that do not enhance the long term sustainability of the social and environmental ecology. We believe that the ecological theory of leadership we have proposed provides such a lens.

**Table 1. Characteristics of Organizations with Open versus Closed Leadership Processes**

<b>OPEN LEADERSHIP PROCESSES</b>	<b>CLOSED LEADERSHIP PROCESSES</b>
Information flow is unrestricted and free.	Decisions are made behind closed doors.
Individuals are rewarded for voicing issues positions, and concerns, that cause the direction of the organization to be reconsidered.	The organization has an established culture and history that discourages innovative thinking.
Major decisions are made with the fullest possible understanding of the consequences.	The organization defines success with narrow parameters, such as profits or share price.
The structure and functions of the organization are flexible.	The organization has a hierarchical structure.
The specialty of an individual does not restrict with whom they interact.	Individuals tend to communicate with a restricted group of people with similar job titles.
The organization's culture does not allow the silencing of a point of view or allow a feedback loop to be ignored.	The organization's culture does not reward or even actively punishes risk-taking.
Reward systems recognize the value and contribution of all members of the organization.	Upper level managers receive the credit and rewards for the organization's successes.
The organization and its members have a shared standard of ethical conduct.	Conduct is judged by its benefit to the organization.
Any individual can explain the reasoning behind decisions that affect them.	Individuals at lower levels of the hierarchy do not understand organizational decisions.
Organizational success is regarded as a team, not an individual effort.	There is competition within the organization to be "the best" or "most successful."
The core values and purpose of the organization are clear, and members are committed to these values, challenging the process when these core values are ignored.	The purpose and core values of the organization are unclear and/or members are not committed to these values.
Development and personal growth are highly valued and supported in the organization.	Personnel changes, such as: hiring new individuals, firing others, and transfers are used to make changes within the organization.
Individuals are held accountable for the decisions they make and the actions they take.	Decisions must be approved at various levels of the organization before implementation.
The organization's flexible structure allows a quick response to changing conditions.	The organization may be slow to respond to changes in markets, competition, or policy.

A good example of the operation of long term feedback loops is eastern Europe and Russia where global changes in communication and information technology accomplished what decades of cold war could not. The implications of actions may be ignored in the short term, but the longer term feedback loops will always continue to function. Thus, in the sense that some leadership actions may have a long term negative impact on

the social or environmental ecosystems, the ecological theory of leadership suggests a standard of practice or ethical guidelines against which leadership actions may be evaluated.

### **Purposes of Leadership**

A systemic view of leadership brings forth the importance of a long term perspective in the evaluation of the individual actions and systemic forces out of which leadership emerges. It calls for a perspective of not just weeks, months, or years, but decades, generations, and centuries. Older generations connect with younger generations which connect with unborn generations. There are systemic forces that act beyond the lifetime of any individual which are not invoked by theories which focus on individual positional leaders. The responsibility to consider implications of actions that extend beyond one's lifetime brings a spiritual, ethical, or philosophical dimension to leadership processes.

One way to bring this ethical and spiritual dimension into relationship with leadership is by articulating the purposes or direction of leadership. Recognizing the context of the times and the adaptive challenges we have before us, it seems appropriate to pose the question (Allen, et al., in press): "Leadership for what?" Leadership for enhancing short term profits? Leadership to enhance one's personal power and advantage? Or, leadership for sustaining current and future generations? Our own articulation of the purpose of leadership processes in the twenty-first century is:

*Leadership processes and individual actions should create a community of reciprocal care and shared responsibility and promote harmony with nature thereby providing sustainability for future generations.*

This is not the only, nor will it be the last such articulation. It is blatantly idealistic, but at its core is an acknowledgement that short term successes are meaningless in the absence of future generations to continue enjoying those successes. Furthermore, it must be asked of what value short term successes are when they do not contribute to sustainability of future generations to which we are directly connected through parenthood and grandparenthood? Articulation of a core purpose that takes a long term perspective may be one of the most critical components of leadership processes.

Prilleltensky (1997) has outlined a framework for evaluating the moral implications of activities. He advocates an "emancipatory communitarian" approach in which a "high degree of concern for well-being of individuals and communities" (p. 525) exists. The assumptions of this approach are an acknowledgement that knowledge should serve moral values, that mutual concerns (as opposed to rugged individualism) should guide life and society, that social obligations should play a prominent role in life, and that oppression of groups and individuals should be removed. Open leadership processes based upon ecological principles belongs among the emancipatory communitarian approaches.

Another implication of this approach is the negative fallout that results when organizational members are treated less than respectfully in the context of closed leadership processes. This is not a sustainable practice because it diminishes the overall social ecology. If all organizations were to provide less than a living wage, no benefits, and depressing working conditions, no customers would remain for the goods and services offered by other organizations. Instead, leadership processes must support and encourage the growth of our consciousness and capacity as human beings (Maynard, 1992). We need to develop a critical mass of individuals who view leadership as a process that both develops others and moves us toward real meaningful change at the same time (Burns, 1978; Greenleaf, 1977; Manz & Sims, 1990). In order to help others advance their consciousness and capacity, individuals who wish to have a major influence must enhance their own personal development (Allen, 1990; Hagberg, 1994). As individuals work together toward making change, they help each other grow and evolve in ethical and spiritual ways seeing connections among a wider range of systems that affect the organization. This, in turn, helps us see new ways to shape our behavior on both an individual and systemic level which will help us adapt to the challenges before us.

## **Some Practical Guidelines for Creating Change**

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The transition from a hierarchical, mechanistic model of leadership to open leadership processes is likely to be accomplished in small increments. The following guidelines for creating change are meant to suggest practical ways an individual can help a hierarchical structure make the transition to open leadership processes. Over time, using these strategies, it may be possible to have a larger and larger portion of the organization making decisions in a manner that reflects open leadership processes.

Practice Guidelines 1: Connection is the Key. Connections and communication across sectors have a significant impact on the adaptability of an organization. If sales people only talk to sales people or educators never talk to business people, organizations will be less adaptable because the systemic nature of organizations and their relationship to other communities is being ignored. Therefore, an important step in the transition from hierarchical to shared leadership is to create links and relationships that enhance the flow of information throughout the organization.

Practice Guideline 2: Leadership Needs to Facilitate an Environment that Fosters Individual Growth, Trust, and Organizational Learning. The adaptive challenges we have discussed create a complex, constantly changing system within which leadership processes function. Learning and development are keys to meeting these adaptive challenges. Leaders in hierarchical positions who wish to move toward shared leadership processes will need to be prepared to assist others to move beyond their current levels of awareness to a wider awareness of their own role in the system. This will require growth in personal responsibility, skills in group dynamics, and community building. Issues of safety and trust will need to be confronted because individuals who have something to add to the organization need to be encouraged and feel “safe” making their contributions. This will also entail risk for individuals who may receive accurate but unpleasant feedback on a personal or organizational level. All participants in the organization need to believe that feedback can be a positive, growthful, and helpful experience for them, otherwise they will not be open to feedback.

Practice Guideline 3: Tension is a Positive Force in Organizational Learning. Conflict and collaboration are not mutually exclusive terms. Anyone who wants to create a more collaborative environment will actually increase the amount of conflict that they experience because individuals will bring their perspectives to the table and differences will become a natural event in the organization. Collaboration allows these differences to be explored in a frank and respectful manner. It also precludes polarization of differences because the relationships between individuals and the common vision keep people working together as they explore different perspectives. Allowing the tension between different perspectives to exist often leads to breakthrough solutions instead of polarization which can only lead to an acrimonious win/lose experience. If the proverbial five blind men examining different parts of an elephant remained open to each other’s unique perspectives, they would be able to grasp that the emergent property of their experiences is an elephant instead of reaching polarized, incompatible conclusions.

Practice Guideline 4: Reflect on the Process. A key behavior in the transition to open leadership processes is to develop new ways to reflect on and learn from our interactions – both on an individual and organizational level. It is also important to discuss meetings themselves to determine whether the new leadership processes are functioning appropriately. Some of the questions that need to be asked include: (1) Have the participants been honest and/or authentic? (2) Did all the stakeholders have input into the process? (3) What patterns emerged that improve our understanding of daily events? (4) Was the group dominated by a single individual or group of individuals? (5) Did the final decision reflect a consensus or a compromise; self-interest or a shared purpose? (6) How could the process be improved in the future? (7) Was the time used wisely? (8) What was learned about how we operate together? (9) Will the decisions lead to sustainability for future generations? These questions and others like them, in essence, are designed to construct a feedback loop around organizational processes, themselves.

Practice Guideline 5: Articulate the Core Purpose and Values of the Organization. Open leadership processes require individuals to take actions in the absence of the typical “approval process” that characterizes organizations with closed leadership processes. What feedback loops are needed to regulate individual decisions and the actions that follow? One approach is to ensure that the organization has a clearly stated core purpose and values against which decisions and actions can be evaluated by each individual. This does not ensure that mistakes will not be made because even the most open leadership processes may not account for all the relevant feedback loops. However, by constantly emphasizing core purpose and values, it is possible to ensure that members are trying to move the organization in the same direction.

Practice Guideline 6: Attach the Form of Your Organization to Your Purpose Instead of Your Purpose to the Form. In the complex world of the adaptive challenges we have outlined, an organization needs to be flexible in order to survive and prosper. If the organization retains a rigid structure or hierarchy, it will be ill-equipped to meet its challenges because the organization can not shift fast enough to respond to change. Instead, a modern, adaptive organization will have a variable structure or even be lacking in discernable structure because groups will come together according to their interests and expertise in order to identify and solve the challenges that the organization faces. The main goal in transforming the organization is to break down the current structures and increase the flow of communication and information. The form of the organization should come together based upon the purpose.

Practice Guideline 7: Reward Risk-Taking. At the most basic level, human behavior is governed by exchanges of rewards and punishments (e.g., Bandura, 1977; Komaki, 1986; Komaki & Desselles, 1990; Tjosvold, 1995). Rewards and punishments contribute to control of feedback loops within an organization or between the systems that coexist with the organization. If individuals are rewarded for taking risks, introducing new points of view, speculating on the long term impact of decisions, and bringing new voices into the leadership process, it will enhance sharing of leadership processes within the organization.

These guidelines are meant to provide an inspiration or beginning for those who wish to make the transition toward open leadership processes. The complex nature of organizations means that outcomes may be difficult to detect and it may be a long time before changes are evident throughout the organization. However, patience and persistence will be rewarded.

## Conclusion

The long term survival of the human species will depend upon our developing capacity to cope with the challenges of an increasingly complex world. A focus on short term feedback loops such as profits, stock price, or a “bottom line” typical of many positional leaders is inadequate to support sustainability of an organization or a global society. Leadership processes need to be open to the richness and variety of feedback loops that come from within and outside the organization. The adaptive challenges, with their inherent complexity multiplied by their emergent properties, far exceed the capacity of any positional leader to comprehend or manage. All individuals must develop their capacity to participate in leadership processes in a variety of contexts so our global society may cope with the tremendous challenges that must be faced now and in the future. This demands decreased dependency on positional leadership and increased personal responsibility among all organizational members. The systemic leadership theory we have proposed connects the current generations to unborn future generations and invokes a spiritual, ethical, and philosophical dimension as the implications of actions play out beyond one’s lifetime. A theory of leadership derived from principles of ecology calls for a radical shift in our perspectives of leadership. It emphasizes individual responsibility, a long term perspective, developing capacities of individuals within organizations, and harmony with nature, while showing the way toward sustainability for future generations.

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