

# In Search of the Future

How Organizations are Learning the Lessons of Sustainability in a Chaotic World

by  
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*If you realize that all things change,  
there is nothing you will try to hold on to.  
If you aren't afraid of dying,  
there is nothing you can't achieve.*

*Trying to control the future is like trying  
to take the master carpenter's place.  
When you handle the master carpenter's tools,  
chances are that you'll cut your hand.*

Lao-tzu

As global change increases in speed and complexity, businesses, government agencies, service organizations, and communities are confronted with the challenge of learning how to search for the future. Some examples:

- A leading American defense research organization responds to dramatic post-cold war challenges by transforming itself to a more flexible and participative organization, and shifts its focus from the laboratory to the marketplace. (Troxel, 1993)
- Costa Rica has created a management development program for its health care system to transform the old, bureaucratic health delivery system to one based on teams, systems thinking, and continuous quality improvement. Today, the new approach is being diffused throughout the country's entire health care system. (Institute for the Future, 1992)
- Primorski Sugar Corporation, a newly privatized Siberian sugar refining plant, had a discouraging history of unsolved problems, antiquated equipment, low employee productivity, and little leadership. The new director, selected by employees from outside the company, challenged the old guard managers and employees to change into a true private enterprise or leave. Most left. Today, a new leadership team has been created and they are transforming the old Soviet plant into a

diversified world-class company. (Troxel, 1993)

- The U.S. government's most pervasive agency, Health and Human Services, with a staff of 140,000 and the country's third largest budget, conducts strategic planning in such a manner that staff are awakened to their own values as public servants and to the ever-present responsibilities of public stewardship. Together, they discover their own capacity to influence the future direction of the agency. (Weisbord, 1992)
- Brigham Young University Business School invented a new curriculum using a future search conference in which all major stakeholders of the school participated. The strategy committee prepared itself to deal with the usual opposition to change when it presented the new program to the faculty for a vote. Surprisingly, few questions were asked and when the vote was called the program passed with a few abstentions and no opponents. (Weisbord, 1992)
- Maliwada, an ancient village in India, was once wealthy but has become impoverished. A team of community development practitioners met with the village leaders to help them discover a shared vision for the future of their community. As the whole village learns how to create a new community, they begin to let go of old class and cultural differences.

Working together, the community is able to acquire a bank loan and government grant to build a dam, a brick factory, and a health clinic. Today, the community is prospering and is teaching other villages how to replicate its model of development. (Troxel, 1993)

These examples illustrate the transformation of some traditional organizations into organizations in search of a sustainable future. Some of the more prominent dimensions of this transformation include:

### **Organizational Structure**

The traditional organization has been a vertical organization with ever-widening layers of managers, technical staff, personnel departments, supervisors, and at the bottom, the front line worker. Workers reported upwards, and the boss was the worker's major customer. It was divided into functional departments, and workers functioned individually in a mass-production setting. By contrast, in the new organization layers are fewer and wider, workers produce in teams which have all the skills and equipment needed to design, produce, and deliver an entire product or service.

### **Management and Leadership**

In the traditional organization, management set policy, rules, and production goals. Workers were not involved in the planning, organizing, or control of their work, their ideas were not solicited, and consequently their productivity was less than optimal. Visionary leaders were expected to lead loyal and willing followers. In the new organization, managers and workers collaborate in setting policy, rules, and production goals. They also propose equipment and training investments, and have a system for continuous improvements. Leadership is exercised at all levels of the organization. Workers participate in developing long-range vision and provide daily leadership in the work setting.

### **Empowered Workers and Teams**

In the traditional organization, employees saw only parts of the work process, and were responsible only for their own discreet tasks. Performance standards were set to the lowest

common denominator. In the new organization, teams are self-managing and all members are empowered to provide team leadership. Everyone shares responsibility for the health of the team. Workers learn to do multiple tasks, and teams deliver whole products or services. Teams learn to set production goals and schedules, order their own materials, and hire new workers. Performance standards are benchmarked to the best in the world.

### **Systems Thinking**

The traditional organization placed an emphasis on bureaucratic hierarchy, chain of command, narrowly defined job descriptions, policies and procedures, and clearly separated departments and functions. The new organization emphasizes systems and organizes its work in such a way that bureaucracy is minimized and performance is emphasized. The flow of work is carefully planned and inefficiencies are removed through continuous improvement processes executed by workers. Departments and functions support the organizational systems, with engineers, planners, and accountants working side by side with production workers to facilitate quick solutions to problems and assure high performance.

### **Eco-system Management**

In the traditional organization, the eco-system was viewed as a source of unlimited resources and little thought was given to its protection. In the new organization, the natural environment is viewed as a partner and sustainability of the eco-system is essential to the future.

### **Quality Focus**

In the traditional organization, quality control was conducted by engineers and quality experts at the end of the production process. The emphasis was on production and workers were not expected to take responsibility for quality. External suppliers were generally selected on the basis of price rather than quality. In the new organization, comprehensive quality control takes place at all levels of the process and workers learn to take responsibility for measuring the quality

of their own work and are committed to continuously improving product and service quality. Suppliers are selected on the basis of quality and a long-term relationship is maintained.

### **Customer Service**

In the traditional organization, customer service was the responsibility of only those who were in contact with customers. Most employees did not have any "customers," only bosses and co-workers. In the new organization, everyone learns who their customers are, what the customers want, and how to deliver it. Often, customers are actively involved in the company's process of developing and improving products and services. Within the organization, internal customers receive the same level of service that is given to external customers.

### **Flexibility**

The traditional organization produced standardized products and services. Customers had to settle for the company's standard product or wait months while the firm re-engineered, re-tooled, and re-trained. In the new organization, custom orders are easily produced and are made to order when the customer orders them. New products and services are developed quickly. Just-in-time deliveries replace the traditional stockpiles of materials.

### **Rewards**

In the traditional organization, pay was based on seniority, labor was viewed as a cost, and evaluations were linked to promotions and pay increases. Employees did not have ownership of the company and rarely were there profit-sharing programs. In the new organization, pay is based on knowledge and skill, and labor is viewed as a competitive advantage. Evaluations are done by team members and are directly linked to performance.

### **Organizational Learning**

In the traditional organization, most training was directed to managers and professional employees and was technical in nature. Line workers received only basic training on equipment operations. In the new organiza-

tion, the capacity to learn is viewed as a competitive advantage, and training is viewed as an investment strategy. Organizational learning is the means by which the traditional organization is transformed into the new organization. As we shall see next, organizational learning is the heart of the new organization.

## **Organizational Learning and the Search for a Sustainable Future**

As we anticipate a future of increasingly fast-paced change, the ability of organizations to respond to the complex, competing, and contradictory demands of the external and internal environments is perhaps the most important competence. This is the role of organizational learning: learning how to gather information from the environment, learning how to continuously improve the responsiveness of internal processes and the interrelationship of systems, learning how to create strategic partnerships, and learning how to transform the whole organization in response to changes in the environment.

Organizational learning is developed at the individual, group, and organization-wide levels. In the new organization, individuals learn a wide range of technical skills, interactive skills, and pursue continuous personal development. Similarly, work groups learn a wide range of skills for planning, organizing, and controlling their work, as well as how they interact with other work groups. The organization as a whole learns to think and act strategically in response to the ever-changing environment.

Systems thinker and futurist Eric Jantsch in *The Self-Organizing Universe* (1980) characterizes future-searching organizations as learning organizations: "Learning is not the importation of strange knowledge into a system, but the mobilization of processes which are inherent to the learning system itself" (p. 196). In other words, the organization has inherent learning processes which can be mobilized to enable the organization to adapt to changes in the environment.

Organizations develop mastery of three interrelated types of organizational learning: operational learning, systemic learning, and transformative learning.

### **Operational Learning**

Operational learning is the foundation of any work organization. Work processes are created and continuously improved to meet customer requirements. Operational learning focuses on continuously improving the quality and service of the organization. Today, continuous quality improvement is the most common example of how organizations are developing the skills of operational learning. In *Organizational Learning* (1978), Chris Argyris and Donald Schon describe operational learning as "single-loop learning." Single-loop learning takes place when members of the organization "respond to changes in the internal and external environments of the organization by detecting errors which they then correct so as to maintain the central features of the [organizational practice]" (p. 18).

#### *Case Study:*

#### **Motorola**

(Redding and Catalanello, 1994)

This Baldrige-award winning electronics manufacturer is approaching a milestone, the achievement of "six sigma," a previously unheard of level of quality — less than 3.4 defects per million opportunities for error. Yet it took Motorola 14 years to achieve this level. Recently, the company studied "six sigma" as a process of organization learning, noting key milestones, breakthroughs, and roadblocks. With new insights into its own learning processes, Motorola has set the goal of reducing its corporate-wide learning process by one half (from 14 years to 7) with two new strategic initiatives: becoming a leader in integrating hardware and software and entering the Eastern Europe market.

### **Systemic Learning**

Systemic learning focuses on the organization as a complex of inter-acting systems. Argyris and Schon describe systemic learning as "double-loop learning." Double-loop learning

occurs when errors are "detected and corrected in ways that involve the modification of the organization's norms, policies, and objectives." (1978, p. 3) Where operational learning is directed toward improving work processes, systemic learning focuses on the fundamental assumptions upon which the organization's systems and structures are built. Systemic learning also reflects critically on the interaction of organizational systems, seeking ways to improve organizational performance by optimizing the performance of the whole organization rather than simply improving single systems in isolation from one another.

#### *Case Study:*

#### **Royal Dutch/Shell**

(Redding and Catalanello, 1994)

A landmark study conducted several years ago by Royal Dutch/Shell sought to discover how companies survive through changes in the environment. The study looked carefully at 30 companies which had lived more than 75 years. Shell itself has a history of over a hundred years, and hopes to continue its history in spite of the uncertainties of the petroleum industry. *The study concluded that these firms persevered because of their capacities to absorb what is going on in the environment and to act on that information with appropriate responses.* In other words, thriving in a changing and even chaotic environment depends on organizational learning, which Shell defines as the process where management teams change their shared mental models of their company, their markets, and their competitors. Arie DeGeus, head of planning, asserts that, "for this reason, we think of planning as learning and of corporate planning as institutional learning." As a result of this study, Shell instituted an aggressive series of steps to transform its learning abilities into a competitive advantage. It seems to be working. In 1990, Shell, which in the 1970s was considered the weak sister of the petroleum industry, surpassed Exxon in total revenues, to become the world's largest oil company.

### **Transformative Learning**

Transformative learning is the process of continuous development of the whole organization. Transformative learning incorporates operational and systemic learning into an ongoing process of evolutionary change.

Argyris and Schon describe this as "deutero-learning": "When an organization engages in deutero-learning, its members learn, too, about previous contexts for learning. They reflect on and inquire into previous contexts for learning. They reflect on and inquire into previous episodes of organizational learning, or failure to learn. They discover what they did that facilitated or inhibited learning, they invent new strategies for learning, they produce these strategies, and they evaluate and generalize what they have produced. The results become encoded in individual images and maps and are reflected in organizational learning practice." (p. 27)

#### *Case Study:*

**JK Fibre, Jhalawar, India**  
(Troxel, 1993)

When JK Fibre plant opened in 1989, it was the realization of Rampati Singhanian's vision to create a company culture of openness, equitable relationships, and minimal bureaucracy. In contrast to the traditional hierarchical management system used in most Indian companies and governmental agencies, JK Fibre was designed to put into practice the new thinking about open organizations and participative management. Work space at the new plant was completely open, with cubicles replacing closed offices. The open culture applied even to salary figures which were posted on bulletin boards for all employees to read. Decentralized operations at the plant required individuals to take responsibility for their own quality inspection, maintenance, and housekeeping. Managers filled out their own forms and kept their own files. As much as possible, communication was face-to-face with few memos and little paper.

The Plant Director, Singhanian, knowingly introduced these new organizational concepts into a traditional Indian work culture deeply

and firmly rooted in hierarchy, information guarding, and paperwork bureaucracy. He set an example of the new style by maintaining an office in an open cubicle where his informal, yet professional, style set the tone for the whole organization. Open office space dramatized the minimization of the organizational hierarchy and departmental turf. No walls divided departments. Managers' desks were placed in the center of the teams' work space, with open access to all staff employees. Like the Japanese, work started every morning with physical exercises in teams. And everyone ate together in the same cafeteria, regardless of rank.

Most radical of all for an Indian company, Singhanian introduced a "gain sharing" incentive plan for all employees. At the close of each quarter, an independent agency conducted a survey asking customers to rate how JK Fibre performed on each factor. The compiled results were used to compute the amount of gain sharing award to each employee, which accounted for a major share of an employee's salary.

After introducing all of these open and participatory methods and establishing a forward-looking company culture, one would expect that JK Fibre had become a model company for all of Indian companies to emulate. Wrong. After two and a half years of experimenting with the best possible organizational design, the most enlightened of management methods, Singhanian and the company managers found it hard to believe that production at JK Fibre was at 50% of capacity, quality was poor, morale was abysmal and, worst of all, customers were leaving in droves. JK Fibre was losing money fast and the parent company which had invested heavily in this experiment was not about to offer further financial investment in what had apparently become a failed experiment. In January 1992, everything literally ground to a halt, and the managers were in the pit of despair.

This was the puzzling situation presented to the consultants who had helped design the organizational originally. After talking with

JK Fibre managers and staff and reflecting on the situation, the consultants presented the managers with a proposal for a "whole system transformation" of JK Fibre. The management team took two weeks to decide that they would hire the consulting firm and accept their proposal. A month later the senior managers spent five days with the consultants to form a coordinated plan of action. The retreat was comprehensive search for a sustainable future incorporating organizational planning, team building, and personal development.

The immediate challenge facing the managers at the retreat was how to get the plant started up again. No new capital was available to them from the parent company, and no banks would provide any credit. They were caught in a Catch-22 dilemma. Finally, after much intense dialogue they hit upon an idea that had possibility. The managers would go to their customers for financing — the very customers who complained about poor quality and late deliveries.

"Can you imagine what it was like to go back to our customers and now ask for money?" recalled one manager. But it was their only hope. The managers decided to convince their customers that it was new day for JK Fibre, that they had a strategic development plan they could and would deliver on. In groups of two and three they visited every customer. It worked. With just enough cash advances to purchase raw materials, they started up the plant two weeks to the day after creating the plan.

By May, the plant was producing an average of 30 tons a day, about the level of production before the January shut down. Quality was improving, but was far from consistent. Then in June, July, and August, more than 50 tons were produced daily, with quality improving together with productivity gains. Finally, in October, the plant reached full capacity, peak production of 60 tons. And quality was also at an all-time high.

A celebration was in order. Spontaneous dancing broke out on the shop floor, and the

managers ordered a large ice cream truck into the factory for a celebration. The truck remained there for 24 hours, time enough for all three shifts to celebrate. They were never able to finished all the ice cream on the truck.

How did JK Fibre produce such a dramatic turn-around in just seven months? In that five day planning session, the managers went through a process of deep reflection to discover the mental models that were preventing them from achieving the success that had eluded them. Once the managers recognized the "contradictions" preventing them from achieving their original vision, they were able to create a three-pronged strategy to transform the company to what it was originally designed to be: Corrective Action Teams, Communication, and Leadership Development.

#### **Corrective Action Teams**

Corrective Actions Teams (CATs), an operational learning strategy, were directed toward improving plant operations. CATs were designed to attack and quickly solve quality and systems problems. From 8 to 12 people from across functions served on a CAT, meeting for a day or two to analyze specific problems such as excessive moisture in the fiber or the cause of the frequent breakdown of electronic control systems. After determining the root cause of the problem, CAT teams determined at least four possible solutions, put a plan together, made assignments and began working on the solution. Employees enjoyed serving on a CAT because of the satisfaction they got from solving long-standing problems.

#### **Communications**

The communications strategy was a systemic learning strategy to improve the interaction of departments, functions, and systems. From the beginning of the JK Fiber, communications were encouraged. Now, full participation of everyone was essential. An Open House forum was instituted. Once a month all employees were invited to speak openly with management about factory problems and generate solutions.

Daily managerial meetings replaced the monthly meetings which had previously been held. By wrestling with issues together daily, departmental walls began disappearing and the managers began to understand the interrelatedness of their functions. Decisions made collectively took into account the needs and requirements of all departments. Where previously managers were preoccupied with the performance of their own departments, the emphasis was now placed on coordinating activities with other departments to achieve optimal company-wide performance.

Monthly Review Forums were instituted for the senior management team to report on accomplishments, issues, and ideas in relation to the overall action plan. Nothing was allowed to disturb the proceedings, even though the meeting was held in the factory building.

### Leadership Development

Leadership development, the transformative learning strategy, has been the largest financial investment of the company's turnaround. Managers, supervisors, and team coordinators participated in learning laboratories with a focus on transformational leadership style. In addition, they spent time learning to incorporate their own personal development into their leadership. Interviews with the managers who have completed the leadership development program pointed out that they have now learned the skills to make the open-organization system work. They learned the facilitation skills which enables them to solve problems as a team, to create a better work environment, and to develop greater team consciousness. Many feel that the personal development parts of the training have enabled them not only to grow personally but often has led to more peace and harmony within their families. Once every three months the core leadership team sets aside two days to continue developing their leadership skills and working on their personal development.

Nine months into the transformation of JK Fibre, the market for acrylic fiber collapsed in

India as a result of political unrest in the country, the introduction of cheaper imported fiber, and an overcapacity of fiber in the Indian market. The new challenge facing JK Fibre is to develop new market strategies in response to this dramatic upheaval. The organizational learning skills —operational, systemic, and transformational — which were developed in the transformation of the JK Fibre are currently being pushed to the limit to meet this new and unexpected challenge from the changing environment. Stay tuned.

In the next section, we will see how new scientific discoveries about the way living systems evolve provide us with some practical guidelines for transformative organizational learning.

## Evolutionary Self-Organization

The life expectancy of an average American business is only about forty years. Many government agencies, technically alive, function like the living dead. Why do organizations fail or, worse, fall into *rigor mortis*? Is it possible for organizations to remain dynamic and continuously change in response to changes in the environment? Some hints at answering these questions come to us from the theory of evolutionary self-organization.

According to the Second Law of Thermodynamics, all systems inevitably come to a state of equilibrium and remain there. Like a child's spinning top which is delightfully set in motion, only to slow down and eventually fall over, entropy governs the life of systems by bringing them to a state of static equilibrium. To set the top spinning again requires someone to put it back into motion.

Likewise, organizations gravitate to a state of equilibrium. As the entropy of an organization grows, more and more energy is required just to maintain the organization, leaving less and less energy free for productive work. As a metaphor for entropy, think of the United States national debt. The outside energy to maintain the federal government comes in the form of taxpayer money, which not only

must support an increasing debt with each passing year, but must also support the interest on the debts of the past. As the debt load increases, less and less money is available for productive purposes and more and more money goes to pay the debt.

But when we turn to natural history, entropy does not seem to govern living systems. We see plants, animals, and whole eco-systems that have evolved over millions of years. There are some human cultures that have existed continuously for thousands of years. Why are they not trapped by entropy?

The theory of evolutionary self-organization provides us with some clues as to how living systems thrive while non-living, mechanistic systems die. Nobel Laureate Ilya Prigogine discovered that living systems continuously renew themselves through processes of spontaneous structuration. When information from the environment floods a living system, it is jarred out of its state of equilibrium, becomes disorganized, and reconfigures itself to a higher state of complexity which is better suited to exist in the changed environment. (Jantsch, 1980)

Prigogine's work helps explain a contradiction in Western science, explains Margaret Wheatley in *Leadership and the New Science*. "If entropy is the rule, why does life flourish? Why is evolution in living systems related to progress and complexification, not to deterioration and disintegration?" (1992, p. 19).

In *Chaos: Making a New Science*, James Gleick, discusses the role of entropy in our thinking: "However expressed, the Second Law is a rule from which there seems no appeal. In thermodynamics that is true. But the Second Law has had a life of its own in intellectual realms far removed from science, taking the blame for disintegration of societies, economic decay, the breakdown of manners, and many other variation on the decadent theme. The secondary, metaphorical incarnations of the Second Law now seem especially misguided. In our world, complexity flourishes, and those looking to science for a general understanding of nature's habits will be better served by the laws of chaos." (1987, p. 308)

Three dynamics which lead to evolutionary self-organization are openness, non-equilibrium and autocatalysis.

### Openness

Living systems overcome entropy by developing a partnership with the environment in which they import free energy from the environment and export entropy. It is like breathing in oxygen and breathing out carbon dioxide. The result is that living systems maintain productive energy and do not accumulate entropy as do non-living systems.

*Developing and Managing Open Organizations* (Mink, 1979) describes the dynamics of organizational openness as external responsiveness, internal responsiveness and unity. The adaptability of an open organization is its capacity to respond effectively to both internal and external environments while maintaining a sense of its own identity. Closed organizations, by contrast, maintain their identity by not changing with their environment, and entropy is the price they pay.

This does not mean that living systems are randomly driven by environmental changes. Wheatley notes that openness to the environment paradoxically creates a greater sense of identity. What comes to dominate the system over time is not the environment but the self-organizing dynamics of the system. Environmental fluctuations may be of random origin, but the resulting changes within the system are not purely random. In response to all environmental disturbances that signal a need for change, the system changes in a way that remains consistent with itself. This self-reference is what facilitates orderly change in turbulent environments. "In human organizations, a clear sense of identity—of the values, traditions, aspirations, competencies, and culture that guide the operation—is the real source of independence from the environment" (Wheatley, p. 94).

Royal Dutch/Shell, in its commitment to organizational learning, has emphasized openness to the environment. Shell has instituted learning strategies designed to enable the company to respond quickly and effectively to changes in local operating

environments. "While its chief competitors, such as the giant Exxon corporation, have become increasingly centralized, Shell has systematically given more and more autonomy to its 260 operating divisions, promoting quick action and experimentation." (Redding and Catalanello)

### Non-Equilibrium

Non-living systems are stable in their state of equilibrium and thus become trapped by entropy. Living systems, by contrast, thrive in a state of non-equilibrium by substituting resiliency for stability. Fluctuations and instabilities at the local levels of the system generate long-term, global stability. Thus, living systems turn out, paradoxically, in the long run to be more stable because of their instability.

The key to breaking free of equilibrium is destabilization. Disturbances from the environment create disequilibrium, and disequilibrium leads to renewal. Because living systems have the capacity to change through disequilibrium, control is relaxed to allow a dynamic connectedness with the internal and external environments. Conversely, systems which seek to maintain equilibrium in a changing environment protect themselves for the short term but ultimately experience an increase of entropy.

We have seen how JK Fiber experienced disequilibrium which led to its transformation. Shell, to foster internal disequilibrium, consciously keeps things shaken up by changing the rules — such as when and how planning is done — to break up the old "corporate rain dance" and to promote new ways of thinking. Another organizational learning method used by Shell is the "management challenge," during which peer managers question the assumptions underlying each other's business plans and operations.

The computer companies which are thriving in today's rapidly changing environment are those which maintain dynamic connectedness to their environments by continuously reinventing themselves. By contrast, witness the

difficulties of giant IBM which currently resembles an elephant learning to dance. This is the mighty IBM which controlled the computer world for so many years. What happened? The industry changed and IBM is learning that stability is not a strategic advantage in a changing environment.

### Autocatalysis

In autocatalysis a small disturbance is fed back on itself, like screeching feedback at a rock concert. This self-amplification produces instabilities which ultimately contribute to the formation of a new structure. Disturbances continuously test the stability of any structure, and it is natural for a system to quell them. However, if the initial disturbance survives the system's natural suppression, the self-amplification process begins. Thus, in the process of autocatalysis a lone fluctuation is amplified by the system until it becomes so amplified that it can no longer be suppressed. "This ... supports some current ideas that organizational change, even in large systems, can be created by a small group of committed individuals or champions" (Wheatley, p. 96). As Margaret Mead observed, "A small group of thoughtful, concerned citizens can change the world. Indeed, it is the only thing that ever has."

The most dramatic illustration of autocatalysis in my experience is the Vietnam anti-war movement. At first, just a few individuals and small groups were speaking out against the war. But as the war continued to grow, an increasingly vocal opposition continued to produce an increasingly noisy protest to which finally the governmental system had to respond.

Self-organizing systems are driven to creative reordering by this amplification at which point the system encounters a future that is wide open. No one can predict which evolutionary path the system will take because the system is free to create its own solution to the new environment. "To live in an evolutionary spirit means to engage with full ambition and without any reserve in the structure of the present, and yet to let go and flow into a new structure when the right time has come" (Jantsch, p. 255).

## Summary

Two world-wide trends are making the traditional organization obsolete. First, the pace of global change is continuing at an increasing rate and organizations are confronted with the need to change quickly and frequently in response to these inexorable changes. Second, people from every walk of life in all parts of the world want to have a voice in determining their own future. For leaders, this creates a most challenging situation. With the pace of change happening so quickly, how can everyone be involved in a significant way? Even more challenging, how can seemingly irreconcilable positions be resolved and incorporated into a compatible and desirable future?

As we have seen, the key to successfully searching for a sustainable future is the development of organizational learning processes that allow individuals, work groups, and the whole organization to actively participate in recreating systems and structures that respond to the demands of the changing environment. This is the promise of evolutionary self-organization. Leadership no longer means having all the answers; rather, leadership is providing the opportunity for dialogue, for an open, creative process that allows solutions to be collectively invented and reinvented. Future-searching organizations learn how to transform themselves in response to the chaos of change and thereby create a future which is sustainable for everyone.

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