

Leadership and the New Science: Discovering Order in a Chaotic World

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- The science encouraged me to believe that there are new ways of comprehending the issues that trouble organizations most: chaos, control, freedom, communication, participation, planning and prediction.
- The quantum world teaches that there are no pre-fixed, definitely describable destinations. There are, instead, potentials that will form into real ideas depending on who the discoverer is and what she is interested in discovering.
- Three different areas of science are treated in some detail: quantum physics, self-organizing systems, and chaos theory.
- I was reading of chaos that contained order; of information as an essential, nourishing element; of systems that fell apart so they could reorganize themselves; and of invisible influences that permeate space and affect change at a distance.
- Each of us recognizes the feelings this tale describes, of being mired in the habit of solutions that once worked yet that are now totally inappropriate, of having rug after rug pulled from beneath us, whether by a corporate merger, reorganizations, downsizing, or personal disorientation.
- Each of us lives and works in organizations designed from Newtonian images of the universe. We manage by separating things into parts. We believe that influence occurs as a direct result of force exerted from one person to another; we engage in complex planning for a world that we keep expecting to be predictable, and we search continually for better methods of objectively measuring and perceiving the world.
- In this realm, there is a new kind of freedom, more satisfying to wonder about than to know, and more exciting to search than to stay put. Curiosity, not certainty, becomes the saving grace.
- I don't believe that organizations are ever changed by imposing a model developed elsewhere.
- Meta-issues that concern those of us who work in organizations: Where is order to be found? How do complex systems change? How do we create structures that are flexible and adaptive, that enable rather than constrain? How do we simplify things without losing what we value about complexity? How do we resolve personal needs for autonomy and growth with organizational needs for prediction and accountability?
- This machinery imagery leads to the belief that studying the parts is the key to understanding the whole. Things are taken apart, dissected literally or figuratively (as we have done with business functions, academic disciplines, areas of specialization, human body parts), and then put back together without any significant loss. The assumption is that the more we know about the workings of each piece, the more we will learn about the whole.
- One of the first differences between new science and Newtonianism is a focus on holism rather than parts. Systems are understood as whole systems, and attention is given to relationships within those networks.
- In the quantum world, relationship is the key determiner of everything. Subatomic particles come into form and are observed only as they are in relationship to something else. They do not exist as independent things. Any open system has the capacity to respond to change and disorder by reorganizing itself at a higher level of organization. Disorder becomes a critical player, an ally that can provoke a system to self-organize into new forms of beings.

- Order and chaos are now understood as mirror images, two states that contains the other. A system can descend into chaos and unpredictability, yet within that state of chaos the system is held within boundaries that are well ordered and predictable. Without partnering of these two great forces, no change or progress is possible. Chaos is necessary to new creative ordering.
- Order and form are created not by complex controls, but by the presence of a few guiding formulas or principles repeating back on themselves through the exercise of individual freedom.
- In motivation theory, attention is shifting from the use of external rewards to an appreciation for the intrinsic motivators that give us great energy. We are refocusing on the deep longings we have for community, meaning, dignity, purpose, and love in our organizational lives.
- I have played with the notion that organizational vision and values act like fields, unseen but real forces that influence people's behavior. This is quite different from more traditional notions that vision is an evocative message about some desired future state delivered by a charismatic leader.
- We are beginning to recognize organizations as whole systems, construing them as "learning organizations" or as "organic" and noticing that people exhibit self-organizing capacity.
- For months, I have been studying process structures – things that sustain their identity over time yet are not locked rigidly into any one physical form.
- The forms change, but the mission remains clear. Structures emerge, but only as temporary solutions that facilitate rather than interfere.
- Organizations lack this kind of faith, faith that they can accomplish their purposes in varied ways and that they do best when they focus on intent and vision, letting forms emerge and disappear.
- Streams have a different relationship with natural forces. With sparkling confidence, they know that their intense yearning for ocean will be fulfilled, that nature creates not only the call, but also the answer.
- This is a universe, we feel, that cannot be trusted with its own processes for growth and rejuvenation. If we want progress, then we must provide the energy to reverse decay. By sheer force of will, because we are the planet's intelligence, we will make the world work. We will resist death.
- Autopoiesis is life's fundamental process for creating and renewing itself, for growth and change.
- Disorder can be the source of the new order. Dissipative structures: dissipation describes loss, a process of energy gradually ebbing away, while structure describes embodied order. Dissipative activity of loss was necessary to create new order. Dissipation doesn't lead to the death of a system. It was part of the process by which the system let go of its present form so that it could reorganize in a form better suited to the demands of its changed environment.
- If in its current form, a system cannot deal with a disturbance, it dissolves. But this disintegration does not signal the death of the system. If a living system can maintain its identity, it can self-organize to a higher level of complexity, a new form of itself that can deal better with the present.
- Dissipative structures demonstrate that disorder can be a source of new order and that growth appears from disequilibrium, not balance. The things we fear most in organizations – disruptions, confusion, chaos – need not be interpreted as signs that we are about to be destroyed. Instead, these conditions are necessary to awaken creativity.
- Quantum physicists speak in terms of probabilities, not prediction. They can calculate the probable moment and location of a quantum leap, but not exactly. Newtonian physics operates with a different belief – the world does behave in deterministic ways.
- There is so much order in the chaotic that our attempts to separate out discrete events create the appearance of disorder.
- A system is defined as chaotic when it becomes impossible to know what it will do next.

- The system holds order within it, and reveals this self-portrait as a beautiful pattern, its strange attractor.
- Throughout the universe, then, order exists within disorder and disorder within order.
- A system is a set of processes that are made visible in temporary structures. These living structures are in no way similar to the solid structures we build. The structures of life are transient; they are capable of changing if needed.
- Informal leadership: people create the leadership that best responds to their needs at the time.
- Roving leadership: indispensable people in our lives who are there when we need them.
- Leadership is best thought of as a behavior, not a role.
- Our search for safety, our belief that we can control our organizations by the structures we impose is foolish.
- In America, we raised individualism to its highest expression, each of us protecting our boundaries, asserting our rights, creating a world that leaves the individual suspended in glorious, but terrifying isolation.
- Quantum world consists of dynamic patterns continually changing into one another – the continuous dance of energy.
- The universe begins to look more like a great thought than like a great machine.
- Particles come into being ephemerally through interactions with other energy sources.
- With relationships, we give up predictability and open up to potentials.
- None of us exists independent of our relationships with others. Different settings and people evoke some qualities from us and leave others dormant. In each of these relationships, we are different, new in some way.
- Systems influence individuals, and individuals call forth systems.
- The act of observation causes the potentiality of the wave packet to collapse into one or the other aspect. Before the observer acts, an endless profusion of possibilities continues to be available.
- Move away from arguing about who's right and who's wrong, and instead focus on issues of effectiveness, on reflective questions of what happened, and what actions might have served us better.
- Acting should precede planning, because it is only when we act to implement something that we create the environment. Until we begin this interaction with the environment, how can we formulate out thoughts and plans? In strategic planning, we act as though we are responding to a demand from the environment, but in fact, we create the environment through our own intentions. Strategies should be just in time, supported by more investment in general knowledge, a large skill repertoire, the ability to do a quick study, trust in intuitions, and sophistication in cutting losses.
- Many former planning advocates now speak about strategic thinking rather than planning.
- This is not a suggestion that organizations exist in a totally reactive state. There is an essential role for organizational intent and identity. Without a clear sense of who they are, and what they are trying to accomplish organizations get tossed and turned by shifts in their environment. No person or organization can be an effective co-creator with its environment without clarity about who it is intending to become.
- We need fewer descriptions of tasks and instead learn how to facilitate process. We need to become savvy about how to foster relationships, how to nurture growth and development.
- Power in organizations is the capacity generated by relationships.
- Look at a workplace's capacity for healthy relationships. Do people know how to listen and speak to each other? To work well with diverse members? Do people have free access to one another

throughout the organization? Are they trusted with open information? Do organizational values bring them together or keep them apart? Is collaboration truly honored? Can people speak truthfully to one another?

- If power is the capacity generated by our relationships, then we need to be attending to the quality of those relationships. We would do well to ponder the realization that love is the most potent source of power.
- We all have been forced to deal with unintended consequences of our well-intended plans. We thought we were doing something helpful to solve a problem, and suddenly we are confronted with eight new problems created by our initial solution.
- We never know how our small activities will affect others through the invisible fabric of our connectedness. I have learned that in this exquisitely connected world, it's never a question of critical mass. It's always about critical connections.
- This world demands that we be present together, and be willing to improvise. We listen carefully, we communicate constantly, and suddenly, there is music beyond anything we imagined. The music comes from somewhere else, from a unified whole we have accessed among ourselves, a relationship that transcends our false sense of separateness. When the music appears, we can't help but be amazed and grateful.
- I gave up looking for straightforward cause and effect. I feel similarly that to position things as polarities doesn't help – we need to stop drawing lines of opposition and try to understand the “and” of one and one.
- I want to use the time formerly spent on detailed planning and analysis to create the organizational conditions for people to set a clear intent, to agree on how they are going to work together; and then practice to become better observers, learners and colleagues as they co-create with their environment.
- I have given up trying to control anything. The universe refuses to cooperate with my desire to play God.
- The longer the task forces studied the issues, the more they were seeing the problems as interrelated. Threads of interconnections were everywhere, yet the five groups were still acting separately from one another. The result was fatigue and impatience.
- Space is the basic ingredient of the universe; there is more of it than anything else. Even at the microscopic level of atoms, where we would expect things to be dense and compact, there is mostly space.
- We are far more porous than our dense bodies indicate. In fact we are as void proportionately, as intergalactic space.
- Space everywhere is now thought to be filled with fields, invisible, non-material influences that are the basic substance of the universe.
- In Newton's model of gravitational pull, a force emanated from one source, acting on another. Einstein developed a different view of the gravitational field. In relativity theory, gravity acts to structure space. The reason objects are drawn to earth is because space-time curves in response to matter. Rather than a force, gravity is understood as a medium, the invisible geometry of space.
- Fields are unseen forces, invisible influences in space that become apparent through their effects.
- Fields are unapproachable through our five senses, yet in quantum theory, they are as real as particles.
- Leaders have been encouraged to consider the impact of non-material forces in organizations – culture, values, vision, ethics. Each of these concepts describes a quality of organizational life that can be observed in behavior yet doesn't exist anywhere independent of those behaviors.

- We can never see a field, but we can easily see its influence by looking at behavior. To learn what's in the field, look at what people are doing. They have picked up the messages, discerned what is truly valued, and then adjusted their behavior accordingly. When organizational space is filled with divergent message, when only contradictions float through the ethers, this invisible incongruity becomes visible as troubling behaviors.
- In creating a vision, we are creating a power, not a place, an influence, not a destination. Vision must permeate through the entire organization as a vital influence on the behavior of all employees. We feel genuinely threatened by incongruous acts because we would understand their disintegrating effects on what we dream to accomplish. We become an organization of integrity where our words would be seen and not just heard.
- If we attend to the fields we create, if we help them shine clear with coherence, then we can clean up some of the waste of organizational life.
- Vision statements must move off the walls and into the corridors, seeking out every employee, every recess in the organization.
- We need to imagine ourselves as beacon towers of information, standing tall in the integrity of what we say, pulsing out congruent messages everywhere.
- Unobserved quantum phenomena are radically different from observed ones.
- We make observations looking for confirmation of our beliefs. In human organizations, we determine the fate of all of us by what we decide to observe in one another.
- The world is only a potential and not present without me or you to observe it. All of the world's many events are potentially present, able to be but not actually seen or felt until one of us sees or feels.
- We need to explore how our perceptions of people and events shape the reality that we then end up struggling with so much.
- No form of measurement is neutral. Every act of measurement loses more information than it gains.
- We worry more about the accuracy of the small bits of information we have and how best to analyze them than about the huge amounts of information we lose.
- In quantum imagery, when data is recognized as a wave, rich in potential interpretations and completely dependent on observers to evoke different meanings.
- People support what they create. Participation process makes a plan come alive as a personal reality. People can commit themselves because it has become real for them.
- Nothing happens in the quantum world without something encountering something else. Nothing exists independent of its relationships. We are constantly creating the world – evoking it from many potentials – as we participate in all its many interactions.
- Who you are depends on who you meet.
- Is it possible to think about organizational roles in this way, as focal points for interactions and energy exchanges? To any role's specific tasks and accountabilities, we should also consider how that role contributes energy to others.
- I've observed the search for organizational equilibrium as a sure path to institutional death; a road to zero trafficked by fearful people.
- Equilibrium is the end state in the evolution of closed systems, the point at which the system has exhausted all of its capacity for change, done its work, and dissipated its productive capacity into useless entropy. Entropy is an inverse measure of a system's capacity for change. The more entropy there, the less the system is capable of changing.

- If we believe that the universe is on a relentless road to death, we can't help but live in fear of change.
- To stay viable, open systems maintain a state of non-equilibrium, keeping themselves off balance so the system can change and grow.
- In the past, systems analysts and scientists studied open systems primarily by focusing on the structure of the system. This route led them away from observing or understanding the processes of change and growth that keep a system viable over time.
- Positive or amplifying feedback loops use information not to regulate, but to notice something new and amplify it into messages that signal a need to change. Positive feedback is essential to life's ability to adapt and change. In these loops, information increases and disturbance grows. The system, unable to deal with so much new and intensifying information, is being asked to change.
- Interest needs to turn from system structures to system dynamics.
- Once it was noted that systems were capable of exchanging energy, trading usable energy for entropy, scientists realized that deterioration was not inevitable. Disturbances could create disequilibrium, but disequilibrium could lead to growth. If the system had the capacity to react and change, then disturbance was not necessarily a fearsome opponent.
- Disequilibrium is the necessary condition for a system's growth. Dissipative structures dissipate or give up their form in order to recreate themselves into new forms. Faced with increasing levels of disturbance, these systems possess the innate ability to reorganize themselves to deal with the new information. For this reason, they are called self-organizing systems. They are adaptive and resilient rather than rigid and stable.
- Process structures reorganize into different forms in order to maintain their identity. It is capable of organizing into whatever form it determines best suits the present situation.
- There are increasing reports of organizations that have given up any reliance on permanent structures.
- An open organization doesn't look for information that makes it feel good, that verifies its past and validates its present. It is deliberately looking for information that might threaten its stability, knock it off balance and open it to growth.
- Self-organizing systems are never passive, helpless victims forced to react to their environments. As the system matures and develops self-knowledge, it becomes more adept at working with its environment. It uses available resources more effectively, sustaining and strengthening itself. It gradually develops a stability that then helps shelter it from many of the demands from the environment. This stability enables it to continue to develop in ways of its own choosing, not as a fearful reactant.
- Openness to the environment over time spawns a stronger system, one that is less susceptible to externally induced change. What comes to dominate over time is not outside influences, but the self-organizing dynamics of the system itself. Because it partners with its environment, the system develops increasing autonomy from the environment and also develops new capacities that make it increasingly resourceful.
- Because system members engage in continual exchanges among themselves and with their environment the system develops greater freedom from its environment.
- Self-reference: when the environment shifts and the system notices that it needs to change, it always change in such a way that it remains consistent with itself. This is autopoiesis in action; a system focuses on maintaining itself, producing itself. It will choose a path into the future that it believes is congruent with who it has been. Change is never random; the system will not take off in bizarre new

directions. Paradoxically, it is the system's need to maintain itself that may lead it to become something new and different. A living system changes in order to preserve itself.

- In organizations, just as with individuals, a clear sense of identity - the lens of values, tradition, history, dreams, experience, competencies, culture – is the only route to achieving independence from the environment.
- The more freedom in self-organization, the more order. Effective self-organization is supported by two critical elements: a clear sense of identity and freedom. In organizations, if people are free to make their own decision, guided by a clear organizational identity to reference, the whole system develops greater coherence and strength. The organization is less controlling, but more orderly.
- When the system is far from equilibrium, singular or small influences can have enormous impact. It is not the law of large numbers or critical mass that creates change, but the presence of a small disturbance that gets into the system and is then amplified through the networks. Once inside the network, this small disturbance circulates and feeds back on itself. As different parts of the system get hold of it, interpret it, and change it, the disturbance grows. Finally, it becomes so amplified that it cannot be ignored.
- Whenever a self-organizing system experiences an amplification process, change is at hand. If the amplifications increase to the level where they destabilize the system, the system can no longer remain as it is. At this moment, the bifurcation point, the system is at a crossroads, standing poised between death and transformation.
- Organizations and their environments are evolving simultaneously toward better fitness for each other.
- When leaders strive for equilibrium and stability by imposing control, constricting people's freedom and inhibiting local change, they only create the conditions that threaten the organization's survival.
- Stasis, balance, equilibrium these are temporary states. What endures is process – dynamic, adaptive, creative.
- Why is there such an epidemic of poor communications within organizations?
- What we were all suffering from, then and now, is a fundamental misperception of information: what it is, how it behaves, how to work with it.
- This strong focus on the “thingness” of information has kept us from contemplating its other dimensions: the content, character, and behavior of information.
- Information has a longer life span than the solid matter it is matched with. Memory is more permanent than matter. Your body is just the place your memory calls home.
- In a constantly evolving, dynamic universe, information is a fundamental yet invisible player, one we can't see until it takes physical form.
- For a system to remain alive, for the universe to keep growing, information must be continually generated. If there is nothing new, or if the information merely confirms what already is, the result will be death. Closed systems wind down and decay, victims of the second law of thermodynamics.
- Intelligence is a property that emerges when a certain level of organization is reached which enables the system to process information. The greater the ability to process information, the greater the level of intelligence.
- Any entity that has capacities for generating and absorbing information, for feedback, for self-regulation, possesses mind.
- We can begin to see that organizational intelligence is not something that resides in a few experts, specialists, or leaders. Instead, it is a system-wide capacity directly related to how open the

organization is to new and disconfirming information, and how effectively that information can be interpreted by anyone in the organization.

- Everybody needs information to do their work. We are so needy of this resource that if we don't get the real thing, we make it up. When rumors proliferate and gossip gets out of hand, it is always a sign that people lack the genuine article – honest, meaningful information
- For so long, we've been engaged in smoothing things over, rounding things off, keeping the lid on, that our organizations have literally been dying for information they could feed on, information that was different, disconfirming, and filled with enough newness to disturb the system into wise solutions.
- Instead of the limiting thought that information is power, they began to think of information as nourishment.
- We refuse to accept ambiguity and surprise as part of life because we hold onto the myth that prediction and control are possible.
- In our brains, complex information travels across broad expanses, never organized into neat pathways, yet capable of organizing into memory and functions.
- We have many organizational models that demonstrate how open access to information contributes to self-organized effectiveness.
- Knowledge grows inside relationships, from ongoing circles of exchange where information is not just accumulated by individuals, but is willingly shared. Information-rich, ambiguous environments are the source of surprising new births.
- Restricting information and carefully guarding it doesn't make us good managers. It just stops good people from doing good work.
- Managers need a new role, that of equilibrium busters. No longer the caretakers of control, we become the grand disturbers. We stir things up and roil the pot, looking always to provoke, even to disrupt, until finally things become so confusing that the system must reorganize itself into new forms and new behaviors.
- Many creativity teachers suggest that we use such a small part of our mental capacity because of our insistence on linear thinking.
- What is needed is an act of understanding in which we see the totality as an actual process that, when carried out properly tends to bring about a harmonious and orderly overall action, in which analysis into parts has no meaning.
- Order itself is not rigid or located in any one structure; it is a dynamic organizing energy. Chaos has always partnered with order – a concept that contradicts our common definition of chaos- but until we could see it with computers, we saw only turbulence, energy without predictable form. Chaos is the last state before a system plunges into random behavior where no order exists. Not all systems move into chaos, but if a system becomes unstable, it will move first into a period of oscillation, swinging back and forth between two different states.
- In the realm of chaos, where everything should fall apart, the strange attractor emerges, and we observe order, not chaos. The boundary is not defined for the system; the boundary lives within the system, becoming visible as it explores its space of possibilities.
- Most of us have experienced this ride of chaos in our own lives. At the personal level, chaos has gone by many names, including “dark night of the soul” or “depression”.
- As we reflect on the times when we personally have descended into chaos, we can notice that as it ends, we emerge changed, stronger in some ways, new. We have held in us the dance of creation and learned that growth always requires passage through the fearful realism of disintegration.

- The shape of a system is predictable or predetermined. But how this shape takes form is through individual acts of free agency. Chaos is order without predictability.
- When a system is nonlinear and webbed with feedback loops, repetition feeds the change back on itself, causing it to amplify and grow. After several iterations, a variance that was too small to notice can cause enormous impact.
- In a nonlinear world, there is no relationship between the strength of the cause and the consequence of the effect.
- In a nonlinear system, the slightest variation can lead to catastrophic results.
- Strange attractors are self-portraits drawn by a chaotic system. They are always fractal in nature, being deeply patterned.
- There are only about two dozen different strange attractors, but there are infinite fractals. A fractal describes any object or form created from repeating patterns evident at many levels of scale.
- What is important in a fractal landscape is to note not quantity but quality.
- When we study the individual parts or try to understand the system through discrete quantities we get lost. Deep inside these details, we cannot see the whole. Yet to understand and work with the system, we need to be able to observe it as a system. Systems reveal themselves as patterns not as isolated incidents or data points.
- I am often struck by eerily similar behaviors exhibited by people in an organization. I might detect a recurring penchant for secrecy, for name-calling or for openness.
- Self-similarity is achieved not through compliance to an exhausting set of standards and rules, but from a few simple principles that everyone is accountable for, operating in a condition of individual freedom.
- Little by little, tested by events and crises, we learn how to enact new values.
- The leader's role is not to make sure that people know exactly what to do and when to do it. Instead, leaders need to ensure that there is strong and evolving clarity about who the organization is. When this clear identity is available, it serves every member of the organization.
- If we can trust the workings of the world, we will see that the strength of our organizations is maintained if we retain clarity about the purpose and direction of the organization.
- In this chaotic world, we need leaders, but we don't need bosses. We need leaders to help us develop the clear identity that lights the dark moments of confusion. We need leaders to support us as we learn how to live by our values. We need leaders to understand that we are best controlled by concepts that invite our participation, not policies and procedures that curtail our contribution.
- What is it that would be so attractive that it would hold our behavior within a boundary and keep us from wandering into formlessness? Values, but by far the most powerful force of attraction in organizations and in our individual lives is meaning. Our greatest motivation in life is not to gain pleasure or to avoid pain but rather to see a meaning.
- I have witnessed the incredible levels of energy and passion that can be evoked when leaders or colleagues take the time to recall people to the meaning of their work. It only takes a simple but powerful questions: What called you here? What were you dreaming you might accomplish when you first came to work here?
- We haven't thought that we might work with the forces of change.
- When we encounter life's processes for change, we enter a new world. We move from billiard balls banging into one another to effect change, to networks that change because of information they find meaningful.

- When scientists shifted their vision from the parts to the whole, what looked like chaos revealed inherent order; a chaotic system displayed itself in a strange attractor.
- Our traditional analytic skills can't help us observe a whole system.
- Allow yourself to pick up impressions, notice how something feels, sit with a group or with a report and call upon your intuition.
- Goethe was intrigued to understand any phenomenon not as an isolated event, but as a consequence of its relationship to other phenomena.
- All beings rely on the law of dependent co-arising. The source of one thing is all things. The leaf depends on earth, water, heat, sea, tree, clouds, sun, time, and space in order to exist.
- Look intently at the part in order to see the dynamics operating in the whole system. The part is not the whole, but it can lead us there.
- If a web breaks and needs repair, the spider doesn't cut out a piece, terminate it, or tear the entire web apart and reorganize it. She reweaves it, using the silken relationships that are already there, creating stronger connections across the weakened spaces.
- To make a system stronger, we need to create stronger relationships.
- In order to change, the system needs to learn more about itself from itself. The system needs processes to bring it together. The whole system eventually must be involved in doing this work; it can't be done by outside experts or small teams.
- Any living thing will change only if it sees change as the means of preserving itself.
- Self-reference explains why any living system is motivated to change. It will change to stay the same.
- I discover who they are by noticing what's meaningful to them as they are engaged in their work. What issues and behaviors get their attention? What topics generate the most energy, positive and negative?
- It is interesting to note how many interpretations the different members of a group can give to the same event. No two people see the world exactly the same.
- If we recognize a shared sense of injustice or a common dream, magical things happen to people. Past hurts and negative histories get left behind. People step forward to work together.
- What we will hear is that most of us went into teaching for noble purposes – we wanted to make a difference in the lives of students and to advance human wisdom. If we have this conversation first, we can discover one another as colleagues. Then we are ready to talk about technology.
- Meaningful information lights up a network and moves through it like a windswept brushfire. Meaningless information, in contrast, smolders at the gates until somebody dumps cold water on it. The capacity of a network to communicate with itself is truly awe-inspiring; its transmission capability far surpasses any other mode of communication. But a living network will transmit only what it decides is meaningful.
- Preaching to the choir is exactly the right thing to do. If I can help those who already share certain beliefs and dreams sing their song a little clearer, I know that they will take that song back to their networks.
- We don't have to push and pull a system or bully it to change; we have to participate with colleagues in discovering what's important to us. Then we feed that into our different networks to see if our networks agree.
- As we contemplate now networks change themselves, it helps to remember that we are working with energy, not matter. One approach to organizational change: I start anywhere and follow it everywhere, following where ideas take hold.

- Although we see change at the material level, it is caused by processes that are immaterial. We must look for these invisible processes rather than the things that they engender.
- We need less reverence for the objects we create, and much more attention to the processes we use to create them. Healthy processes create better relationships among us, more clarity about who we are, and more information about what's going on around us.
- As we learn to live and work in this process world, we are rewarded with other changes in our behavior. I believe we become gentler people. We become more curious about differences, more respectful of one another, more open to life's surprises.
- We are great weavers of tales, listening intently around the campfire to see which stories best capture our imagination and the experience of our lives. If we can look at ourselves truthfully in the light of this fire and stop being so serious about getting things right, we can engage in life differently, more playfully.
- Everywhere in the new sciences, in living systems, theory, quantum physics, chaos and complexity theory, we observe life's dependence on participation.
- Most basic human dynamics are completely ignored: our need to trust one another, our need for meaningful work, our desire to contribute and be thanked for that contribution, our need to participate in changes that affect us.
- Beyond the fads that have swept through large organizations, think of all the contemporary leadership problems that are variations on the theme that we don't know how to work together. We are terrified of the emotions aroused by conflict, loss, and love. In all of these struggles, it is being human that creates the problem. We have not yet learned how to be together. I believe we have been kept apart by three primary Western cultural beliefs: individualism, competition, and a mechanistic worldview.
- This is not a universe of things, but a universe of the no-thing of information. And this information is organized by a second invisible element, meaning.
- Information and meaning making do not obey the classical laws of physics that govern matter. As energetic forces, they move and act differently – they can travel with great speed anywhere in the universal web and appear suddenly as potent influences that surprise us. In the West, we didn't grow up learning about non-material forces. But this has become a critical curriculum.
- People need to be free to do what has to get done.
- As we abandon the machine imagery of the past, self-reference calls to me as the richest and most enticing teacher for how to be together in ways that support life, not destruction.
- Self-reference conjures up such different possibilities for how to be together. It explains how life creates order without control, and stable identities that are open to change; it describes systems of relationships where both interdependent and individual autonomy are necessary conditions. It promises that as individuals together reference a chosen, shared identity, a coherent system can emerge. It illuminates the necessity for meaning making in a world that often feels meaningless.
- No rebirth is possible without moving through a dark passage.
- We do need to be sharing what we find, but not as models. From each other, we need to learn what is possible. Another's success encourages us to continue our own search for treasure.
- After all is said and done, we have the gift of each other. We have each other's curiosity, wisdom, and courage. And we have life, whose great ordering powers, if we choose to work with them, will make us even more curious, wise and courageous.