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# THE SYSTEMS THINKER™

*Special Conference Issue*

## Learning Organizations: The Promise and the Possibilities

This year's annual Systems Thinking in Action™ Conference explored both the promise and the reality of the learning organization through the theme, "Learning Organizations in Practice: The Art of the Possible." Each of the keynote speakers provided a different perspective on the process of creating a learning organization. Together their comments provide a rich and fascinating exploration of the purpose, principles, and structures that will make the learning organization a reality.

Following are summaries of three of the keynote talks. Recordings of some keynote and parallel sessions are also available on audio and/or videotape as part of the Systems Thinking in Action™ Conference Collection.

—Colleen P. Lannon

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PEGASUS



### **Peter Senge—Creating Transformational Knowledge**

The concept of the learning organization first became prominent about six years ago. It is only now becoming clear, however, that this concept is missing something fundamental. We are now learning that what goes on in any creative process isn't about organization, it's about *community*. The absence of effective learning communities keeps our organizations from being able to learn from our most clear, demonstrated breakthroughs. Although individual learning occurs all the time in organizations, it often has little or no impact on the larger system. Learning communities provide the infrastructure and support to expand learning beyond the individual level.

The three core activities of the learning community are practice, research, and capacity building (see "Core Activities" on p. 2). *Practice* is anything that people do to produce an outcome or result. Practitioners can be line managers, a product development team, a sales team, or front-line manufacturing people. *Research*, on the other hand, is any disciplined approach to discovering and understanding, with a commitment to share what's learned. The institution we associate most often with research is

the university. *Capacity building* is carried out by coaches and mentors, who help people develop the capacity to do something they couldn't do before.

Consulting, or the HR function within an organization, is the institution most often associated with capacity building.

Unfortunately, in the real world these three activities rarely overlap. But if we were to get rid of the imaginary boxes that separate these areas, we would actually begin to see a system for producing theory, methods, tools, and practical know-how. This is the essence of a learning community.

### **Fragmentation**

The fragmentation among these three areas of activity is at the heart of many problems we face today. One reason we are powerless to deal with our environmental problems or can't help our large institutions change in fundamental ways is that the system whereby we collectively learn and alter our conditions is deeply fragmented. Walls have been built around the three areas of activity. Capacity builders such as consulting institutions, for example, undermine the knowledge-creating process because they have almost no incentive to share their insights with others. How free are

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they really to deal with the toughest issues of the client system? What if the person paying the bill is the problem? Can they tell him or her?

Then there are the walls between the university and other parts of the system. A typical article from an academic journal is full of jargon, referencing thousands of ideas that only a handful of people know about. These experts employ what Donald Schön calls "technical rationality," which separates theory from application: first you get the theory, then you apply it. This disconnection also appears in organizations, where the executives operate by technical rationality while the people on the front lines are the ones who actually have to put theory into practice.

## The Systems Thinker™

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*The Systems Thinker™* explores both the theory and practice of the learning organization, with particular emphasis on systems thinking as the cornerstone of the five disciplines (as outlined by Peter Senge in *The Fifth Discipline*). Articles by leading thinkers and practitioners articulate the challenges and issues involved in creating learning organizations. We encourage dialogue about systemic issues and strive to provide a forum for debating such issues. Unsolicited articles and stories are welcome.

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Once we let go of technical rationality, we can ask: How does real learning occur? What happens in a community that integrates these areas? Artistic communities, for example, show that a different way of working together is possible. MIT's Eric von Hippel, a world leader on product design, cites another example of a learning community. He notes that a lot of terrific new products are created by the customer, not by the company. In his view, companies that form different relationships with their customers can be extraordinarily more competent in product innovation—an example of how companies can form a learning community.

### AutoCo: Learning Community in Action

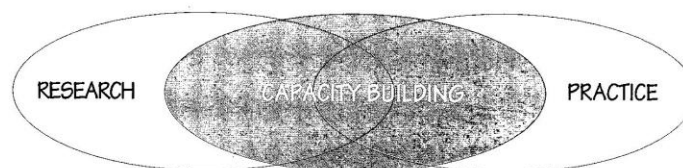
Another example of a learning community is the AutoCo case, which has been the subject of a three-and-a-half year project at the MIT Center for Organizational Learning (OLC). It has been documented through a series of interviews that tell the story of this product development team's journey—a story that chronicles fascinating change among individuals that occurred as they developed new capacities to work together. As one of the team leaders explained, "[Now] everybody says what's really on their mind. All our problems are thrown on the table. It looks like chaos, but issues really get sorted out. We don't wait until we have the answer to bring up the problem."

In an engineering culture, this directly contradicts a basic ground rule: bring up the problem only *after* you have solved it. But by the end of the project, this team wasn't operating that way anymore. They had found a new way of working together—one that proved extraordinarily successful and broke many company records. Clearly, this is a powerful story of the interaction between capacity building and practice.

However, the activities and mindset of the team were viewed as so foreign by the larger bureaucracy that the team was seen as "out of control." After a global reorganization, the senior team members were not offered compelling positions, so they left the company within a few months of the product's release.

There is a postscript to this story. Today, almost two years later, there are thousands of people involved in learning organization projects at AutoCo. Somehow, what seemed like an enormous setback at the time—the loss of several senior team members—did not hamper the overall process. And, perhaps even more surprising, AutoCo's senior managers recently decided to publicly disseminate the learning history document, which tells the story of the team's successes and failures. Why? Because it was consistent with their overall vision of making the link between research and practice. Until this disciplined approach to "discovery

### Core Activities



The three core activities of the learning community involve practice, research, and capacity building. By integrating these areas, we can begin to create a system for producing theory, methods, tools, and practical know-how.

and understanding with a commitment to sharing" is present, the toughest issues that arise in innovative practices will often remain submerged.

### **Creating Learning Communities**

How do we create learning communities? First, as in the AutoCo case, we must let our story out—even the parts of it that we do not like. Second, we need to be clear about our larger purpose. What are we committed to? If we are focused only on producing practical results, our efforts will never be truly successful. The knowledge-creating process must be broader than that; it must embrace all three areas. Without these multiple perspectives and commitments, brilliant innovations will not spread.

Finally, we have to find new ways of governing. At the MIT Center for Organizational Learning, we're moving toward having a governing council that is elected by all the members of the community. This approach is radical, because in almost all nonprofit organizations the council appoints its own successors. But we believe that a democratic system, in essence, should invest more power in underlying ideas than in institutions.

In a democratic community, theory, tools, and practical knowledge are like a tree. The roots of the tree are theory, the branches are tools, and the fruit is practical knowledge. If you just eat all the fruit (take all the practical know-how, apply it, make lots of money) but don't reinvest some of that fruit and let it reseed, you'll have no more theory, no more trees.

At the heart of this tree is a transformational process: photosynthesis. The ideas that are drawn up through the roots (the theory) interact with the outside environment through the leaves (the tools) that create the fruit of practical knowledge. This system is trans-

formational, and knowledge of the whole system might be called transformational knowledge.

But this transformational knowledge—of the knowledge-creating process—is not held by any one individual or group. It exists as collective knowledge held only by a community, a *learning community*. Thus, as we learn how to develop such communities, we may come to a much deeper appreciation of democracy, "a great word," as Walt Whitman said, "whose . . . history has yet to be enacted."

—Edited by Joy Sobeck

### **Robert Fritz— The Power and Beauty of Structure: Moving Organizations from Oscillation to Advancement**

I studied at a conservatory of music, which is something I usually don't mention in business settings. When people hear that you are in the arts, they immediately assume that you don't know anything about business. But it strikes me that, in some ways, an organization is really no different from a piece of music. No organization is more structurally complex than, for example, Stravinsky's *Rite of Spring*. In fact, if our organizations functioned like great orchestras, they would work very well—far better than many of them currently do. But we must include design as well as execution in our analogy—the composition is as important as the performance, if not more so.

The key to optimal performance—both in organizations and in the arts—lies in understanding and working with *structure*. Structure is an essential element in artistic pieces, and it can also work for or against change in organizations. If we focus on altering those fundamental structures that don't work, we can accomplish the changes we want. However, if we don't take structure into consideration, any change effort, no matter how valuable, may be doomed to failure.

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### **What Is Structure?**

The first characteristic of structure is that it consists of individual *elements*. These elements form *relationships* in which the combination of the elements *causes* the elements to behave in particular ways. The relationships, taken together, form a kind of unified *entity*. So structure is not simply various elements that have relationships with each other; it is the overall entity formed by these particular causal relationships.

In the arts, structure is based on tension/resolution systems. Tension is caused by a discrepancy between two things (light/dark, loud/soft, protagonist/antagonist, etc.), and it produces a desire for resolution. Artists manage tensions and resolutions quite consciously. To a filmmaker, the audience's feelings are predictable, controllable. Alfred Hitchcock, for example, was a master at understanding how structural relationships cause particular patterns of behavior. He could make a film in which he determined exactly what the audience would feel at any moment of the film. If we, like Hitchcock, can understand structure, we can create a structure that is bound to go in a particular direction. For an organization, this principle can help people form structures that lead to predictable and wanted changes, rather than unin-

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tended consequences and neutralization of success.

For example, a pivotal moment in the movie *Casablanca* occurs when Ilsa and Victor Laslow walk into Rick's cafe. They're sitting at a table chatting, and Rick looks over at Ilsa. Their eyes meet, and in that moment, we know we have a triangle. We have a woman who loves two men. We have a movie!

To determine if these relationships are structural, let's test them. If we change the elements, do any of the dynamics change? Let's say that Rick is in his cafe and Ilsa comes in alone. Does that change the dynamics? How about if Ilsa and Victor come into Rick's cafe, but Rick has gone to Chicago, so he's not there? Or, Rick is at the cafe and Victor comes in, but Ilsa's not with him? It's simply not the same—the tension that is set up between those three people dissipates the moment one of them is taken out of the scene. As soon as we change the structure of the relationships, the tendency for behavior changes.

As this scene illustrates, a structural relationship is one in which there's a tendency for behavior to move in a particular direction. At the beginning of the film, Rick says, "I stick my neck out for nobody." But at the end he sends the woman he loves off with another man for the well-being of humanity. Now that's movement!

### Organizational Structures

We can see similar tension/resolution systems operating within organizations. This type of system produces either os-

cillation or advancement (also called resolution). Obviously, we would like our companies to advance, but we often get stuck in oscillating patterns. Why? It has to do with the conflict that is set up when there are two competing tension/resolution structures operating in the same system.

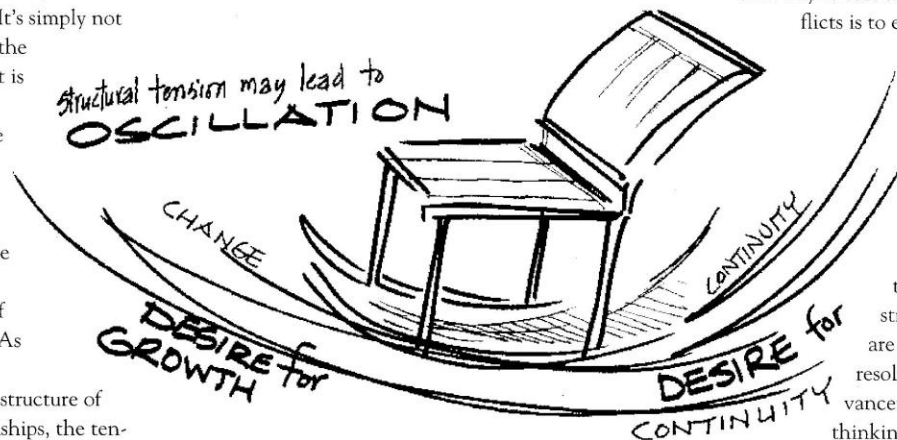
To understand how conflict plays out, let's say I've got a rubber band tied around my waist and anchored to a wall that represents *change*. This sets up a tension/resolution system—the tension in the rubber band will naturally resolve as I move toward the desired change. But suppose I've got another rubber band around my waist that anchors me to the opposite wall, representing *stability* and *continuity*. As I start moving toward change, the rubber band in front

tion systems are in the same structure, they must compete. It isn't that people by nature are resistant to change, but that there has to be an underlying structural motivation for us to resolve tension in the direction in which we want to go.

### Moving Toward Resolution

Obviously, we want to structure our organizations to enable resolution rather than oscillation—to move from where we are to where we want to be and, having moved there, be able to move to yet another place. So how can we prevent ourselves and our companies from getting stuck in competing structures? By creating structures that can "resolve," thus moving us toward advancement and success.

One way to sort out these conflicts is to establish hierarchies of importance in values, which can enable us to create structural tension—structures that are capable of resolution and advancement. When thinking about capitalizing a business, for ex-



ample, the goals of building the company and managing short-term stock-market performance can become conflicting. If a leader in a company doesn't sort out what's more important—building the business or focusing on the return on the stock market—every time the employees move in a direction that will build long-term growth and sustainability, they will be pulled away from that because the company's share price went down. In contrast, if a company understands the principle of structural tension, organizes itself

of me becomes slack, but the rubber band behind me becomes more tense. At a certain point, no matter how much I believe in the change, the tension produced by the desire for stability will overcome the desire for change. At this point, I will move toward continuity and away from change.

This is the type of trap that many organizations find themselves in when they are caught in competing tension/resolution systems. In our example, there is a need for both continuity and change, but if these two tension resolu-

around what matters to it most (in contrast with its current reality), and then takes actions that move it in that direction, it will move toward resolution rather than oscillation.

In a way, this process is like creating music. As a composer takes a theme and begins to develop it throughout a piece, all the parts coordinate and play together to create a comprehensive whole. It's the same way in a well-designed company—by understanding and working with the concept of tension/resolution systems, individuals and departments can work together to continually evolve their capacity to design and then create their future.

—Edited by Joy Soback

### Margaret Wheatley— Understanding Organizations as Living Systems

Most of us are pathfinders. We are trying to understand organizations as systems. But there are profound differences between cybernetic systems and living ones. The path of living systems requires that we entertain some startling and disturbing concepts—ideas that call into question our present approaches to systems study.

An organization is not just a system, it is a *living* system. Life is always new and surprising, constantly creating further complications and mystery as it unfolds. These characteristics of life do not sit well with our desire for control. Yet life creates such dense and entangled webs that it is impossible for us to predict its behavior or to understand it through mapping. Graphic depictions deceive us into believing that we can truly understand a system. In truth, every time we develop precision in our understanding of something—including causal loops and system maps—we lose the rest of the system. Every act of defining loses

more information than it gains. The relevancy is actually in the messy, never-ending complexity of relationships.

Our desire for control leads us not just to maps, but to a reverence for techniques. We substitute the messiness of meaning for the elegance of techniques. Dialogue is an example. We took this valuable idea and turned it into a matter of technical skill, focusing on the techniques of dialogue at the expense of its essence. In this way, our desire for control can turn vital

within such agreements that our organizations take form. What is the cost, the price, of belonging to this system?

Failure to address these kinds of beliefs leaves us tinkering at the level of structure and form rather than at the organization's core. An organization cannot be changed at the level of what we see, but only at the level where its identity is forming itself. Therefore, we cannot expect a learning structure to work unless the organization's agreement of belonging is about learning. We cannot train people to be life-long learners if the agreements of belonging dictate keeping their mouths shut and "never making the boss look bad."

A SYSTEM IS ONLY  
ALIVE IF IT  
CAN GIVE  
BIRTH TO ITSELF...

Autopoiesis =  
self-creating

ideas into approaches that endanger and even destroy the good that we are trying to create in organizations.

### Organizational Identity

A system is alive only if it can give birth to itself. This means that all organizations create themselves, spin themselves into existence. They become more dense and complex as they generate endless webs of connections. Organizations create themselves around questions of identity—i.e., what is the organization? Any changes that we hope to accomplish in the workplace must therefore occur at this deep level of identity.

To create learning organizations, we must understand the underlying agreements we have made about how we will be together. Instead of focusing on training programs or structures related to organizational learning, we first need to explore the agreements people have used to organize themselves, since it is

### The Autonomy of Living Systems

A living system is also autonomous—free to choose what it wants to recognize, regardless of what we explain to it or show it. Only if the system finds what we have to say interesting and meaningful will it open itself to new information. Thus we can never direct a living system; we can only disturb it. To truly understand an organization as a living system, we need to determine what the system finds meaningful. One way to do this is to think of our "interventions" as indications of what the system notices. This method can reveal a lot about what is going on inside the system—what motivates and inspires it, and how information moves through it. If we try to change an organization and it pushes back by ignoring us or moving in another direction, we need to see these responses as a window onto how the system works, rather than as a personal failure.

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