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THE ART & PRACTICE OF THE LEARNING ORGANIZATION

by Peter Senge

What is a learning organization? Senge's use of the word goes beyond taking in information. It's more about creating and building something, enhancing capacity. An organization that can operate in an active, generative manner that continually enhances its capacity is in a state of learning. Such an organization also must overcome entrenched, old paradigm "learning disabilities," such as "I am my position" and "the enemy is out there."

The new organization, according to Senge, will instead make a commitment to five basic disciplines, by which he means a theory translated into a set of practices. Much like an artist or spiritual practitioner, the new paradigm organization may never master each discipline; however, it will create the skills and tools that enhance its capacities.

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One morning a few years ago during a little quiet time it hit me that how organizations learn or fail to learn was going to become a hot topic. Having lived through the buildup of ideas such as vision, alignment, and empowerment and not having written anything for wide distribution on those subjects, I thought maybe this was a subject where we ought to stake out some turf. Since then, I've seen the term "organizational learning" used in a lot of ways which make me glad I wrote the book, because, although they are interesting, they are not very profound.

By and large, the term has been used to describe organizations that

are "fast on their feet." We all know that the world is very turbulent today, that organizations with many layers of hierarchy can't adapt quickly, and many won't be around very long. But the idea that learning is about adaptation seems to me woefully inadequate. The very word "learning" has lost most of its meaning in contemporary speech. It has become almost synonymous with "taking in information." We might say, "Well, I learned all about financial accounting for executives yesterday. I went to the class." But what are we really saying? It's that I pulled up a chair and took in some information, and now I can replay some of it.

The schoolroom is a pretty powerful metaphor for the idea of learning as taking in information. Most of our formal education reinforces this perspective—we are taught to believe that there is some information that the "expert" has that we don't have, and once we can repeat it back to her or him with some fidelity and reliability, then we have "learned" it. But of course none of us learned to ride a bicycle that way, or to walk, or talk, or any of the other things that are genuinely called "learning." So learning has very little to do with taking in information. Most fundamentally, learning is about enhancing capacity. Learning is about creating and building the capacity to create that which you previously couldn't create. It is intimately related to action, which taking in information is not. One of the reasons traditional learning is so boring is that taking in information is very boring; it's very passive. But real learning is always "in the body"; it's intimately connected to action.

So learning organizations are organizations that are continually enhancing their capacity to create. This concept of the learning organization echoes the idea Innovation Associates has been committed to from the very beginning: that groups of people can potentially operate in ways that are fundamentally more generative, empowering, and inspiring than the ways in which we normally operate.

The central idea of [my] book is that a set of—let me call them "ideas" for now—is gradually crystallizing that will make learning organizations a realizable, reliable phenomenon. We will no longer struggle to surmount the predominant tendencies of traditional, authoritarian organizations to destroy people's spirit and change only when they must. Organizations will become predominantly learning-oriented rather than controlling. Why? *Because the way people think and interact in those organizations will be different.*

But, first, we need to look a bit deeper at why new ways of thinking and interacting are needed. We need to better understand the learning disabilities that afflict most contemporary organizations.

LEARNING DISABILITIES

The second chapter of [my] book is called "Does your organization have a learning disability?" In it, I talk about what I think are the fundamental reasons why real learning doesn't occur in organizations. Almost all of these learning disabilities are illustrated in the infamous "beer game." Over the years, I have come to see it as a wonderful metaphor for life in general. You remember when you played the game that, after a relatively short period of time, you really were hunkered down managing your position—you were a retailer, or a wholesaler, or a brewery. And that's the first learning disability, "I am my position." The way organizational life operates is that, after a little while, people form an intense identification with their position—who they are is what they do.

I first started to realize how serious this identification is ten years ago. A friend of mine had a booming business that involved retraining workers in steel plants that were closing down. He said that, in reality, these people were fundamentally untrainable. The reason is that if you've been a lathe operator for twenty years, in your mind who you are is a lathe operator. Until you can get people to see that who they are is different from what they've been doing all this time, you can't train them for anything else. The consequence of operating in organizations as if I am my position are incalculable—the loss of dignity, the destruction of intellectual curiosity, and from a systems view, doing my job "right" but screwing up the system as a whole. As the beer game illustrates, when people concentrate on handling their position well but don't understand what's going on around them, they never see how their own actions contribute to their problems.

That leads to the second learning disability, "the enemy is out there." When we think of who we are as the position we play, or the job we do, then if things don't go well we conclude that somebody out there "screwed up." When I draw this boundary very tight around myself, and my sense of identification is rooted in my position, it's very natural to look at the people outside that circle as enemies once problems arise. One of the great ironies in companies is that people often have more animosity towards other people in their organization than they do towards the competitor. Isn't that interesting when you think about it? But it is the natural consequence of this self-identification.

The third learning disability is the "myth of proactiveness." Proactiveness is a phrase that is often used these days, but it usually means

"I'm going to get more active fighting those enemies out there." For example, early in a project at an insurance firm where we've done a lot of systems work over the years, the claims vice president came up with a proactive strategy for fighting litigation.

The litigation crisis has been growing for many years in the U.S. property and liability industry, which you all know. What you might not know is that about 80 to 90 percent of the cases that get litigated are never taken to trial by jury, but are settled out of court. The reason is that within a month or two the claimant's lawyers usually know much more about what happened in the situation than the insurance company, so the insurance company has to settle. The vice president decided that to fight this they would boost their litigation staff and not get "taken to the cleaners" anymore. "We're going to get proactive" was their motto. The vice president had written a speech, which he was about to deliver, proclaiming the new policy.

The project team sat down one afternoon and built a very simple computer model—the types of calculations you could really almost make on the back of an envelope. We looked at the likely fraction of cases that would be won or lost and the cost. We estimated the cost regardless of the outcome of the trial because there are certain costs involved in taking cases to court, depending on how long the litigation process takes, the overhead costs, the indirect costs, etc. We found that there was no set of assumptions the team could provide where the firm would be ahead financially by taking more cases to court. The reason was that the quality of investigation of the claims in the first place was so shoddy that the insurance company rarely had a good case to defend, no matter how many lawyers they hired. Being "proactive" was an illusion.

The vice president was being proactive in a very reactive mindset. The root of reactiveness is in the way we think. If our state of mind is that the enemy is "out there" and we are "in here" (a fundamentally nonsystemic way of looking at the world), then proactiveness is really reactiveness with the gauge turned up 500%.

There are several other learning disabilities I talk about in chapter two. One of them, "the parable of the boiled frog," has to do with the fact that we are very good at reacting to sudden threats to our survival, but we're very poor at recognizing slow, gradual threats. That is similar to a frog that will sit in the water and let itself be slowly boiled to death because it doesn't perceive the danger.

I think the most ponderable learning disability is what I call the "illusion of learning from experience." Here's the dilemma: it's pretty

evident that most of the real learning most of us have done in our lives has been through experience. How did you learn to walk, ride a bicycle, or talk? You learned from doing something and observing the outcome—you fell off the bike and got up again, rode some, fell off and got up again, rode some more, fell off and got up again, and all of a sudden you sort of got it, right? So human beings learn wonderfully from experience—most of the time, but not always.

In fact, we learn reliably *only* when the consequences of our actions are apparent quickly and unambiguously. The reason why bicycle riding is such a good metaphor for learning from experience is that it's a near perfect example of seeing the consequences of our actions *immediately*. But, what if the rider was blind-folded and drugged, so that when she or he fell they only learned about it when they awoke, several hours later? It would then be virtually impossible to master riding through simply trying again and again.

As marvelous as children are at learning, think about what happens when a child first starts to interact with other children. Very different dynamics come into play. You do something that hurts another child's feelings, but he or she doesn't say anything, so you don't notice. Two weeks later you notice that the person who used to be your good friend just isn't very friendly to you anymore. But you don't make the connection—cause and effect are not obvious because the consequence occurs "out there," at some distant point in time. By the time you feel the friendship waning, you probably can't even remember what you did. You conclude that "people are hard to understand." Thus starts a lifetime of slow and unsteady learning about relationships.

The dynamics that preclude learning from experience in organizations are vastly more complex. Think about the important decisions we make. What makes them important, what makes them "strategic," is that the consequences occur in the future, and often in distant parts of the system. They're not local. They're not clear and unambiguous. And they are very, very hard to learn about.

I don't think organizations learn much from experience at all. As Rick Ross says, "Most managers' twenty years of experience are really one year relived twenty times." There is nothing we have that we could really call twenty years of meaningful experience. I think this is quite an interesting dilemma, the fact that we learn best from experience and yet we don't "experience" the consequences of our most important actions.

Then there is the "myth of the management team," the idea that complex inter-dependencies and dynamics can all be figured out by a

talented group of people who bring together diverse backgrounds and points of view. The reality is that most of the time management teams don't work. They are held together by a superficial facade of "all for one" camaraderie that comes apart when there is any real pressure. The collective IQ of the team is half that of the least swift team member.

For difficult problems, vastly more creative solutions would be generated if one or two people just went off and dealt with problems unilaterally instead of agreeing to the watered down consensus that emerges from "the team." One reason is that teams have pre-programmed responses to protect each other and themselves from pain, threat, and surprise—what Chris Argyris calls "defensive routines." The result is "skilled incompetence," where groups are highly skilled at protecting themselves from threat, and consequently keeping themselves from learning.

So those are the learning disabilities. Obviously, they are written with the idea of getting people's attention, because they tend to pose some troubles, some difficulties. But they are really just setting the stage, because the book is not about learning disabilities.

What I think potentially could be the enduring contribution of the book is the idea that it's truly possible to build a different sort of organization. But it will take a radically new strategy: a commitment to certain basic disciplines, which will shape how we think and interact.

The word "discipline" has a couple of different meanings. One is that a child should sit still and be "well disciplined." But another is the way it's used in the phrase "artistic discipline" or "spiritual discipline." In this context it means a particular theory, translated into a set of practices, which one spends one's life mastering. You never "have mastered" a discipline. No matter how much you learn you realize how much more there is to learn.

The first discipline is that of *building shared vision*. Now, everyone in this group knows about this discipline because it is has been a focus of Innovation Associates' work for a long time. The question I addressed in the book was first "what does it mean to have a vision?" and second, "what does it mean for it to be shared?" The idea of *building* shared vision stresses that you never quite finish it—it's an ongoing process. Even if one group starts to see very clearly a picture of the future about which they care deeply, others will see it less clearly or remain unconvinced, or simply can't see how this picture relates to them and their job. This is why the "let's write a vision statement" fad that has run rampant in recent years is so off-base. Many executives want to get

"this vision thing" over and done with, so they can then get back to work. They don't grasp that the "vision thing" *is* their work. Those leaders who understand the distinction between vision as a set of inert words and vision as a living force in the hearts and minds of people know that what matters is continually reflecting on and talking about what people really want to create.

A lot has happened in the last 10 years since Innovation Associates began to work in this area—everyone now talks about visions. But the idea is still a long way from practice. I think one of the reasons that shared visions are not common is that very few corporations have any real idea the sort of commitment you have to make to the *individual* for genuinely shared visions to operate.

The second discipline, the discipline of *personal mastery*, elaborates this commitment. The bottom line with shared visions is that individuals must have their own visions before a shared vision can exist. If people have no real sense of what truly matters to them, the best they can ever do is follow someone else's vision. This is the fundamental distinction between commitment and compliance. What needs to be recognized is that this is exactly the state of affairs that traditional authoritarian organizations have always sought: compliance to the boss' goals. *Work*, in the sense of "doing one's work," then becomes *labor*, "a factor of production," along with plant and equipment and materials. To change this state of affairs represents what might well be the most radical position advocated in the book: that learning organizations must be fully committed to the development of each individual's personal mastery—each individual's capacity to create their life the way they truly want. Despite much rhetoric to the contrary, I think this commitment is still pretty far ahead of us, although there have been a lot of changes in the business world in recent years in this direction.

Personal mastery involves not only vision but also holding an accurate picture of current reality, thereby generating "creative tension." People with high levels of personal mastery have a great tolerance for living with creative tension. They actually relish it. Martin Luther King spoke of "creating a tension in the mind, so that individuals could rise from the bondage of myth and half truths," and indeed felt that fostering such tension was his core task. This is why he sought to "dramatize" the actual conditions of racism and prejudice, while simultaneously holding forth his personal dream of "racial brotherhood . . . where my four children will one day live in a world where they will be judged not by the color of their skin but by the content of their character."

People with high levels of personal mastery can distinguish creative tension from the "emotional tension" (sadness, disappointment, hopelessness, anger) that may arise when we are truthful with ourselves about the gaps between where we are and where we want to be. Emotional tension for them becomes simply another facet of current reality, and as such is subject to the senior force of creative tension.

I think there is a great deal more to be learned about how organizations can actualize this "commitment to the truth" required for true personal mastery. I mean, what *is* current reality? The answer is not actually as straightforward as we might think. Take this flipchart. Some people might not know what a flipchart is. They'd think of it as a mass of papers. Some other people might not know what paper is, and think of this as some strange substance. So our vision of current reality has everything to do with the third discipline—*mental models*—because what we really have in our lives is constructions, internal pictures that we continually use to interpret and make sense out of the world.

The idea that people create internal representations is the cornerstone of cognitive psychology. But from a managerial and organizational perspective, what makes this idea pertinent is that our individual representations are all different, and we do a hell of a good job obscuring these differences from ourselves and one another. Recognition and communication of our mental models requires reflection and inquiry skills possessed by few managers. This part of the book is where I first start to draw very heavily on the work of Chris Argyris, Don Schon, and others who have worked to better understand the nature of reflection in the managerial setting.

One of the key concepts of the discipline of working with mental models is the need to balance inquiry and advocacy. In the organizations I've known well, most managers are trained as advocates. They were taught to be forceful, articulate spokespersons for their point of view. Very few organizations reward inquiry. When was the last time anyone was promoted for asking tough questions that challenged established policies and practices?

The irony is that as you rise in an organization, more and more you are dealing with issues that *don't* have simple answers. The really important issues that confront senior management are what E. F Schumacher (the man who wrote *Small Is Beautiful*) called "diverging problems," which require seeing issues from multiple points of view, identifying trade-offs, and making choices while continually

remaining open to discovering errors in one's reasoning. Yet the very people we're relying on to sort out these issues have been conditioned for all their professional lives to be forceful advocates, not incisive collaborative inquirers.

There are many other important aspects of working with mental models. One critical idea is what is called "levels of abstraction." Our minds work so fast that we literally confuse what we directly observe and the images our minds form based on what we observe. We leap from "data" (he is speaking loudly) to abstraction (he is insensitive) in the flicker of an eye, and then treat the abstraction as if it was data. This is why our mental models are so hard to see—to us they are what *is*, not our interpretation of what is. The idea that we relate through our mental models has all sorts of fascinating implications for managers. The basic puzzle is how do you surface, expose, and bring into a conversation people's assumptions about the world so that shared mental models can continually improve. Behind every strategy is a mental model. We can argue like cats and dogs about the strategy, but without any way of getting at the assumptions behind the strategy the argument is virtually pointless, because we have no way of achieving a deeper, shared understanding.

Now I am already starting to imply the fourth discipline, which in the book I call *team learning*. The mental models that really matter in an organization are the shared mental models, the implicit assumptions that "this is the way the world is." Individual learning, no matter how wonderful it is or how great it makes us feel, is fundamentally irrelevant to organizations, because virtually all important decisions occur in groups. The learning unit of organizations are "teams," groups of people who need one another to act.

To appreciate the discipline of team learning, let's start with the difference between discussion and dialogue. The word dialogue comes from the Greek dia • logos, *dia* meaning "through," and *logos* meaning "meaning" or "word." In its original sense, it described a conversation where the meaning moves *through* the group. So, to truly have a dialogue is really a different state. It no longer consists of individual thoughts, but a group "sharing in a pool of collective meaning," in the words of David Bohm, an eminent physicist who has spent the last eight years trying to understand the nature of thought. Bohm points out that *discussion* comes from the same roots as *percussion* and *concussion*, and literally means "to heave one's views at one another." A discussion is always a game of win or lose—the prevailing opinion is the one left on the field once the battle is done. I'm not saying that

discussion is always bad and dialogue is always good. Discussion is often very important for making decisions, particularly when there's time pressure. But without the enrichment of dialogue, collective learning will rarely occur.

The Laws of the Fifth Discipline

- Today's problems come from yesterday's "solutions."
- The harder you push, the harder the system pushes back.
- Behavior grows better before it grows worse.
- The easy way out usually leads back in.
- The cure can be worse than the disease.
- Faster is slower.
- Cause and effect are not closely related in time.
- Small changes can produce big results—but the areas of highest leverage are often the least obvious.
- You can have your cake and eat it too—but not at once.
- Dividing an elephant in half does not produce two small elephants.
- There is no blame.

Team learning was the discipline I felt the most uncertain about when writing the book. Much of what I learned for the chapter on team learning I discovered after I'd written the first draft. After I encountered David Bohm's work, I had a richer theoretical framework for talking about a lot of things I had been struggling with before. David's basic premise is that thought is primarily collective, but that humankind has, over the past several thousand years, lost the capability it once had to truly think together—that is, we have lost our ability to be conscious of our thinking and therefore to originate new thoughts that can lead to new, more collectively productive actions.

THE FIFTH DISCIPLINE

The last discipline, the one that ties them all together, is *systems thinking*.

Systems thinking is vital to the book and to learning organizations on two quite different levels. First, it offers a critical set of tools for understanding complex policy and strategy issues. Everyone pays lip service to the fact that the world is daily becoming more complex, that change is accelerating. "Change has changed"—or so the saying goes. Yet, there is little serious attention to how our predominant ways of

thinking must change in order to be prepared to understand and manage in a world of increasing inter-dependency.

In the book, systems thinking is introduced in a novel way that we have been developing at Innovation Associates in the past year or two—through understanding and using certain basic "systems archetypes." I have become convinced that this offers the lay person an intuitive and usable avenue for beginning to think systemically, without having to first spend 532 days studying at MIT or some other equally distant venue. The systems archetypes are "story lines" that keep recurring in diverse personal, organizational, and social settings. For example, many systems grow and then stop growing, often prematurely. Yet most people push on all the wrong places when they want to keep growth going. Rather than seeking out and removing the sources of limitations to growth, they "push" on the growth engines. This usually results in a brief resurgence, and then things just get worse again.

The "limits to growth" archetype is one of eight identified in the book. It may take some time to come to understand these archetypes, but I think those who do will find them to be invaluable for their own thinking and for talking about complex issues with others.

Second, systems thinking is vital as a philosophy and set of principles that integrates all the learning disciplines, and keeps them from being just a list of favorite ideas and clever techniques. The more you understand the systems perspective, the more you can begin to practice the other disciplines.

For example, I really question whether you can build shared visions without systems thinking. Most people believe their "current reality" was created by somebody else. I have long held that the best definition of systems thinking is "understanding how our actions shape our reality." If I believe that my current state was created by somebody else, or by forces outside my control, why should I hold a vision? The central premise behind holding a vision is that somehow I can shape my future. Systems thinking helps us see how our own actions have shaped our current reality, thereby giving us the confidence that we really can create a different reality in the future. Without a systemic viewpoint, I believe the visions are wishful thinking at best and the seeds of cynicism at worst.

Likewise, systems thinking provides critical linkages that support the other disciplines. It illuminates the subtleties of personal mastery, such as the nature of compassion and our connection to the larger world. It is vital to the practice of working with mental models: it

provides tools that can help us surface hidden assumptions and construct mental models focused on inter-relationships and processes of change rather than static images.

Lastly, the very cornerstone of team learning, dialogos, arises from a profoundly systemic worldview that illuminates the subtle connectedness in our patterns of thought. So it is no wonder that the tools of systems thinking prove uniquely well suited to fostering collaborative inquiry and building shared mental models that encompass different individuals' unique points of view.

So you see, systems thinking is the discipline that integrates the disciplines—that's why [my book is] called *The Fifth Discipline*.