*The Fifth Discipline* and "learning organizations"

The Fifth Discipline brings word of "learning organizations," organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together. Five disciplines are described as the means of building learning organizations. Case studies are provided to show how the disciplines have worked in particular companies.

The need for learning organizations is due to business becoming more complex, dynamic, and globally competitive. Excelling in a dynamic business environment requires more understanding, knowledge, preparation, and agreement than one person's expertise and experience provides. David Garvin of Harvard University says that "Continuous improvement requires a commitment to learning." Reference.

The five disciplines are systems thinking, personal mastery, mental models, shared vision and team learning. The first three disciplines have particular application for the individual participant, and the last two have group application. The author writes of the disciplines that these might just as well be called the leadership disciplines as the learning disciplines. Those who excel in these areas will be the natural leaders of learning organizations. Systems thinking has the distinction of being the "fifth discipline" since it serves to make the results of the other disciplines work together for business benefit.

The Fifth Discipline as a book consists of five parts - business setting that calls for change, systems thinking, four other disciplines, case studies, and final thoughts about future disciplines and the possible effect of learning organizations. In an additional section the systems thinking archetypes are explained.

The Five Disciplines

What fundamentally will distinguish learning organizations from traditional authoritarian "controlling organizations" will be the mastery of certain basic disciplines. That is why the "disciplines of the learning organization" are vital.

Individual disciplines

Systems Thinking
Systems thinking is based on system dynamics; it is highly conceptual; it provides ways of understanding practical business issues; it looks at systems in terms of particular types of cycles (archetypes); and it includes explicit system modeling of complex issues.

Systems thinking is a conceptual framework, a body of knowledge and tools that has been developed over the past fifty years, to make the full patterns clearer, and to help us see how to change them effectively.

Also, The essence of the discipline of systems thinking lies in a shift of mind:

- seeing interrelationships rather than linear cause-effect chains, and
- seeing processes of change rather than snapshots

The practice of systems thinking starts with understanding a simple concept called "feedback" that shows how actions can reinforce or counteract (balance) each other. It builds to learning to recognize types of "structures" that recur again and again: the arms race is a generic or archetypal pattern of escalation, at its heart no different from turf warfare between two street gangs, the demise of a marriage, or the advertising battles of two consumer goods companies fighting for market share. Eventually, systems thinking forms a rich language for describing a vast array of interrelationships and patterns of change. Ultimately, it simplifies life by helping us to see the deeper patterns lying behind the events and the details.

Systems Archetypes are basic and understandable cycles that systems go through. The archetypes from The Fifth Discipline are -

- Balancing Process with Delay
- Limits to Growth
- Shifting the Burden
- Shifting the Burden to the Intervenor
- Eroding Goals
- Escalation
- Success to the Successful
- Tragedy of the Commons
- Fixes that Fail
- Growth and Underinvestment

Systems thinking uses archetypes for modeling the cycles that systems go through. Consequences at a distance - keep us from easily seeing cause and effect. Complexity and understanding - we need methods to increase understanding. Leverage - is to find the point in the cycle where effort is most effective or to change the structure of the system.

Personal Mastery

Personal mastery is the discipline of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively.
Continually focusing Vision, current reality, and creative tension

If we have a personal vision and we also see current reality objectively, then the difference between the two causes "creative tension". That tension can be used to draw us from where we are - in current reality - to the vision.

What the vision does is to bring about the creative tension that is used to move a person toward the reality of the vision.

Commitment to the truth is the other part of the process. Understanding of current reality as well as a vision are necessary for creative tension to begin to work.

Using the subconscious is important in personal mastery. The author says that people committed to continually developing personal mastery practice some form of "meditation." Whether it is through contemplative prayer or other methods of simply "quieting" the conscious mind, regular meditative practice can be extremely helpful in working more productively with the subconscious mind.

The following words are the first from the "Introduction to the Paperback Edition" of The Fifth Discipline. The vision that became The Fifth Discipline was born one morning in the fall of 1987. During my meditation that morning, I suddenly became aware that "the learning organization" would likely become a new management fad. The author decided that he wanted to take advantage of the fad and do something that would establish systems thinking, mental models, personal mastery, shared vision, and team learning and dialogue as inescapable elements in building learning organizations.

People creating the results in life that they truly seek
This is where the spirit of the learning organization is from.

## Mental Models

"Mental models" are deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action.

The discipline of working with mental models starts with turning the mirror inward; learning to unearth our internal pictures of the world, to bring them to the surface and hold them rigorously to scrutiny. It also includes the ability to carry on "learningful" conversations that balance inquiry and advocacy, where people expose their own thinking effectively and make that thinking open to the influence of others.

Balancing Inquiry and Advocacy
Scenarios
Leaps of Abstraction
Left-hand Column
Espoused theory versus theory-in-use

## Team disciplines

### Shared Vision
The practice of shared vision involves the skills of unearthing shared "pictures of the future" that foster genuine commitment and enrollment rather than compliance. Openness

Pictures of the future

Team Learning

The discipline of team learning starts with "dialogue," the capacity of members of a team to suspend assumptions and enter into a genuine "thinking together."

The discipline of dialogue also involves learning how to recognize the patterns of interaction in teams that undermine learning. The patterns of defensiveness are often deeply engrained in how a team operates. If unrecognized, they undermine learning. If recognized and surfaced creatively, they can actually accelerate learning.

Dialogue

The discipline of team learning involves mastering the practices of dialogue and discussion, the two distinct ways that teams converse. In dialogue, there is the free and creative exploration of complex and subtle issues, a deep "listening" to one another and suspending of one's own views. By contrast, in discussion different views are presented and defended and there is a search for the best view to support decisions that must be made at this time. Dialogue and discussion are potentially complementary, but most teams lack ability to distinguish between the two and to move consciously between them.

David Bohm's necessary conditions for dialogue are as follows:

1. all participants must "suspend" their assumptions, literally to hold them "as suspended before us";
2. all participants must regard one another as colleagues;
3. there must be a "facilitator" who "holds the context" of dialogue.


Dr. Isaacs mentions these first steps and four Levels and Stages of Dialogue.

- Early requirement - people developed an initial grasp of inquiry skills, such as how to detect an abstract statement and invite people to explain their thinking.
- gradually people recognize that they can either begin to defend their points of view, finding others as somewhat or totally wrong, or suspend
their view, and begin to listen without coming to a hard and fast conclusion about the validity of any of the views yet expressed. They become willing to loosen the "grip of certainty" about all views, including their own.

- At this stage, people may find themselves feeling frustrated, principally because the underlying fragmentation and incoherence in everyone's thought begins to appear.

Extreme views become stated and defended. All of this "heat" and instability is exactly what should be occurring. The fragmentation that has been hidden is surfacing in the container.

They ask: "Where am I listening from? What is the disturbance going on in me (not others)? What can I learn if I slow things down and inquire (to seek within)?"

- People notice, for example, that they differ in their pace and timing of speaking and thinking, and begin to inquire into and respect these facts.

Sometimes in this phase the flow takes on a powerful and undeniable intensity. Inquiry within this phase of the container is subtle; people here can become sensitive to the cultural "programs" for thinking and acting that they have unwittingly accepted as true. In these later stages of dialogue, the term "container" becomes limiting. It is more accurate to describe it as a kind of shared "field" in which meaning and information are being exchanged.

This phase can be playful and penetrating. Yet it also leads to another crisis. People gradually realize that deeper themes exist, behind the flow of ideas. They come to understand and feel the impact that holding fragmented ways of thinking has had on them, their organizations, and their culture. They sense their separateness. While people may understand intellectually that they have had limits to their vision, they may not yet have experienced the fact of their isolation. Such awareness brings pain--both from loss of comforting beliefs and from the exercise of new cognitive and emotional muscles. People recognize that their thoughts--in the form of collective assumptions and choices--create and sustain fragmentation and separation.

Moving through this crisis is by no means a given nor necessary for "success" in dialogue. Groups may develop the capacity for moving to the final level of dialogue over a considerable period of time. It is a deep and challenging crisis, one that requires considerable discipline and collective trust.

- If this crisis can be navigated, a new level of awareness opens. People begin to know consciously that they are participating in a pool of common meaning because they have sufficiently explored each other's views. They still may not agree, but their thinking takes on an entirely different rhythm and pace. At this point, the distinction between memory
and thinking becomes apparent. People may find it hard to talk together using the rigid categories of previous understanding. The net of their existing thought is not fine enough to begin to capture the subtle and delicate understandings that begin to emerge. This too may be unfamiliar and disorienting. People may find that they do not have adequate words and fall silent. Yet the silence is not an empty void, but one replete with richness.

Tabling or suspending assumptions

Other topics to mention and some concerns

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Microworlds - computer enactments of businesses and business processes. Where is training or knowledge going to come from? 

metanoia - Greek word meaning "change of mind"

The apostle Paul said "if we have hope in this life only, we are of all men most miserable."

The cost of advancing principles where there are views that are held religiously may not be pleasant. Some thoughts that arise from this are that opposition may be great enough to make hope for "the next life" needed for workers. Also, apostolic dedication to the task was to a task and an objective that were real.

Instinct - actions that don't result from thoughtfulness may not be easily overcome through dialogue.

Criticism - harsh and possibly personal disagreement may not be manageable through simple openness.

There is a need for principles beyond what individuals make up for them own selves. The natural affections such as love and nurturing do not simply distribute to everyone or through the business climate.

New Age

One author says:

*Does Senge think his movement is New Age? Asked directly, he replies: "The term carries a lot of baggage, but yes, Deming always talked about a new economic age. That was his term, and he said that the principles by which success is going to be determined in this new economy will be different. So it's New Age."*


In *Organizational Dynamics*. Autumn 1993. *Communities of Commitment: The Heart of Learning Organizations*. Fred Kofman and Peter M. Senge say the following.

*Joseph Cambell spoke of the ancient Indo-European myth of the Goddess who "teaches compassion for all living beings. There also you come to appreciate the real sanctity of the earth itself, because it is the body of the Goddess."* Recent
advances in archeological research are suggesting that the myth of the Goddess may have predominated throughout central Europe in the late Paleolithic and early Neolithic cultures. These cultures may have been neither warlike nor male dominated, as long assumed.

On the other hand, I found a copy of Authur Koestler's book "Ghost in the Machine", written in 1967, in the New Age section of a local bookstore. The use of the name "new age" does not necessarily mean that a viewpoint really is part of the new age. Nevertheless, use of the idea of a goddess for decency and possibly attentiveness do have something in common with new age imagery.

Life in a body.
Integrity and the inability to manage the body.
"unvoiced longing toward a truer world" as W. E. B. Du Bois wrote about the blues in The Souls of Black Folk.
Self-Control as a biblical version of personal mastery.
Anecdotes and case studies
Pleasant conversation
"Bright Ideas"
The difference between delayed on-line communication and dialogue.
Integrity - being true to our understanding or our promise.
Authenticity - being real and genuine.
Collective intelligence - the benefit of combining the understanding of individuals.
Aspiration - hopes, desires for the future, vision, direction.
Conceptualization - seeing the future through imagination and system thinking.
The concert pianist thinks only of the aesthetics of the performance, not the mechanics.

System Dream

The first full day I worked on this review, I probably spent about ten hours gathering notes, searching The Fifth Discipline for definitions, and writing the beginning of the review. That night I slept and dreamed of flying. I was thinking that my dream might not be very beneficial for publication; however, I bought the Fifth Discipline Fieldbook 7-Dec-95, and during lunch at a cafeteria that day I heard someone say, "I'm going to tell you a dream I had last night." Then when I was leaving, I heard someone else from another table say as I walked past "here's my dream." So, here's my system dream.

I see a flying saucer/platform-type vehicle. My vantage point seems to be a little above the saucer and not far from it. It may be hovering in the air; however, it doesn't seem like a space vehicle, more like a hovercraft. The vehicle seems to have something to do with my brother. Maybe he is accustomed to flying these vehicles. The saucer is not awesome or forbidding and is about the width of 1-2 chairs. I think of flying it as a privilege and think of the vehicle in terms of a taken-for-granted F-14. Soon I am flying it. There are no visible controls; it seems to go where I want it to, responding to my thought. I am flying fairly slow, maybe at a height of 100-300 feet over a suburban residential area. I see my destination, beside or near someone's house, across a small
field. My flight is wobbly, and I don't know how to control the part of my thinking that controls the vehicle. I'm descending to my destination with a trace of shame and embarrassment as I try to avoid and am not sure I can avoid power lines between me and my destination. Somehow, maybe by guessing or chance, I avoid the power lines and everything is OK.

My Contribution

**Is "learning organization" the answer to my question?**

If someone asked how to start a car and received an answer in terms of the laws of physics, the answer would be unusual. Usually we have some idea of the kind of answer we'll receive and may even expect it. The learning disciplines are not an "expected answer" for the question "how can my workplace become a learning organization?" Or, more directly, "what can I do to be part of a learning organization?" We would expect answers like "just start learning" and "help promote learning". The Fifth Discipline in not directed to meeting those expectations and with good reason. Learning in an environment where there is little receptivity to what is learned is not fully useful to a company. And "ivory tower" learning that separates people does not further the development of a learning organization.

The five disciplines relate to business needs

Individual learning should prepare the individual for being a part of the group (personal mastery), and what is learned needs to prepare receptivity to others' learning, experience, questions, and manner of thought (mental models). A viewpoint that is sufficient for understanding business cycles and system relationships is required for working with cycles and toward better relationships both of systems and with people (systems thinking). Without a guiding purpose and shared values (shared vision), corporate effort will have the Tower of Babel problem and the confusion resulting from different languages. For everyone to learn together (team learning), a receptive process of listening to one another is needed.

The disciplines may not be what we were looking for

In these terms, the disciplines of learning may seem less foreign; yet there is a great distance between the idea of personal mastery and behaviors such as looking for stuff on the network. How can purposeful, person-as-resource principles be furthered? This is when the vision and a real understanding of the present show that we must change our minds. The first step for the individual in being part of a learning organization is wanting to be a part, and maybe that's the first thing that has to be settled. Do you want to go? If you want to go, then you can.

Object-oriented design and the mental work required for system design

Object-oriented design and object-oriented computer programming languages have increased in emphasis in the last few years. While Steve McConnell's Code Complete isn't directly concerned with object-oriented programming, it is very informative about programming research and methods, and part of the author's purpose in writing the book was to reduce the significant gap between research and practice. If procedural programming practice differs greatly, object-oriented programming shares the same
The emphasis of object-oriented programmers and designers is often very different with programmers seeming to think that the technical elements of the language result in useful objects, while designers who are working at a higher level than a programming language, a level that is possibly lacking from some projects, marvel at the uncertainties, mental effort and difference between design choices.

Object-oriented design has understandable means
One thought that may benefit the learning organization is that object-oriented system modeling, though based on very definite "finding methods", continues to be conceptually difficult. The finding methods such as CRC cards and Use Case modeling give an investigator real starting points or starting questions. Systems archetypes, on the other hand, seem to be based on business analysis expertise and experience of same-type cycles. There's less information presented about how to find the archetypes in a system than object system designers have needed, wanted and received in their work. If you don't see the archetypes, there's not much guidance for how to find them. And evidence of the full effectiveness of modeling with the archetypes is not presented, either. The conclusion might be that further development of systems thinking models and modeling is needed and possible. Maybe I should mention here that I've purchased The Fifth Discipline Fieldbook, and it may answer some of my questions.

Systems thinkers view of the archetypes
In The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization systems thinking professionals evaluate the use of systems archetypes and write the following. The comments from the book are not intended as being disrespectful of modeling methods.

- An archetype is nothing more than a mental model made visible. 164
- Translating a complex organizational issue into a model that makes sense is still a high-level craft, and the modeling programs contain no built-in criteria for helping you see whether a model is credible or appropriate. 176
- Peter Senge has referred to them, correctly in my opinion, as "training wheels." 177
- Predicting the behavior of even the simplest archetype would mean solving a high-order nonlinear differential equation in your head. Human beings do not have the cognitive capacity to do so. 178

How much of life is made of visible cycles?
Another thought is that object-oriented design seems to focus much more on the intended use and functionality of systems rather than emphasizing visually defined cycles within a system. The cycles are almost taken for granted in some modeling, since programming generally involves repeated processes. I don't have enough business experience to say whether a given case study is exemplary and useful for general application or whether it is an example of a story-teller's skill and the human interest of stories.

Explanatory Notes
Importance of the fifth discipline, systems thinking
There is some disagreement on the importance of systems thinking relative to the other disciplines. One article about Peter Senge says that systems thinking is no more important than any of the other disciplines and that the term "fifth discipline" was used because it sounded good. On the other hand, the book says that the discipline makes the other disciplines "work". The author writes *It is vital that the five disciplines develop as an ensemble. This is challenging because it is much harder to integrate new tools than simply apply them separately. But the payoffs are immense.*

*This is why systems thinking is the fifth discipline. It is the discipline that integrates the disciplines, fusing them into a coherent body of theory and practice. It keeps them from being separate gimmicks or the latest organization change fads. Without a systemic orientation, there is no motivation to look at how the disciplines interrelate. By enhancing each of the other disciplines, it continually reminds us that the whole can exceed the sum of its parts.*

The author also writes *I call systems thinking the fifth discipline because it is the conceptual cornerstone that underlies all of the five learning disciplines of this book.*

Reference

From the same publication, "David A. Garvin is the Robert and Jane Cizik Professor of Business Administration at the Harvard Business School. His current research focuses on the general managers role and successful change processes," Go to context. More information.

The Author of The Fifth Discipline
From the book cover, Peter M. Senge is Chair of the Council for the Society for Organizational Learning and a founding partner of Innovation Associates in Framingham, Massachusetts, and Toronto, Canada. He has introduced thousands of managers at Ford, Digital, Procter & Gamble, AT&T, Herman Miller, Hanover Insurance, Royal Dutch/Shell, and at other major corporations to the disciplines of the learning organization through the seminars offered by Innovation Associates. Go to context.

Learning Organization Resource List

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Additional information is available on the WWW for learning organizations and system thinking.

If anyone has anything to say, they can send me a note at j-fullerton@tamu.edu

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