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## Learning Organizations Part 11: Systems Thinking and Chaos

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“Anytime we see systems in apparent chaos, our training urges us to interfere, to stabilize and shore things up. But if we can trust the workings of chaos, we will see that the dominant shape of our organizations can be maintained if we retain clarity about the purpose and direction of the organization.”  
— Margaret Wheatley, **Leadership and the New Science** (1992)

**What is chaos?** Chaos is something that has always been with us. However, it wasn't until recently that scientists discovered chaos and formulated the new *Theory of Chaos*. Chaos can be defined in two ways.

1. Chaos represents the changes over which we have no control.
2. Chaos represents the confusion or disorder that occurs in events so that they appear erratic and unpredictable.

One of the best examples of chaos is a weather system. Meteorologists are notorious for not being able to predict weather accurately all of the time, since weather is *chaos at work*. The reason weather is so hard to predict is that there are so many variables in play at any one time. The other reason is that any change in any one variable can affect how it interacts with all of the other variables, and how it will ultimately affect the entire system. A meteorologist can read the weather map and see that there are no storms in the general vicinity. However, one significant variable changes, and suddenly a storm cloud appears out of nowhere. That's chaos. It's unpredictable, it's full of disorder, and it's what causes changes that we cannot control.

*The Butterfly Effect* is an analogy that is often used to describe chaos. The story starts with a butterfly in the Amazon flapping its wings. Three months later, in Edmonton, Alberta, a storm appears out of nowhere. The theory is that the

butterfly's movements can cause a change in the weather somewhere else in the world. The variables that cause such mammoth changes can be that small. It's difficult to imagine that a butterfly can have such an effect. It's even more difficult to imagine the effect that we as humans have on our planet, on the weather, and in our organizations.

**What does chaos have to do with today's business climate?** James Gleick, author of the bestseller book, **Chaos**, explains that chaos is found everywhere. We only need to look around us to see it. “A rising column of cigarette smoke breaks into wild swirls. A flag snaps back and forth in the wind. A dripping faucet goes from a steady pattern to a random one.” Chaos appears in such forms as economic restructuring, downsizing, and globalization. “No matter what the medium, the behaviour obeys the same newly discovered laws. That realization has begun to change the way business executives make decisions about insurance, the way astronomers look at the solar system,

the way political theorists talk about the stresses leading to armed conflict.”

Today, the force of technology is changing how we work with others, as well as the type of work that we do. Chaos is apparent in all of these changes. It shows up in unpredictability, in uncertainty, and in the confusion that all of these events and feelings bring. For many of us, the greatest uncertainty is whether or not we will be working at all. Futurists tell us that there is no end in sight, and that we haven't seen anything yet. We are forced to admit that **the only constant in life is chaos itself.**

That's what makes chaos so hard for us to fathom. Chaos requires us to think very differently about the world in which we live. This way of thinking is extremely foreign to our current mechanistic perspective on life. As the opening quote states, “Anytime we see systems in apparent chaos, our training urges us to interfere, to stabilize and shore things up.” This is what I see in almost every organization that I enter: people trying to stabilize the apparent chaos they are experiencing. However, when it comes to chaos, this strategy fails, especially when the people try to maintain the old system, and to prevent it from evolving into a new, and possibly better, system. The old mechanistic way of thinking tells us that we need to *control* the change, to *manage* it. Chaos tells us to **go with the flow** of change. Without question, this requires a shift in the way that we think.

Chaos also illustrates how important each of us is in both the world and our organizations. Just like the butterfly, each of us is a variable. Ultimately, we can cause enormous

changes in our organizations in the long term, but we need to know how to do that well. Ruben Nelson, a Canadian futurist, gives us a perspective of working with chaos: “Approaching the future is like paddling a canoe down the river. There's whitewater ahead, uncertainty around the next bend and no turning back. Rather than clinging to the shore or backpaddling furiously, the canoeist must go with the flow, reading the water ahead, and responding with a skilled paddle.”

Peter Senge, author of **The Fifth Discipline Fieldbook**, gives us a strategy to approach chaos and uncertainty by asking us to develop a personal vision as well as a shared vision. The best way to deal with chaos, and the change that it brings, is to know where both you and your organization are going. Having a vision means that you have a clear picture of your future, a beacon that shines through the fog of uncertainty. This holds for the individual, the team, and the organization. Our vision allows us to let go of the old way of doing things, and, in letting go, gives us the energy to move towards the new.

Today, many organizations are in a state of paralysis. These organizations seem unable to develop a vision, and even if they do, they are unable to share it with their people. Wheatley believes that these organizations “typically struggle against the environment, seeing it as a source of disruption and change.” These organizations and their people stand on the shoreline of the future, yet see only the fog of uncertainty. Even though the fog beckons, without a beacon, a light, or a vision to set the direction, we only get more lost in the uncertainty.

People within organizations cannot wait for senior management to set the direction. Chaos shows us that we can all help in our own small ways, and that small actions can lead to significant changes. I have found that whenever I take a group of workers through a personal vision and shared vision activity, they are not only happier and less stressed, but also they know what they need to do to help themselves and their organizations. Once you know what your beacon looks like, you can see your way through the fog of uncertainty.

“If we succeed in maintaining focus, rather than hands-on control, we also create the flexibility and responsiveness that every organization craves.”  
— Margaret Wheatley, **Leadership and the New Science** (1992)

For more information on developing a personal vision and a shared vision, read the following sections in **The Fifth Discipline Fieldbook**:

- *What You Can Expect*, pages 198-200
- *Drawing Forth Personal Vision*, pages 201-206
- *Vision for the Organization*, pages 208-209
- *What Do We Want to Create?*, pages 337-339

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