



Guidelines for Daily Systems Thinking Practice

by Linda Booth Sweeney

Systems thinking is a discipline for seeing problems holistically and for understanding how systems create the patterns and events we see around us. Systems thinking also offers a framework for defining problems, asking better questions, and making effective decisions. Because systems thinking relies on the use of a powerful set of tools and often counterintuitive perspectives, it requires lots of practice. Here are some guidelines for making systems thinking a habit for life-long learning.

Individual Practice

Becoming a seasoned systems thinker starts with a strong commitment to developing your own awarenesses and skills. Individual practice forms a solid foundation from which to build collaborative skills. To sharpen your systems thinking abilities, you can begin by asking new kinds of questions, learning to experience time differently, noticing the systems around you, and practicing diagramming your understanding of those systems.

ASK DIFFERENT QUESTIONS

Systems thinking offers a framework for defining problems as well as solving them. To practice thinking from a more systemic perspective, start by paying attention to the questions you ask. Try to ask questions that get at underlying structural relationships or patterns of behavior exhibited over time; that focus your attention on potential delays, balancing or reinforcing processes, and unintended consequences; and that help you understand what time intervals you're focusing on and how you and others are perceiving situations.

For example:

- "Has this same problem occurred in the past? Is it chronic?"
 - "What data are available about this problem?"
 - "What structures might be causing this behavior?"
 - "Over what time period will this system exhibit the full cycle of behavior that is of interest to us?"
 - "Does the time period we've chosen correspond with the process we're focusing on?"
 - "What delays might we experience in this system?"
 - "What makes you see the problem as you do?"
- (Ask *yourself* this question, too.)

LEARN TO EXPERIENCE TIME DIFFERENTLY

When faced with complex problems, we are often strongly influenced by society's messages about what constitutes enough time. Typically, we focus on shorter time horizons (time intervals) than we should.

To combat this, try making explicit the time horizon with which you are working. For example, are you interested in the behavior of oil prices as they move over a two-month period or a two-year period? What might be an appropriate time horizon for understanding the impact of nuclear-waste disposal?

Also, extend your sense of what constitutes "the present." Try thinking in terms of a longer block of time as "now"—say, one year past and one year ahead. Ask yourself what was happening a year ago. What is happening now? What does the next year hold? By extending our sense of "now," we can grasp interconnections that we may not have seen before.

Try slowing down so that you can align more effectively with the systems you are trying to understand. In his book *The Fifth Discipline*, Peter Senge observes that "learning to see slow, gradual processes requires slowing down our frenetic pace and paying attention to the subtle as well as the dramatic." Take a walk outside. Sit under a tree for 20 minutes. Shadows will move. A leaf may fall. See what you can observe by slowing down.

NOTICE THE SYSTEMS AROUND YOU

Try looking for feedback loops in everyday situations. For example, has your company launched a new product whose sales really took off, only to plateau out eventually? This may indicate a reinforcing process that suddenly is affected by a balancing process. Are you feeling pulled like a yo-yo between two extremes? If so, there is likely a balancing loop at work.

Keep an eye out for signs of systemic processes in your personal life as well, such as the impact your actions have on your family system or natural cycles. Might a reinforcing loop be broken if you picked your socks up off the floor? What might happen if you—and others—turned off the water while brushing your teeth?

DRAW A LOOP-A-DAY (OR ONE A WEEK)

Every morning, sit down with your cup of coffee, the newspaper, a pad of paper, and a pen, and look for news stories that you can explore through causal loop diagrams. Search for stories that describe patterns of behavior over time. (For example, "The unemployment rate rose over the past 10 years, as did the number of families seeking welfare assistance.") Sketch the systemic structure that you think is producing those patterns. This is a great way to practice recognizing systemic structures and mastering causal loop diagramming. *The Economist* magazine is a particularly rich source of systems-oriented stories.

Collaborative Learning

For many people, real insights come in the company of others. Likewise, the use of systems thinking concepts and tools is most powerful in a group or team. Here are some tips for collaborative practice.

FIND A COACH OR MENTOR

Establish an apprenticeship with a seasoned systems thinker. Shadow that person during part of a workday or a consulting engagement. Or, identify a systems thinking coach or mentor. Pick one example a week from your daily coffee-and-causal-loop exercise and fax or e-mail the article and your diagram to your mentor. Discuss the loops and consider alternative explanations, key questions, data you'd want to collect, and possible interventions.

START A BOOK GROUP

Find a partner or group with whom you can connect on a regular basis to read an article or book related to systems thinking or organizational learning. Read a chapter or article a week and then discuss it (in person or by phone or e-mail). Or, convene a group to try exercises in experientially based books such as *The Fifth Discipline Fieldbook*, *Systems Thinking Basics*, *The Dance of Change*, or *The Systems Thinking Playbook*.

FORM LEARNING COMMUNITIES

Gather with others who are interested in systems thinking, either in person or online. If you live near people interested in building their systems thinking skills, try meeting once a month. Have members bring stories from their business experiences, and select one to discuss as a group. Explore the roots of the problem through inquiry and causal loop diagramming.

Try participating in an electronic learning forum as

well. Here are three excellent ones:

- system-dynamics@world.std.com (focuses on system dynamics modeling in organizational settings)
- k-12sd@ssysdyn.mit.edu (focuses on system dynamics in K-12 education)
- world.std.com/~lo

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