



SYSTEMS THINKING: THE BIGGER PICTURE

BY BILL HARRIS

As a professional systems thinker and system dynamicist, I sometimes wonder why more people don't see value in simulation models for learning and insight. I recently taught two different workshops on systems thinking, and I observed something important in both: By presenting a range of approaches and inviting clients to view them as alternatives rather than pushing one technique, we can help them to view systems thinking in all its forms, including simulation, more positively.

Let's define a problem as an issue that requires our action or attention. People—all of us—have experienced a range of problems in our lives, and we want to have a chest full of tools to deal with those varied challenges effectively. Clients don't react well when we act as though we have *the one tool* that will fix all their problems, and that's not surprising. If you have a toolbox at home, you likely have a variety of screwdrivers, wrenches, saws, and drills. Most of us probably regard the midnight infomercial advertising a one-tool-that-does-everything gadget with skepticism, and our clients probably react similarly to some of our enthusiasm about computer modeling.

Because such a wide range of issues can be modeled with *ithink*® or similar tools, we may sometimes sound as though we believe the first action in any circumstance is to grab our computers and start building a stock and flow diagram. But just because we can create a model to address a particular problem doesn't mean that modeling is the best way to do so, and our clients and colleagues know that. There are many, many other tools, from many different fields, that we might apply.

For example, my colleague Bob Williams from New Zealand, a co-presenter in one of the workshops, has introduced me to Peter Checkland's Soft Systems Methodology (SSM). It provides a framework for building a rich picture of a system by viewing it from multiple perspectives. The approach encourages us to expand our capacity to respond to issues by finding insights not obvious from only our own point of view.

Likewise, Glen Hiemstra of Futurist.com has introduced me to the Futures Wheel model as a way to look at the likely future evolution of a current situation. You start by jotting down a development you want to analyze on a piece of paper. Around that center, you place a ring of circles that captures the most important, immediate consequences of that development, and you connect them to the center with spokes. Then you draw a second circle of rings showing the effects of each of those initial consequences, again connected by spokes. It's the process of thinking about those second- or even higher-order consequences that might give you the insights you need to create a robust plan for the future.

In a third example, Geoff Coyle and John Powell of the University of Bath have introduced me to Qualitative Politicized Influence Diagrams (QPID, pronounced Cupid). Put simply, this tool involves creating a causal loop diagram, annotating it with the people or roles involved in each of the links, and listing the people or roles involved in each loop in the diagram. Looking at the final product can help a team create a useful strategy for moving forward.

Why would I, as a system dynamics consultant interested in

simulation, write about these other techniques?

There are three reasons. First, I've observed that people are more likely to become excited about system dynamics when they select a modeling approach because it fits their problem and not because they perceive it's all I've got to sell.

Second, sometimes another approach is truly a better and faster way to solve a particular problem. We don't help our organizations or our clients when we give them a tool that's not well suited to their jobs, and we know what happens to us in the long run when we aren't helpful (have you ever heard the phrase, "What have you done for me lately?").

Third, and most fitting here, these and other approaches can inform our model building in those times when creating a simulation is appropriate. I'm beginning to use SSM to examine a system from multiple views before moving to stocks and flows; I think it can help me make more useful models. I see how a Futures Wheel can help me scan for a broader set of possibilities and how QPID can help me organize my thoughts at the beginning of a modeling exercise. And I'll continue to search for new tools to add to my toolbox.

The bottom line: Be a bigger picture systems thinker, for you'll solve more problems, and you may find others more willing to listen to you! ■

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