Systems Thinking Hits Its Stride: An Interview with Michael Goodman
by Kali Saposnick

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Michael Goodman, principal of Innovation Associates Organizational Learning, has developed and conducted systems thinking programs around the world. Having attended and presented at every Pegasus Conference since its inception in 1991, Michael will continue the tradition at this year's conference in October in Boston by co-facilitating the "Designing a Systems Thinking Intervention" learning path. In these sessions, he will help participants apply systems tools to understanding and solving a chronic problem in their organization. In the following interview, Michael shares some thoughts about how systems thinking has shifted over the years and why its application is relevant today.

In the late 1950s, a brilliant electrical engineer at the Massachusetts Institute of Technology (MIT) pioneered the use of computer simulation to address business and organizational issues. Jay Forrester, the founder of the field of system dynamics, challenged business and world leaders to use these tools to consider the long-term, unintended consequences of their policies and actions. Inspired by the potential of systems thinking to contribute to a better world, the students in Jay's courses built upon his insights and branched out into many fields. One of those MIT graduates, Michael Goodman, found his niche developing and applying systems thinking in the area of organization change and learning.

"The key question my peers and I continually asked ourselves was, 'How can we make systems thinking available to a wider audience?'" says Michael. "The sense of urgency in organizations to fix problems quickly has led people to take short-sighted actions, resulting in unintended, adverse, and sometimes devastating effects. We wanted to figure out 'How can we get the greatest number of people to think things through thoroughly before they make far-reaching decisions? How can we help them test their assumptions and beliefs so they can identify the unintended effects of their strategies and dig deeper for new, long-lasting solutions to old problems?'"

Increased Accessibility
Answers to these questions began to emerge over the past three decades, as innovative breakthroughs in software, tools, and literature made systems thinking accessible to an increasing number of people. On the simulation modeling front, Michael points to less technical, more user-friendly computer programs, such as *ithink®*, developed by the late Barry Richmond of High Performance Systems, and *Vensim®*, developed by Bob Eberlein of Ventana Systems, that have enabled more people to create simulations of and, in turn, better understand complex problems in their organizations. On the organizational front, the identification of systems archetypes, to which Michael made significant contributions, has helped people easily recognize common systemic patterns in the workplace. The systems archetypes illuminate familiar, recurring stories that apply to organizations across the board; for example, "Fixes That Backfire or Fail" shows the consequences of short-sighted decision-making, and "Limits to Success" explains the barriers to growing an enterprise or improving performance.

Goodman and his colleagues have tried to make systems thinking accessible by positioning it as "a common language for thinking and acting that makes it easier for people to have conversations about things that matter." Like any language, he says, you've got to practice it. To become fluent, you must immerse yourself in it and keep working at it until you begin thinking in that language. As you begin to think systemically, you instinctively start to broaden your perspective and

consider the unintended consequences of your organization's decisions and policies.

According to Michael, Peter Senge's *The Fifth Discipline* has played an enormous role in helping people become aware of the value of learning this language. He explains: "Peter's articulation of the five disciplines-systems thinking, mental models, shared vision, team learning, and personal mastery-captured people's passion and excitement. My colleagues and I were delighted by the idea of a 'learning organization' that could improve its competitive advantage by integrating these principles into the fabric of the workplace." One powerful outcome of the book, he notes, is that more people than ever before are using systems thinking to surface and test their beliefs and assumptions about how the world works. "Our mental models shape how we behave and how our organizations function. Once we can see undesirable patterns we've created in our organizations, we can start to change them. We're no longer prisoners of them."

Three Trends
What's been particularly exciting to Michael is the ways in which organizations have made shifts in their culture by applying a systemic perspective. Over the last few decades, he has seen the following trends: 1) expanding internal capacity to use systems thinking in organizations, 2) greater global awareness of systems thinking language, 3) and greater application of systems thinking in the public sector where policies are formed.

Expanding Internal Capacity. More organizations are investing in developing their own internal capacity to integrate systems thinking into how they do their work. For example, four years ago, Goodman was invited to help mid-level and upper managers develop their skills in the areas of leadership, team alignment, mental models, shared vision, and systems thinking at one of the largest oil producers in the world. Several far-sighted executives wanted to promote shifts within the company so that it could respond agilely to pressing environmental, political, and economic issues related to oil and its future. A visible outcome of this initiative is that the organization has now developed a cadre of internal change agents with advanced skills in systems thinking and the confidence to champion the tool as a way for the organization to effectively address its business challenges.

Michael explains, "Middle and upper management have begun to shift from trying to supply all the answers to tapping into the intelligence and experience of an entire team to solve difficult problems. They have pioneered ways to build informal communities of practice across functional boundaries that use systems thinking as the primary vehicle for meaningful conversations around ongoing and new challenges." He points to one engineering community of practice that meets regularly to discuss the problems of corrosion, or the inevitable degradation of the metal in the pipelines. During the course of their dialogues, participants have pulled together new knowledge, identified potentially high-leverage actions and interventions, and made recommendations that they're now implementing. Without the language and tools of systems thinking, they would not have made such progress.

Greater Global Awareness. Today, more employees in organizations around the globe are familiar with systems thinking language than ever before. "People may not be using systems tools per se, but they recognize the value of the ideas," Michael says. "In my travels to Malaysia, Korea, Australia, Saudi Arabia, India, and South Africa, I find that virtually any manager I meet has heard of 'learning organizations' or 'mental models.' I've watched people pause a little more rather than instantly react to problems or crises. With this body of material to help them process information in ways they hadn't before, they seem to have 'permission' to say, wait a minute, we need to go slower now in order for us to go faster later."

Michael notes that systems thinking, as well as the other disciplines, is showing up more frequently in management and organization literature. He cites *Applying Quality Management in Healthcare: A Process for Improvement* by Diane L. Kelly (Health Administration Press, 2003), which provides an integrated approach to tackling the quality challenges inherent in healthcare, and *Viable Business Strategies: A Systemic, People-Centric Approach* by Marius Ungerer,

Maurits Pretorius, and Johan Herholdt (Knowres Publishing, 2002), which outlines a systemic framework for developing and implementing strategy.

Greater Application in Public Institutions. A third significant trend is the growing use of systems thinking in the public sector. For example, several Singaporean agencies, including the police force, military, and education ministry, have made a long-term commitment to bringing organizational learning and systems thinking to their policy-making processes. Also, the U.S. Navy has made significant investments in an internal e-learning network to make systems thinking accessible to its entire workforce; a sailor on a ship at sea can now tap into a web-based course on systems thinking.

A Natural Part of Doing Things
"Basically what's happened over the past decade or so is that we've learned, and are continuously learning, a lot about how systems thinking works best, where its strengths are, how to connect people naturally with it, and how to get it to take hold in an organization." Michael says. "With these discoveries, I'm expecting more organizations than ever to build it into their way of working. Systems thinking is more than drawing loops or using the archetypes. It's about shifting how we think and act. By bringing both the short- and long-term dimensions into our conversation, asking different kinds of questions, and making our assumptions visible, we are better able to tap into the intelligence and wisdom within our organizations and, ultimately, improve the quality of our decisions and performance."

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