

## THE WORLD CAFÉ: LIVING KNOWLEDGE THROUGH CONVERSATIONS THAT MATTER

BY JUANITA BROWN, WITH DAVID ISAACS AND THE WORLD CAFÉ COMMUNITY

“We learn, adapt, and bring forth our worlds through the networks of conversation in which we participate.”

—Humberto Maturana

**C**onsider all the learning that occurs as people move from place to place inside and outside an organization, carrying insights and ideas from one conversation to another. The invisible connections among these conversations and the actions that emerge from them help to build the organization’s collective

knowledge and shape its future. But the process of co-creating the future through conversation is so natural we usually overlook it.

Since our early ancestors gathered in circles around the warmth of a fire, conversation has been a primary process for making sense of our world, discovering what we value, sharing knowledge, and imagining our future. Small groups exploring important questions—and connecting with other groups that are doing the same—have

always played a major role in social and institutional renewal. Consider the sewing circles and “committees of correspondence” that helped birth the American Republic; the conversations in cafés and salons that spawned the French Revolution; and the Scandinavian “study circles” that stimulated an economic and social renaissance in Northern Europe. Reaching out in ever-widening circles, members of small groups spread their insights to larger constituencies, carrying the seed ideas for new conversations, creative possibilities, and collective action.

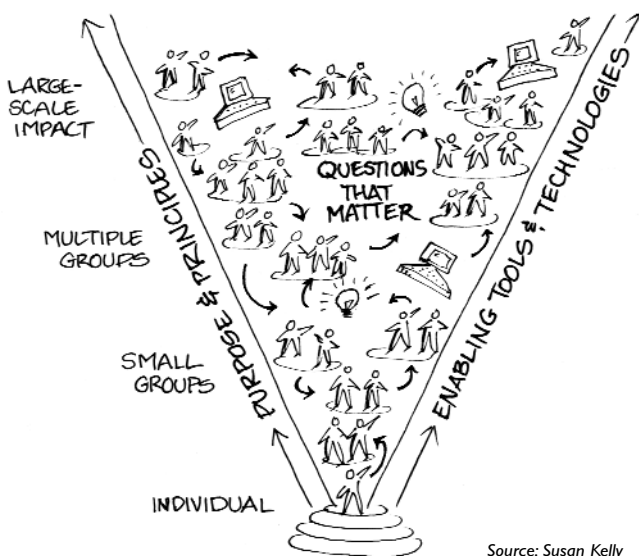
cies, carrying the seed ideas for new conversations, creative possibilities, and collective action (see “Conversation as a Path to Large-Scale Change”).

Today, especially with the advent of the Internet, we are becoming increasingly aware of the power and potential of these dynamic networks of conversation and their systemic importance for large-scale collaboration, learning, and change. The cross-pollination of ideas from group to group can lead to the emergence of surprising creativity and focus as we discover innovative ways to support a “system thinking together.”

What if we could create an intentional, simple, and effective approach

*Continued on next page >*

### CONVERSATION AS A PATH TO LARGE-SCALE CHANGE



Source: Susan Kelly

Reaching out in ever-widening circles, members of small groups spread their insights to larger constituencies, carrying the seed ideas for new conversations, creative possibilities, and collective action.

### INSIDE

<b>TOOLBOX</b>	<b>6</b>
Fine-Tuning Your Causal Loop Diagrams—Part I	
<b>FROM THE RESOURCE SHELF</b>	<b>8</b>
Building Relationships with Respect at the Center	
<b>VIEWPOINT/FEEDBACK</b>	<b>9</b>
The Imperfect Storm	
<b>SYSTEMS THINKING WORKOUT</b>	<b>11</b>
Reader's Response to "Moving Beyond the E-Vent Level"	
<b>FROM THE FIELD</b>	<b>12</b>

for fostering greater collaborative learning and coherent thought than is often available in large group settings? Our research reveals that what we have come to call “The World Café” has a unique contribution to make when the goal is the focused use of dialogic inquiry to foster collective insight around real-life challenges and key strategic questions at increasing levels of scale.

What is The World Café? It is an innovative *methodology* that enhances the capacity for collaborative thinking about critical issues by linking small-group and large-group conversations. In the process, knowledge grows, a sense of the whole becomes real, and new possibilities become visible. The World Café utilizes the principles of dynamic networks and living systems to access a source of deeper creativity and shared knowledge that might not be available through more traditional approaches to collaborative work.

The World Café is also an evocative *metaphor* that enables us to pay attention to aspects of organizational life that are often invisible, hidden by formal structures and policies. It highlights the naturally occurring networks of conversation and social learning through which we access collective intelligence, create new knowledge, and bring forth desired futures. Using The World Café as an organizing image allows leaders to intentionally design processes that take advantage of the natural dynamics that are already at play in order to

create sustainable business and social value.

### How The World Café Was Born

Several years ago, we serendipitously discovered the unique power of Café-style conversations. One rainy morning, we wanted to provide a comfortable setting for participants in a global dialogue on intellectual capital to enjoy their coffee while waiting for the session to begin. We set up small tables in our living room and covered them with paper tablecloths. We added flowers and set out colored crayons, like in many neighborhood cafés.

People were delighted and amused. They got their coffee and gathered in small, informal groups around the tables. Soon, everyone was deeply engaged in conversation. As they talked, people scribbled ideas on the tablecloths. After a while, someone expressed curiosity about what was happening in other conversations. One person agreed to stay at each table as a host while others traveled to other tables to discover what interesting ideas were pollinating there.

People buzzed with excitement. At a certain point, they decided to leave a new host at each table. The other members traveled to new tables, connecting ideas, testing assumptions, and adding to each other’s diagrams and pictures on the tablecloths.

As lunchtime drew near, we took a “tour” of all the tablecloths, seeing what new connections and questions had emerged. Our interactive graphics

specialist captured collective insights from the morning on a large piece of newsprint in the middle of the room. We suddenly realized that we had tapped into something very simple but potentially very powerful. Through the Café conversations, a shared knowledge base, larger than any individual or group in the room, had become accessible to us. Our unique contributions had combined and recombined into rich new patterns of living knowledge and innovative thought that had not been visible when we started.

### The World Café As Methodology

What makes such a seemingly simple practice—that of talking together about things we care about and intentionally linking the essence of our conversations with others in ever-widening circles—so useful? We think it’s because Café conversations offer us the opportunity to notice the possibilities for mutual insight, innovation, and action that are already present in any group, if we only knew how to access them. We are discovering that this process offers a unique mixture of freedom and focus, of coherence without control. Depending on an organization’s needs, Café events can be designed around particular themes or topics. The Café format is flexible and adapts to different circumstances, based on a few simple practices and principles (see “Café Hosting Tips”).

Groups as small as 12 and as large as 1,200 from around the world have engaged in Café learning conversations in a wide range of settings. In a global consumer products company, executives from over 30 nations used Café principles to integrate a new worldwide marketing strategy. In New Zealand, Maori leaders combined The World Café with indigenous meeting formats during regional treaty negotiations. Mexican government and corporate leaders applied The World Café to scenario planning. A Fortune 100 company is using “Creative Cafés” to explore corporate responsibility with stakeholders. And faculty members in the U.S. and Europe are creating

#### C A F É H O S T I N G T I P S

While Café hosting is limited only by your imagination, consider including the following elements as you experiment with Café conversations:

- Set up Café-style tables or another relaxed setting.
- Provide food, beverages, music, art, natural light, and greenery.
- Encourage informal conversation focused on key questions.
- Allow time for silence and reflection.
- Encourage members to “cross-pollinate” ideas and insights across groups.
- Have materials available for visually representing key ideas—markers and paper.
- Weave and connect emerging themes and insights.
- Honor the social nature of learning and community building.
- Help members notice that individual conversations are part of and contribute to a larger field of collective knowledge and wisdom.

virtual online “Knowledge Cafés” to conduct distance-learning programs.

After participating in Café conversations, members share comments such as, “I developed productive relationships and learned more from others than I ever expected. You can actually see the knowledge growing.” Participants often develop an increased sense of responsibility for making use of the practical insights they gain and for staying connected as they expand the conversation to larger constituencies.

The practice of The World Café is based on a set of working assumptions that we continue to explore:

- The future is born in webs of human conversation.
- Compelling questions encourage collective learning.
- Networks are the underlying pattern of living systems.
- Human systems—organizations, families, communities—are living systems.
- Intelligence emerges as the system connects to itself in diverse and creative ways.
- We collectively have all the wisdom and resources we need.

### Five Key Operating Principles

We are discovering that the unique contribution of Café learning seems to come from translating these working assumptions into the following five operating principles that, when used in combination, increase the likelihood of generating breakthrough thinking.

**Create Hospitable Space.** Café hosts around the world emphasize the power and importance of creating a welcoming environment to enliven collaborative conversation. We thrive and are better able to confront difficult questions, explore underlying assumptions, and create what we care about in surroundings that evoke warmth, friendliness, and authenticity than in those that are less hospitable to the human spirit. Most meeting places are sterile, cold, and impersonal. Consider choosing environments with natural light. Create comfortable seating. Honor our traditions of human hospitality by offering

refreshments. Play soft music as people enter. Decorate the walls with art. Hospitable space means “safe” space—where everyone feels free to offer their best thinking.

Hosts can create hospitable space even in large, impersonal venues. For instance, at a conference for 1,000 people, we asked the hotel staff to set up small, round cocktail tables instead of rows of chairs in the cavernous ballroom. We then decked out each table with a red-checked tablecloth and a vase of red and white carnations. Volunteers placed sheets of white paper over the tablecloths and left small containers of colored markers for doodling. We also brought in palm trees and other greenery. When people entered the room, they were greeted by soft jazz music. The buzz of conversation almost instantly filled the space.

**Knowledge emerges in response to compelling questions that “travel well” as they attract collective engagement and exploration throughout a system.**

### Explore Questions That Matter.

One of our most important learnings in working with The World Café is that discovering and exploring “questions that matter” opens the door to catalytic conversation, insight, and innovation. Knowledge emerges in response to compelling questions that “travel well” as they attract collective engagement and exploration throughout a system. Powerful questions provide focus and coherence to networks of conversation that might otherwise spin off in random directions. Well-crafted strategic questions define *intention*, *focus energy*, and *direct attention* toward what really counts.

Hone the skill of shaping open-ended questions that are relevant to the group’s real-life concerns. These questions need not imply immediate action steps or problem solving. Allow the questions to invite inquiry and

exploration. At one Café in Denmark focused on improving a school system, the hosts framed the central question as “What could a good school also be?” rather than as “How can we fix the problems in this school?” In doing so, they opened up the conversation to appreciating what might be possible in the future, rather than limiting the focus to what is wrong in the present.

**Connect Diverse People and Perspectives.** “Intelligence emerges as the system connects to itself in diverse and creative ways,” according to Margaret Wheatley, author of *Leadership and the New Science* (Berrett-Koehler, 1992). By cross-pollinating ideas among tables in several rounds of conversation, we intentionally invite a more accelerated and richer network of dialogic interactions on a larger scale than is common in most dialogue circles.

One technique for enriching the ways in which the system connects to itself is to vary the different rounds of conversation. Hosts stay at each table to welcome guests while the other members travel to new tables to share as well as gather insights. Travelers might then return to their home Cafés or continue to move from table to table for several iterations. Sometimes the hosts change, with the first host becoming a traveler during the second cycle. Or several members might stay at the table while the others go out for brief visits as “ambassadors” to other tables, collecting new seed ideas that bring diverse perspectives to the home table.

Additionally, all living systems—including human systems—benefit from diversity. In her book *The Quantum Society: Human Nature and Consciousness Defined by the New Physics* (William Morrow and Company, 1994), Danah Zohar states: “Social evolution requires that different points of view, different ideas, different ways of life, and different traditions recombine into larger, more complex emergent wholes.” Breakthrough thinking is more likely to emerge when diverse viewpoints and perspectives contribute to the exploration. For example, “Strategy Cafés” that engage multiple

[Continued on next page >](#)

> Continued from previous page

stakeholders, including employees from all levels as well as customers and suppliers, can offer richer opportunities for innovation than traditional strategic planning activities among senior executives alone.

### **Listen Together for Patterns, Insights, and Deeper Questions.**

Through Café conversations, participants often discover coherent patterns of meaning in what may appear, at first glance, to be a chaotic and messy self-organizing exchange of ideas and perspectives. The emphasis is on *shared listening*—listening for the wisdom or insight that no individual member of the group might have access to by themselves. To that end, invite members to offer their unique perspectives and listen for new connections in the “space in-between.”

Allow for silence and reflection. Ask members to notice what’s evolving in the middle of the table. By focusing on these special qualities of collective attention, we have a greater opportunity to experience what our Danish colleague Finn Voldtofte calls “the magic in the middle.”

For example, in Sweden, hosts of a multi-stakeholder forum used Café conversations to clarify areas of inquiry that could influence the future of both the information/communications industry and the environment. They began the first round of conversation by giving each table of participants a “talking stone.” Each member took the talking stone in turn and presented his or her key insights, thoughts, or deeper questions about the query “How can information technology contribute to a sustainable future?”

The three other participants at each table were to listen carefully and draw any connections they noticed between ideas in the middle of the tablecloth. In the second and third rounds, the Café hosts asked everyone to begin listening as a group for the deeper assumptions underlying their perspectives and to write them on the tablecloth as well. When the final round was over, the group pooled the

collective insights and “ahas” that had emerged from linking the small-group dialogues from Café tables and creating a “conversation of the whole.”

Through this intentional process of discovering and connecting underlying assumptions and insights, participants who might have opposed each other in a different setting came to a mutual appreciation of the deeper questions they faced together in contributing to a sustainable future.

### **Make Collective Knowledge Visible to the Group.**

We’ve come to realize that the simple act of scribbling ideas and pictures on a paper napkin or tablecloth so that the others at the Café table can literally “see what you mean” is integral to knowledge creation and innovation. As Michael Schrage says in

*Shared Minds: The New Technologies of Collaboration*

(Random House, 1990), “The

images, maps, and perceptions

bouncing around in people’s brains

must be given a form that other people’s

images, maps, or perceptions can shape,

alter, or otherwise add value to. . . . It

takes shared space to create shared understanding.”

By providing paper and markers, we encourage the use of

“shared space” where people can build on each other’s ideas, weave together

their thoughts, and engage in deeper collective listening.

Many Café events include an interactive graphics specialist, who creates large visual maps that synthesize key insights and ideas. Commented Nancy Margulies, who has hosted many Cafés, “It’s like having a big ‘tablecloth’ in the middle of the whole group. Participants can quite literally see that they are creating something new together.” Other possibilities for making collective knowledge visible include having a “gallery walk,” with participants taking a tour of the tablecloths created by the different groups; publishing a Café newspaper on the spot; and creating theater presentations that reflect group discoveries. Each of these techniques allows participants to

capture and build on the momentum and ideas that emerge. In addition, creating “storybooks” from the session allows participants to take the results of their work to larger audiences after the event.

The five operating principles seem quite simple, but embodying them as an integrated practice demands creativity, thoughtfulness, artistry, and care. The creativity of the host can make the difference between an interesting conversation and the magic of experiencing what our colleague Tom Atlee calls *co-intelligence in action*.

### **Conversation As Action**

But is all of this talk just that, talk? What about the urgent need for action in our organizations today? We have found that, by its nature, The World Café challenges the ways most of us think about creating desired results in organizational and community life. Many leaders still preach that we should “stop talking and get to work”—as if talk and work were two separate things. Humberto Maturana, a pioneering evolutionary biologist, has helped us see that human beings think together and coordinate action *in* and *through* language. Conversation *is* “real work.” Through conversation people discover who cares about what and who will be accountable for next steps. We are finding that when people come to a new level of shared understanding around real-life issues, they want to make a difference. When participants return from Café conversations, they often see additional action choices that they didn’t know existed before.

### **Café As Metaphor**

As reported by members of Café events, The World Café is a powerful methodology for collaborative learning and knowledge evolution. We are also finding that it is a provocative metaphor that can help us see organizational and societal change in a new light. How might the metaphor of “The World as Café” invite us to think differently about ways to catalyze system-wide innovation and action?

We are learning that Café conversations are based on a larger natural process of mutual inquiry and



Source: Nancy Margulies

discovery that does not depend on small, round tables and red-checked tablecloths. By experiencing the power of focused networks of conversation on a small scale, members see how they might utilize this strategic insight in the larger systems they are part of. What if conversation were as much a core business process as marketing, distribution, or product development? What if it were already *the* core process—the source of organizational intelligence that allows all of the others to generate positive results?

For example, imagine your organization as a series of Café tables, with employees moving between functions inside the organization as well as connecting with multiple “tables” of customers, suppliers, distributors, and other conversation partners. What difference would it make to your own action choices if you viewed your workplace as a dynamic, living network of conversations and knowledge creation rather than as a traditional hierarchy (see “What We View Determines What We Do”)?

Based on an understanding of The World Café, leaders can take greater responsibility for designing infrastructures that bring coherence and focus to organizational conversations. For example, they come to recognize the key role they play in discovering “the big questions” and hosting strategic conversations with multiple stakeholders. This shift of lens also has practical implications for how leaders work with strategy formation, organizational learning, information technology, the design of physical space, and leadership development.

In one Café session, senior leaders from major corporations were mapping the implications of taking this view. The director of global operations for a company with more than 50,000 employees suddenly jumped up from his seat and exclaimed, “Do you know what I’ve gone and done? I’ve just reorganized my entire global operation. I’ve broken up the informal knowledge networks and relationships that have developed over the years. If I had looked at my reorganization through these glasses, I would have done it a lot differently. It’s going to take us a *long*

## WHAT WE VIEW DETERMINES WHAT WE DO

*If key knowledge sharing, learning, and strategic innovation happen in networks of conversation through personal relationships, then . . .*

- What is the unique contribution of leadership?
- What learning tools/methods/approaches have the most leverage?
- What are the implications for strategy evolution?
- How might you design physical space differently to support knowledge sharing?
- How would you approach the process of organizational change and renewal?
- What is the most strategic use of information technology?
- What are the indicators of success?

*time to recover!”* His heartfelt comments stimulated a lively conversation about the role of leaders in developing organizational strategies that honor these less visible but critical conversational and learning processes.

We’re seeing many practical examples of how people are intentionally using the metaphor of The World Café to guide strategic work in larger systems. Executives in a high-tech corporation helped to decrease the injury rate dramatically by using Café principles to engage existing networks of conversation and introduce questions about safety risks. The World Café has led intellectual capital expert Leif Edvinsson of Sweden to observe that the office design of the past is inadequate to support effective knowledge work. In response, he has engaged leading-edge architects in alternative space design.

World Café principles are also being used to redesign a Museum of Science and Industry in Florida to highlight not only formal exhibits but also learning conversations as doorways to discovery. And the initiative From the Four Directions: People Everywhere Leading the Way is intentionally weaving a global network of conversations among leaders of all ages on several continents. Using the Internet and other information technologies, local conversation circles feed insights back into the network, catalyzing these worldwide leadership dialogues into a growing force for societal innovation.

### Creating Sustainable Value

The World Café is one path for stimulating courageous conversation about questions that matter to our lives and

work—especially in large group settings. We are now seeing the systemic ways in which focused networks of conversation, especially with the support of collaborative technologies, can help organizations and communities evolve. Using The World Café as a methodology and as a metaphor offers a practical yet innovative way to cultivate both the knowledge required to thrive today and the wisdom needed to create the futures we want, rather than being forced to live with the futures we get. ■

**Juanita Brown** and **David Isaacs** serve as strategists and thinking partners with senior leaders, applying living systems principles to the evolution of knowledge-based organizations and large-scale change initiatives. They have hosted Café conversations and strategic dialogues internationally in a wide variety of business and community settings. (Contact [info@theworldcafe.com](mailto:info@theworldcafe.com) or call 415-381-3368). **The World Café Community** is comprised of a growing global group of leaders and others committed to courageous conversations and positive futures. We thank Anne Doshier, Ken Homer, Susan Kelly, Janice Molloy, Nancy Margulies, Karen Speerstra, and Sue Wetzler for their special contributions to this article.

## NEXT STEPS

- **Notice** the generative power of conversation and shared listening.
- **Explore** what you would do differently if you viewed your organization or community as a network of conversations and social learning through which we co-evolve the future.
- **Consider** how you might “seed” your own networks of conversation with questions that matter.
- **Convene** a Café conversation in your organization or community (for ideas, go to [www.theworldcafe.com](http://www.theworldcafe.com)).



# FINE-TUNING YOUR CAUSAL LOOP DIAGRAMS— PART I

BY JOHN D. STERMAN

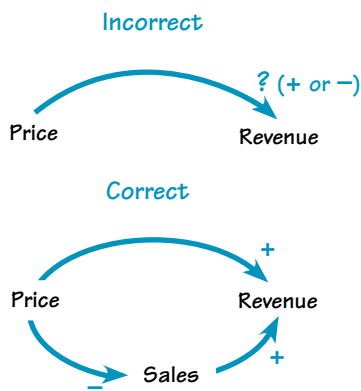
ARTICLE 1 OF 2

In this two-part series, John D. Sterman, author of *Business Dynamics: Systems Thinking and Modeling for a Complex World* (McGraw-Hill, 2000), shares some important tips for making your causal loop diagrams (CLDs) as accurate, understandable, and useful as possible. This article, excerpted from *Business Dynamics*, reviews helpful guidelines for the process of formulating CLDs; the second article (to appear in the August 2001 issue) will explore more advanced tips. For basic guidelines about how to create CLDs and a wide range of examples, refer to Sterman's book or go to [www.mhhe.com/sterman](http://www.mhhe.com/sterman) or [www.pegasus.com](http://www.pegasus.com).

**C**ausal loop diagrams are an important tool for representing the feedback structure of systems. They are excellent for

- Quickly capturing your hypotheses about the causes of dynamics;
- Eliciting and capturing the mental models of individuals and teams;
- Communicating the important feedback processes you believe are

AMBIGUITY OF LINKS



To be effective, your CLD should not include any ambiguous causal links. Ambiguous polarities usually mean there are multiple causal pathways that you should show separately.

responsible for a problem.

The conventions for drawing CLDs are simple but should be followed faithfully. Think of CLDs as musical scores: At first, you may find it difficult to construct and interpret these diagrams, but with practice, you will soon be sight-reading. In this article, I present some important guidelines that can help you make sure your CLDs are accurate and effective in capturing and communicating the feedback structure of complex systems.

**Avoid Ambiguity in Labeling Causal Links**

People sometimes argue that a specific link in a CLD can be either positive or negative, depending on other parameters or on where the system is operating. For example, we might draw a diagram that relates a firm's revenue to the price of its product and then argue that the link between price and company revenue can be either positive or negative, depending on the elasticity of demand (see "Ambiguity of Links"). A higher price means *less* revenue if a 1 percent increase in price causes demand to fall more than 1 percent. This link would be labeled with a negative sign. But less elastic demand might mean a 1 percent increase in price causes demand to fall less than 1 percent, so revenues would then *rise*, resulting in a positive link polarity.

When you have trouble assigning a clear and unambiguous sign to a link, it usually means there is more than one causal pathway connecting the two variables. You should make these different pathways explicit in your diagram. The correct diagram for the impact of price on revenue would show that price has at least two effects on revenue: (1) it determines how much revenue is generated per unit

"+" AND "-" VS. "s" AND "o"

In system dynamics modeling, the polarity of causal links is indicated by "+" or "-". In recent years, some people (including *THE SYSTEMS THINKER*) began to use "s" and "o". Pros and cons of each have been debated ever since. Following standard system dynamics practice, I recommend the "+" and "-" notation, because it applies equally correctly to ordinary causal links and to the flow-to-stock links present in all systems, while "s" and "o" do not. For further information, see George Richardson, "Problems in Causal Loop Diagrams Revisited," *System Dynamics Review* 13(3), 247-252 (1997), and Richardson and Colleen Lannon, "Problems with Causal-Loop Diagrams," TST V7N10.

sold (a positive link), and (2) it affects the number of units sold (usually a negative link).

**Is It Reinforcing or Balancing?**

There are two methods for determining whether a loop is reinforcing or balancing: the fast way and the right way. The fast way, which you may have learned when you first started working with CLDs, is to count the number of negative links—represented by "-" or "o"—in the loop (see "+ and - Vs. 's' and 'o'"). If the number is even, the loop is reinforcing; if the number is odd, the loop is balancing. However, this method can sometimes fail, because it is all too easy to mislabel a link's polarity or miscount the number of negative links.

The right way is to trace the effect of a small change in one of the variables around the loop. Pick any variable in the loop. Now imagine that it has changed (increased or

decreased), and trace the effect of this change around the loop. If the change feeds back to reinforce the original change, it is a reinforcing loop. If it opposes the original change, it is a balancing loop. This method works no matter how many variables are in a loop and no matter where you start.

### Make the Goals of Balancing Loops Explicit

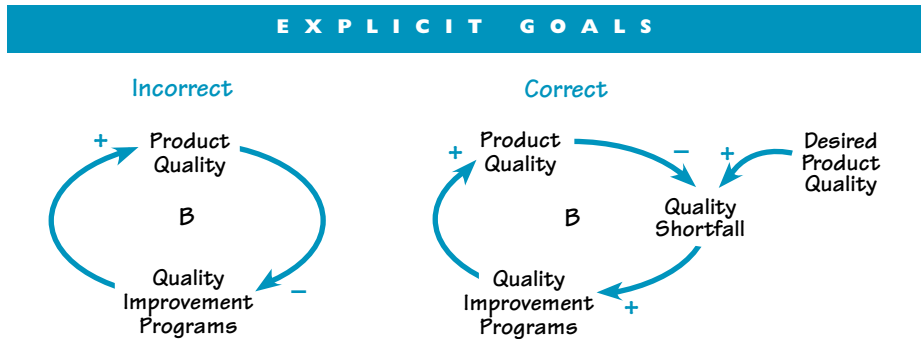
All balancing loops have goals, which are the system's desired state. Balancing loops function by comparing the actual state to the goal, then initiating a corrective action in response to the discrepancy between the two. It is often helpful to make the goals of your balancing loops explicit, usually by adding a new variable, such as "desired product quality" (see Desired Product Quality in "Explicit Goals"). The diagram shows a balancing loop that affects the quality of a company's product: The lower the quality, the more quality improvement programs the company initiates, which, if successful, correct the quality shortfall.

Making goals explicit encourages people to ask how the goals are formed; for instance, who determines desired product quality and what criteria do they use to make that determination? Hypotheses about the answers to these questions can then be incorporated in the diagram. Goals can vary over time and respond to pressures in the environment, such as customer input or the quality of competing products.

Making the goals of balancing loops explicit is especially important when the loops capture human behavior—showing the goals prompts reflection and conversation about the aspirations and motives of the actors. But often it is important to represent goals explicitly even when the loop doesn't involve people at all.

### Represent Causation Rather Than Correlation

Every link in your diagram must represent what you and your colleagues believe to be *causal relationships* between the variables. In a causal relationship, one variable has a direct effect on another; for instance, a change in the



Making goals explicit in balancing loops encourages people to ask questions about how the goals are formed. For example, what drives a company's desired level of quality?

birth rate alters the total population. You must be careful not to include *correlations* between variables in your diagrams. Correlations between variables reflect a system's past *behavior*, not its underlying *structure*. If circumstances change, if previously dormant feedback loops become dominant, or if you experiment with new decisions and policies, previously reliable correlations among variables may break down.

For example, though sales of ice cream are positively correlated with the murder rate, you may not include a link from ice-cream sales to murder in your CLD. Such a causal link suggests that cutting ice-cream consumption would slash the murder rate and allow society to cut the budget for police and prisons. Obviously, this is not the case: Both ice-cream consumption and violent crime tend to rise in hot weather. But the example illustrates how confusing correlations with causality can lead to terrible misjudgments and policy errors (see "Ice-Cream Sales and Murders").

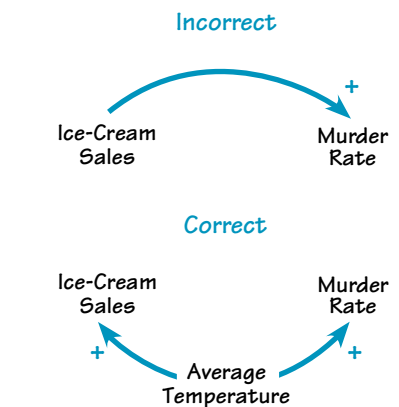
While few people are likely to attribute murders to the occasional double-dip cone, many correlations are more subtle, and it is often difficult to determine the underlying causal structure. A great deal of scientific research seeks the causal needles in a huge haystack of correlations: Can eating oat bran reduce cholesterol, and if it does, will your risk of a heart attack drop? Does economic growth lead to lower birth rates, or is the lower rate attributable to literacy, education for women, and increasing costs of child-rearing? Do companies with serious quality improvement programs earn superior

returns for stockholders?

Scientists have learned from experience that reliable answers to such questions are hard to come by and require dedication to the scientific method—controlled experiments; randomized, double-blind trials; large samples; long-term follow-up studies; replication; statistical inference; and so on. In social and human systems, such experiments are difficult, rare, and often impossible. You must take extra care to determine that the relationships in your CLDs are causal, no matter how strong a correlation may be. ■

John D. Sterman is the J. Spencer Standish Professor of Management at the Sloan School of Management of the Massachusetts Institute of Technology and director of MIT's System Dynamics Group.

### ICE-CREAM SALES AND MURDERS



Causal loop diagrams must include only what you believe to be genuine causal relationships, never correlations, no matter how strong.



## BUILDING RELATIONSHIPS WITH RESPECT AT THE CENTER

BY JANICE MOLLOY



**Respect:  
An Exploration**  
by Sara Lawrence-  
Lightfoot

In the introduction to her book, *Respect: An Exploration* (Perseus Books, 1999), sociologist Sara Lawrence-Lightfoot observes that “We pay more attention to [respect] when it is *not* expressed.” And, in fact, when searching for the causes of destructive social trends ranging from school violence to the culture of rudeness that surrounds us, we tend to focus on what we perceive to be a growing lack of respect for people within our society.

To shift our discourse from what happens when respect is *absent* to what happens when it is *present*, Lawrence-Lightfoot deftly weaves together individual profiles, personal reflection, and philosophical analysis. Through the powerful stories she tells, she helps us to understand respect not as a rigid set of rituals based on status and hierarchy but rather as a dynamic process of relationship-building.

### Six Facets of Respect

Traditional notions of respect emphasize “some sort of debt due people because of their attained or inherent position” and require “expressions of esteem, approbation, or submission.” In contrast, Lawrence-Lightfoot describes respectful relationships based in symmetry, empathy, and connection, even among those considered to be unequal. She documents how such bonds grow and develop over time, as well as the challenging work that nurturing them entails.

To illustrate the different ways in which people commit to building relationships with respect “at the center,” the forms that these relationships take, and their impact on the participants and others, Lawrence-Lightfoot paints a vivid portrait of the lives and work of six individuals. The story of each of these people embodies a different facet of respect: empowerment, healing, dialogue, curiosity, self-respect, and attention.

For instance, to bring to life the concept of *empowerment*, the author introduces us to nurse-midwife Jennifer Dohrn, who founded a birthing clinic to serve poor women in South Bronx, NY. After witnessing Dohrn’s interactions with patients, including during the birth of several babies, Lawrence-Lightfoot reports that the midwife “provides an oasis of respect and safety that allows women to be in touch with their bodies, take control of their care, and realize their own power to give birth and build a family.” Whereas in the Western medical system, patients are traditionally expected to defer to the expertise and higher status of the care provider, in the Childbearing Center, they are encouraged to review their own charts, read relevant literature, and participate in classes, groups, and mentoring so they can make informed decisions about their medical care.

Likewise, to illustrate *self-respect*, Lawrence-Lightfoot follows Harvard University law professor David Wilkins as he strives to treat the people in his classes with a sense of dignity generally denied to first-year students. To learn more about each of his 150 Civil Procedures students, he invites them to join him for lunch in groups of 12. In this intimate setting, Wilkins is able to see his students as individuals and learn

more about their unique histories. Back in the classroom, by creating an environment that feels safe and generously offering these budding lawyers “his time, his wisdom, his humor, and his legal expertise, he hopes that they will feel his respect for who they are and will become.”

One theme that emerges from the mosaic that Lawrence-Lightfoot creates through these stories is how roles often reverse in respectful relationships: The so-called expert—teacher, health-care provider, minister—becomes the learner, as the student, patient, or parishioner feels increasingly comfortable conveying to the “expert” what he or she knows, needs, and values. This growing interdependence transforms the relationship between the participants and the participants themselves, dismantling traditional hierarchies and leading to a greater sense of mutuality and reciprocity.

### The Promise of Transformation

Lawrence-Lightfoot’s dynamic view of respect jibes with much of the work currently being done in organizations with disciplines such as servant-leadership and dialogue. Each of these areas of research and practice emphasizes the need to truly see and hear individuals and to honor their unique contributions and perspectives. Each offers the promise of a radical transformation of our institutions, businesses, communities, and families. And each gives us the hope of wholeness—as individuals and in concert with others—as we look to the future together. ■

Janice Molloy is content director at Pegasus Communications and managing editor of *THE SYSTEMS THINKER*.



## THE IMPERFECT STORM

BY PATRICK J. O'BRIEN

**W**hen the “great blizzard of 2001” in the northeastern United States failed to be in the right place at the right time, with the right degree of punch, lots of people got frustrated—even angry. Why the upset? Is shoveling snow so satisfying?

Actually, few people really looked forward to the predicted snow, ice, slush, and power outages. But in anticipation of the storm, families rushed to the food markets, companies closed down, 18-wheelers packed into rest areas on the interstate highways, and airlines cancelled flights. When the anticipated storm did not come as forecasted, many felt angry and frustrated. The storm eventually did come, but the timetable, path, and intensity were different than had been reported.

What went wrong? Nothing, really. We all made decisions based on professionally developed computer models, and we followed the voice of prudence that said, “It’s better to be safe than sorry.” But the storm did not act according to the model—and we were sorry that we played it so safe!

The lesson to be learned is about models and how we use them. Models are constructed to represent something—a car, an inventory system, global climate change, and so on. A model airplane is real—but it is not the airplane itself. Likewise, a model storm is real, but it is not the storm itself—it is a representation of a storm, given a particular set of assumptions about multiple, interdependent variables acting in a particular way in a dynamic weather environment.

We cannot judge models on how “good” or “bad” they are—but on

how “useful” we find them. To what degree does a model help build awareness of what the future may bring and help us prepare for it? Should we bring our raingear? Buy extra bottled water and canned soup? To what degree does a model help us understand the complexity of our present reality? Can we count on a model of seasonal consumer demand to help us make decisions about production schedules and warehouse capacity?



A model’s usefulness is enhanced if we can dig inside of it and understand the interplay of variables, and if we can distinguish between the quality of the model’s

structure and the data that is put into it. Even embarrassing uses of models can help us learn more about reality. Despite the confusion about calling the winner of the U.S. presidential race in Florida on election night, we did learn a lot about the models that the pollsters and TV stations use when predicting outcomes.

### Models All Around Us

We are surrounded by models, even when we don’t think of them as such. For instance, visit a new apartment complex or suburban housing development and go through a model unit. Walk through the oversized closet; spin the built-in spice carousel; envision the workshop in the extra-wide garage; smell the afternoon coffee. Maybe someday . . .

Or spend the morning at the local super hardware store. Play with the computer models in the remodeling section. See how you could renovate your tiny, 18-year-old kitchen. Gleaming cabinets could hang here;

the dishwasher could move there. Choose a refrigerator that opens on the left, then one that opens on the right. Try lime walls with white trim, or white walls with lime trim. Maybe someday . . .

The models look stylish in the new summer fashions. How about a new dress, or perhaps that lavender suit. The yellow, green, and red scarf could go with just about anything. But I can’t picture myself in that skimpy bathing suit any time soon. Maybe someday . . .

Models help us play around in possible future worlds without the risk involved in making a major financial investment or the risk of failure. They allow us to add or subtract variables and to change the relationship between variables. They help us *plan how to react* if some future should emerge and also to *proactively shape that future*. We might not be able to change tomorrow’s weather, but we can change the scheduling of product launches to take advantage of present production capacity. Our models are useful if they help us experience a reality that we cannot otherwise take part in within the limits of our present time/space boundaries. They can help us take the “Maybe” out of “Maybe Someday” by supporting the planning process.

### Different Responses to Different Scenarios

People from all walks of life create their own models every day. For example, NFL coaches conduct model drafts to create the best possible team, given certain variables. What if the Raiders go for the defensive player in the second round—should we trade down or up? Go offense or special teams? Who might be left on the

*Continued on next page >*

➤ Continued from previous page

board in the third round? Should we worry about the salary cap this year, or restructure contracts and worry about it next year?

Or a production manager might draw out the dimensions of a problem on the back of her lunch bag. She pencils in the variables, identifies the linkages, and asks questions such as: “What is causing what? Where are the delays? Are we creating our own mess? What can we change? What will happen if we do? Where is the leverage?”

We can even play corporate leader by using a computer simulation such as *Balancing the Corporate Score Card* (Harvard Business School Publishing/High Performance Systems, Inc.). Make the tough decisions and see what happens. Not satisfied? Go back and try something else.

The easy access to computers and user-friendly simulation software has given us the capacity to stretch our thinking into the future. Instead of building sandcastles on the beach, we can build—even remodel—organiza-

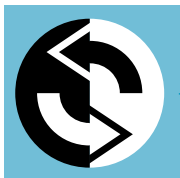
tional structures and see what might happen when the imperfect storms of reality come across the terrain. We can play with multiple scenarios and test the robustness of our strategies against each possible future.

For example, what would happen if we wanted to challenge our thinking about the impact of economic development on the structure of our city and county resources? What if we successfully recruit new industries into our region, or if existing employers significantly expand? How will the population expand? Will we be able to create a sustainable environment? Will the school system be able to grow to meet the needs of the increasing number of students? What about space for recreation? Will there be enough water, enough energy? Where will the talent come from? How will the workforce get to the workplace—by cars, by public transportation? Are we willing to change our tax structure to build the infrastructure to support economic expansion? Where will the delays be? We can create a variety of scenarios to help us better understand

these futures and then challenge our own beliefs about how much we really want to expand.

The value of any model, including the mental models that we have in our heads about how the world works, lies in our own willingness to challenge the assumptions used to create the model—and to live in the alternative futures that models allow us to think about. So that storm last winter didn’t happen in precisely the way we thought it would, based on the models we followed. But it did happen. And we were prepared. The storm model was certainly useful, even if somewhat inaccurate on this occasion. It is up to us to make our own best decisions based on models that we trust—and then continually work to refine those models if they don’t always produce results we can rely on. ■

Patrick J. O’Brien is an executive consultant with Performance Consulting, Inc., a firm dedicated to helping organizations learn how to create the capacity to achieve sustainable outcomes.



## F E E D B A C K / F O L L O W - U P

### Delving Deeper into the California Energy Crisis

I read the article “A California Dream Becomes a Nightmare” (V12N2) on the California energy crisis with some interest. However, I felt there were some key areas left out of the assumptions and causal loop diagram.

The article addresses California’s not building power plants. However, this did not occur due to the 1996 deregulation. Having worked in the energy industry for quite a while, it has been a known fact since the mid-to late-1980s that California did not have enough capacity to meet future demand. Needless to say, any time a utility tried to bring in a new plant, it was shut down. For years this was

driven by public protest more so than statutory reasons. As a result, the real “cause and effect” began at least a dozen years before the deregulation. This really demonstrates the fundamental rule that cause and effect are not closely related in time or space (generally speaking).

The diagram in the article does not appear to address the dynamics of not building any new power plants. I could indirectly read that into a couple of areas, but it is not clear to me.

—Steve Abernathy

### Editor’s Response:

Thank you, Steve, for enriching the discussion of the dynamics surrounding the California energy crisis. Because our “From the

Headlines” articles are limited to one page, our writers only have enough space to scratch the surface of complex issues such as this one. Although these brief articles aren’t meant to be comprehensive or definitive, we hope they provoke readers to explore the structures presented in greater detail and to challenge the assumptions that went into the diagrams that we publish. We hope the article and Steve’s thoughtful feedback might serve as the basis of an interesting dialogue; to participate, please go to <http://www.pegasus.com>, click on “Pegasus Forums,” go to the “Systems Thinking” Bulletin Board, and look for the topic “California Energy Crisis.”



## READER'S RESPONSE TO "MOVING BEYOND THE E-VENT LEVEL"

In the March issue of *THE SYSTEMS THINKER*, we reported about a web site designed to encourage anonymous complaints by employees from throughout the corporate world. Chris Soderquist, founder of Pontifex Consulting, offered his perspective on why blowing off steam can be counterproductive rather than therapeutic.

### The Problem: Unintended Consequences of Venting

While reading the Workout regarding Vault.com, I couldn't help but picture Peter Finch's famous scene from the movie *Network*, as he leans out the window and screams "I'm mad as \_\_\_, and I'm not going to take it any-more!" Such a cathartic release seems really therapeutic; however, it is often more harmful than helpful.

Anonymous "venting" seems like a great idea. But succumbing to this impulse will likely decrease the probability that any effective change will happen in an organization. Here's why.

As frustrations build, the natural reaction is to vent, releasing that frustration (B1). This is just a quick release; since the cause of building frustration—unaddressed issues—still remain, the level of frustration rebuilds. Eventually, people will engage in conversations to address the issues, which will lower frustration (B2)—and fewer unaddressed issues reduce the building of frustration (B3).

This would be effective if the previous venting had not generated defensiveness, which hinders stakeholders' ability to address the issues. It sets in motion an insidious vicious cycle: the higher the frustration, the more venting, and the less likely conversations will result in addressing the issues—and the more frustration (R4)!

### The Solution: Model II Skills

The leverage point is building the organization's capacity to facilitate

productive conversations—ones that reduce defensiveness in order to more effectively address issues. Chris Argyris refers to such skills as Model II skills; they are described in very practical terms in Roger Schwarz's *The Skilled Facilitator* (Jossey-Bass, 1994).

Comments like "The CTO is a complete idiot" are unactionable; they might be true, they might not—yet there's no data for anyone in the system to decide what's true nor how improvements can be made! Such comments only increase defensiveness. Plus, venting anonymously allows the venter to ignore their own responsibility with respect to the issue. Model II skills help people who want change to present their issues in ways that reduce potential defensiveness by doing so in a "mental model-testing" way. Mental model-testing facilitates collaboration with all stakeholders on resolving issues—and by doing so, the venters may even have their mental models revised.

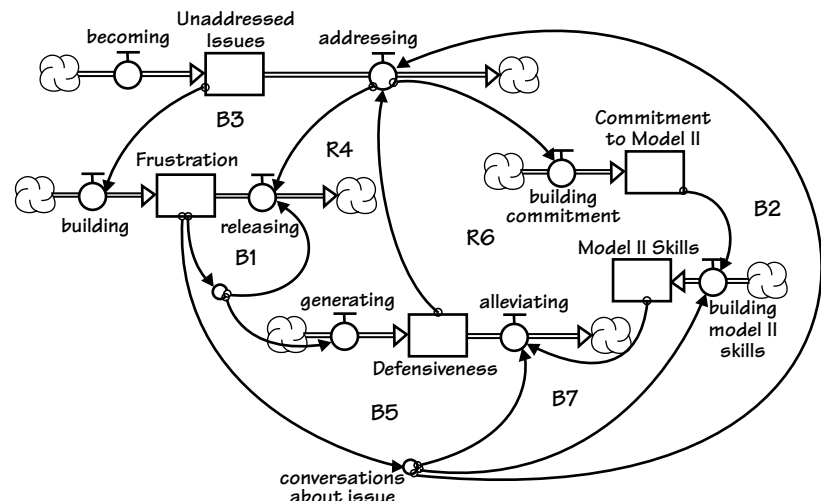
Organizations embarking on this journey set in motion beneficial feed-

back loops. First, because defensiveness is alleviated, conversations about issues eventually lead to addressing them, which lowers frustration (B5). Second, a virtuous cycle results because successfully addressing issues will increase an organization's commitment to building Model II skills (R6).

Learning these skills requires applying them to conversations about difficult issues, which, if successful, reduces the need to have such conversations (B7). Such a loop would impede further building of these skills if not for the fact that more issues enter the unaddressed stock (that nasty inflow will make sure of it). The good news is that future issues will likely be "higher quality" issues. Organizations that learn to address some of the issues described in the E-vent article will—like moving up Maslow's hierarchy—be able to focus on issues of more strategic importance. And that's an issue not to complain about! ■

—Chris Soderquist

### The Leverage in Building Communication Skills





## FROM THE FIELD

### **Profit Beyond Measure Receives Shingo Prize**

*Profit Beyond Measure: Extraordinary Results Through Attention to Work and People* by H. Thomas Johnson and Anders Bröms (Free Press, 2000) has been awarded the 2001 Shingo Prize for Excellence in Manufacturing. Johnson was a presenter at the 2000 *Systems Thinking in Action*® Conference and will publish an article based on that presentation in an upcoming issue of *THE SYSTEMS THINKER*. The 13th Annual Shingo Conference and Award Banquet will be held June 4–8 in Dearborn, MI. For information, go to <http://www.shingoprize.org/shingo/index.html>. We congratulate the authors on this well-deserved acknowledgement of their achievement and contribution.



## PEGASUS NOTES

### **Three New Pocket Guides Available**

These handy reference guides—the latest in our Pocket Guide series—offer practical tips for accelerating organizational change and managing complex challenges.

#### **A Guide to Practicing Dialogue** by Glenna Gerard and Linda Ellinor

This guide differentiates dialogue from discussion/debate, offers tips for practicing dialogue skills, and suggests ways to use dialogue in problem-solving and decision-making.

#### **A Guide to Servant-Leadership** by Ann McGee-Cooper and Gary Looper

This guide compares servant-leadership with traditional leadership models, gives initial steps for practicing servant-leadership, and outlines how TDIndustries built a shared vision using this methodology.

#### **Managing the Archetypes: Accidental Adversaries** by Philip Ramsey and Rachel Wells

The first in a new series on managing the systems archetypes, this guide offers insights into the dynamics of relationship breakdowns and provides leverage points for strengthening healthy relationship loops while weakening dysfunctional ones.

To order, call 800-272-0945 or go to <http://www.pegasuscom.com>. \$5.00 each; volume discounts are available.

### **John Leggate Added to Conference Program**

Pegasus is pleased to announce the addition of John Leggate as a keynote speaker at the 2001 *Systems Thinking in Action* Conference. Leggate is group vice president, Digital Business, for BP, one of the world's largest oil companies. In his presentation, titled "Learning in the Digital Era—The Strategic Imperative," he will talk about how BP is changing the way that teams work together and communicate; these changes are in turn challenging how traditional managers think about collaboration and the boundaries of their own creativity. For more information about the conference or to register, go to <http://www.pegasuscom.com/stapage.html>.

**For information about reading and using causal loop diagrams, go to [www.pegasuscom.com/cld.html](http://www.pegasuscom.com/cld.html).**

## LEARNING LINKS

### **<http://www.berkana.org>**

The Berkana Institute is an educational and research foundation, founded by Margaret Wheatley and Myron Kellner-Rogers, that seeks to explore new thinking and practice about the organizing of human endeavor. The Institute sponsors research into the conditions that support the liberation of our collective capacity in organizations worthy of our humanity. The web site includes a calendar, a history of the organization, and information on new initiatives.

### **<http://www.chaordic.org>**

The Chaordic Alliance is committed to creating the conditions for the formation of practical, innovative organizations that blend competition and cooperation to address critical societal issues. The web site offers definitions of and resources about chaordic principles, news and events, and information about partners and projects.

## THE SYSTEMS THINKER®

**Managing Editor:** Janice Molloy ([janicem@pegasuscom.com](mailto:janicem@pegasuscom.com))  
**Founding Publisher:** Daniel H. Kim  
**Publisher:** Ginny Wiley  
**Editors:** Kali Saposnick  
**Production:** Nancy Daugherty  
**Circulation:** Glenn Ceurvels ([glenn@pegasuscom.com](mailto:glenn@pegasuscom.com))  
**Editorial Advisory Council:** Pål Davidsen, *University of Bergen*; Bob Eberlein, *Ventana Systems, Inc.*; Sharon A. Els, *Pugh-Roberts Associates*; Michael Goodman, *Innovation Associates*; Janet Gould Wilkinson, *Gregory Hennessy, McKinsey*; Jenny Kemeny, *David Kreutzer, Successful Systems*; Victor Leo, *Dennis Meadows, University of New Hampshire*; John Morecroft, *London Business School*; David V. Packer, *The Systems Thinking Collaborative*; James Pennell, *Morgan Stanley*; Nick Pudar, *General Motors Corporation*; Michael J. Radzicki, *Worcester Polytechnic Institute*; Thomas J. Ryan, *Shell Oil Company*; Peter Senge, *MIT Sloan School of Management*; Dan Simpson, *The Clorox Company*; John Sterman, *MIT Sloan School of Management*; Pat Walls, *FedEx*

*THE SYSTEMS THINKER*® explores both the theory and practice of systems thinking and related organizational development disciplines. Articles by leading thinkers and practitioners articulate the challenges and issues involved in creating organizations on the leading edge of innovation. We encourage dialogue about systemic issues and strive to provide a forum for debating such issues. Unsolicited articles, stories, and letters to the editor are welcome.

*THE SYSTEMS THINKER*® (ISSN 1050-2726) is published 10 times a year by Pegasus Communications, Inc. Signed articles represent the opinions of the authors and not necessarily those of the editors. The list price is \$189.00 for one year. Site licenses, volume discounts, and back issues are also available.

Copyright © 2001 Pegasus Communications, Inc. All rights reserved. No part of this newsletter may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system, without written permission from Pegasus Communications.

#### **Orders and Payments Offices**

Phone 800-272-0945 • 802-862-0095 • Fax 802-864-7626  
[customerservice@pegasuscom.com](mailto:customerservice@pegasuscom.com)  
PO Box 2241  
Williston, VT 05495 USA

#### **Editorial and Administrative Offices**

Phone 781-398-9700 • Fax 781-894-7175  
[editorial@pegasuscom.com](mailto:editorial@pegasuscom.com)  
One Moody Street  
Waltham, MA 02453 USA

[www.pegasuscom.com](http://www.pegasuscom.com)

