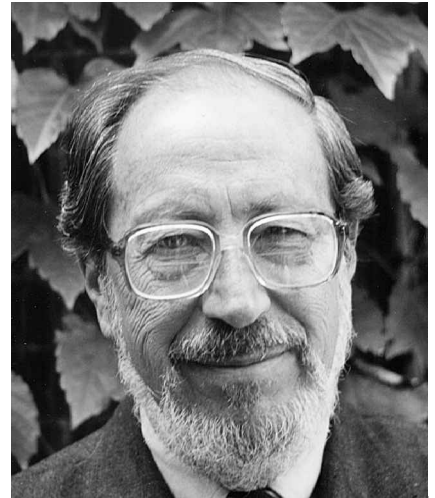# From the Founding Editor

Reflections is about the creation, dissemination, and utilization of knowledge. In our first issue, we provided several articles that explored what we mean by knowledge, especially the distinction between explicit and tacit knowledge, between theory and practice, between knowing what and knowing how, between intellectual knowledge and skill in application of that knowledge. It is time to deal more explicitly than we have with the tacit skill dimension, to explore in somewhat greater detail what practitioners do that makes them more or less effective, to explore the theory of practice.

We cannot, of course, give a definitive analysis of practice because practice is an art and because practice involves large amounts of improvisation. But we can provide some insights and some examples of how consultants and practitioners think about what they do and what they believe is more or less effective in getting things done. As in our previous issues, we open up the area and invite our readers to comment and to add their own insights.

Ed Schein

In This Issue

Edgar H. Schein and Karen Ayas

What is the essence of the change and intervention methodologies that organizational consultants use? What are some of the tools that actually work? What specifically makes them effective? And, perhaps most important of all, what are consultants trying to do? What are some of the goals toward which these tools are employed? In this issue, we have a number of articles that attempt to answer these questions as we begin to explore the "theory of practice."

As one of our distinguished board members, Ray Stata, once said to a class of executives, "Everything happens through conversation." The practice of conversation is one well worth detailed exploration. We begin the issue with an insightful conversation facilitated by **Otto Scharmer**. Looking back on their professional lives dealing with change, **Ed Schein** and **Adam Kahane** share their defining and critical experiences, revealing the hallmarks of a change consultant's ultimate goals and what he or she has to do to achieve them. Otto Scharmer summarizes with his own remarks on the levels of reorganizing and change.

Next, **Penelope Williamson, Anthony Suchman, John Cronin**, and **Diane Robbins** describe a relationship-centered approach to consulting in the health care industry. This approach builds on trusting relationships between consultants and clients that allow for meaningful conversations and tapping into the collective wisdom of the organization. The CEO of the client organization, John Cronin, responds to **Joan Vitello**'s comments and further inquiry.

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We follow with "dialogue," one of the more enhanced modes of conversation along the conversation continuum. **Charles Palus** and **Wilfred Drath** describe a technique they refer to as "mediated dialogue" that can create profound levels of shared meaning in a group so that the wisest courses of action can emerge. **William Isaacs**, a scholar and consultant who has pioneered the dialogue approach, challenges their approach and the authors respond. **Roger Harrison,** in his comments, refers to additional approaches that make dialogue accessible to all, not just experts.

In our Views section, **Frank Schneider,** reflecting on his own experience with e-mail, explores the possibility of a dialogic approach to online communication. Commentators **Susanna Opper,** a seasoned consultant, and **Jim Fleming,** a practicing manager, share their experiences.

The power of storytelling is illustrated from diverse angles by the next set of articles. These clearly show how and why stories work when all else might fail. **Stephen Denning**, former Program Director of Knowledge Management at the World Bank, shares his own story. Clearly, storytelling is an art and not every story fosters change in a corporate setting. Read the table carefully if you want to identify the elements of what Denning calls a "springboard story" and cultivate the art of effective storytelling. In her comments, **Stella Humphries** offers her story to illustrate the power of stories in a research setting. **Patrick Parker-Roach,** in his comments, continues to explore storytelling from a consultant's perspective.

Next, **Linda Booth Sweeney** shows how one might reach a better understanding of systems through the use of children's favorite stories—those we all are probably familiar with but have never explored from a systems thinking perspective. As **Philip Ramsey** comments, this might be creative and educational for adults and children alike.

We then shift gears to another powerful learning tool. **Marilyn J. Darling** and **Charles S. Parry** reveal the dynamics of the after-action review (AAR) process and explain how the army has created this post mortem in the service of learning from experience and how it has influenced army operations. Colonel **John O'Shea** (US Army, retired) underscores AAR as a "living practice" and reiterates some of the subtleties involved in making it so.

We close the issue with **Diane Schmalensee's** article, which focuses on the power of learning that crosses the boundaries of professional communities and provides insights on how to connect people from different disciplines. **George Roth,** in his comments, shares his experience with the MIT-Ford, industry-university collaboration and what contributes to its success.

As always, we welcome your reactions and comments. Please e-mail us at jane@solonline.org.

Humility and Ignorance: What It Takes to Be an Effective Process Consultant

Edgar H. Schein, Adam Kahane, and C. Otto Scharmer

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This open-ended conversation took place on February 7, 2000, in Cambridge, Massachusetts. Our goal was to explore some of the deeper aspects of consulting and change. The afternoon conversation highlights some of Schein's and Kahane's critical learning experiences as consultants to corporate and civic change projects. We talked about the more subtle aspects of profound change as they are perceived from the perspective of the consultant.

C. Otto Scharmer (COS): What questions do we want to explore in this conversation?

Edgar H. Schein (ES): For me, the first question is what are the deep, common elements of successful intervention and change? Are there really important differences between different claims and approaches to change? Or are most change theories built on very similar premises? I am struck by how everyone makes claims with their own technology as if they had a unique approach. Are there real differences or are these just differences for purposes of public relations, rather than being theoretically sound?

Second, why is it so hard to get people to see the deeper levels, either in their personal relations or culture or any of the things we end up dealing with? It's very hard to get people to stop, reflect, and look at what's really going on.

Adam Kahane (AK): I am working with a different set of questions related to the process of strategizing—although I think that there are links to yours. The first has to do with the extent to which strategy is adaptive—trying to do as well as we can in a world outside our control—versus strategy being generative—trying to change the world. I believe that the will to change the world, to make it a better place, is a vital part of effective, innovative strategizing—or maybe that's just wishful thinking on my part.

Second, almost everything that's been written about strategy is about analytical, rational processes. What role, if any, is there for intuitive and other nonrational processes in choosing which path to take?

My third question has to do with how to be effective as a consultant. Almost all my work has involved organizing and facilitating collaborative conversations of one sort or another, but, recently, I've been wondering whether we put too much emphasis on collective, collaborative, consensus-based processes, instead of other ways of effecting change. I see the danger of getting lowest common denominator results from processes that take all the spark and edge off.

ES: One critical issue is the will to betterment and what, if any, are its sources. I have tended to put a stake in the ground that the source of motivation to change is a kind of disequilibrium between what I want and what is going on, which is fundamentally an adaptive process.

I've always been puzzled, particularly in the new learning organization context, about the notion that people spontaneously want to get better, even if there's nothing

wrong, that there is in us all a will to improve. I have a hard time seeing that in my experience. I wonder whether you could say a bit more about what you see to be the nature of that will to betterment and where it comes from?

AK: I wasn't talking about the will to personal betterment but rather about the will to societal betterment: people being unhappy with the state of their world and having energy to try to make it better. I guess that, in a way, this fits your adaptive construction.

What I've noticed is that groups that are, explicitly or implicitly, working to make their world better off seem to have a greater and deeper energy and creativity than groups working only to make themselves better off.

COS: Can you give some context? What would be an example?

AK: The examples that stimulated my thinking in this area are the groups of civic leaders I've worked with in South Africa, Guatemala, Colombia, Cyprus, and elsewhere. These are projects in which politicians, activists, businesspeople, trade unionists, academics, clergy, guerrillas, indigenous people, and other sectoral leaders from across many organizations have gotten together to try to address the messed-up situations in their countries. What I've noticed is that these groups almost always exhibit greater energy, creativity, openness, and hard work than do groups of leaders drawn from a single organization—say, a typical corporate management team. I'm wondering whether there's an obvious source of energy at work here that we're overlooking—that by choosing to ignore or assume away the will to societal betterment, we're ignoring a vital possible driver of change within single organizations as well.
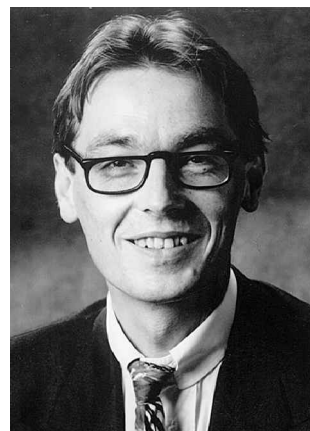
ES: In terms of what a consultant does, it strikes me that that question raises a very clear choice. We encounter organizations with organizational problems and we encounter individuals who have hopes and dreams of changing the world. The implication of what you're saying is that we pick the organization as the client, instead of the individuals, and say to those individuals, let me see if I can help you be more potent as an individual or leader. We don't pick the leaders to be our clients; we pick the social community or the organization and rationalize that its interests have to be addressed. If we took the other view, we might be involved with some radicals who might also produce results that we're not so clear about. It's riskier to work with the idealistic will, isn't it?

AK: You seem to be implying that only individuals have idealistic will. I am interested in what Otto has called the "common will" of a group or organization. The image I have is of this common will is a young shoot of a plant, covered by dirt. If it is true that this will is an important source of generative energy, then our work with organizations should pay attention to uncovering that shoot and letting it grow.

COS: I like the image of the shoot. It also implies that we should be careful that the process of uncovering doesn't damage the plant.

AK: Right. All of this about common idealistic will is obvious in missionary or advocacy organizations whose explicit purpose is changing the world. But, sometimes, I have noticed this same energy in corporations, where we can glimpse, buried under all the corporate garbage, a fragile, shared commitment to making the world a better place—for example, in FedEx, to really helping its customers get the stuff they urgently need, or in PricewaterhouseCoopers, to being honest, trusted attesters. Is helping clients sweep away the dirt and expose this commitment a crucial or incidental part of our interventions? Perhaps this uncovering is one of the highest leverage ways we could help a client organization unfreeze and get moving.

ES: I wonder whether, in my own unconscious, its equivalent is that I've never, in my change theory, been willing to say that unfreezing just causes anxiety. I've always said

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By choosing to ignore or assume away this will to societal betterment, we're ignoring a vital possible driver of change within organizations.

it's anxiety/guilt. Psychodynamically, the will to improve has more to do with unmet ideals, and the failure to meet them is a sense of guilt, which Freud might say is another form of anxiety, but it's very different from adaptive survival anxiety.

The people at Case Western—for example, David Cooperrider, with his notion of appreciative inquiry—are working the same issue and saying there's a real energy in uncovering people's guilt. People in organizations know, deep down, that life could be better, but they are paralyzed by various forces. The job of the consultant or interventionist is to release some of that guilt into positive idealistic will. I like the term "idealistic will."

AK: My partner Bill O'Brien has a complementary view of this.[1] His recent thinking and writing have focused on the "ladder of maturity" of corporate leaders. His key point is that increasing maturity means increasing other-centeredness, that is, decreasing selfishness. This relates to my notion that working to make the world better off draws upon—and elicits in others—a different kind of energy than working on making yourself better off.

COS: Could we take the issue of idealistic will or the role of will in change processes and apply it to our own experiences, both the individual journey and also our professional work? Ed, for example, if you look back to your own journey and professional life in dealing with change, how do you see your story evolving from the particular point of view that you just developed?

ES: I can put some marker events into a life context. For example, one huge event for me was to move from experimental social psychology into sensitivity training groups and discover that by not imposing an experimental design and prespecifying what I was going to look at, but by sitting in a group hour after hour and just letting the events flow over me, a whole different world opened up that I hadn't seen. I had been preventing myself from seeing by controlling the experiment.

The real source of what I would call my clinical approach to research probably was my T group experience of seeing how much more there was to be learned by sitting quietly and letting events unfold than by trying to structure those events. I remembered, of course, years later, having grown up for six years in Switzerland, three years in Russia, one year in Czechoslovakia, and then coming to the US, that I must have learned the importance of seeing what's really going on as an adaptive mechanism. Sitting in a T group was in a way more natural for me than being the proactive manipulator of the situation.

Another marker event was my experience as a consultant to Digital Equipment. I tried to get the senior management group to behave in a semi-civilized fashion, while they were shouting and interrupting and climbing all over each other. I found that they were very appreciative of my efforts, but it didn't make a damn bit of difference. I finally gave up and it had the feeling of giving up; this was a very important point. When I gave up, my eyes and ears cleared a little bit. I began to try to experience why they were behaving this way. They were not crazy. There was something going on that I just hadn't been seeing.

I finally saw that these very smart people who were used to debating with each other were fighting a life-and-death battle and that this was their normal behavior. I saw that my intervention might help them process the information rather than trying to change their behavior. I went to the flip chart and started to write things down, which became a truly helpful intervention because they were losing information. All I did was to enter their process and see what they needed within that process. For me, that's the hallmark of what a consultant has to do. We can call that "adapting to their culture" or we can give it other labels.

But there's a kind of psychological need to start with the willingness to give up your own stuff—whether accessing your ignorance or being willing to change toward how the client sees things. For me, that's been the story over and over again—that I have to open my eyes and ears before I become effective.

AK: My own experience as a participant in T groups has been that they helped me to understand better my own responses and behavior, and eventually to understand better how my responses and behavior affect the groups I led. What I learned is how much my own state of being—my level of openness, anxiety, genuineness, commitment, and so on—affected what the group I was leading was able to do. My limitations as a leader

translated into limitations in the group. This is what Bill O'Brien is focusing on when he emphasizes the importance of the leader's maturity for the capacity of the organization he or she leads.

COS: Adam, what are your defining or critical experiences?

AK: Let me mention three. First, my way of thinking was deeply influenced by my father's interest in Alfred Korzibski's work on "general semantics."[2] General semantics teaches us to be aware of the mismatches between the world and our linguistic descriptions of the world—Korzibski was the first to coin the phrase "the map is not the territory"—and of the inevitable incompleteness and inaccuracy of our descriptions. This notion of language as a process of abstraction rather than of representation, which I ingested with my mother's milk, is central to the scenario methodology I learned at Shell: we can tell different stories about the world, but we can't really know what's going on. I think that I'm more comfortable than most people with the fact that all we have is models, and that we need to hold them lightly.

The second was my experience of going to South Africa in 1991 to help the Mont Fleur team of politicians and activists use the Shell scenario methodology to think through and influence the transition from apartheid.[3] Previously, I'd been an expert analyst, advising other people what to do; this was my first experience as a true facilitator. I was using the scenario methodology not with a group whose intention was to do as well as they could in the world, which was the implicit basis of the Shell scenario work, but rather to effect a change in the world in which they were living—the South African transition. So I was thrust into a purely facilitative, rather than expert role, in a setting that was explicitly generative rather than adaptive, or idealistic rather than fatalistic.

The third experience was to notice how, in the years since Mont Fleur, my work with civic and corporate groups has become richer and more powerful as my own capacity and openness have increased. The key experience was in using the Mont Fleur approach with a team of civic leaders in Guatemala in 1997, just after the signing of the peace treaty that ended 36 years of brutal civil war.

COS: Can you share some aspects of the Guatemala story?

AK: The specific incident I am thinking of was when I asked the team to talk about the system we were studying—the past, present, and future of Guatemala—through the lenses

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of their own personal experiences. That invitation to bring their own stories to the scenario work allowed people to tell their truths about the situation, including terrible, horrible, cruel truths. It enabled all of us to see much more clearly the dynamics that were driving the system. It also made the source of common idealistic will visible to everyone: what the group had no choice but to do to prevent the recurrence of these terrible atrocities. That storytelling was the turning point in a project that has had and continues to have a significant impact on the history of Guatemala.

I would not have had the capacity to facilitate that session had I not been somewhat mature in my ability to remain present and open in such a highly emotional, highly conflictual situation. Five years earlier, my own unease or anxiety would have driven me to try to shut down the conversation.

ES: The interesting implication is that breadth of experience and allowing oneself to have that experience is the path to maturity. When people ask me, "How can I broaden my own thinking? How can I learn something new?," I answer, "Travel. Get out of your own culture and see the world. But you have to see it. You can't just go to the American enclave in Paris."

As a consultant, I'm a professional outsider.

We both seem to agree that the opening or widening of our horizons is a product of exposure to different kinds of data.

AK: Right. In both the South African and Guatemalan cases, being an outsider was a critical qualification. As a consultant, I'm a professional outsider. Obviously, this has drawbacks and limitations, but it also has advantages.

When you mentioned living in different countries as a child, were you a refugee?

ES: Partly. My father was working in Russia because, at that time, physicists were highly employable in Russia and China. But he left Russia when Stalin's repression began to affect foreigners, and then he left Prague because Hitler was knocking on the door. He was a Czech and my mother was German. He was Jewish; she was not. But he saw clearly that Europe was getting to be more and more dangerous, so in a sense, he was functioning in our later European years as a refugee. But he still was taking the initiative; he wasn't being forced. He got out before things got bad.

AK: Did you consider yourself at home in America when you were growing up?

ES: I remember that we viewed the US as a kind of a terminal place. In Chicago, my father got a job at the university, and that's where I grew up. I became Americanized very rapidly, formed a self-image as an American, and had to help Americanize my parents. For them, it was a much tougher transition. I knew no English when I hit Chicago, so I learned the language from the ground up.

AK: In consulting, I think it is useful to be both distant and close. The times when I've been able to be an outsider and also to be open and deeply connected with the clients— and I haven't always succeeded in this—are the times when I've been most effective. This means at the same time being connected and not connected to the system you're trying to help.

ES: I have observed that, in working with organizations, especially in other countries, my effectiveness depends on having a sense of team with some insiders. Often they're insider consultants who have recruited me to play the role of the outsider. But my worst experiences were when I've been the lone consultant in another culture, unable to decipher it, and making disastrous mistakes because I didn't understand the local scene.

For example, in the sixties, I went to Mexico on behalf of a human resources executive in the national bank. He wanted his group to be oriented to the different methodologies of organization development. The organization design group in the bank asked whether they could also attend the seminar, and the executive, being generous, said sure.

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I described Blake's intergroup exercise of forming self-images and images of the other group and then sharing them.[4] Somebody suggested that since we had two groups, why not do it? I didn't know any better, so I said all right, you go in your separate groups, form an image of your own group and an image of the other group, and then share it.

During the sharing, it came out that my client's group saw themselves as somewhat disadvantaged because my client was not a very strong leader. The other group leader perceived that as a political advantage and said, in effect, that maybe the groups should merge and things should be done differently. So the client who had invited me lost power in front of my eyes.

That led to a debate, during which they violated the agreement to stay in English and lapsed into Spanish. From the body language, I could see terrible conflicts going on, but I had lost control of the group by then. Six months later, my client resigned from the bank, somewhat in disgrace; his group had turned against him. The other leader was stronger and took over. Maybe that would have happened in a natural course, but certainly my simple agreement facilitated a huge change there that was not what my client had intended.

He was very good about it; he didn't blame me. But I certainly learned a lesson. If you're going to get into other cultures, particularly a Latin culture—which I think I understand less well than most others—you work with an insider and don't make decisions without talking over the consequences of the decisions with the insider.

AK: My own experience with this is a bit different. I have often made mistakes from not understanding what's going on, and so I also find it helpful to work with somebody who understands the culture of the organization or the country. But the times I've been most successful, even in totally foreign cultures, have been when I start with an orientation both of ignorance and of respect. When I did the Mont Fleur project, South Africa was extremely polarized, and afterward one of the team members told me the team hadn't been able to believe, when they first met me, that anybody could be that ignorant: they were sure I was trying to manipulate them. But when they realized I truly didn't know anything, they were able to trust me.
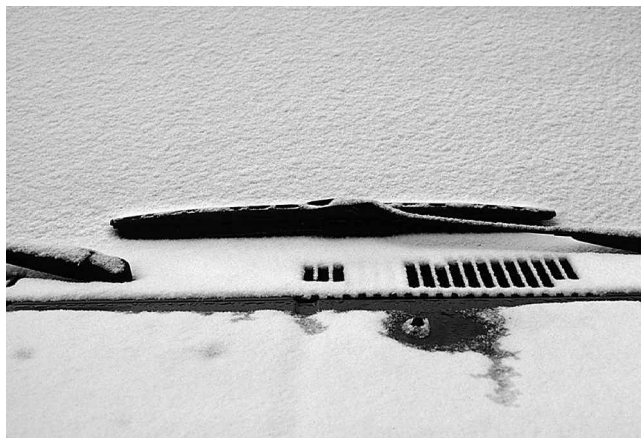
So I've found that ignorance and respect go a long way. The biggest mistakes I've made have not been from insufficient knowledge and understanding but from insufficient respect and humility. And insufficient humility also increases the risk of not listening to feedback about mistakes you are making and thereby going on to make even bigger mistakes.

ES: The lack of humility is an enormous mistake. Clearly that's what was going on at Digital, where I came in with my arrogant knowledge of what a group should be. I didn't begin to be effective until I gave up. What I was giving up was my arrogance.

There is a story about the psychoanalyst Frieda von Reichman, who focused on one catatonic patient who didn't speak for months and months, that she got very frustrated, put her head in her hands and started to sob because she was totally exhausted. The patient spoke for the first time and said, "You're not happy with me, are you?" That was her first honest response. Until then she had been manipulating.

So, letting go, respect, and humility are common issues that we've experienced as very important. And a lot of that is accessing what you described as your own inner self, getting acquainted with how your own issues distort what others are able to do.

AK: That comes back to the third question I asked at the beginning of this conversation. We're describing the leadership of the consultant and pointing out the importance of ignorance and humility. Yet aren't we placing too much emphasis on collaborative, consensus-based processes rather than a more decisive, authoritarian leadership?

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Group leaders or chief executives often ask me, what do you want me to do in this workshop? For years, I said, "I don't want you to do anything. Just be part of the group. Don't use your authority at all." Now I think that's terrible advice to give. Now I would suggest that they listen, participate, and lead when they need to lead.

ES: Why would you give advice at all? Why wouldn't it be another intervention to say, what is your own goal? What are you trying to do?

AK: That's a good point. I was reflecting on how my view of the leader's role has changed over time and on a general problem I've noticed, especially in US corporations; that the leadership pendulum has swung from authoritarianism to abdication.

ES: I'm wondering whether we unwittingly create this problem by giving advice to leaders before we know where the leaders are going. In my model, I have to take it a step at a time. Before I know where the leader is going, I'm not going to get into the group. And I'm not going to make an intervention for another group until I know where that group is going. I force a joint decision at each step. If the leader and I both agree that this is the way to go, then we take the next step. If the group and I both agree that this is the way to go, then we take the next step.

That allows us to ask if we are just doing the easiest thing. To ask if we should be aspiring higher. It leaves me open to challenging them. I have to have a sense that, as I move into the system, I have a role in the decisions, but the client has to own every decision that moves forward with me. Facilitators make a huge mistake by coming in with their own agendas, rather than facilitating the leader's agenda.

Facilitators make a huge mistake by coming in with their own agendas, rather than facilitating the leader's agenda.

COS: You just pointed out an important principle that is at the essence of process consultation. If you look back at your own experience, can you also see some aspects that changed in your practice? Are there things that you may emphasize differently today than when you first wrote *Process Consultation*[5]?

ES: You reminded me of another dramatic experience that preceded *Process Consultation*. A colleague and I interviewed engineers in a laboratory, wrote a fancy report, and gave it to the laboratory director; he looked at the section about himself, found some criticism there and didn't like it, and threw us out.

It took me years to figure out what we had done wrong. We had never asked him why he was doing the interviews. His boss had authorized them. We clearly put him in a compromised position. Even worse, we put the engineers in a compromised position, because even though the thing was anonymous, for all we knew, he got very angry and fired a bunch of them. So not getting him into the loop as the primary client, going straight to the group, and bypassing the person with the power were vivid mistakes in retrospect.

I have certainly learned a great deal about power dynamics and about not bypassing people who have power. The people with power have to own the interventions that the consultant makes, or else they're in a good position to either pull the rug out from under you or make you fail so that it's partly unethical and partly ineffective. You go much slower, and you don't do huge projects without the involvement of powerful leaders. Now I tend to work with the power centers for a long time before I move out into the group.

AK: Do you work with them individually before you work with the group?

ES: Absolutely. Until I have a sense that I know his or her agenda and that we make the group decision together.

AK: I like that approach. I have tended to jump in almost immediately to group work, after just a few interviews. Often there are leadership agendas and constraints that I'm never aware of and that ultimately show up.

I got into this whole business by emphasizing facilitation, consensus forming, and conflict resolution. Obviously, that's an important part of the work, but as the sole way of intervening, getting groups to talk to each other nicely or have dialogue is limiting. Not all important interventions are group interventions.

COS: That leads us to Ed's first question, what is the essence of the change and intervention methodologies we use? Are they really the same or do we see a certain evolution? Adam, you work with scenario methodology. What is your answer to Ed's question?

AK: Consultants and authors differentiate among different methodologies for their own personal gain. But both statements are true: it's all the same and it's all different. I once asked Albert Bressand, a French economist, the same question, and he answered, "It's like the annual Paris fashion shows: they're always the same and always different."

ES: When you are effective, what are you doing?

AK: I am helping people uncover their current reality and the source of their shared commitment. There are many different ways of uncovering current reality, but this essential objective is the same, whether it's systems analysis, market research, scenario thinking, or T groups. These are all different ways of seeing more of reality, in order to be able to act from a more informed, systemic perspective. So at that level, it is all the same. But uncovering the reality of the dynamics within a team is not the same as uncovering the reality of the dynamics of the oil market.

Uncovering is what I think an artist has to do to see the shape and the color in order to render it.

ES: I agree with the word *uncover*. Uncovering things at the individual, group, and system levels requires very different techniques. What makes us effective is when we successfully have helped someone uncover either something about their own motives, therapy, or whatever or something about their reality. That's when I feel good, when somebody says, "Oh, I see it now."

The link to art is very powerful to me; that uncovering is what I think an artist has to do to see the shape and the color in order to render it. I'm struck by how much artistic training you need to learn to see. You don't automatically see an object.

AK: Once you've uncovered the essence of a situation or seen things as they are, then the action starts immediately: there's no additional step between seeing differently and acting differently. Isn't it rare to see things differently and not act differently? Maybe good uncovering is the whole job. The contrary view would be that understanding the way things are is just the beginning; then you have to make action plans and so on. It's what I've said about the role of mental models in scenario work: reperceiving is everything.

COS: Ed, what's your experience of effecting change in groups? How much of the work is seeing it another way?

ES: It's an iterative process. Once I see it differently, it produces different action. But once I've produced different action, I've created a new reality and that new reality also has to be reperceived. The client may need help in seeing whether the new reality is what they really want.

We have to keep uncovering in order to keep changing the actions. So the principle still holds, but uncovering isn't a single act; it's a perpetual process. I like the emphasis on perception, because I'm convinced that this is all of our perception, even though you started with the idea that what we really want to uncover is the will. But the way you uncover will is not to prod and probe emotionally. I think the way to uncover will is perceptually. To discover what it is I really want, deep down.

AK: How is that perceptual?

ES: The will is already there in me; I just don't see it. It doesn't have to be put there. Or if it's not there, it's not there.

AK: In the Guatemala storytelling session I referred to earlier, the shared will of the participants was to some extent already there, in that they had agreed to participate in the project, but it wasn't fully visible to them.[6] Their stories made their wills visible to each other, and then came the realization that there was a common will.

At the end of that session, one of the participants described it as a moment of communion. Not being a Catholic, I didn't really know what that meant; I had said I felt, in the silence after the storytelling, a spirit in the room. A Mayan man—Guatemala is 50% Mayan—came up to me and said, "Mr. Kahane, why were you surprised that there was a spirit in the room? Don't you realize that today is the Mayan Day of the Spirits?" These observations about communion and spirit weren't meant metaphorically. These people were saying that through that dialogue, we not only had accessed the perspectives of each other, but had in some way connected to larger, higher, divine reality.

It's one thing to talk about the will to make the world better as an important generative force, but what if you take that further? How do we talk about the will to connect to the divine or to enact the divine as a force in our work? In the Guatemala workshop, people had dreamed dreams and seen visions, and it brought into the work not only an emotional element, an element of will, but an element of spirit. Where does that appear in change consulting?

ES: Historically, you could say spirit has always been a huge force. How did the people on Easter Island drag those huge stones and position them? How did the Egyptians raise obelisks? How did people build cathedrals? When you think about the amount of energy and will it took to do that, that certainly was not just making the world better, that was connecting with the divine in some way. But I wonder if, in this secular world, we have yet uncovered its equivalent.
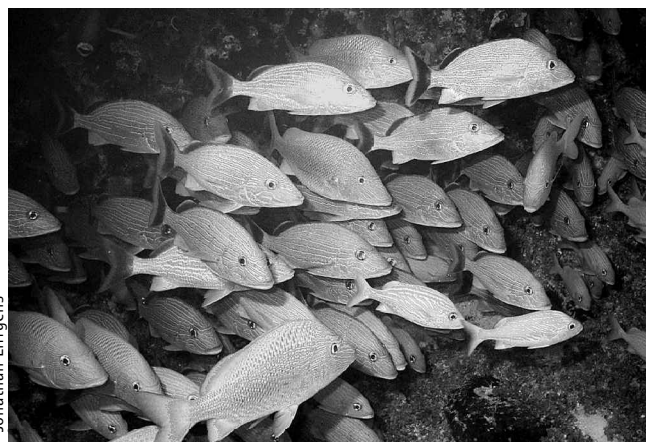
AK: What connections, if any, would you make between that and your own work?

ES: I don't see any connection, in the short run. David Cooperrider is working with religious leaders, trying to create a dialogue across religions. Most of the heavy issues in the world today—the wars and so on—are religion based. But I've secularized myself; I haven't gotten involved with that level of consulting. I don't have a feel for it, and maybe that says something about me. I'm not sure I want to get involved.

AK: One of the most interesting and inspiring consulting engagements I ever had was with the Anglican Synod of Bishops of Southern Africa. When Archbishop Desmond Tutu retired, his replacement, Winston Ndungane, asked me and my wife Dorothy to facilitate a strategy workshop for his 32 bishops. The workshop was unusual in that the spiritual aspect was of course discussible. Every morning, we started off with communion in a small local church, and every evening, we went back to the church, and this gave the whole meeting a different tenor. I noticed this from the beginning of the meeting, when we were setting ground rules. One bishop said, as someone always does, that we ought to listen to each other. A second bishop said that, more specifically, we should listen to each other empathetically. Then a third bishop said, "We must listen to the sacred within each of us."

What does it do to the quality of conversation if we start with the viewpoint that when you are speaking, I regard you as an embodiment of the divine? What does that do to the quality of my listening?

Bill O'Brien says that the secular equivalent of this approach is love, which he defines in the organizational context as "the will to help another complete themselves."

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How do I listen and lead if I bring to our relationship this level of loving other-centeredness? If I put it in that secular context, is there any connection to your theory of process consultation?

ES: Yes, I think that connects with the first principle of trying to be helpful. If that weren't my goal, nothing else would follow naturally. And that implies a certain level of acceptance—love.

In the T groups, we reached an always important insight—every group goes through the love-in stage. Maturity, in this case, is to reach a higher level of love, which is acceptance. I do not have to like and love you physically in order to truly respect you as another human being. Only when people got to that level, did the group really feel it could act. Humberto Maturana says that love is the only emotion that increases intelligence.[7] If I accept and respect you, then I'm also open to growth. Whereas if I don't, I shut down.

Operationally, I find it hard to take a stance other than helpfulness. I find it hard to be exploitative or be aggressive. I would always prefer, if possible, to be helpful. And that, of course, is partly adaptive. That's a safer position when you're moving across unknown territories.

I don't know whether that's maturity or altruism or adaptiveness. Theories of maturity get a bit tricky. Maturity itself can be simply an adaptive, selfish, self-centered response. I don't know if there's a truly objective way of measuring maturity that's independent of culture.

COS: You could look at the same behavior that you're embodying in your life from a different point of view. So one possibility would be to look at this behavior from the adaptive frame, as you just did. The other possibility would be to take the other frame, that is, to help uncover emerging realities that this is just the way you are in the world and that's what you bring into the world with who you are.

ES: The consequences are not necessarily connected to the motives. My motive to be helpful might be one thing, but the consequences of being helpful might be entirely different.

Maturity itself can be simply an adaptive, selfish, self-centered response.

AK: I can see a strong connection between what I was talking about and your stance of helpfulness. I've been struck by the impact, for good and ill, of my attitude or intention. I believe that the biggest reason I was successful in the Mont Fleur project was because I was predisposed to be not only helpful, but respectful and even in awe of the participants, many of whom I knew had sacrificed enormously for a better South Africa. This attitude is not one I have always taken, either before or since. So helpfulness, servant leadership, humility, respect, other-centeredness—these are key.

ES: Most successful change starts when the client system recognizes in itself, long before I'm involved, that they want something different. In therapy, the most important predictor of successful therapies is going to the therapist.

Once the client has said I need help, he or she is in a vulnerable, one-down position. If the therapist, in whatever guise, isn't prepared to be sympathetic and helpful at that moment, this one-downness is reinforced and creates defensiveness and hostility. So being helpful is also very practical. Clients can climb out of their feeling that something is wrong with them; the therapist has to show the client that it's okay.

AK: Do you think it's correct that the closest therapeutic school to our kind of consulting is Rogerian?

ES: Yes, the philosophy that Rogers espoused sounds very similar. It's maybe not accidental that when I was an undergraduate at the University of Chicago, part of the psy-

chology section of the year-long biology course was a segment on psychology that Rogers himself taught. I remember going around the campus with my friends caricaturing it. We would literally reflect to each other what the other one said.

AK: And then you made a profession out of it!

Several things have struck me in our conversation. You said that your basic model was that change results from noticing a difference between the way things are and the way we want them to be. If that's the definition of adaptation, then I'm not sure how that's different from wanting to make the world better. My original distinction between adaptiveness and generativity blurs. It's a question of what's the scope of your desire for things to be better: Is it just your immediate situation or some larger system?

It also struck me that your principle of helpfulness and what I call other-centeredness are similar. You are humble about your humility; your discomfort with talking about wanting to change the world itself strikes me as humble.

Finally, I've always found the Dewey-Kolb learning cycle to be an exceptionally practical model.[8] I like your insight that change processes are, at their essence, reperceiving, acting, and then reperceiving again. This is a simple way of looking at what we really need to do, a practical simplification of our work.

ES: My biggest new insight from this conversation is that I've always been uncomfortable with the organizational learning model—*The Fifth Discipline* model.[9] And I think I now know why. There's a huge difference between uncovering others' values, which I believe in, and imposing your own values, which I think is implicit in the five disciplines. So Peter Senge and I are both values-based, but he's got a set of values, and I'm interested in uncovering other people's values.

In that uncovering, people may reveal stuff that goes against my grain, and I have to deal with that. But I can't start with my values and "help" people to accept them. There's too much of that in the five disciplines, at least at the process level. It's too heavy-handed for me. So that distinction is important to me. I'm uncovering other people's idealistic will.

The other reassuring thing from this conversation is that we agree in so many areas, particularly on the importance of uncovering. Where we differ from most other consultants is that we have a theory that says the internal reality, the reality of the situation, isn't obvious and needs to be uncovered. We have a theory that our real skill is in our ability to help people uncover all those things and uncover it in ourselves.

AK: The general semantics principle that you can never know the current reality, but only build a model of it, is also important. And you have to hold your model lightly. University of Texas poetry professor Betty Sue Flowers has said that the important thing about scenario work is that once you've gotten used to the idea that there are two or three different scenarios or ways of looking at the world—two or three different pairs of eyeglasses—it makes it easier for you to imagine that there's a fourth and a fifth. So you learn to hold your interpretations of reality more lightly.

That's important, because it's a non-hegemonic approach. It allows me to say that your interpretation of what's going on has value. It's not that I know the truth and therefore it's in your own best interest that I impose this on you.

ES: Family therapists make a fetish out of saying that everything that the therapist or the facilitator says is preceded by "It's my hypothesis that . . ." The word *hypothesis* suggests testing what I see and what you see; you never see anything other than in hypothesis terms.

AK: That, for me, is another way of stating what you said was the distinction between injecting my values and uncovering yours. It's a non-hegemonic orientation, a humble orientation. The key message of the *Visión Guatemala* team ended up being that the country had to embrace a pluralistic ethic of multiethnicity and multiculturality, and move away from an ethic where a small group of powerful people knew the one right way and could kill as many people as they needed to enforce that way.

In this sense, the respectful dialogue of the *Visión Guatemala* team exemplified and modeled the essential change it was committed to effecting in the larger national system: toward a culture of deep respect, openness, and democracy.
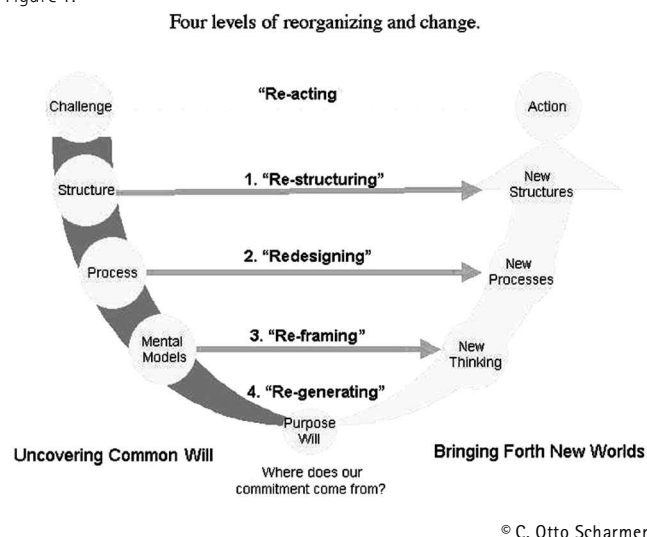
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Commentary

by C. Otto Scharmer

The conversation with Adam Kahane and Ed Schein revolved around the deeper and more subtle aspects of profound change. Throughout the conversation, we identified a number of important principles that all relate to the same territory: how to extend the conventional approaches to consulting and change toward the more subtle and deeper foundations underneath. The figure depicts this territory as moving from the upper three more conventional levels of change (levels one through three) to the deeper level underneath (level four). The principles articulated throughout the conversation such as "uncovering the shoot of a plant," "uncovering common will," "seeing as a gateway into a more creative and effective action," as well as the more personal pragmatics like "access your ignorance," the importance of "humility," and the "intention to being helpful" all refer to the same territory: how to help people and organizations access and operate from the deeper and more subtle level four of organizational learning and change.

Figure 1.

Four levels of reorganizing and change.

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Relationship-Centered Consulting

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The term "relationship-centered care" focuses the attention of clinicians and medical educators on the fundamental importance of relationships in health care as vehicles for accomplishing care and therapy with meaningful results (Tresolini, 1994; Suchman, 1998). Its implementation depends on a clinician's ability to be attentive to the patient, to be aware of interpersonal process, and to engage the patient in dialogue and partnership.

For many years, professionals interested in promoting relationship-centered care focused on helping individual clinicians learn the necessary skills and attitudes and on helping teachers learn effective new methods. Recently, however, there is growing recognition that interactions between patients and clinicians occur in an organizational context and are influenced by the values expressed in the organizations' policies, processes, and culture, and in their leaders' behavior (Suchman, 2001). The extent to which organizations express relationship-centered values of respect and partnership—as contrasted with depersonalization, hierarchy, and control—determines whether they promote or inhibit the practice of relationship-centered care. All too often, the values implicit in organizational processes are unexamined, with the result that organizations influence individuals' behavior in ways contrary to their intent, in effect, getting in their own way.

Leaders and managers of health-care organizations—from small practices to large academic health centers—can promote relationship-centered care and improve quality by attending explicitly to the values they and their organizations communicate and by improving communication and relationship skills. Such skill development activity might be the central focus of an organizational development consultation or be integrated into the conduct of specific organizational tasks or projects, such as strategic planning or program evaluation.
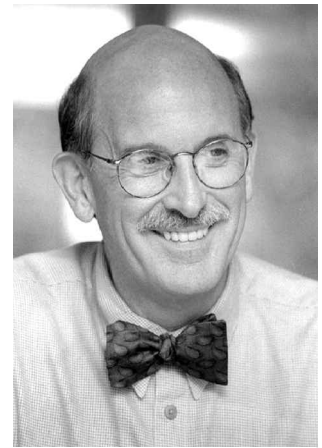
Consultants to such projects have an equally significant opportunity. The parallel between the processes of clinical and administrative practice extends to the realm of consulting: the values expressed in the interactions between health-care consultants and their client organizations influence the administrative behavior of the organization, which in turn influences the care that the organization provides. We use the term "relationship-centered consulting" to denote a particular approach to organizational consultation characterized by its explicit attention to relationships and interpersonal process, and its respect for the wisdom and capacity of the organization itself. Relationship-centered consulting seeks to unleash the emergence of wisdom, creativity, and direction from the members of an organization, in dynamic interaction with each other and with the consultants.

The approach we outline in this article applies across many levels of scale, beginning with individual attention to being mindful (Palmer, 2000; Kabat-Zinn, 1994) and to how we work together as a team. Our relationships and partnership process helps us behave similarly with the health system leaders to whom we are consulting, which, in turn, invites their congruent behavior and ultimately influences the staff and how they work with the community. We give those we work with an opportunity to learn about relationship-centered process firsthand through their own experience (see the sidebar for the supporting behaviors).

Behaviors That Support Relationship–Centered Consultation

- Bringing our whole selves to the work:

  1. Taking time and responsibility to center ourselves as we enter the work.
  2. Taking time with each other for personal checking in as we enter the work.
  3. Helping each other throughout the work so that we can be most helpful to others.

- Lighthearted profoundness (paying attention to both the depth and humor inherent in complex situations).
- Balancing advocacy, inquiry, and skilled listening (to hear ourselves and each other more deeply).
- Mutual respect and shared leadership (equality of voice).
- Bringing an appreciative eye to the work, to every question, each situation.

  1. Presuming wisdom in self, others, and group.
  2. Bringing out the best in each other and in the whole.

- Encouraging and practicing shared creativity.
- Planning carefully and thoughtfully and then being ready to let it go while holding to core principles.
- Trusting the process.

  After each event, inquiring appreciatively to learn from and celebrate successes.

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This method of consulting originated in empirically derived principles of medical interviewing (Engel, 1977, 1980; Lipkin et al., 1995; Rogers, 1961) and family and systems consultation (developed in the fields of family medicine and family therapy [Wynne et al., 1986]). These principles were subsequently enhanced and extended to the realm of medical education by the precepts of learner-centered learning (Knowles, 1980), and further extended by the principles of appreciative inquiry (AI) (Cooperrider and Whitney, 1999).

Our approach and other theories of consultation and organizational change converge. The approach is similar to process consultation (PC), developed by Edgar Schein, in which the role of the consultant is to help clients diagnose problems and determine solutions to issues rather than to provide answers (Schein, 1987, 1988, 1999). In so doing, the consultant teaches clients useful methods for ongoing discernment and moving forward in their organizations and systems. The basis of PC is building a collaborative, trustworthy relationship in which consultant and client have an ongoing learning partnership. The client, who knows what will work in his organization better than the consultant, holds the ultimate solutions. The consultant's primary role is to propose and design processes to help clients perceive and follow their own wisdom.

Our approach also converges with theories of participative management, which advocate flattened hierarchical structures and fuller use of the knowledge and capacity of the people on the front lines (Peters and Waterman, 1982; Lawler, 1996). Peter Senge, in developing the concept of the learning organization, focuses on an organization becoming more explicitly aware of how its people think, interact, and learn (Senge, 1990). Peter Block focuses directly on relationships, partnership, and the need for leaders to build, rather than limit, the capacity and power of everyone in the organization (Block, 1993). This theme is carried further by Ronald Heifetz, who, in his conceptualization of adaptive work, describes the role of leadership in helping people increase their capacity to tolerate and even harness conflicts in interests and perspectives as a source of growth and constructive change (Heifetz, 1994). In his theory of complex responsive process, Ralph Stacey integrates complexity science, social constructionism, and communication theory to offer a description of how both continuity and novelty arise unpredictably through social interaction, with relationship and diversity as the principle factors influencing the capacity for creative emergence (Stacey, 2000).

Principles of Relationship–Centered Consulting

To better convey the nature of relationship-centered consulting, we present five principles that have guided our work and illustrative stories from two projects we conducted

together for the Northern Berkshire Health Systems (NBHS) in North Adams, Massachusetts. One of us, John Cronin, is the CEO; the other three of us were external consultants.

1. Recognize That Consultation Is a Creation with the Client

Some consultants approach a client organization as "experts with answers," frequently bringing predetermined methodologies to analyze and solve the client's problems. We begin with the belief that the individuals who comprise and interact with the organization have the deepest knowledge about its culture, people, history, values, virtues, weaknesses, and business environment. Our role is to help create favorable conditions in which people can discover their own answers—to access their own wisdom, creativity, and energy in service of what is meaningful to them. We form trustworthy relationships and listen deeply to the client.

John Cronin had been CEO of NBHS for three years when he learned of Penelope Williamson and Anthony Suchman's relationship-centered retreats for the boards, administrators, and physician leaders of health-care systems. He wondered whether this approach might help to launch a governance structure for his newly integrated system. In our first conversation, we learned that the system had just formed through the merger of a hospital, a home-care agency, a long-term care facility, a senior living center, and a community foundation. Three different boards of directors were consolidated into one system board and three working committees.

The individuals who comprise and interact with the organization have the deepest knowledge about its culture, people, history, values, virtues, weaknesses, and business environment.

Cronin's aim was to help members of this stewardship group retain their commitment, while changing personal roles, and to deepen their relationships with one another, while providing relationship-centered care to their patients and community. As we learned about Cronin's vision, manner of working, and experiences and as he heard about our work, principles, and beliefs in more detail, we began to form a relationship of mutual respect and trust. Through dialogue, our ideas culminated in a design for a governance retreat uniquely suited to the system.

2. Be Present Personally

Relationship begins with personal participation, without the masks of organizational roles. Creativity and commitment are unleashed when the personal interests and passions of individuals align with organizational needs. When people share meaningful stories and find common ground and values, relationships deepen and collective action is mobilized.

The governance retreat could not take place without the support of the board chairpersons and the three standing committees; they had previously expressed some skepticism about "touchy-feely" processes that felt good but had no concrete results. So, before proceeding with further planning, Cronin asked us to meet with the leadership group. We began by inviting them to tell us how they became involved with NBHS and what mattered most to them about their leadership roles. One team member told about his daughter's heart defect at birth, about the many operations she required, and about his and his wife's decision to return from Boston to this small community, their hometown. Their medical experience and strong links to the community inspired their devotion to the continued excellence of the local health-care system.

Other stories reflected shared values of commitment to the community and the care it provides its members. Experiencing each others' stories—which they had not previously heard, despite many years of working together—deepened the relationships among the committee chairs and also helped them understand our design for the planned retreat. They enthusiastically recommended that we proceed.

We held the retreat four months later. The goal was to help the new governance groups determine how they might work together most effectively. We began again with participants' stories, establishing a strong base of shared commitment and values. The rest of the program consisted of experiential learning about dialogue and relationship-

centered care, and work sessions for the new committees to formulate agendas and design their work processes. By the end of the retreat, the committees had a list of specific action steps and a clear understanding of their interdependency.

3. Maintain an Appreciative Stance

This aspect of our work is informed by the discipline of appreciative inquiry (AI), developed by David Cooperrider and colleagues (1999) (see the sidebar). We believe in the capacity of the human spirit and in people's ability to find the best in themselves and others and use it to create a better world. The way people cast their attention determines what they perceive, how they make sense of things, what they expect, how they act, and how others respond to them. Significant opportunity for change can come from simple, intentional shifts in what they focus on.

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An unexpected outcome of the governance retreat was the recognition that the board did not—and could not—represent all the stakeholder groups in the community. Therefore, as part of the new integrated system's first cycle of strategic planning, a diverse group of people (some staff members and system leaders, but primarily community members) formed a stakeholder team. The team's role was to bring the voice of the community into the strategic planning process by interviewing members of 12 different stakeholder groups. (Because of her work with appreciative inquiry in whole-health-care systems, we invited Diane Robbins to join the consultant team at this time.)

At the first team meeting, many participants were eager to tell us what was wrong with their health-care system. We explained that our approach was different—it would search for and discover what was right with the system, so that the group could dream of and design an even better system in which core life-giving qualities were enhanced. Some were delighted and interested, others were doubtful, and a few showed outright disbelief that looking for only positive stories could lead to meaningful change. As they gained experience, however, the interviewers discovered that the issues that emerged in an appreciative approach were the same as in a problem-focused approach, but in a hopeful way, rather than with blame, defensiveness, and negativism.

As consultants, we guided the team through an appreciative inquiry (Cooperrider and Whitney, 1999), believing in the capacity of each person and the group to engage in this complex methodology and make a difference. The group ultimately conducted 136 interviews and performed a rigorous qualitative analysis and synthesis of the stories they

Basic Assumptions of Appreciative Inquiry*

- In every society, organization, or group, something is working.
- The language we use to describe reality helps to create that reality.
- Systems move toward what they choose to study or focus on.
- The act of asking questions of an organization or group influences or changes the group in some way.
- Systems are capable of becoming more than they are, and they can learn how to guide their own evolution.
- Looking for what works well and doing more of it is more motivating and effective than looking for what does not work and doing less of it.
- People have more confidence and comfort to journey into the future (the unknown) when they carry forward parts of the past (the known). In other words, continuity is as important as change.
- The collective creation of a desired future is most powerful when it is based on the best of what already exists.

* Cooperrider, D.L. and D. Whitney. "Appreciative Inquiry" in *Collaborating for Change,* eds. P. Holman and T. Devane (San Francisco, CA: Berrett-Koehler Communications, 1999): 1-40.

gathered. Their work ultimately became the guiding vision for the strategic plan; they were proud of what they had accomplished.

Most of the team members—particularly those who did not work in health care—wondered what they could contribute to the process. One team member, a retired community member, cancer survivor, and volunteer at the local hospital, agreed to be on the stakeholder team with ambivalence, not sure that she could offer anything. At the first meeting, she told about the care she experienced during various ordeals while being diagnosed and treated for cancer. She reported being "overwhelmed by how everyone at the hospital rallied round to support and help me." Her story became an exemplar of several core themes that emerged as essential to health-care encounters. That evening, her husband called Cronin to thank him for inviting his wife to be part of the stakeholder team. He said that it had made her feel useful by doing important work. She participated actively in the entire interviewing process and at the subsequent strategic planning retreat. She was one of three stakeholder team members who presented a skit, "The Voice of Our Community," that illustrated the core values and visions emerging from the community's stories.

4. Trust the Process

The strength of good relationships creates a space in which new practices can be introduced, monitored, and recalibrated. Leaders and consultants need to be able to tolerate "not knowing," to remain flexible and improvise, and to hold open a space for new possibilities to emerge. Holding tightly to prior expectations for a specific outcome can interfere with the ability to recognize other emerging patterns and opportunities and can also preempt an organization's creativity. Rather than engineering a process to arrive at a predetermined outcome, consultants can help organizations engage in a high-quality, relationship-centered process that will find its own outcome. Also, because the result comes from the group itself, the group will readily embrace its own creation; buy-in is built in from the start.

Cronin and his leadership team talked openly about each phase of the strategic planning project, an invaluable part of the unfolding process. They were curious about and receptive to whatever themes emerged from the stakeholder interviews. Likewise, through our close working relationship, the four of us were able to learn and discover, keeping our focus on the health of the project while resisting the temptation to control it. Because Cronin was highly attuned to his community's culture, he was an important sounding board in the creation of each aspect of our plan—when to take risks, when to move ahead, what processes were most likely to be accepted, and which ones we should revise.

The strength of good relationships creates a space in which new practices can be introduced, monitored, and recalibrated.

The philosophy of trusting the process prevailed through all stages of the stakeholder team's work, from designing the interview questions and format, to learning the techniques of appreciative interviewing, to distilling the core themes from the interviews. For example, an important component of each meeting of the stakeholder team was a dialogue about the group's work. The topic of these dialogues was not preplanned; the four of us determined them on the spot (in consultation with the group), based on our perceptions of what was emerging. Although we were somewhat anxious about not planning the meetings, the questions that came forward were of compelling interest to the group and far more useful than any themes we might have prepared. When the group doubted that our appreciative approach could effectively unearth the fundamental issues, we didn't ignore their questions. Instead, we encouraged them to be willing to wait for the answers until they had gained some experience with the new method.

5. Harness the Richness of Diversity

Diversity seeds creativity. Rather than treating it as a problem to overcome and rushing to premature consensus and closure, it's important to recognize the value of tolerating paradox and valuing conflicting views. Holding multiple, contradictory perspectives simultaneously and exploring the tensions between them create opportunities for deep

understanding and for breakthrough thinking. It also fosters agility in both thinking and action. The key tools for valuing and harnessing diversity—listening and dialogue skills and the attitudes of respect and openness—are the core of a relationship-centered process.

The stakeholder team and stakeholder groups interviewed were very diverse. As differences emerged in the ideas about methods and results, we did not resort to compromises or votes. Rather we helped the group tolerate—and value—the tension of their differences by explicitly acknowledging their struggles and offering empathy, legitimation, and support ("this is difficult; that's normal for this kind of process; you're doing a good job"). This enabled their dialogue to continue, resulting in deeper understanding and closer relationships.

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We used a similar approach in the strategic planning retreat, which brought together the board, the stakeholder team, and the people working on other, more traditional elements of strategic planning (analysis of utilization, marketing, and financial data; facilities planning; review of core clinical functions; and scenario planning). Each participant was committed to and had particular knowledge of one kind of information. The retreat gave an opportunity to learn new information from colleagues and to synthesize different information into a compelling, comprehensive whole.

For example, after the community stories and the market-share data were presented, we observed both interviewers and inveterate number crunchers struggle with each other's data and then suddenly grasp a larger picture. One board member remarked: "None of the numbers look too good. We are going to have to change how we 'care,' 'partner,' and 'are excellent' [the three major themes that emerged from the stories] to improve these numbers." Another remarked, "Now I understand the profound importance of the community stories." A third said, "I knew all this from the research, but I heard it better and differently from our community's stories." A stakeholder team member remarked: "I've completely changed the way I think. These weren't just 'nice stories' we collected. They really matter, when you look at the numbers."
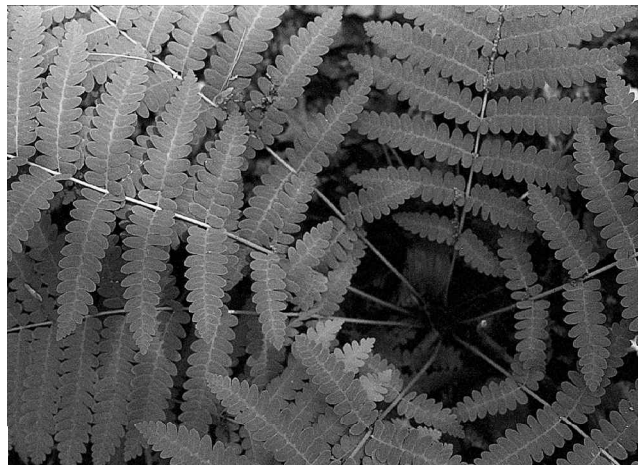
The retreat ultimately resulted in a strategic plan, each component of which responded to themes in the community's stories and a good portion of which would not have existed without the stories. The community received the plan enthusiastically. The whole project exemplified a relationship-centered process at a community level.

Conclusion

We have described a relationship-centered approach to consulting in a health-care organization. The values and methodology of this approach mirror those of relationship-centered care, thus helping the organization's leaders and staff learn about the process directly through their own experience. The opportunities for learning, team building, and modeling collaborative values are greater in a relationship-centered consultation than in the more traditional "experts providing answers" approach. Moreover, because the outcomes of the consultation emerge from the collective wisdom of the organization itself, the likelihood that the results will be well suited, will enjoy broad support, and will be sustainable is enhanced. Relationship-centered consulting offers an effective, enjoyable alternative to a control-oriented process. With the support and participation of leadership, it has the potential to ripple outward, transforming organizational culture.

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Commentary

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The success of today's organizations depends on their ability to shift from rigid, hierarchical structures to dynamic, learning entities allowing individuals, teams, and the whole entity to develop and grow. The interaction among individuals in these open systems is critical for the achievement of organizational outcomes. Nowhere is this relational aspect more important than in health care. Effective relationships are the foundation of the care provided by nearly all health-care practitioners and an important link to the patient's positive outcome. This is further substantiated in a report on relationship-centered care by the Pew-Fetzer Task Force: "Contemporary patterns of illnesses are complex and require multiple therapeutic approaches by practitioners from a variety of disciplines and professions. In order to fully attend to all of the factors influencing health in a coordinated way, having effective working relationships among practitioners is essential" (Pew-Fetzer, 1994: 10).

Consultants are frequently called on to facilitate or strengthen these relationships by improving communication and relationship skills, especially those of leaders and managers in health care. Williamson and colleagues address the consultant's role by constructing five basic principles drawn from the conceptual frameworks of systems theory, complexity theory, and appreciative inquiry that offer an innovative approach to what I refer to as the last bastion of mechanistic organizations—health care. Many health-care organizations still contain fiefdoms, hierarchies, and command-and-control leadership practices. It takes a visionary, courageous CEO to abolish those hierarchies, abandon command-and-control practices, and establish an environment that truly encourages empowered health-care teams and promotes connectedness among disparate individuals. Such a CEO was one of the authors of this article.

But the article raises certain questions: How sustainable was this consultative process? What are the short- and long-term outcomes for patient and staff satisfaction as a result? What type of CEO

leader is receptive to such a novel consultative process? What can relationship-centered consultants do when they confront CEOs or health-care leaders who are just interested in tangible outcomes and resistant to an appreciative process?

I just completed a PhD study exploring leadership practices and the emotional intelligence of nurse leaders. Are emotionally intelligent leaders more receptive to such a consultative process? Do they have better interpersonal relationships? These are just some of the questions practitioners need to address in future articles.

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Response

by John C.J. Cronin

The consultative process used by Northern Berkshire Health Systems was one part of an ongoing organizational transformation of NBHS. One of the first effects of the process was to raise the level of dialogue in the board setting. The NBHS Board of Trustees is now a body that wants to look forward; it is increasingly engaged and committed to change. Members recognize that health-care delivery needs to change and wish to be part of that change. The commitment exists at the board, senior management, and middle management levels.
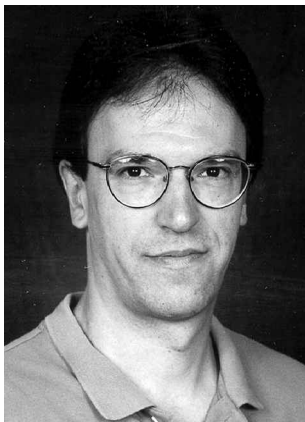
We have, indeed, seen an increase in patient-satisfaction scores in the past year and are monitoring employee satisfaction. Additionally, we are encouraging the efforts of systemwide work groups as new relationships develop among individuals.

Using the appreciative inquiry method, NBHS heard the call from the local community for caring, partnership, and full-spectrum excellence in health care. To achieve those ends, the system leadership is now committed to culture change that will produce the kinds of effective working relationships considered important by the Pew-Fetzer Task Force.
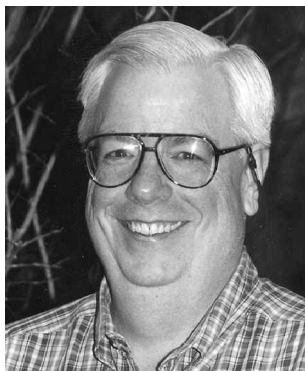
As a footnote: the consultative process also led to an informal professional relationship with the consultants that allows continued contact.

Putting Something in the Middle: An Approach to Dialogue

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Conversation is conducted atop layers of meaning. How we understand each other depends quite a bit on what's underneath the conversation because the basis of what we hear and say lies in inferences, assumptions, values, feelings, and information. For example, people talking about trends in the financial markets need to have some basic understanding in common for the conversation to go anywhere. Often, that shared understanding is adequate. But if the topic is saving for retirement and the conversation is between two people, one of whom is financial adviser to the other, then something close to dialogue needs to occur. That is, the parties in the conversation need to deliberately dig down into the layers of meaning and mutually examine things like personal values, assumptions about the future, and income data. The process of digging includes the possibility that substratum meanings will be discovered or clarified in the course of the dialogue, and that something new might be created (for example, new career goals). Obviously, in this example, the technical methods of the financial adviser will help guide the conversation, but the danger in not having a dialogue is that actions will be based on fundamental misunderstandings or that a narrow set of options will be entertained.

Dialogue at its best is a way of creating profound levels of shared meaning in a group so that the wisest courses of action can emerge. We view dialogue as a desirable component of leadership, especially in the face of adaptive challenges within our increasingly networked society (Heifetz, 1994). In shaping practice to needs, as sponsored by the Center for Creative Leadership, we have taken guidance from the work of David Bohm (1990), William Isaacs and Peter Senge (1994), Chris Argyris (1993), and Nancy Dixon (1996). Along with our colleagues and clients, we have experienced great rewards in taking part in dialogue in organizations, typically in service of leadership development initiatives. Yet we have found (and these authors acknowledge) that learning dialogue and practicing it effectively can be difficult. In this article, we discuss some of the reasons for this and offer an approach that we have begun to test that addresses some of the difficulties. We call this *mediated dialogue*.

A critical aspect of dialogue is what Bohm calls *suspending assumptions:* "You literally suspend them in front of the group so that the entire team can understand them collectively" (Isaacs, 1994: p. 378). The term *assumptions* is to be taken in its broad sense as the underlying basis for what one thinks and feels—the layers of meaning underneath the conversation. For example, Chris Argyris describes these layers as a sequence, a chain of reasoning toward increasing abstraction, which he calls the *ladder of inference.* The ladder starts at the bottom rung with data and objective events, then on the next higher rung is selected particulars from such data, followed by ascribed meaning, more generalized assumptions, conclusions, and finally adopted beliefs.

According to William Isaacs, suspending assumptions consists of three roughly sequential activities. The first he calls *surfacing,* or becoming aware of one's assumptions. Another is *display*, lifting assumptions in front of the group, so all, including the holder, can perceive them. *Inquiry* is the shared exploration and reconstruction of the accumulated knowledge held in the middle of the group.

Suspending assumptions is difficult in all three of its components and is often misunderstood. The phrase itself is misleading; it sounds at first as if one is being asked to stop using or suspend the logical foundations of one's thinking. Nancy Dixon (1996) observes that the technique of dialogue can take almost a year of steady practice to master; internalizing the values can take even longer. One quickly realizes how far dialogue is from the ordinary conduct of conversation.

We observe two aspects of suspending assumptions that are, in practice, especially hard to grasp. First is the notion of the "middle." The figurative space into which people are asked to speak and place their meanings is seemingly empty and ephemeral. The prevalent Westernized mode of communication is for people to keep this metaphorical middle space *within* themselves and speak to a similar space *in* other people ("me" to "you"). The temptation during dialogue is thus to focus on other individuals in the group and to locate the activity of making meaning as wholly *in* them or *in* oneself. One group we worked with remembers dialogue as the activity "where you look down at your shoes when you speak"—a device introduced to avoid the habit of seeking face-to-face agreement or disagreement. The dialogic request to "speak to the middle of the group" can be hard to fathom.

Second, the idea of "constructing" meaning is difficult to grasp. The deliberate construction of meaning is a dialectic between crafting and taking apart. More commonplace is the notion that a person gets a good idea and therefore tries to influence others, or the notion of changing one's mind in the face of a compelling argument, or the gut reactions of agreement and disagreement.

The figurative space into which people are asked to speak and place their meanings is seemingly empty and ephemeral.

Constructing meaning during an extended dialogue implies a prolonged neutral zone in which meaning is "under construction" and in which the "construction site"—the group's shared understanding—is in a bit of chaos; this is not unlike the "Big Dig" currently underway in the city of Boston, in which the central artery of the city's highway system is being radically rebuilt while everyone in the city tries to go to work every day. Testing the edge of chaos so close to the self is a fair approximation of madness (or road rage, in this case), suggesting that some empathy is in order for those who don't wish to go there.

Overlapping the two problems above are epistemological difficulties related to developmental challenges:

- Dialogue calls on people to let go temporarily of the idea that they "own" their ideas, feelings, or perspectives (it's hard to "hold your ideas lightly," as our colleague Robert Burnside points out).
- Dialogue invites people to participate in the creation of something that may challenge their "own" ideas and feelings (as a participant in dialogue, you open yourself to change and to discovering the limitations in what and how you think).
- Dialogue asks people to take in others' ideas and feelings as if they are worthy both on their own terms and in relation to one's own terms.

These problems seem formidable. Many writers on dialogue assume that they can be overcome only by (1) prolonged exposure and practice of dialogue techniques, and (2) personal development to transcend the epistemological barriers.

We have been experimenting with an approach to dialogue that overcomes some of these difficulties, called *mediated dialogue*, the topic of the rest of this article. Our thesis is that dialogue is a process that occurs by putting meanings to be explored and reconstructed in the middle of a group. Placing a mediating object in the middle, under the right conditions, is a way to enhance the experience of dialogue.

We want to emphasize that mediated dialogue itself is not a technique; nor is it our invention (though we are inventing techniques which take advantage of it). It is a natural mode of communication that can be enhanced.

Mediated Dialogue: Origins in Theory and Practice

In this section, we describe the origins of mediated dialogue, emphasizing connections to our research and practice at the Center for Creative Leadership (CCL). We and our

colleagues at CCL have long been exploring ways to facilitate conversations that promote insight and learning. A common way of doing this has been through experiential learning. Of special relevance to dialogue is the experiential learning paradigm in which a group, which is debriefed for perceptions and lessons, engages in a task. Thus, a skilled conversation akin to dialogue takes place, resulting in a reappraisal of shared and individual meanings (assumptions about work, relationships, identity, and so on). The "something in the middle" is a virtual object—the shared experience still vivid in memory—or a real object, as when a group builds something together.

In the early 1990s, a form of the something-in-the-middle learning process evolved utilizing what we call *identity objects*. (Drivers for this evolution included the surge in organizational restructuring that destabilized individual and social identities.) These are figurative representations of the self in context, so that a person crafts meaning about who he or she is, values, aspirations, challenges, hopes, and fears.

Identity objects *. . . are figurative representations of the self in context, so that a person crafts meaning about who he or she is, values, aspirations, challenges, hopes, and fears.*

A *touchstone* is an identity object, a three-dimensional collage in which natural objects are assembled into an aesthetic articulation of sense of purpose (De Ciantis, 1995). The invention of the touchstone by Cheryl De Ciantis was an important step toward the notion of mediated dialogue, as it used a meaning-invested constructed object to scaffold the three steps in suspending assumptions: bringing meaning to the *surface* by attaching significance to an object (in this case, by making the object), *displaying* it by placing it at the center of public view, and then *inquiring* into its various meanings by the person who made it and by the others who view it and make sense of it.

Another type of identity object is the autobiographical fictional character sketch used to help managers comprehend individual leadership profile data (psychometrics, 360 degree feedback, and so on). The basic instruction is:

> Write the story of a fictional character whose profile happens to be in some ways much like your own. How did that character get where it is? Where is it going? The character may be a person, an animal, or an object. You have full artistic license to make an imaginative portrait of this character, to tell a story.

The sketches bring meaning to the surface by projection, discovery, construction, and perception. The stories are then read to the group (display). Other group members respond to each sketch (inquire) by giving their impressions of the character and its experiences *per se* (as opposed to their direct impression of the real person, the teller of the story). Perspectives are unearthed and created *in the middle*, as a shared endeavor. The person telling the story is not in the spotlight so much as the story is. Teller and listeners typically benefit from the fictional frames of the sketches, what we will later define as *aesthetic distance*.

The *postcard exercise* uses several hundred radically diverse postcards and photographs culled from personal collections. Each person in a group intentionally selects three postcards (surfacing) while browsing the entire set; each shows something essential of her life in the past, the present, and the future. Selection tends to be intuitive and metaphoric, although it can be literal. (This striking mix of real facts, warts and all, and fantastic possibilities are what a poet once described as "imaginary ponds with real frogs in them.") Participants share images with each other (display), presenting their own and commenting on others' (inquiry). The purpose is so people can explore their own development. They see patterns and possibilities and watch and help others do the same.

The Leading Creatively Program (LCP) is based on the idea that the competent perception and construction of meaningful images, representations, and (more broadly, spoken) ideas is a vital resource for communities trying to make sense of complex challenges (Palus and Horth, 1996, 1998). For example, participants make print-image collages about specific challenges they face in their work (surfacing). The collages are hung together as a gallery (display).

Inquiry within LCP uses a technique adapted from Montague Ullman (1996) called the *star model*—a process that has become the basis for our current practice of mediated dialogue. The star model locates group members as if they were points of a star, with the

center of the star a common area for meaningful artifacts. The main flow of discourse runs between the center and the points of the star, rather than from person to person. People give and take meanings from the common area by choice—offering perceptions, making connections, noticing patterns, and so on. In the case of complex-challenge collages in the LCP, participants comment on each others' representations in language such as, "When I look at that I see . . ." or "If that were my collage, I might think about . . ." or "Building on that last observation . . ." The maker of the collage at first simply listens and, in the end, reassumes the authorial voice and reclaims his own understanding of the challenge being faced. The sense-making process here tends to be very fluid. People take input from each other. For example, a person can establish the meaning of her own situation as she examines the collage made by another.

Mediated dialogue consists of three generic steps:

1. Constructing or selecting an object and charging it with meaning.
2. Sharing the object and its meaning with others.
3. Opening the object and the meaning to inquiry, including the construction of shared meaning.

Two Techniques for Conducting a Mediated Dialogue

In this section, we describe two techniques—Visual Explorer and movie making—that we invented for conducting dialogue. We invite others to test the methods and invent new ones. It is important to use these techniques in the context of good organization development practice, that is, responsible and competent stage-setting, facilitation, and follow-up.

We illustrate the techniques with the disguised case of senior managers at a company called Angstrom Inc. (a pseudonym). We used both techniques during a meeting of several days, with cumulative effect. The dialogue we were facilitating was larger than this single event, at the level of the long-term strategic conversation of the group. No brief technique can substitute for sustained dialogue. We offer these techniques as stepping stones, not the entire path (but useful where the path fades from view).

Visual Explorer

Visual Explorer combines aspects of the postcard exercise, collage, and the star model (described in the previous section). It was first designed as a versatile aid to sense-making in the face of complex challenges; as we used it, we frequently noticed that better dialogue took place.

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Instead of postcards, we use a large library of digitized images from which we have selected 156 for this application (although postcards are still a good option). The images are printed in color on letter-size paper. This large format affords better viewing than postcards, and digital color provides sharp, compelling visual qualities. We used two overarching criteria in choosing the images, which are derived from our experience using the postcard tool. First, the images have a wide variety of visual styles (for example, photographs, eighteenth-century oil paintings, abstracts) and portray various human conditions (for example, culture, gender, emotional range). Second, the images are "interesting" or lead to psychosocial metaphors. One example is a stunning photograph of a group of hikers roped together while traversing a vast white glacier. Compelling aesthetic features often help an image meet the criterion. Other images are interesting because they hint at layers of meaning or hidden perspectives. For example, several images require close examination to determine which side is up.

The senior managers at Angstrom Inc. met one weekend to determine strategy in the face of significant change, fast-paced competition, and ambiguity. First, they listened to a number of expert presenters discuss studies of the industry. The task for the Angstrom group was to make sense of a flood of information in a context of ambiguity while planning for the future—a situation calling for competent sense-making (Weick and Meader, 1993) and an opportunity for mediated dialogue. The seed question we asked was, "What stands out, above all else, from this morning's presentations and why?" The instructions we used are summarized in table 1.

What we are learning by using the Visual Explorer is that it produces surprisingly good dialogue. In this case, it was a minimal dialogue that lasted only 30 minutes or so within the small groups of three or four. Yet it was a good start on a subsequent session of dialogue at the same meeting of Angstrom executives using the movie-making method described in the next section.

One picture, selected by an executive whom we will call John, shows a person fishing through a hole in ice. John used the image to describe the simplicity and the demands of fishing. Angstrom is a high-tech business, yet for John, the work came down to certain basics: patience, focus, and a bit of suffering. John's group noticed the wooden stick and simple metal tool lying on the ice and tried to determine what those represented in their business. They noticed the person was alone and wondered why.

Mary chose an image of a rock climber. She talked about the exhilaration and fear she experienced at Angstrom. Someone noticed that Mary was holding the image upside down—the trees in the distance belonged at the bottom. The conversation shifted to perspective: What happens if you *invert* certain key assumptions that Angstrom had made?

Table 1 Using the Visual Explorer at Angstrom Inc.

	Rationale and Comments
This exercise's purpose is for participants to process what they heard from speakers and to raise and examine the points that are most salient to the group and its challenges.	The group wanted help with this and found the purpose compelling. Work with what is most salient or important to the individuals involved.
Instructions to group 1. **Think about** one topic or detail you heard among all the presentations that stands out for you in its importance or possible implications.	
2. **Write down** your thoughts on what stands out for you (three to five minutes). What you write down in your journal will be private unless you choose otherwise.	A journal is a good companion to dialogue. Occasional brief periods to organize and write down private thoughts are a valuable complement to the public verbal exchanges.
3. **Browse through the pictures** on the tables and find one or two that evoke the thoughts you wrote down. The connection between the thoughts and the images may be intuitive, emotional, or literal. The image may "speak to you" in ways that are hard to verbalize. Do this without talking (speaking interferes with the browsing). Take your time and look at all the images (five to ten minutes).	The images have been displayed on tables before the start of the activity. Music played during this step gently enforces silence.
4. When you have found your image, return to your seat and **write** first what you see in the images and second a few thoughts about the connection to your thoughts (three to five minutes).	Introverts especially need more time to write in their journals.
5. **Break into subgroups** of three or four.	These groups can be formed in various ways familiar to all facilitators.
6. **Share and discuss** the images (repeat all these steps for each person):	This is a variation on the star model. Summarize these steps for the group on a chart or handout.
• **Describe your image** to the group, paying attention to the details and to the image as a whole. What is it? What's going on? Why were you drawn to that image? What do you wonder about in the image? **Explain what the image means to you with respect to your thoughts.** How is it connected to your thoughts? What does it mean to you? Does it bring out anything that you hadn't thought of before? (three to five minutes).	It is important that people spend time paying attention to the image itself before going on to describe its connection to their thoughts.
• Each person in the group then describes what he or she sees in the same image and any connections. Each person speaks to the group rather than directly to the individual who selected the image, using language such as, "What I see in this image . . . " or "If this were my image . . ." (three minutes for each other person in the group). • The person who selected the image has a chance at a "last word" about the images and possible meanings and connections to the topic (one minute).	In the same way as the person who chose the image, the others should spend time first describing what they see in the image and then any connections they make to it. Encourage people to speak to the whole group, not only to the person who chose the image.
7. Again write your thoughts in your **journal**.	
Save the selected images for the next phase of mediated dialogue.	An optional activity can move into debriefing or decision making.

We observed the following kinds of mostly positive behavior and outcomes in this case and similar cases while using Visual Explorer:

- When they first encounter the Visual Explorer process, people are often suspicious of it as being "too soft" for serious business. Yet the overall reaction at the end is usually favorable.
- Participants often report that the quality of the conversation improves in various ways, in terms of the quality of insights about issues, and in the way people treat each other during the conversation.
- The bottom line for the Angstrom group was that they felt they had obtained valuable insights, while avoiding some ruts ("rat holes" as they call them) that frustrate them in their usual discussions.
- The images facilitate a flow of ideas from the person speaking.
- The images facilitate a flow of appreciative and constructive observations by the listeners.
- Each person in the group examines elements that stand out in the images so that points of view are not entrenched.
- The images become the center of a conversation rich in metaphors.
- People often find personal connections to their own and others' images, adding a degree of interpersonal richness and self-disclosure.
- The images lend themselves to visual jokes, so there is a sense of play and a lot of laughter.
- The images also lend themselves to serious themes, by content (death, war), as a screen for values and beliefs (parent/child, cultural themes), and as a vehicle for emotion-laden issues.
- Topics are hanging at the end of the activity; this is troublesome if this is just an "exercise." Some frame for closure or continuation is required.
- It is not easy to preserve potentially valuable insights from the dialogue, although the images show promise as durable artifacts. (For example, people often ask to keep the images they selected, and we have seen them framed and hung in offices and corridors.)

Several typical comments we hear in debriefing Visual Explorer sessions are:

- "I thought I knew what the picture I picked was all about until other people said what they saw in it" (referring to the image *per se*, not the interpretation).
- "I thought I had the connection of my picture to my challenge nailed down until I heard how other people would connect it to their challenge. The meaning of the image just seemed to grow." (His sense of challenge grew as others made their interpretations of the image.)
- "I felt like whatever I said about my picture was accepted by the others in my group even though they had different ways of interpreting it. Their disagreement about the nature of the picture did not make any difference to the feeling of having my own views accepted and appreciated."
- "I learned something about a person in my group whom I have known for years. I got an insight into the way he thinks about things by listening to him describe his image and how it was connected to his concerns about the future."
- "The conversation we had went far, fast. Yet we also looked at a lot of details."

Movie Making

The movie-making technique is based on three sources: *Collage*—arranging disparate images into a meaningful representation of something—is used to understand complex challenges. It is a method well developed in the LCP and often adapted by program alumni in their own leadership situations. *Storytelling* includes earlier work we had done on autobiographical stories in support of leadership development. *Literature* on strategic scenario-building (for example, Schwartz, 1991) is another source.

We facilitated a movie-making session at the weekend Angstrom meeting. Our purpose was twofold: (1) to imagine the future in order to think about strategy and prepare

for unexpected events, and (2) to learn to work more interdependently. The movie-making exercise followed Visual Explorer; each was a way to practice dialogue in support of group interdependence and dealing with the unexpected. Instructions are summarized in table 2.

The group produced four wall-sized collage-movies, showing imaginative "what if" scenarios about the company's possible futures, such as, "What if Cuba suddenly opened its borders and transformed into a showpiece for business growth?" "What if our employees all became free agents in 'the connected society'?"

One of the most revealing commentaries on this activity resulted from a mistake we facilitators made: we removed the movies from the wall that evening to prepare for the next day's activities. The next morning, the participants were rightfully upset; they wanted to continue the dialogue. They wanted to stand again in front of the movies they had made and continue the in-depth conversations.

The group agreed that the quality of their conversation was better than usual for them, both during the making of the movies and during subsequent dialogue.

We observed the following behavior and outcomes in this case:

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- People voiced some initial concerns about the movie making as being too "touchy-feely." These concerns completely faded during the dialogue.
- This process raised and explored many business issues at a detailed level.
- The movie medium allowed the dialogue to leave and then revisit issues; the movies stayed on the wall.
- When the groups first started making the movies, the conversation tended to be very abstract and analytical. It helped to suggest that they go to the wall and start sketching.
- It also helped to advise them to preface remarks with the word "pretend" (for example, "pretend Angstrom goes into these new markets").
- As the exercise proceeded, there was more levity and more laughter.
- The groups used the images from the previous Visual Explorer activity in the movies, linking the two activities.
- The groups created many metaphors.
- The movies tended to be more nonlinear than a traditional story. They contained inserts or digressions that were riffs on the theme but were not well integrated. They were unedited drafts rather than polished scripts. This happened when the groups split into smaller units to create different segments of the movie, but seemed to help rather than detract from the ensuing dialogue.
- One suggestion that helped when the movie making bogged down in disagreement was to make the disagreements come alive by putting them into the movie, such as having two characters with differing viewpoints.
- Shifts in the patterns of conversation tended to occur when the groups "went to the walls," that is, when they got up from their chairs and sketched the movies.
- Hanging the completed movies on the wall for shared reflection means that, when the debriefing ensues, people are looking at the wall rather than each other (another variant of "the middle"). Eye contact can interrupt dialogue and turn it into discussion.
- The movies were *not* complete until the participants viewed and reconstructed them in the process of dialogue. Observations and interpretation of the larger group compelled new shared understandings of the work that each small group had done.

Table 2 Movie making at Angstrom Inc.

	Rationale and Comments
The purpose of this exercise is to better perceive and understand possibilities that are currently unexpected in a deliberately interdependent way.	The group members had already set goals for themselves.
Instructions to group 1. **Break into four groups** of seven or eight people, one for each of four previously identified strategic themes (customer relations, new services, new products, and innovation).	This is the strategic work of the group.
2. **Create an imaginative story** set in the near future—a fictional future for Angstrom. The story will illustrate a disruptive yet possible set of events and circumstances in your market—inspired by the presentations you heard earlier in the meeting. Emphasize the strategic theme your group has been given.	There were two set-ups: • Presentations by experts on dynamic forces in the business (Angstrom called this "provocative discovery"). • Input was gathered from group members using a prompt: *Imagine an event that would have significant impact on Angstrom's business. Describe the event. Imagine a headline that captures the dilemma or event. What are the implications?* We collected the answers and distributed them to the group before the meeting.
3. **Create an illustrated story** or movie on the white paper covering the wall, using the magazines and photos provided, images from Visual Explorer, glue, string, tape, paint, and anything else. **A story has these parts**: *Once upon a time*—Introduce the characters, set the stage; *Then one day*—A provocative event occurs that challenges the status quo; *And so*—What happens? How does so-and-so respond? *And in the end* Make scenarios memorable, compelling, vivid, and provocative. Take two hours for making the movies.	We used a yard-wide roll to paper the walls. Each group had its own wall. The movie is a kind of storyboard, illustrated script, projection screen, motion picture. Invoking a familiar story pattern seems reassuring and helps people organize their material. Facilitation points: • Sketch at the wall rather than argue about the plot around a table. • Embody any disagreement you have into characters or plot elements. • Pretend, play, improvise, imagine.
4. **Share and discuss** the movies (repeat for each group in turn): **A group shows (presents, narrates) its movie** to everyone (15 minutes each). After, have a dialogue focused on the movie: **Start with observations** about the details, characters, surprises, ambiguities, and so on as you might discuss a film you have just seen with friends. Language such as "I noticed," "I wonder," "When so-and-so died, I thought. . ." **Ask the movie makers** about their choices, their process in making the movie, their assumptions, and so on.	This is a variation on the star model and a form of dialogue. Keeping the primary focus on the movie allows the process of suspending assumptions to continue.
5. **Look at the meanings and broader implications** of the movie for Angstrom. What does the movie help us to see about the present situation? What are our assumptions, compared to the ones in the movie?	We made an error by removing the movies from the walls too soon. The group was eager to continue having a business conversation with the movies on view spurring dialogue.
6. **Locate key strategic points** across all four movies: Participants get five red and five green sticky dots. They place the green dots next to portions of the movies that they think illustrate Angstrom's key strategic strengths. They place the red dots next to portions that show strategic weaknesses.	Voting can be done on any salient dimension on which you want to poll the group. The dots help keep the conversation close to the movies, that is, to the constructed middle of the dialogue. Save or digitally photograph the movies for future review by this group and their staffs.

Conclusion

Dialogue can be valuable in addressing complex challenges. In practice, dialogue is often difficult to initiate if not already present. Putting something in the middle—mediation of the conversation with various kinds of "objects"—has always been a way to achieve dialogue. The notion of mediated dialogue points the way to doing this deliberately and with skill.

What happens before and after dialogue also determines its success. Mediated dialogue sustains connections to art, especially in the sense of skilled craftsmanship and the disciplines of building (Booth, 1999). The best conversations have always been intertwined with the things we make and with the processes of making. The common area in the middle of a dialogue benefits from having an artistic bridge. Mediated dialogue means building artistic bridges for communication.

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Commentary

by William N. Isaacs

In his book, *Serious Play,* Michael Schrage raises the important insight that the way organizations reflect on and manage their innovation prototyping process is critical to stimulating innovation (2000). This is because the prototyping process is essentially a learning process. It can force reflection on underlying mental models and the social context that guides action by enabling people to make their choices, preferences, and biases explicit. The central idea here: explicit thinking can become refined thinking.

This is, in part, the premise behind Palus and Drath's article on mediated dialogue, which approaches the same ground by suggesting that mediating objects or processes can stimulate dialogue. Mediating objects are like conversational prototypes, letting people give form to the unformed or unarticulated assumptions they have. Yet while their article proposes two interesting mediating techniques, which I believe can be valuable in liberating energy, they do not quite go far enough and have the potential to be misleading. This is because it is the very perils and difficulties of dialogue that their techniques seek to help people overcome that contain some of the most important information people need to achieve genuine dialogue and breakthrough thinking.

Palus and Drath argue that dialogue is difficult, and one core aspect of it—suspending assumptions—especially so. They propose visual techniques that allow people to externalize their unconscious or tacit thinking and so make it available for reflection. It does seem to be the case that transitional objects like the ones they propose do allow people to externalize their thinking and do promote cognitive development.

Yet the question arises as to why dialogue is difficult at all. Palus and Drath suggest, in essence, that it is because people either do not have the competencies to construct meaning live, in front of others, or are too defensive to allow it to happen. They propose techniques to help people through these limits.

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I believe the problem lies deeper in the fragmented tacit infrastructure of our thought, which produces deep divisions of identity and experience among people, and in the social rules we have adopted that tend to inhibit the free and open speech that we idealize. We see evidence of this everywhere: subcultures within organizations always seem to arise that have different ways of seeing the world and that compete with one another for predominance and control. We feel these fundamental divisions, in other words, yet our civilizing social rules tell us that to raise difficult issues is to make trouble, and so we tend to try not to. Of course, these things leak out (or are shouted out) anyway, and trouble ensues.

Palus and Drath cite several comments from people who feel liberated as a result of their approach, because it gives them a sense of connection, releases energy, and produces insight. But did these people use these techniques to challenge themselves and challenge one another's thinking, or merely come to the point of feeling secure in their own, because they were able to articulate it or discover something about it? A technique that gives people the chance to avoid trouble with one another can feel liberating, but it may bypass an essential phase of conversation that leads to genuine dialogue: breakdown. A breakdown is an explicit collapse of the smooth surface of coherence that the civilizing processes of our organizations insist we maintain.

The challenge is to find a way to inquire into these very forces that lead to breakdown, if we are to actually produce sustained change. Making thinking explicit is an important step, but if it is not coupled with active engagement in the differences that arise, and the reasons for those differences, they can in the end actually delude people into thinking they had a powerful exchange, when in fact they stayed safe and did not venture into the more dangerous, but ultimately more fruitful domain of inquiry into difference and into the fascinating strangeness of the *other*.

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Response

by Charles J. Palus and Wilfred H. Drath

Certainly William Isaacs is right in asserting that dialogue ideally helps people in obtaining "free and open speech" across the "fragmented tacit infrastructure of our thought." Helping people make sense and meaning together across boundaries, when they see things differently, is our explicit goal. And, yes, people are bound by "civilizing social rules" that do often get in the way of such shared meaning-making. However, the very point we were hoping to make in the article is that the "perils and difficulties" of achieving "genuine" dialogue need not stop people from beginning the journey of *learning* dialogue. Too often, the very mention of the word seems to frame an activity in which only the achievement of "true" dialogue will be judged a success, so that in-between steps of not-quite-regular discussion and almost-dialogue are taken as failures.

Object-mediated dialogue seems to encourage certain initial forms of what Isaacs calls "breakdown" early in this learning process. The use of physical objects viewed and handled in common often reveals profound disparities in what people notice and how they name things. Such disparities—relatively small breakdowns in the web of shared meaning—are often quite surprising, even humorous, and can rapidly become an explicit subject of the dialogue. This is a good place to start learning about a new way to talk, even as the dialogue moves to more difficult forms of breakdown over core issues. Our experience has been that people usefully take small steps toward dialogue, and that the experience of achieving something that is not quite a normal conversation, that goes (even if only a little) beyond the conversational routines of day-to-day work, affords people a preview of deeper and more useful dialogue (perhaps what Vygotsky would have called an experience in the zone of proximal development). We think such a preview can support development in the desired direction. To answer Isaacs' question, yes, people use mediated dialogue to "challenge themselves and challenge one another's thinking," but the degree and nature of the challenge is at the edge of what can be supported, not beyond it.

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Commentary

by Roger Harrison

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Effective ways of focusing dialogue are always welcome. Palus and Drath make a creative contribution with their approach to mediated dialogue. The idea of focusing on "something in the middle" should lead to further innovation. As a facilitator with interest in useful ways of making dialogue work, I appreciate their sharing of inventions and especially their willingness to share a mistake they made. I find I learn as much or more from my own and others' mistakes as I do from successes.

The article stimulated me to reflect on the distinction between "running" dialogue and approaches that promote self-determination by participants. Because of client pressures for quick results, consultants are always tempted by participants' preference for something being done to them, rather than muddling through the learning process themselves.

Good practice of our art need not be complex and mysterious. It is possible, indeed preferable, for willing participants to manage their own inquiry into the deeper meanings behind differences without having to accept arcane and mystical definitions for ordinary words. Christina Baldwin, for example, describes an elegant and effective approach to the self-management of dialogue. Baldwin's work currently provides the approach to learning dialogue used in Margaret Wheatley's worldwide community building project, "From the Four Directions." Having used both Bohmian dialogue and Baldwin's circle work in my own attempts to make dialogue accessible, I believe that all well-managed efforts to promote inquiry lead to a deeply satisfying communion of minds and hearts. This being so, we should choose those approaches that are most accessible and easily owned by clients. Our world needs powerful and effective clients more than it does powerful and effective consultants.

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http://www.peerspirit.com.

Have You Ever Listened to Your E-Mail?
A Dialogic Approach to Online Communication

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Have you ever listened to your e-mail? In thinking about my own experience with e-mail communications, I realize that I have rarely asked myself this question. In the physical world, effective communication begins with listening to others and to oneself. Eighty percent of the energy used in effective communication goes toward listening (Brownell, 1995). How much energy should I use to listen to my e-mail or other online communication?

In cyberspace, I sometimes feel very disconnected from my conversation partners, not only because they are not present physically, but also because they are emotionally and spiritually absent. I feel distant from their very nature, from who they really are, and lack the verbal and nonverbal behavior that helps me understand. Many forms of online communication such as e-mail do not respect the complex process of developing genuine relationships based on mutual interest, trust, and help—relationships that have true value and meaning to each party. For me, most online systems deal with communication as if it were an abstract structure existing only of bits and bytes. Unfortunately, in today's fast-paced environment, the quality of communication is often defined by what is necessary rather than by what is needed.

While communicating via e-mail, some of my basic questions are: "What do I know about the other person? What are her or his characteristics? How does what I know influence her or his writing and my interpretation of it? What is her or his underlying intention?" It is like reading a book and knowing exactly who the author is and under what circumstances the book was created. This information changes the way I understand and experience the book. The book develops its own "persona," and I often feel connected with its story and characters in mysterious ways.

How strongly do I feel connected to my e-mail partner? What is more dominant when I am reading or writing an e-mail, the wholeness of the relationship or just the words on my computer screen, the meaning of which are created mostly through my own lenses and not through those of my correspondent? What if I had a technology that allowed me to display the memories of my relationship with my e-mail partner in the background of my computer screen? The uninspiring blank canvas of my screen would be filled with videostreams of events, unique to this relationship, that carry its value and potential. Wouldn't the impact go beyond the bits and bytes that intend to create meaning by simply decoding meaningless datastreams into words that we humans can understand? True meaning, or true understanding, can be created only in relationship with others. Words alone do not create meaning. Therefore, only if I am consciously aware of everything in my relationship with others, will I be able to unfold its qualities and beauty. Then I am ready to enter and sustain a dialogue with others.

Maybe the complexity of relationships is one reason why online communities have difficulty achieving critical mass. Many now combine virtual with physical reality. *Fast Company,* for example, organizes events at which people meet locally to discuss specific topics. Its mission states: "*Fast Company* is more than a magazine: It's a movement. It's a series of engaging live events. It's an acclaimed Web site. It's a global community" (www.fastcompany.com).

In another example, a business team of eight people that plans the annual meetings of a nonprofit membership organization met for two days to initiate the planning process for its annual meeting. The planning team in previous years communicated only by phone or online forums. Participants felt that the face-to-face meeting created a clearer roadmap for the planning process from the beginning. They found value in meeting physically, not only virtually.

Only if I am consciously aware of everything in my relationship with others, will I be able to unfold its qualities and beauty.

What would I like to preserve from face-to-face conversations? What needs do I want to be addressed, even in the virtual world?

During the past few months, I have had many conversations with members of a learning community. In these conversations, I felt a wholeness and combined intellect develop that invited and allowed for exploration of new territories. How can I experience the richness of someone's presence and the potential of our combined forces when physical presence is rare?

To reflect more deeply, I refer to William Isaacs' work on dialogue and the art of thinking together. He comments, "Dialogue is a conversation in which people think together in relationship. . . . Dialogue is an altogether very different way of talking together . . . a conversation with a center, not sides" (Isaacs, 1999: 18-19). Dialogue combines three languages: the language and voice of meaning, feelings and aesthetics, and power of actions (Isaacs, 1999). The three languages are embedded in four dynamic fields that represent the continuous development of the quality and depth of a conversation. Therefore, these fields include not only the ideas at work but also interpersonal forces. In general, the fields develop in order as being nice, being tough, being reflective, and being generative (Scharmer, 2000). "People who wish to innovate or develop new knowledge must come to see their work as functions of the quality of these fields rather than as the product of individual action or willpower alone" (Isaacs and Zohar, 1995). Isaacs writes, "Too many of us have lost touch with the fire of conversation. When we talk together, it is rarely with depth. . . . *Dialogue*, as I define it, is . . . a way of taking the energy of our differences and channeling it toward something that has never been created before. . . . It attempts to bring about change at the source of our thoughts and feelings, rather than at the level of results our ways of thinking produce" (Isaacs, 1999: 14, 19, 20).

Danah Zohar relates the fields of conversation to the quantum vacuum, the ground stage of energy in the universe, "The quantum vacuum is . . . the basic, fundamental, and underlying reality of which everything in this universe—including ourselves—is an expression (Zohar, 1990: 225). Note that the vacuum is not empty; we are only unable to see its fullness. What we see are "organized patterns of energy," or relationships, that emerge from it (Isaacs and Zohar, 1995).

A field of conversation is the atmosphere, energy, and memories of the people who are interacting. To that regard, "the [quantum] vacuum itself can be conceived of as a 'field of fields' or, more poetically, as a 'sea of potential'. . . . The vacuum is the *substrate* of all that is" (Zohar, 1990: 225). Is there a quantum vacuum online, a virtual nothing?

In 1994, Richard Karash created an e-mail-based online forum to offer a virtual space in which to explore, share, and develop knowledge on learning organizations (www.learning-org.com). The community now brings together a diverse, worldwide group of more than 2,000 actively engaged members. How can these members understand the sea of potential in their community? Virtual, not physical, communicating leads to new opportunities to embrace the benefits of diversity while overcoming some of its constraints. Prejudices based on physical impressions are less prevalent in the virtual world than they are in the physical. Diversity online is more often about the diversity of ideas, thoughts, and opinions.

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Even though there is an opportunity for deeper connection with less prejudice, how often do I truly listen to what I see on my computer screen? How often do I listen to myself, to the way I listen? Do I feel listened to? Am I going beyond my own reality to explain the world around me and do I make space for the reality of others? I question myself not only on the level of meaning, but more deeply on the level of feelings and emotions. The virtual world allows people to connect with their true inner beings without the fear of losing face. It is a connection of souls.

Virtual space, in my opinion, supports a core competency of dialogue in the real world, that of suspending one's own truth: "How tight do I hold what I am saying? Is this my only truth, or can I offer it for exploration with others?" (Isaacs and Zohar, 1995). Emotions and feelings come into play, and aesthetics find a place.

A consultant for virtual communities told me that virtual space can hold more emotional tension than can physical space. There is a personal anonymity that allows people to be more open and honest with each other and for reflecting deeply. But this kind of connectivity also bears the risk that people will communicate with less respect for each other. Respect, though, is a second capacity for behavior in a dialogic environment and represents an awareness of the integrity of another's position and the impossibility of fully understanding it (Isaacs, 1999). The aforementioned consultant described a virtual community dedicated to inquiring deeply into conversations. The members who experienced their conversations in the virtual space more strongly related to who they are as human beings. They could share their inner being without the danger of "being shot at." They could speak in their own voices and, thereby, practice a third capacity for behavior in a dialogic environment.

Voicing means that one is speaking the truth of one's own authority and is encouraging others to do the same (Isaacs, 1999). True voicing is possible only when the capacity for respect is present. If suspending, voicing, and respecting are to exist, then there is a need to combine advocacy (offer one's own comments and opinions) and inquiry (inquire into one's own and other's views). A balanced combination of these speech patterns opens a reflective space in which it is possible to define new common ground. Online, this space leads to a new way of listening: "Listening requires that we not only hear the words, but also embrace, accept, and gradually let go of our own inner clamoring. . . . This means listening not only to others but also to ourselves and our own reactions" (Isaacs, 1999: 83). Listening is the fourth capacity for behavior in dialogic interactions.

With regard to listening, the virtual world offers an enormous advantage over the physical world: time. In most cases, the sender and receiver are not interacting with each other at the same time, so each take more time to listen. Combined with time, balancing advocacy and inquiry creates a new opportunity for mutual developmental growth and for creating something that is not based on memories or well-known patterns. It is an opportunity to make good friends who "*explicitly* test their differences and become *more different* from one another—stranger and stranger—even as they also develop shared aims, respect, and love at the deepest level. . . . This kind of friendship is highly challenging and dynamic. Persons who begin to taste and value this kind of friendship tend to be attracted to, rather than repelled by, strangers who come from different cultures, generations, sexes, religions, or races. Developmental transformation tends to occur within [this kind of] friendship rather than ending the relationship" (Torbert, 2000: 166). Purely learned reactions are replaced by inquiries into the existence of governing values and beliefs. Single-loop reactions are completed with double-loop and triple-loop feedback. More than simple learning, this is a deeper kind of learning to learn.

Online communication also can be used to address marital problems. A friend told me that he uses e-mail to solve conflicts with his wife. In the real world, he explains,

their emotions interfere with the issue and they are unable to separate the problem from the person. The influence of their emotions spreads through the household, affecting their children. However, when they use e-mail reflectively, their emotions are not as prevalent and both can talk in a different way of love, respect, and learning from and with each other.

The virtual world creates a space of safety and trust. Isaacs calls this space a container or space that holds the pressure or the emotional tension and offers psychological safety: "The container is a circle that holds all, that is a symbol for wholeness, a setting in which creative transformation can take place. The idea behind a container is that human beings need a setting in which to hold the intensities of their lives" (Isaacs, 1999: 243).

Margaret Wheatley has commented, "In the quantum world, *relationship* is the key determiner of everything" (Wheatley, 1999: 11). All comes into being through relationship. In the quantum world, there are many unseen connections that no one has observed or consciously experienced, yet they hold everything together. "These unseen *connections* between what were previously thought to be separate entities are the fundamental ingredient of all creation" (Wheatley, 1999: 11). Surfacing the eternal truth of human relationships not only in the physical, but also in the virtual world brings about order in our relationships. Order, as a virtue, is created through the actual perception of "what is" (Krishnamurti, 1994).

Online dialogue is also about suspending judgment, speaking my own voice and inviting others to do the same, and respecting myself and others.

Isaacs and Zohar have remarked, "We bring to all our relationships, to all our conversations, to all of our thoughts, to all of our experience all our potentiality; it is through this potentiality that we—by our connectiveness—are able to tap into it [the quantum vacuum] and develop and experience it. This creates a different sense of relationship, silence, and space" (Isaacs and Zohar, 1995).

Obviously, effective online communication requires at least the same amount of energy used in listening as does real-world communication. It is about suspending judgment, speaking my own voice and inviting others to do the same, and respecting myself and others. It is also about creating the space or container where all this is possible. It is about revealing the quality of virtual interpersonal connectivity and interdependence that is in the sea of potential, but has never been articulated. Ultimately, it is about love and creating order in our relationships.

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Commentary

by Susanna Opper

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Although it is not immediately obvious, Frank Schneider presents an interesting case for online communication's potential as a "container"[1] for a more profound level of human conversation. Indeed, that was exactly what most online pioneers experienced two decades ago when e-mail and, more importantly, computer conferencing first became publicly available. In those heady times, we early adopters believed that computer-mediated communication would, indeed, take us one step closer to dialogue as William Isaacs and others have defined it. "In dialogue, people learn to use the energy of their differences to enhance their collective wisdom," Isaacs comments (1999). Indeed, we longed for the day when critical mass would arrive, and everyone would communicate electronically.

Now we are there. Grandparents and grandchildren connect via e-mail. College students who, the joke goes, only phoned home for money are now in conversation with their families. Family quarrels appear in phosphorous, where the indignant can vent to all simply by clicking the button "family." And as Schneider notes, married couples can express themselves more coolly in this medium. But is there really deeper conversation—true dialogue? And, if not, should there be?

Distinctions are missing from Schneider's comments, as they are so often missing from the activity of human communication. Like the telephone and the written letter, e-mail is not a singular medium. Much of our e-mail is *transactional*. We wish to arrange a meeting, transmit a document, or introduce someone to a certain website. These messages don't have emotional or intellectual content. Schneider's wonderful suggestion of "memory wallpaper" would be wasted in these communications.

However, the wallpaper would be nice for *interpersonal* e-mail—the electronic equivalent of a telephone call. These communications share personal or business messages and have meaning and significance. Perhaps, as Schneider suggests, electronic relationships could have a visual element. Or, as I've imagined, we could show a representation of our face and then adjust our expression to reveal our moods and reactions. Perhaps these devices would enable us to transcend from the "I" of Martin Buber to the "thou."

But most interpersonal e-mail isn't the real substance of group interaction, where projects move forward and decisions are made. I call these electronic communications *relational*, like the *Fast Company* events or the planning team for an annual meeting. Project teams, special interest groups, and work teams for partnerships and strategic alliances make up this category. These work teams are not co-located, so a member can't stroll down the corridor to convene with a colleague or call an ad hoc meeting to resolve a difficult issue. These meetings need to take place online—by phone or computer.

The concept of electronic dialogue is valuable in relational situations. If groups could build true virtual communities, they could bond even when face-to-face meetings are difficult or impossible. But e-mail isn't a very good medium for this type of interchange. E-mail is, essentially, a one-to-one communication. Group dialogue requires shared electronic communication—conferencing, discussion groups, or some other group media.

Such was the electronic network built by Exxon Chemical Company in the early 1980s. "As a group, Exxon's organizational development (OD) professionals were responsible for corporatewide reorganizations, quality assurance, and human-resource management. The sensitive nature of their interventions required communications with others who had similar skills and training. Computer conferencing gave Exxon's OD professionals, interested managers, and affiliated outside consultants a way to collaborate with a lot less strain" (Opper and Fersko-Weiss, 1992: 36). It helped its members deal with a number of traumatic corporate changes including severe cutbacks, closed plants, and major, high-level personnel shifts.

An online T group was the most dialogic aspect of the Exxon network. For more than two years, a group shared personal and professional issues and challenges with people they had never met face to face. Life, death, marriage, career issues, personality clashes—nothing was off limits. The conversation was deep, personal, emotional, and authentic; it was, indeed, a dialogue. In Schneider's words, it allowed "people to connect with their true inner beings without the fear of losing face. It [was] a connection of souls."

As Schneider observes, groups function best when their electronic dialogue is inaugurated face to face. Once teams know each other and are committed to a shared purpose, online communication excels. Everything is a matter of record, so misunderstandings are reduced. Time, as Schneider observes, adds to the richness of communication. Responses can be more thoughtful.

The virtual container can create the safety and trust Schneider describes. To do so effectively, the technology must support the container, and that means it must be designed for groups, efficiently organized, and easy to use. It saddens me that more than 15 years have passed since Exxon's OD group inaugurated its online dialogue, and such communication is still a rare experience. Now that e-mail has reached critical mass for transactional and interpersonal communication, dare we hope that dialogic group communication will soon take hold for relational online interaction?

Note

1. "A container can be understood as the sum of the assumptions, shared intentions, and beliefs of a group. These create a collective 'atmosphere' or climate." Isaacs, W. "Dialogue: The Power of Collective Thinking" *The Systems Thinker* 4 (April 1993): 3.

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Commentary

by Jim Fleming

Today's technologically advanced society offers significant opportunities and challenges. One growing paradox is the use of technology to afford us time. High-tech products ranging from mobile PCs to other handheld systems are intended to help us make efficient use of our diminishing free time by providing more readily available information. But information has become so available that these high-tech wizardries consume our free time while we try to keep up with the flow of information.

In the past, we depended on human interface, phone transactions, or mail services for such information and subsequent collaboration, interpretation, or negotiation. Direct face-to-face interactions or indirect phone conversations created a form of learning through listening. We recognized the benefit of not only achieving results but also developing relationships. We had been socialized to converse in a way that created effective communication and fostered trust. One difficulty, though, was finding opportunities to connect despite geographic or time differences. E-mail seemingly solved this problem.

But along with the good intentions of the e-mail system, we continue to discover the bad. Connecting via e-mail has become so effortless that it is sometimes abused. Each day, we are inundated with dozens of e-mails of kilobytes ranging in double and triple digits. We have become so super-connected that our ability to truly "listen" to what is transmitted has decreased due to the lack of time. (Wait, I thought I was buying more time with these gadgets!?!?)

So we face the challenge of recapturing our free time while developing relationships. In this transaction-based environment, we attempt to read all e-mails and look only for the "right" information. I find myself moving quickly through the daily barrage of e-mail to work effectively. Apparently, I am using this medium to garner results, but is this only a fallacy due to my decreased relational connections?

As Schneider states, we can now create a way to not only listen to our e-mail but also enter into a dialogue. The use of dialogue in the Intel culture allows employees to have divergent conversations for more viable learning and then convergent conversations for moving into action. To be successful in the future, we must build capability to collaborate effectively via e-mail. Communication and organizational development professionals need to continue to work with employees and systems to develop an awareness of increased potential for the whole organization.

At the SoL 2001 annual meeting, C. Otto Scharmer discussed relationships between patients and physicians who aspired to respond to events at a deep level of awareness. The current responses were superficial and left both sides highly frustrated. The same people were asked to project what they desired in future relationships; each clearly wanted the relational response to be more reflective and self-transformational.

By reading e-mail with a consciousness of self-transformation, can the outcome be more profound? Would this not lead to more effective quantitative and qualitative results, while also creating lasting relationships in the absence of physical presence? These questions are relevant for creating and maintaining an effective learning organization in the twentieth-first century.

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Narrative Understanding

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> The surface of the earth is soft and impressible by the feet of men; and so with the paths the mind travels. How worn and dusty then, must be the highways of the world, how deep the ruts of tradition and conformity.
>
> —Henry Thoreau (1943)

It is late in the evening of Tuesday, December 21, 1999, when the e-mail message arrives. In the old apartment in the twelfth *arrondissement* in Paris where I am staying, the dingy mirrors, the antique wooden cabinets, and the *amuse-gueules* served in old china bowls are not fancy or even pretty. Yet the apartment has the particularity and the universality of a family space that has been lived in, the kind of simple and seductive room in which one at once feels comfortable.

Now late at night, after eating a meal of honest food—olives and cheese, thick crusty peasant bread and *raclette*, washed down with red wine—I am staring at a blinking computer screen and reading through a stream of e-mails. In a message from my vice president, I get confirmation of my suspicions. Back at organizational headquarters in Washington, DC, confusion is brewing.[1]

More than three years have passed since I began the task of implementing knowledge management in an international institution committed to fighting world poverty. In the process, knowledge management has gone from being almost totally unknown to being a central strategic thrust. The institution is going through a transition from a narrowly focused organization providing loans for investment projects to one that is also aggressively sharing knowledge both internally and externally to accomplish its ambitious mission. The change has involved hundreds of managers and staff implementing the basics of knowledge management, including strategy, organization, budget, incentives, technology, communities of practice, and measurement system—the essential elements needed for implementing knowledge management in a large organization (Denning, 1999/2000). The changes have been made even though the organization is not generally noted for its agility or its willingness to embrace innovation.

Everywhere there is evidence that these measures are registering success. Eleven months ago, the strategic forum of our senior management confirmed the central role of knowledge sharing in the organization's future. The mission statement now reflects knowledge sharing as a principal tenet. An external evaluation has verified our direction. A benchmarking exercise has selected us as a best practice organization. Internal surveys and focus groups also show progress. Yet, just when all these strategic pieces seem to be in place, just when we are getting credit for having everything set, all hell has broken loose inside the organization.

Now, from the vantage point of a warm apartment in Paris, I read an e-mail telling me that key senior managers, including some of the business unit leaders, apparently no longer understand knowledge management. During meetings over the past few weeks leading up to next month's strategic planning forum, it has become clear that knowledge management is mysterious or even confusing to some of them. In particular, they see the value or returns on the investment in knowledge management as uncertain. And these are the very people at the top of the organization who should be leading the implementation.

According to the message I am reading, yet another meeting has not gone well. A routine briefing to the leadership about the agreed-on scenarios has ended in a debacle.

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What was presented as the mere fine-tuning of an accepted melody has elicited calls to throw out the whole score. Objectives are no longer intelligible. The leaders are asking hard questions. The metrics just raise more questions. Overall, the carefully woven consensus is unraveling.

I look up from the screen and go to the apartment window and stare out on the deserted Parisian street dotted with Christmas decorations. In the illuminated darkness, I can perceive that this news from Washington contrasts sharply with the levity and festive benevolence of the holiday season.

The Conversation in Washington

We do not see things as they are, we see them as we are.
—*Talmudic saying* (Hirshfield, 1997: 119)

On my return to Washington in the new year, the worst is confirmed. What began as one senior manager's angst has now spread rapidly. At the upper levels of the organization, it has suddenly become fashionable to attack knowledge management. One sharp question leads to another. Criticism is spilling across the entire institution, sullying everything. There is a risk of the program becoming the mere butt of cafeteria jokes, fodder for watercooler gossip.

The salvos come from many angles. It is said that we are "narrowly and internally focused" with little operational perspective. Resources are being given to "self-selected thematic groups" who are neither the main users nor the generators of knowledge.[2] We have fostered a "thousand points of light," resulting in a mixed quality of outputs. The thematic groups are "running rampant." We are driven by "the concerns of IT gurus" rather than the audiences we are meant to serve. We have "no business model," let alone an optimal one. We are "too concentrated on technological tools" without sufficiently considering the situation that governs the use of the tools or other avenues for information capture and sharing. We "lack adequate incentives" to encourage widespread participation. We need to "bring back order and control." We need "a governance structure" for our thematic groups. The litany of criticism is prodigious.

Criticism is spilling across the entire institution, sullying everything.

Even our friends are not helping. Some are promoting homegrown alternatives to knowledge sharing. Others are busy redefining and reinventing the idea of knowledge management—yet again. One senior manager who has only recently heard of communities of practice is busy writing memos to the corporate management, presenting as new truths the ideas that we have continuously disseminated for the previous three years. While imitation is the sincerest form of flattery, the stridency of the writing implies that we are misguided.

If a genuine debate were taking place on these themes, I would hurry to encourage it. An open dialogue would be a perfect environment to engender fresh energy and support. But the discussion is anything but cerebral. Instead, there is a frenzy of dismissive questioning. It has become "in" to be critical. People are passing on these strictures without thinking, unwittingly infecting others with the virus of criticism. Adverse opinion is spreading quickly but not in any visible form that can be dealt with simply.

What is the situation? Some problems are real, and, in this sense, some of the objections have merit. Some of our communities of practice are moribund. Some teams are not linked to the communities. Not all our knowledge collections are as robust as we would like. Not all the budget is being wisely spent. Some managers are not supportive. The program has needed a significant investment.

But many of the hundred-plus thematic groups are working well. They are dynamic, vibrant, and exciting, and

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many task teams are drawing on their expertise. Those who need to know are increasingly linking up with people who do know. More and more, people are finding what they need from the Web on their own, without bothering anyone. Internal and external surveys show growing support. More fundamentally, regardless of how implementation is proceeding, the organization has little choice but to enhance its capacity to share knowledge. Only through sharing knowledge can we survive in our traditional lending business or succeed in achieving our mission of poverty reduction.

Yet now, the mood at the top is becoming hostile, and the debate strident and adversarial. These people do not seem to want to engage in conversation. They want an argument in which they can depict the difficulties as so significant that we have to re-consider everything. There is a sense that they would like to engage in a duel for the future, a duel that some are convinced they can win.

Leading up to the Meeting

To change a group, one must change what it says and what it means.
—Karl Weick (1995)

Instead of the usual expectations of strategic planning—a carefully orchestrated discussion conducted with the predictability of an eighteenth century gavotte—a whirlwind of criticism is swirling across the upper levels of the organization. Amid the confusion, managers are viewing knowledge management, not as a force for the future, but as passé. With such uncertainty in the air, people are confused. The risks are becoming significant, perhaps representing a tipping point for the entire institution.

The question for us is not so much, "How did we get to this point?" but instead, "Where do we go from here, and how?" Like ancient navigators, we have no explicit maps for travel.

In such a predicament, we could plead with the senior managers to see reason and assess the weight of the evidence and the program's official indicators. But would any-one listen? In the current hyperventilating environment, a calm, objective appraisal of the facts and figures is unlikely. We have had one-to-one meetings with some of the busi-ness leaders. We learn that the proximate cause for the disorder has been a series of presentations using jargon-laden black-and-white slides with lists of bullet points and abstractions. These managers are not totally unaware of the evidence staring them in the face. What they need is to see the evidence in a different way. They need a new set of fundamental assumptions through which they can understand the facts and figures and their work, organization, and future. The abstract contraptions of rational debate will be unable to instigate this shift or withstand the raw force of collective misgivings, now blowing in huge gusts through the upper levels.

I could depict the visible elements of the situation in graphs and two-by-two matri-ces that show us moving from the bottom left-hand box ("We are here") to the top right-hand box ("We need to be there"). But the issues lie not so much in what is visible, but rather in the mental spectacles through which these people view the world. In their mind's eye, they can no longer see the path into the future. More graphic diagramming is un-likely to help. Their perceptive frameworks need to change, so that their visual inputs can once again make sense. In the turmoil, people are relying on perceptual frameworks that have served them well in the past. These frameworks exist in a mental world below the surface, a world more powerful than the visible one, but also less accessible. To reach it will require a different kind of effort (Hirshfield, 1997: 119).

The issues lie not so much in what is visible, but rather in the mental spectacles through which these people view the world.

I could invoke managerial authority, based on previous strategic decisions. But in the midst of this hurricane of doubts and misgivings, any gains from a command-and-control approach would be temporary and perhaps not even successful.

In fact, I do none of these things. As I have done in each of the crises that have arisen over the past few years during the implementation of knowledge management, I tell a story (Denning, 2000).

The Madagascar Story

> There are certain things about the human being that do not obey the laws of time and space.
> —Karl Jung

In the past year, the focus of our storytelling has been on the staff at large. Now we need to retarget the senior leadership, those who will have to lead the charge.

I have used the story of Madagascar on many occasions, and it has proved its capacity to move a group in many different settings. A new story would be even better, but I have no time to find, craft, and test a new story for such a high-risk situation. For this group, the Madagascar story *is* new. So I use the tried and true Madagascar story that is as comfortable to me as an old slipper and as reliable as a tool tested successfully many times.

At my presentation to the vice presidents, the participants, mostly VPs or their deputies, trickle in and sit down. As we wait for a quorum to form, the talk around the table is informal and lighthearted, as they munch on plain tuna sandwiches and drink soda from bottles with plastic straws. We begin with only a brief introduction, and I launch into my story as to why we are sharing knowledge:

Near the end of 1998, the team leader had a problem. He was heading a group of World Bank staff in Antananarivo, the capital of the African island of Madagascar, in a comprehensive review of the country's public expenditures. The work was a collaborative effort with the government of Madagascar and a number of the other national and international partners.

The team leader found himself at the center of a mounting controversy over introducing a value-added tax in Madagascar. The purpose of the tax was to have a single tax replace other individual taxes that had become cumbersome to administer and ineffective in raising revenue, in order to ease the government's administrative burdens while safeguarding and enhancing public revenue. The controversy concerned whether medicines should be exempt from the value-added tax. Some favored making an exception in order to advance the cause of health care, particularly for the poor. Others were concerned about making *any* exception to across-the-board implementation, because once one exemption was allowed, others would follow, and the implementation of the tax would soon become even more complicated than the current patchwork of taxes it was replacing. The controversy was becoming steadily more heated.

The team leader was a seasoned professional with many years of experience in the field and had seen other schemes for simplifying public taxation founder because of such exemptions. He was therefore inclined to side with those arguing against the exemption, but as the controversy gathered momentum, he could also see that the debate could jeopardize the success of the entire public expenditure review.

What usually happened in past situations was that the team leader would try to persuade the review participants of the wisdom of his viewpoint and, failing persuasion, would return to World Bank headquarters in Washington, DC, to consult with colleagues and supervisors. He would eventually give the other participants the World Bank's official "position," in the hope that this would resolve the controversy. Often such official "positions" merely set off further controversy, which could last for months or even years, undermining the spirit of collaboration essential to public expenditure management.

In this instance, as a result of the knowledge management program underway at the World Bank, what actually happened was quite different. From Antananarivo, the task team leader sent an e-mail to his colleague practitioners in tax administration inside and outside the World Bank—a community that had been built up over time to facilitate the sharing of knowledge. He urgently asked about the global experience on the granting of exemptions for medicine.

Within 72 hours, the responses came to Antananarivo from various sources, including World Bank staff members in the Djakarta field office, the Moscow field office, the Middle East, the development research group, a retired World Bank staff member, and a tax expert at the University of Toronto. From these responses, the team leader could see that the weight of international experience favored granting an exemption for medicines. So he was able, within days, to go back to the other review participants, lay the international experience on the table, and so resolve the issue. As a result, an exception was granted for medicines, and the public expenditure review was completed collaboratively.

Knowledge management does not stop there. Now that the World Bank has realized that it has learned something about the design and implementation of a value-added tax, specifically how to approach exemptions, it can capture that experience, edit it for re-use, and place it in its knowledge base, so staff can get access to it through the Web. The vision is that this know-how can be made available externally through the Web, so that anyone can get answers to questions on which the World Bank has some explicit know-how and on other myriad subjects on which it has assembled some expertise.

I follow the story with analytical reasons for continuing knowledge sharing and the practical steps needed to carry it forward across the entire organization. But I present it always through the lens of the Madagascar story, so that the reasons can take on a new shape and meaning. Grounded in the story's reality, the flaws and blemishes in implementing the overall knowledge-sharing program—which are plentiful—now become challenges to be attacked, rather than reasons for abandoning the goal. The question is not so much, "Why do we have so many flaws?" but becomes rather, "What's stopping us from making Madagascar the universal pattern across the whole organization?" The ensuing discussion of knowledge is constructive and oriented toward moving the agenda forward and solving the problems.

The Aftermath of the Storytelling

To recognize imaginative encirclement as a primary mode of thought is to remake one's relationship to knowing.
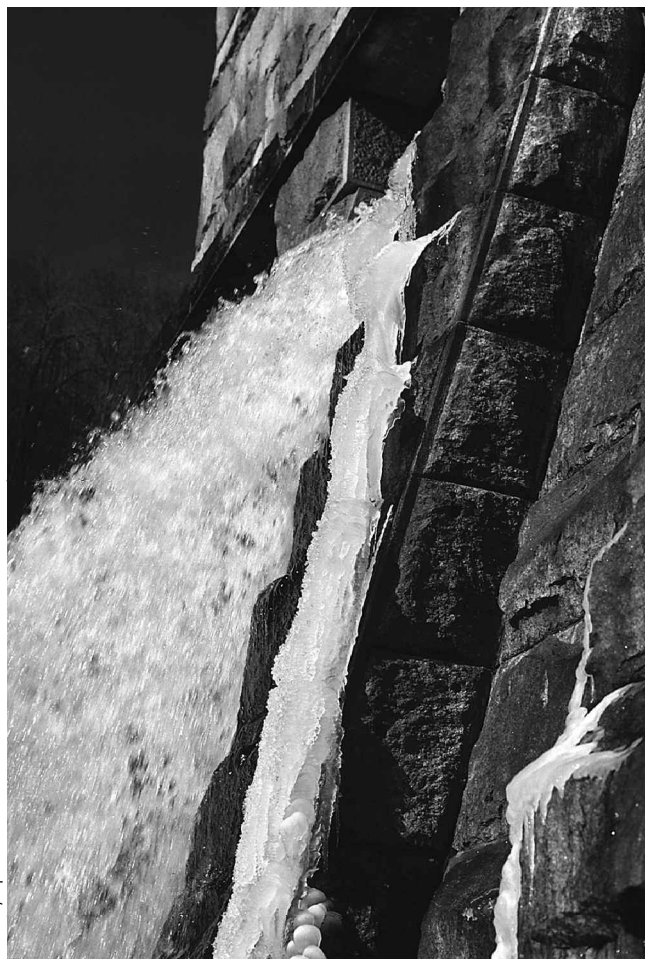—Jane Hirshfield (1997: 111)

One is never entirely sure what the audience's reaction to a story will be because so much depends on what the listeners themselves bring to it. Sometimes, if the listeners are in a different frame of mind, a story can misfire. Sometimes, listeners don't spring to a new level of understanding and remain earthbound, mesmerized by the explicit story or distracted by one relatively unimportant part of it, such as the technology.[3]

This time, we learn that the participants at the briefing immediately report to their staffs in positive terms, telling them that knowledge management is obvious and logical, scarcely more than common sense. Some happily retell the main elements of the Madagascar story as though they had known it all along. The difficulties of communication and persuasion that only an hour ago seemed so intractable now seem to evaporate. When participants bring a willingness to learn and engage in a process of collective imagining, a story can return the favor and carry them to a place where they can see new meaning for their work and lives.

The high-level strategic planning forum takes place a week later. I would like to attend the meeting but have not been invited because I have not been assigned the status in the organization hierarchy to attend. Privately, the fact that I am not invited causes me some anxiety, given the importance of knowledge sharing. But I tell myself that if the storytelling has been effective, there is no need for me to be there. The storytelling itself will have woven a spell independent of my presence. It will have sparked a new understanding and view of the future, strong enough to prevail on its own.

The fact that I am not invited to the meeting makes explicit that my role in the organization is not the issue. The discussion is about the idea of knowledge management, not about me. If I were present, the discussion could easily degenerate into one of defending territory or status in the hierarchy. In my absence, the discussion can rest on the merits.

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In due course, I learn that, at the strategic meeting, knowledge management is non-controversial and becomes one of the four accepted pillars that will support the organization's future. The significance is not merely that the decisions from the meeting reestablish the accepted centrality of knowledge sharing: rather, it is that there is no longer any debate. With large budget cuts in the offing, other programs are suffering significant reductions or mutilations, but knowledge sharing enjoys a privileged position. Everyone accepts that it is a central thing that must be protected.

The Role of the Storyteller

> Enlightenment involves becoming a person of no rank.
> —Lin-chi (Hirshfield, 1997: 210)

Once again, storytelling has performed its habitual magic. It has enabled the management of a large organization to spring to a higher level of understanding so that the idea of knowledge sharing emerges in the collective consciousness as something that the organization obviously has to do. A springboard story (see the table) enables an audience's leap in understanding so they can grasp how an organization or community or complex system may change (Denning, 2000: xviii). Storytelling enables the idea to take root and flourish, without the adversarial baggage of winner and loser it would have to carry if I had entertained an adversarial debate. The future has been co-created, rather than being the outcome of an argument or duel. For the listeners, the story has bridged the organization from how it has been in the past to its new destiny. Listeners can cross the bridge at their own pace, on a journey that becomes their own.

The teller of such a story thus occupies a place on a threshold between the organization as it now is and as it is going to be. The teller's ability to understand and communicate the reality of both worlds enables him or her to be effective. Knowing the existing world with its preoccupations, habits, norms, fetishes, and neuroticisms enables the storyteller to know the limits of what he or she can say, the limits imposed by ongoing conversations.

As for the future, even an effective storyteller will only dimly perceive the world that is to be. But he or she must understand it enough to sketch its main dimensions and communicate its shape to those in the current organization. He or she must know it well enough so as not to misrepresent it. If the storyteller does a good job, the meaning of the future for an entire community will be transformed and will take on the sheen of treasure (Hirshfield, 1997: 209).

Only by living on the threshold can the storyteller know both worlds. It is not a transitory passage or a temporary episode, but a permanent abode. Becoming a storyteller means having a changed relationship with the organization. It may require leaving the mainstream and relinquishing the comfort of defined assignments or the privileges of position or power. Whatever the storyteller's formal status, whether president or messenger, the storyteller becomes a person with no rank. The ongoing task is to live on the periphery and be a guide to what lies beyond. A healthy organization accepts this role, sometimes without recognition but also without blame.

A storyteller can thus enable an organization to undertake the imaginative encirclement of its future world. Official Western culture—so rational and utilitarian by habit—is rooted in "hard, cold facts." Such thinking has produced a certain kind of return. But living as a human being and coping with the complexities of the future is a task inherently the opposite of "hard" or "cold." Abstract language with its static generalities can represent no more than disconnected fragments of our rapidly shifting reality, and even then, it conveys its messages to us as external voyeurs.

Storytelling by contrast enables us to enter directly into this flowing, protean world of change. As participants, we can understand more of the interrelationships and trajectories. The intelligence that flows through storytelling confirms that reality is not merely a stack of static abstract propositions, but rather an infinite number of complex and multifaceted possibilities, dynamic and full of unexpected changes.

Storytelling enables the idea to take root and flourish, without the adversarial baggage of winner and loser it would have to carry if I had entertained an adversarial debate.

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Table 1 Elements for developing the springboard story.*

Characteristic	Explanation
The explicit story should be relatively brief and textureless.	The story should have only enough texture or detail for the audience to understand it. You do not want the audience getting caught up in the *explicit* story, since the objective is for the listeners to discover and co-create their own mental story in their own terms in relation to their own context. You want all the listeners' energy and attention given to *joining the dots* between the implicit story and their tacit understanding.
The story must be intelligible to the specific audience.	The audience needs to understand enough about the protagonist and the initial incident to be *hooked* by the conflict or problem. In effect, you should provide no more than necessary for the listeners to understand the story so that they don't get lost in it, but enough so they follow its meaning.
The story should be inherently interesting.	To capture the interest, the *actions* described might be difficult, with a *predicament* that cannot be handled routinely, some tension between the characters, or *unexpected events* that happen in an otherwise normal sequence of occurrences. There should be an element of *strangeness*.
The story should spring the listener to a new level of understanding.	To achieve this effect, the story must epitomize or embody the change idea, almost like a premonition of the future. The story must be an easy mental leap from the facts to new input into the various versions of the organization's life story that the listeners carry in their heads.
The story should have a "happy ending."	The story must spring the listener out of a negative, questioning, skeptical frame of mind into a positive attitude of *wanting* to understand the change idea. For this to happen, the listener must be in a positive *aha!* frame of mind. A positive ending is much more likely to achieve this effect.
The story should embody a change message.	Stories can help persuade people if there is an implicit change message close to the surface of the explicit story, which they can discover and make into their own change message.
The change message should be implicit.	Clarity is ideal when listeners are already convinced and are simply trying to understand the implications. But when they are skeptical, resistant, or even unreceptive, the storyteller should let them discover the implicit change message so it becomes their own meaningful idea.
The listeners should identify with the protagonist.	Much of the persuasive power of a springboard story derives from the fact that the listeners identify with the protagonist in such a way as to enable them to see things from another perspective.
The story should deal with a specific individual or organization.	People are more likely to project on to single individuals than on to multiple individuals or groups. Specific individuals work better than anonymous groups or collections of organizations.
The protagonist should be prototypical of the organization's main business.	If the principal business is sales, the central figure should be a salesperson. If manufacturing, the protagonist should be someone in manufacturing. If multidisciplinary teams, it should be the team leader.
Truth is better than invention.	Listeners' confidence in the veracity of a supposedly true story is usually not on very solid ground. But the apparent superiority of a true story over a wholly invented story in terms of communication is palpable. A true story with extrapolations into the future can work well even with difficult audiences.
Test, test, test.	Only experience with an actual audience can indicate whether a story is going to work. A story can be tested on individuals or small groups before trying it on a large group in a high-risk setting.

Storytelling, which enables us to understand this reality, is thus not some minor or antiquated branch of abstract thinking. It is a separate mode of cognitive functioning, comprising a distinctive modality of understanding not reducible to abstract thinking (Polkinghorne, 1988; Bruner, 1986). Despite the efforts of science and philosophy to suppress storytelling, it continues to be ubiquitous, not only because it is the primary way in which we make sense of the world, but also because it is the central method by which we grasp the meaning of the past and imagine and create our future.

Notes

1. The organization discussed in this article is the World Bank. The views expressed are those of the author and not necessarily of any other person or organization.
2. Communities of practice are known by different names in different organizations. In this organization, they are known as "thematic groups."
3. Denning, S. (2000), chapter 6, describes an instance in Switzerland when the storytelling totally misfired.

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Commentary

by Stella Eugene Humphries

Passing easily through the portal of Stephen Denning's description of an enchanting domestic scene in Paris, I am quickly catapulted into his personal drama unfolding at the highest levels of a powerful, international institution. Denning, without being personally present, intervened in the institutional storm with a story. As the story percolated through the psyche and intellect of the decision makers, it brought, as if by magic, cohesion from fragmentation, direction from confusion, alignment from dissention, and agreement from doubt. The story precipitated a sudden and rapid change of state: from chaos to order.

Thus Denning brings us a taste of story's power through the authority of his personal experience and through the medium of his own story. Story, as we know, is the age-old method of teaching, of maintaining cultural cohesion, and of sustaining family and community norms, values, and belief systems. Here we see its effect, not in a church, school, family, or community, but in an organization wholly vested in the primacy of intellectual analysis for processing data, communicating information, and substantiating decisions. However, as Denning describes, the complexity of the issues, the plurality of perspectives, and the external pressures to move quickly create entangled situations that inherently overpower the capacity of analytical tools to address.

As a society, we have institutionalized analysis as the most legitimate tool of decision making. Yet we do not understand the limitations of analysis as well as we understand its strengths. Its shortcomings, however, are beginning to be felt as we inextricably face an increasingly complex, volatile world. We are thus being led by events to reconcile polar opposites, to address such social imbalances. By its intrinsic nature, analysis dissects, fragments, and abstracts. The polar opposite includes synthesis, integration, and sensing a system as a whole. Our investment in analysis, I believe, is one of these imbalances that will continue to demand our attention and drive us to accept its

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polar opposite. In Western culture, thus far, we have given relatively little attention to the explicit development of capacities and methods of synthesis.

Story "showed up" in Denning's world by chance, but he recognized and developed its potential as a vehicle of integration and synthesis. He evolved a form and use of story into a highly effective tool for decision making and change in complex and demanding professional situations. By contrasting his own failed attempts at using analytical methods to effect change, Denning provides masterful insights into why story holds such power.

Stories have the capacity to order, integrate, and sequence elements that, in analysis, all too easily remain isolated in time and space and that furthermore are usually relegated to disparate domains of thought and feeling. Stories can impart chunks of relevant information in a coherent form that is cognitively plausible and intuitively satisfying at the same time. By relating a particular past experience, a well-designed story can convey a general message in the present that engages the individual imagination in such a way that it inspires possibilities for future, collective action.

At the risk of contributing to the reification of story into a distinct "thing" to be studied and analyzed, I sense there is a need to add to and expand our understanding of the potent, complementary role of story, particularly in professional settings organized around the centrality of analysis. To this end, I offer my own "story" and cite an example to illustrate an underlying, generic process that has, in my career, produced consistent, tangible results within a wide range of contexts.

I was asked by the Australian federal government to assess the continentwide impact of nonindigenous plant species on natural ecosystems. In the early 1990s, it had become apparent in the high-visibility region of Kakadu National Park (Crocodile Dundee country) that a unique wetland ecosystem with endemic fauna and flora was being totally destroyed by the seemingly sudden explosion of a shrub species introduced from another part of the world almost 100 years before. Several million dollars in emergency funding was provided for its eradication but, to prevent future *ad hoc* requests for funding, the federal government requested a national review of the status of plant invasions. To put this task in perspective, the size of Australia is roughly the size of the continental US. Moreover, there were virtually no quantitative studies of the distribution, impact, or rate of spread of nonindigenous species. In other words, there were no available data commensurate with the task.

I began by talking with professional colleagues in agriculture agencies, herbaria, conservation, and natural resource management agencies and universities in each state. I spoke with dozens of experts with local, on-the-ground knowledge of their region and traveled with them to see sites of impact. Many could describe what these now impoverished sites had looked like years ago; they showed me how poor land-management was inextricably implicated in the spread of introduced species. I heard their stories of frustration at being unable to attract attention and funding for weeds of conservation concern. I took pictures of the gradual but unmistakable process of devastation of entire natural ecosystems at scales of hundreds of thousands of square miles.

From the detailed, personal knowledge of many individuals, regional and national themes emerged. These could be woven into a composite "story" of the radical continentwide transformation of natural ecosystems and the human activities underlying these change dynamics. The story of the spread of nonindigenous species was compelling: Australians faced a grave, if not insurmountable loss of natural species and habitat diversity at a rapidly accelerating rate.

When I first presented this composite story in seminars and at conferences, one could almost hear the collective gasp of horror at the implications. The story caught the attention of scientists and government authorities, and the report was published in a book that became a university text and a reference book within Australian government departments that was locally referred to as the "Bible." The report became the basis of a national weed strategy and of changes to federal import legislation. Weed invasions were reframed as a land-use issue and understood as symptoms of deeper societal attitudes to importation, land use, policy, funding, and education.

Had the data been available, I would have used it to create summary maps, graphs, tables, and quantitative descriptions. However, I would have missed the immediacy of apprehending directly what was occurring and, hence, gaining the deeper understanding of the issues with their complex causal factors. Through personal interaction, I was exposed not only to the scientific level, but also to the underlying human context that is the determiner of the history, current status, and future prognosis of the situation. This included participation in the emotional tenor of what it means to people to lose their natural heritage.

An analogous process of collecting stories of personal knowledge and experience and synthesizing these into a collective story has been a cornerstone of most of my research projects over al-

most two decades. This has not been an intentional methodology, but it evolved from a need to address socially pressing issues that transcended neat packaging within one discipline and for which data were scant, inadequate, or missing. I now attribute much of the influence of these studies to the power of living story and the consequent power of the process of collective discovery and assimilation of results.

In face-to-face conversation on subjects that have personal meaning, all parties learn something when the inquiry is carried out with the intention of truly discovering what is "best" in a given situation, time, and circumstances. When people are offered a chance to speak freely from an integrated personal and professional perspective, the way opens to capturing a highly textured, information-rich portrayal of central issues, together with underlying driving forces and possibilities for action. By contrast, using targeted questions as an initial exploration runs the risk of predisposing answers and reducing the probability of bringing the real issues to the surface. Storytelling naturally evokes the multidimensional complexity, while simultaneously highlighting important, urgent factors from each person's perspective. For the interviewer, it is important to stay open to what "wants to emerge" and to pay attention across stories to underlying patterns. The storyteller is thus in service to the collective and to the highest level outcome, rather than a specific result. The voice and themes of the final, integrated story will then tap directly into the collective perception, wisdom, and need of the moment.

In my experience, the very process of collecting the stories energizes individuals around the issues, which inevitably leads to sharing insights and possibilities with colleagues. The ripple effect of the initial conversations establishes a momentum and receptivity for change within a much wider group than the one directly engaged. Without exception, acceptance and implementation of the needed changes has, in my experience, been a foregone conclusion. Formal ratification of recommendations proceeds relatively seamlessly, that is, without dissent from key stakeholder groups. This approach to complex issue assessment has repeatedly produced highly successful results within the most technical and bureaucratic settings, including large international development, conservation, and financial organizations.

In conclusion, the process of eliciting and presenting stories that integrate personal experience and professional knowledge from multiple perspectives acts as a powerful catalyst for collective transformation and action in complex and charged decision-making situations. As long as all relevant stakeholders are represented and the stories are gathered without manipulation toward a particular agenda, the voice of the collective emerges and the direction and course of action "falls out" in a clear way. When the story reflects the true, collective voice of the time, transformation is inevitable.
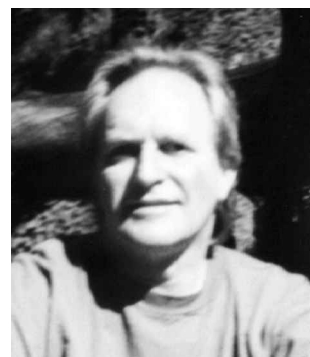
Commentary

by Patrick Parker-Roach

The love of a good story, and the art of crafting one, is as old as language itself. Until the invention of the printing press, oral history was the primary tool for passing down the collective wisdom of the tribe from generation to generation. In crisis, the selection of just the right story for a given situation and the ability of the teller to inspire could result in continued tribal evolution or extinction. Although storytelling is still immensely powerful, the art form of oral history has diminished since the advent of the printing press. Stephen Denning provides a great service in sharing his experience of bringing storytelling into a corporate setting.

As I see it, the power of a well-spun story lies in its imprecision. A story that is loose enough allows listeners to engage their imaginations to fit the story to their personal reality. This gives mobility to the story's message. Unlike a good PowerPoint presentation that may work well when delivered to targeted audiences up and down the organizational chart, a well-crafted story can organically traverse the important informal social networks of the organization, finding just the right ears. The story's essence can sprint from boardroom to lunchrooms, inspiring people who then mold it to their reality and pass the story on to others whom they feel need to hear it. If the story puts fire in the listener's belly, they retell it with passion to light the fire in others. The moral of the story remains, while the emphasis changes to bridge the needs of both teller and audience.

In today's era of shattered loyalties, a well-told story may hold the critical spark needed to ignite the untapped wisdom and energies trapped in our modern organizational tribes that are crucial for continued evolution.

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Understanding How Systems Work through Children's Stories

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Seeing, sensing, and understanding the world of systems all around us is becoming an increasingly important life skill. Why? More and more of the pressing challenges facing us—from the unintended side-effects of pesticide spraying, to resistance to shifting educational standards, to boom-and-bust economic markets, to escalating global conflict—are generated by complex human systems. Our bodies, families, schools, and communities are all systems. By understanding how they work, through *systems thinking*, we can all deal more effectively with the increasing complexities of everyday life.

There are several well-traveled ways of learning about natural and social systems. Thoreau and Goethe, for example, both took the path of intense observation and immersion into the natural world. Others, seeking to understand the behavior of social systems, have applied insights from chaos and complexity sciences or have learned from various members of a family of systems thinking frameworks, such as organizational learning, system dynamics, and soft systems methodologies. In this article, adapted from *When a Butterfly Sneezes: A Guide for Helping Kids Explore Interconnections in Our World through Favorite Stories,* I suggest a complimentary way of learning about the often mysterious behaviors of natural and social systems through stories (Booth Sweeney, 2001).

Why learn about systems through stories? As system dynamics professor John Sterman has noted: "Since the time of Aesop, people have used stories to illustrate important lessons about the intricate natural and social systems in which we live.ÊToday, it is more important than ever that we all learn about the dynamics of complex systems, and from the earliest age" (Sterman, 2001). Moreover, stories are fun and memorable. And it is often through fairy tales, myths, and other kinds of stories that we pass on profound, subtle wisdom to future generations. Finally, adults ("big kids") can learn just as much from stories as children can.

In a way, children understand the importance of stories more than grown-ups do. As adults, we're taught to put away the fantasies of childhood and be "mature"—that is, to be sensible, logical, and level-headed. As we store childhood stories away, we may put our imaginations and sense of wonder into the back of the closet as well. The ability to think systemically requires a healthy dose of imagination, that is, to imagine possible futures, to think in terms of "what ifs," and to visualize and sense connections and interdependencies that aren't obvious. Stories can help to engage, stretch, and foster these cognitive and sensory skills.

Thinking about Systems

No matter where our kids grow up, their lives influence—and are influenced by—the lives of people everywhere else on the planet. Clearly, we want our children to understand these interconnections so they can more effectively work within this web of relationships. As the parent of a bright, inquisitive toddler, I frequently wonder how he and

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his infant brother will learn to live in a world where the results of a poor corn crop in Iowa affect what a little girl might have to eat in the African savanna.

From playground fights in grade school to "homework burn-out" in high school, from virus outbreaks to the boom-and-bust markets they'll hear about in later years, our children face all sorts of situations throughout their lives that demand their understanding and problem-solving skills. As parents and educators, we want to help them avoid getting swept up in or hurt by these sorts of events. Ideally, we want them to be able to see the systems they are embedded in, to understand why troubling things happen, and to figure out what they can do about them. So, how can we help our children grasp these realities and move into adulthood prepared to deal with them? One way to do this is to teach them to live not just from moment to moment but with an understanding of how problems come about and how new challenges might unfold in the future. This means questioning overly simple explanations of events, looking for patterns in how things happen, experimenting, and even redesigning systems so that they work better for them.

One way to help children to develop these life skills is to share ideas and tools from the field of systems thinking. This way of thinking helps us see how the many social systems in the world around us—from families and neighborhoods to global economies and governments—actually work. It also helps us understand how the cause-and-effect connections among the parts that make up these systems influence the events we experience in our day-to-day lives. In particular, systems thinking helps us see how events can build on each other (for instance, when a playground argument between two bullies escalates into an all-out brawl) or control or counteract each other (a child's efforts to improve grades can eventually be counteracted by fatigue and burn-out).

Systems thinking helps us see how events can build on each other . . . or control or counteract each other.

A systems view of the world is not new. More than 2,000 years ago, the Greeks and later ancient Chinese philosophers such as Master Lao were describing reality in terms of wholes composed of related parts. Indeed, many cultures, including Native American traditions, tend to see reality as indivisible wholes, emphasizing interrelationships and circular loops of causality. Family therapists, business managers, educators, and trainers around the world have used systems thinking ideas with remarkable results.

Adopting a systems thinking stance can be an important part of successful parenting and teaching. Through systems thinking examples and stories, we can show our children how to solve, anticipate, or, as systems thinker Russell Ackoff says, "dissolve" problems. We can also show them how to address the challenges facing them in their communities and the world. Systems thinking can help a child to understand how the mysterious natural and social worlds function, see how he or she contributes to trouble or creates success, and even to understand the bigger picture of what parents and teachers are trying to accomplish.

Like many adults, I have an intuitive grasp of systems thinking ideas and have come to see how valuable they are in dealing with the most important challenges in everyday life. However, systems thinking was never an explicit part of my education in grade school, high school, or even college. When I did hear systems-oriented teachings, they came in the form of old adages, such as my mother's favorite, "an ounce of prevention is worth a pound of cure" (her gentle reminder to anticipate unintended consequences and to try to take "the long view").

Systems thinking is embedded in our old teaching stories, common sense, and wisdom traditions. Yet many basic systems concepts are conspicuously missing from much of Western education. Clearly, parents and educators need some other way to share these lessons.

Stories: An Enchanting Doorway to Learning about Systems

Story telling is the most ancient form of education.
—Joan Halifax, *The Fruitful Darkness* (1993)

Like many children, my young son Jack learns a great deal from books—through my reading to him and by paging through picture books. On some days, he consumes as many as 20 or 30 stories! His love of books has made me wonder: Why can't parents, teachers,

and children learn about systems thinking through stories? Unfortunately, not many children's stories embody systems principles. Most of the stories tend to describe simple plot lines that feature some sort of problem, a reaction, and a quick resolution; that is, A causes B, and B causes C, end of story.

For instance, remember "I Know an Old Lady," about the lady who swallowed a fly?

> I know an old lady who swallowed a spider
> That wriggled and wriggled and tickled inside her.
> She swallowed the spider to catch the fly.
> But I don't know why she swallowed the fly!
> I guess she'll die!

The old lady goes on to swallow a mouse, a cat, a dog, a cow, and, finally, a horse—all to catch a pesky little fly. What happens when she swallows the horse? "She dies, of course!" While I'm delighted that Jack can repeat the rhymes from this darkly humorous story, I can also see that it is essentially a linear tale made up of a long chain of events. It doesn't teach anything about the relationships between the elements in the story or the fact that events can circle back to either amplify or lessen each other. Nor does it help kids look for patterns in events or root causes of problems. Indeed, most children's stories (particularly in Western cultures) are organized along a typically linear chain of events that are made up of these five elements (Jacobsohn and McMullen, 1986):

- An initial event that sets up the problem; for example, the old lady swallows the fly.
- A simple reaction, often an emotional response to the initial event; the old lady gets bothered by the fly in her stomach.
- The setting of a goal in order to do something about the problem; the old lady decides to swallow a spider so that it will eat the fly in her stomach.
- An attempt to reach the goal; she swallows the spider, but then it wriggles and tickles inside her.
- A reaction; she keeps swallowing more and more creatures to solve her worsening problem.

This chainlike story structure raises a sobering question: Do most children's stories actually encourage children to see the world as overly simple chains of events-reactions-resolutions? Are young people, particularly in Western cultures, actually "set up" by the structure of the stories they read to look for linear rather than systemic relationships? I think the answer is a resounding *yes.*

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Systems Thinking: A Means to Understand Our Complex World

> Since relationships are the essence of the living world, one would do best . . . if one spoke a language of relationships to describe it. This is what stories do. Stories . . . are the royal road to the study of relationships. What is important in a story, what is true in it, is not the plot, the things, or the people in the story, but the relationships between them.
>
> —Gregory Bateson in F. Capra, *Uncommon Wisdom: Conversations with Remarkable People* (1989)

Natural scientist Fritjof Capra, in quoting systems thinker Gregory Bateson, captures the reason for connecting systems thinking to stories: both act as metaphors that can help us interpret our experiences. Systems thinking helps *expand* our understanding. It shows us how to:

- See the world around us in terms of wholes, rather than as single events or "snapshots" of life.
- See and sense how the parts of systems *work together*, rather than see just the parts as a collection of unrelated pieces.
- See how the relationships between the elements in a system influence the patterns of behavior and events to which we react.
- Understand that life is always moving and changing, rather than static.
- Understand how one event can influence another—even if the second event occurs a long time after the first and far away from the first.
- Know that what we see happening around us depends on where we are in the system.
- Challenge our own assumptions about how the world works (our *mental models*)—and become aware of how they limit us (what a kid might call "stinking thinking").
- Think about both the long-term and short-term impact of our and others' actions.
- Ask probing questions when things don't turn out the way we planned.

We can't *abandon* analytical thinking; after all, it really is important in dealing with certain kinds of tasks or simpler problems. But if children know how to *complement* analytical thinking with systems thinking, they'll have a much more powerful set of tools with which to approach life.

Children are natural systems thinkers. They begin to recognize how systems work early in their lives. At about five months, a baby begins to play games with her parents. She learns to cry deliberately and then waits to see if her doting parents will hurry over and pick her up. If they don't, she cries again, perhaps a little louder this time. These kinds of experiences give children a basic understanding of *causality* (albeit one-way causality): "If I cry, my parents will pick me up."

As the child grows into a teen, she extends her understanding of causality to her family and community: "If I stay out late, my parents will be mad, which means I may not be able to stay out late next weekend." She thus begins to learn about mutual causality, and to experience the nature of interdependence between herself and others, through being a member of a family, a sports team, a neighborhood, and so forth. As she moves into adulthood, the young woman then finds a world of accelerating change, where new, faster technology and shrinking global borders collide to create an increasingly interconnected landscape. In such an environment, everything everywhere appears to be—and actually is—connected to everything else.

Systems Thinking Essentials

We can think of cause and effect, or causality, as coming in several "shapes." Many children and adults assume a linear shape when explaining how something happens: one thing causes the next, like a set of falling dominos. In the case of dominos, this is indeed the nature of causality.

Systems thinkers have other images of causality, for example, feedback loops, which have a circular shape. The simplest way to think of feedback loops is to imagine that one event causes another event, and that second event comes back around to influence that *first* cause: A causes B, and B causes A. For example, the more children that are born, the greater the population, the greater the population, the greater num-

The Butter Battle Book by Dr. Seuss
New York: Random House, New York, 1984
Format: Picture book, fiction
Age Range: 4 to 8 years old, but excellent for adults

Systems Thinking Concepts
Simple interconnectedness, circular feedback, reinforcing loops, "escalation," seeing the way a system's parts are interconnected (structure) and how that affects everyday patterns and events, and the power of small decisions to lead to big problems.
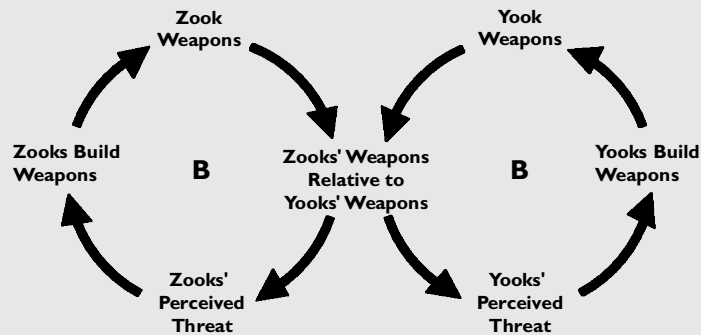
Quick Look at the Story
Dr. Seuss describes a feud between the Yooks and the Zooks. What's the source of the conflict? One clan eats their toast butter-side up; the other eats it butter-side down! Members from each group build a wall to keep the two clans apart and begin feuding with hand-held slingshots. Eventually, they move on to more sophisticated weaponry, until each side has the capacity to destroy each other and the world.

Teaching Tips
The story sets up a compelling analogy for any situation—such as the Cold War arms race—where tensions and even violence just keep getting worse. From a systemic perspective, the intensifying feud between the Yooks and Zooks offers powerful lessons about escalation and possible ways to stop cycles of violence.

"Escalation" generates some of the most troubling problems facing us in society. It's also one of the more commonly occurring systems archetypes. Young children immediately understand this archetype if you give them the example of two bullies fighting on a playground. One shoves the other, and the other shoves back harder, until a brawl ensues. In organizational life, we adults might recognize the story of escalation in typical price wars. Or in a more deadly confrontation, the escalation structure can lead to catastrophic consequences such as that faced by US President Kennedy and Soviet Chairman Khrushchev during the Cuban missile crisis.

You can see the reinforcing nature of the conflict in this story in the two intersecting loops illustrated below.

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ber of possible parents, and the greater number of births and so on (assuming a relatively stable environment).

Many indigenous cultures, including Native American traditions, see the world in terms of circular causality. In a well-known speech, Black Elk (2000), a holy man of the Oglala Sioux, said:

Everything an Indian does is in a circle,
and that is because the power of the world always works in circles,
and everything tries to be round.

Systems also tend to behave in similar ways in very *different* kinds of settings. For instance, in that age-old problem of playground fights, one bully insults another, who then comes back with an even more inflammatory retort. The next thing you know, someone throws a punch, and a brawl erupts. Now think of companies competing in the business world. One draws more customers by slashing prices. Their main competitor, concerned about being left behind, slashes its prices even more, prompting the first company to try

The conflict grows as one party (the Zooks) takes actions (builds a weapon) that the other perceives as a threat ("a very rude Zook by the name of Van Itch snuck up and sling-shotted my Snick-Berry Switch"). As their sense of security and superiority diminish, the other party (the Yooks) feels threatened and responds in a similar manner, building a Triple-Sling-Jigger and increasing the threat to Zooks. As a result of this move, the Zooks feel threatened and take even more intimidating actions. You can see the reinforcing nature of the conflict by following the outline of the figure-eight produced by the two balancing loops.

Questions

For Younger Readers

- What do you think is happening in this story?
- What do you think the Zooks and Yooks were thinking when they _____? (Fill in the blank by citing different points in the story.)
- What could the Zooks and Yooks do to get along better?

For Older Readers

- What happened? What do you think might happen next?
- What other stories, either from real life or from fiction books, describe the same kind of behavior?
- Who or what do you think is being threatened here? What is the source of the threat?
- What could the characters do to resolve their feud?
- If you were an international peace negotiator assigned to help these two tribes avoid mutual destruction, what would you suggest the Yooks and Zooks do to counteract the escalating pile of weapons? Or even better, what could they do to *reverse* the effects of the escalation? For example, what role might the people in the "backroom" play in your plan?

Voices from the Field

I've read this story with a number of groups, including fifth-grade students, educators in the Western US, and system dynamics researchers and consultants in Europe. The fifth-grade students (who greeted me as the "loopy lady") were in the midst of learning about fractions, percents, and decimals. Graphing had already been covered in the fourth grade. In English class, they were reading a series of Native American folktales. They were familiar with the idea of ecosystems but the official unit on that topic was to come in the sixth grade. In computer class, they were learning word processing and effective use of the Internet; and in social studies, they were investigating the Europeans' arrival to America and its effect on Native Americans. Just before one of my class visits, the teacher had framed the US bombing of Iraq as a "moral dilemma," and, I was told, an all-day debate ensued. When I sat down to read *The Butter Battle Book* with small groups of these students, I found, to my hidden delight, that many children made astute connections between the book and the stories of war in newspaper headlines. For example, one student began to trace an imaginary spiral with his finger, saying, "They do something worse to each other each time, over and over."

to offer even *lower* prices. Even though these two situations look very different on the surface, both involve a build-up or an *escalation* of tensions or competitiveness.

Systems thinkers have identified a whole set of common "stories" like this, which they call "systems archetypes," that occur in very different settings. For instance, in an archetype called "Fixes That Fail," you do something to try to solve a problem, but the problem eventually just gets worse (like drinking coffee to perk you up when you're tired, but then when bedtime comes, you're restless and don't sleep as well, and you get even *more* tired over time).

With another archetype, "Limits to Success," you get something really great going, but then it seems to level off—such as persuading more and more neighbors to help out at the annual town fair—but then suddenly seeing their help taper off. What has happened? A reinforcing loop (efforts to make the town fair successful) is connected to a balancing loop (a limit to the time, energy, or resources that folks in town can provide). If you have that "I'm spinning my wheels" feeling, you may be experiencing this archetype.

The great thing about these old teaching stories is that they let you recognize, and

therefore better manage and anticipate, common problems that occur in lots of different situations. And they also tend to show up in some favorite stories!

A profound and practical habit I've learned from systems thinking is to look at a system consciously from multiple perspectives, actually, from multiple *levels* of perspective. This systems thinking concept can also be explored through stories. For example, a teacher might face a situation in which, if Johnny is late to school, he might lose his recess privilege that day. But this "event" often doesn't tell the whole story. Systems thinking tells us to stop and look below the surface, to see how the structure (the relationship between the parts in the system) drives the patterns of behaviors we see, which influence the events to which we react.

How to Use Stories

Stories reignite our sense of imagination and wonder regardless of our age. Some stories may be excellent tools for raising kids' awareness of systems' behaviors, in an easy, fun, and educational way. In *When a Butterfly Sneezes,* I have assembled 12 children's stories from around the world that offer powerful lessons about life. (See the sidebar for a guide to one my favorite stories, *The Butter Battle Book* by Dr. Seuss.) If you decide to revisit some favorite children's stories from a systems thinking perspective, here are some tips for making the best use of the stories.

Systems thinking tells us . . . to see how the structure . . . drives the patterns of behaviors we see, which influence the events to which we react.

Begin with What Happened

Begin by simply asking readers to describe what happened or is happening in the story. What relationships do they notice in the story, and what happens to those relationships over time? You may also ask readers what they found surprising in the story. (The unexpected often reveals a system at work!) The idea here is to elicit children's perception of the story's dynamics and *then* to get them mulling over the relevant systems thinking concepts.

Trace Cause-and-Effect Relationships

Ask your children or students to draw a causal picture of the story or part of the story. Don't worry about whether they get the loops exactly right. Just encourage them to practice. This activity will get them thinking about causality, whether it be circular cause-and-effect loops or causality in the form of branches or networks. After they finish drawing, ask: What might happen in the story if part A or character B or relationship C were taken away? This question helps children tune into the systems nature of the story.

Ask Causal Questions

In my experience with fifth-grade students, I found that many easily adapted to using causal sentence structures. As an adult, you can model the kinds of questions that will arouse your children's and students' interest in the systemic nature of a story. For example, ask: What did the people/animals in the story do? What made them do these things? What happened after they did what they did? How long did it take for those things to happen? If the people/animals do *X* [a possible action], what will happen? What might happen that no one expected? Do some kinds of things keep happening over and over in the story? If so, what? What do you imagine happening to the people/animals in the story 50 years from now? How did you feel when you were reading the story? Did your feelings change? What would you have done differently if you were the main character?

Help Children Show What They Already Know

Explaining a story's system lessons right off the bat is a sure way to take the enchantment out of the reading experience and deprive children of their own sense of achievement. Instead, try to encourage readers to reveal what they already know (rather than

teach them something new). Help them find meaning in a story and explore how it may relate to their own experiences. For example, encourage kids to give their own personal examples of how something in real life happened to them that was a lot like an event in the story. You will probably find, as I have long suspected, children are better and more natural systems thinkers than adults.

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Commentary

by Philip L. Ramsey

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Sweeney expresses well the deep connection between storytelling and natural systems. Not only are stories a powerful way of teaching *about* systems, creating and telling stories connect deeply with the natural systems on which we depend.

Making up a story is an exercise in creating. Each time I create a story, I feel I am building my capacity for aspiration. And in telling a story—particularly to people I deeply care for—while I may be seeking to teach a lesson, I am doing so in a way that strengthens relationships. Telling a story certainly feels different from giving a child a lecture.

Thus the connection between stories and organizational learning goes beyond systems thinking. Notice Sweeney's questions for making the best use of stories. Why doesn't she suggest explaining the story to the child? My belief is that stories work because they avoid the command-and-control approach to which we so easily default. Stories generate a learning environment free from the interference so common in classrooms and workplaces.

After a lesson using a *Billibonk* story, eight-year-old Sarah spent several minutes with her teacher discussing concerns on her mind that she had never shared before. Three days later, Sarah's parents appeared at school wanting to know what was going on; Sarah had begun to sleep through the night. The teacher, author, and parents could not pinpoint what in the story made a difference, but the outcome was beyond their control. Any attempt to control the child's response would not have brought about the change.

Experiences like this profoundly affect storytellers as well as story-recipients. If you use stories in the ways that Sweeney suggests, don't expect that only the child will change.

After–Action Reviews: Linking Reflection and Planning in a Learning Practice

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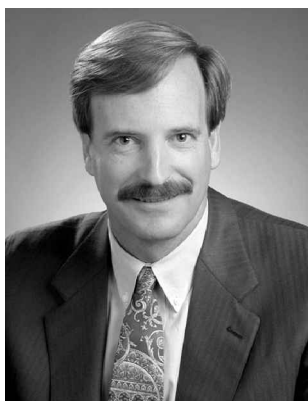Signet Consulting Group
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The US Army's Center for Army Lessons Learned (CALL), founded in 1985, may have been the first consciously designed organization devoted to knowledge management (KM). CALL defines a lesson as "learned" when and only when: (1) it actually results in a change of behavior, and (2) the lesson—the hypothesis of cause and effect—has been vali-dated (CALL, 1997). This definition holds a hidden but important criterion of a "lesson learned" that is missing from many organizational learning practices and KM systems. It implies that, before even thinking about knowledge transfer, the team itself will adjust its own actions and then validate whether or not this adjustment produced the kind of result predicted by the hypothesis implied in the lesson. This requires a repetition of the action context over time. Lieutenant Colonel Joe Moore, a seasoned army practitioner who has managed and trained using the after-action review (AAR) for 15 years, says:

> In a complex situation, most of what you learn from a single experience is *the wrong an-swer*. So you go out and choose a different answer to the problem, and it's wrong too, but maybe it's less wrong. . . . You've got to learn in small bites, lots of them, over time, and they'll work, eventually, into a complete solution to the problem. This cannot be accom-plished in a one-time reflection event that happens only after a project is complete.

Retrospective versus AAR Practice

Most reflective processes look backward. Whether called a critique, a post mortem, a ret-rospective, lessons learned, or an AAR, there are several characteristics typical of these traditional processes:

1. They are done once in the life of a project or event, after it is completed (and *long* after the time when the team has the ability to change what it's doing to affect the result).
2. Focus is frequently on developing recommendations to be implemented by people other than those making the recommendations.
3. The facilitator produces a report that senior managers might use, but participants do not see it as relevant to their current projects. If "best practices" are identified, there is rarely an effective channel between the knowledge and future users.
4. Planning for the reflective processes happens after the conclusion of the project or event, in other words, as an afterthought disconnected from the action.
5. They are lengthy sessions with mandated attendance of all project members, even if their current challenges or workload are irrelevant.
6. They are initiated after a "failed" project, or as a result of significant levels of intra-team conflict and stress, and tend to focus more on dissecting past performance than on planning for future success.

By contrast, in the AAR practice that the US Army has evolved during the past 19 years, several AAR meetings typically take place *through the life* of a project, rather than *after* the project is done and people are about to disperse (see the table).

Table 1 A comparison of post-mortem and living learning practices.

A typical retrospective	A living AAR practice
"Learning" happens at the end of the project.	Learning happens throughout the project.
Called for after "failure" or high stress.	Planned for any project that is core to business goals.
The meeting is planned after the project or event.	The meeting is planned before the project or event.
One meeting with all participants in one room.	Meetings with smaller task-focused groups.
Reviews the entire process.	Focuses on key issues relevant to going forward.
Produces a detailed report leading to recommendations.	Produces an action plan participants will implement.
Focuses more on dissecting past performance.	Focuses more on planning for future success.

These sessions are generally planned into the project up front and focus on behaviors the participants can implement. A true AAR practice pays attention to future actions, not just reflection on what has happened to date. As Lieutenant Colonel Moore describes it:

> You get more real learning at a midway point in the project than at the end. What are you going to fix? What are you going to sustain? Same conditions. Same team. "We're part way through the project. We're behind schedule. We're over budget. How do we fix this?" Now you're starting to take the AAR process to a new level, so that it can give you real feedback—real material improvement.

This distinction is widely misunderstood even within the military, where the acronym "AAR" sometimes refers to "after-action *report*," which displaces the emphasis from the unit's learning *practice* to the physical artifact of the event. The goal from the team's own future learning and performance becomes the transfer of information or knowledge to another team. If Moore is correct, and if most of what's produced in one-time learning events is *wrong*, then what is the value of such reports from a KM perspective? To put it in strong relief: What faith would you place in the report of someone whom you don't know, based on a one-time experience?

Shift from Reflection to Planning

Most learning practices in the corporate world start with planning, move to action, and, when the event or program or project is done, they end with reflection. Using the US Army's AAR practice as an example, we are proposing a shift in emphasis from reflection to planning. The army's practice, as it was developed and has evolved at its premiere training facility, the National Training Center (NTC), operates with a different flow. The process starts with a sort of "reflective planning" by asking the group to articulate its planning assumptions based on past experience. Then, after a single battle, it moves back to reflection and planning for the next day. And so on, for the entire two weeks that the brigade is "in the box" (conducting realistic battlefield scenarios) at the NTC. The result is reflection-planning, brief period of action, reflection-planning, more action, and so on. Reflection and planning are thus closely tied together, interspersed between actions, which shortens and steepens the improvement curve.

The US Army's Practice

How did the army come to create such a learning practice? The Vietnam War led the US Army to reflect deeply on its status: civilian perceptions of the military were decidedly negative; the morale of troops was at a low point; the army's preparedness for sudden deployment and ability to fulfill its role in the national military strategy were in question. This period of deep introspection re-energized the army. It was clear that assigning blame was less important than setting a very specific course for the future. The concrete result was a major effort to modernize and restructure the army to meet the changing challenges and threats of the 1980s and 1990s and an all-volunteer force.

As part of its modernization effort, the army's senior leadership determined that units needed to be able to train in a realistically stressful environment that simulated actual combat as closely as possible. This vision resulted in the creation of the Combat Training

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Center (CTC) program. Four training centers—three in the US and one in Europe—were created to provide intensive training in realistic combat environments. The first of these centers, the NTC at Fort Irwin, California, came on line in 1981 to give soldiers the opportunity to experience intense, realistic, heavy maneuver warfare in desert conditions.

At the NTC, units undergoing training are designated as BLUFOR, short for "blue force." In military war games, "blue force" refers to the friendly force fighting against an enemy called "opposing force," or OPFOR. The OPFOR is a highly trained cadre in residence at the NTC. BLUFOR units experience up to 14 days of simulated combat against this thinking, uncooperative enemy. During this time, soldiers may get four hours of sleep a night if they are lucky, start their day with reconnaissance missions at midnight, engage in force-on-force battle before the sun rises, conduct a series of AARs by early afternoon and, finally, plan and rehearse for the next day's engagement.

The first AARs after a battle are conducted platoon by platoon, out in the desert, in the shade of the unit's equipment. Then platoon leaders gather to do a company-level AAR, after which company commanders gather in a mobile unit to do their review. Finally, by the end of the day, the battalion commanders meet in the command center to do an AAR of the entire battle. AARs at the platoon level may use nothing more than a sand map of the battlefield, littered with color-coded MRE packets ("Meals Ready to Eat," or rations) to illustrate troop placements. As the afternoon progresses, battle statistics, videos, and satellite-assisted maps of actual troop movements and "kills" are compiled to help the unit commanders review the "ground truth" of what actually happened to facilitate a reflective conversation about what to learn from the day and what to do tomorrow.

From its inception, the goal of the NTC has been to win the first battle of the next war (Chapman, 1997: 9). Though the goal has remained the same, the NTC's tools and practices have evolved over the past 20 years. The NTC itself is an idea borrowed from the air force's Red Flag program, which, in turn, was borrowed from the navy's famed Top Gun program. Top Gun was created in response to navy research that showed that, in their first combat engagement, American pilots had only a 60% chance of survival, as opposed to a 90% chance after ten engagements (Chapman, 1997: 15). Top Gun aimed to bring pilots up to a 90% survival rate on their first live engagement.

The AAR Meeting

AAR meetings at army CTCs can vary in structure depending on what kind of mission is being reviewed, where the AAR is being held (in the desert, in a mobile unit, or in a headquarters theater-style room), its timing during the rotation, the skill level of the unit, and the preferences and experience level of the observer/controller (O/C), who is part expert observer, part team coach, part facilitator.

An AAR as conducted at the army's CTCs typically:

1. Reviews first what the unit intended to accomplish (the overall mission and commander's intent).
2. Establishes the "ground truth" of what actually happened by means of a moment-by-moment replay of critical battlefield events.
3. Explores what might have caused the results, focusing on one or a few key issues.
4. Gives the unit the opportunity to reflect on what it should learn from this review, including what they did well that they want to sustain in future operations and what they think they need to improve.
5. Concludes with a preview of the next day's mission and what issues might arise.

The following AAR represents a typical well-run AAR by a senior O/C, Lieutenant Colonel Tim Cherry. The AAR, which took approximately two hours to conduct, was held in a theater-style room in the headquarters for that CTC.

After the O/C checks in off-line with the commander to review the focus for this AAR, he formally opens the session. He shows video clips of the day's battle. He follows this with war footage from World War II that illustrates the power of indirect artillery fire followed by direct fire. (The O/C and the unit commander had already agreed that the coordination of artillery would likely be a primary area of focus during this AAR.)

Following this introduction, the O/C shows a series of slides, including an inspirational quote on soldiering, a review of "House Rules" for doing AARs ("It's important to remind the unit leaders at this point that it is their AAR," according to Cherry), and a review of the mission statement, including doctrinal standard, unit's orders, and commander's intent (purpose, key tasks, end state).

This is followed with a six-minute prerecorded audiovisual battle summary that covers the key points of the battle. The summary shows a bird's-eye view of the battlefield map, with troop and vehicle locations superimposed in red and blue. The O/C entertains questions about the battle summaries.

The commander of the OPFOR reviews his mission, outlines his planning assumptions, and describes the battle from his perspective, disclosing what, in retrospect, he did and didn't know. He entertains questions. This discussion is followed by a quick factual review by the O/C of the overall battle statistics on both sides.

After the unit understands what actually happened during the battle, it is ready to discuss why problems happened and what to do to prevent recurrence. This sets up the bulk of the AAR, which consists of a review and discussion of key issues (for example, synchronizing indirect fire, or "battlefield visualization"). This is where the most important learning takes place. Each issue discussion begins with battle data related to the specific issue, an audiovisual recreation of defining moments relevant to that issue from the simulated combat, a discussion of causes, a request for and discussion of "sustains/improves," and summary teaching comments by the O/C.

The AAR is wrapped up with a preview of the next mission, a safety reminder, and a closing quote.

A highlight of the discussion involved why the unit missed opportunities to engage the main body of the OPFOR at a southern chokepoint with indirect artillery fire (in order to take out the OPFOR subsequently with direct fire), and what impact that had on the outcome of the mission. They concluded that a significant contributor to their failure was that they did not establish and maintain a priority for their indirect fires. But the discussion didn't end there. Participants observed that some of the subordinate unit leaders had better situational awareness than the commander, including a scout helicopter that was positioned to see the whole enemy obstacle breach from start to finish. Simultaneously, however, a fight that was breaking out between two companies in a northern sector had transfixed the commander's attention. As a result, "guys were just canceling fire missions, shifting here and there."

Significantly, after some discussion, the unit commander spoke up in a nondefensive tone and agreed, "Maybe I blew it. It dawned on me that I made the wrong call. I got caught up in this narrow focus and lost the bubble [situational awareness of the whole battlefield]. We had two priority missions, and I diverted that focus." After more discussion, during which the unit commander listened as much as he spoke, Lieutenant Colonel Cherry commented, "The key point here is that, because we weren't able to influence this one point, the enemy was able to breach the obstacle and exploited that opportunity."

This is an example of how complex the environment of the battlefield can become with multiple events happening simultaneously. It also illustrates how much value the unit can harvest from non-confrontational dialogue, framed by a question such as, *"What was our actual performance compared to our intent, and what do we think caused our actual results?"* The quality of dialogue is especially enhanced when the leader models the learningful conversation that he or she expects of the unit.

Lieutenant Colonel Cherry maintains that the AAR starts long before the actual session:

> *After the unit understands what actually happened during the battle, it is ready to discuss why problems happened and what to do to prevent recurrence.*

My technique is this. I get with my battalion commander counterpart throughout the whole plan and prepare and execute phases of the operation. I talk to my counterpart after the operations order briefing and again after the unit combined-arms rehearsal. We have a relationship. What emerges prior to each mission are some key issues that will usually play out during the execution. Normally, we agree. Meanwhile, I'm gathering data from my O/Cs in preparation for my AAR. Prior to the AAR, I ask the commander, "What do you want me to focus on during the AAR? It's your AAR. I'm just here to support whatever you want to talk about."

Adopting AARs in the Civilian Sector

Shell Oil may be the first civilian adopter of the AAR method. With General Gordon Sullivan (retired) on their board of directors, Shell started using AARs in 1994 during a dramatic transformation in its governance structure—a time of significant turmoil. Then CEO Phil Carroll had a passion for learning. AARs were a natural fit and the motivation to learn was high. Since then, Shell has continued to support the use of AARs from the corporate level. Its challenge now is to make it part of the culture at a local level.

Other corporations, such as Fidelity, IBM, and Harley-Davidson, have operationalized an on-going AAR practice in a particular unit of the business. This has often been under the leadership of an ex-army officer. IBM's Jack Beach, a former member of the faculty at West Point, uses AARs with his team to hone a leadership development program. "There's not a lot of technology involved," comments Beach. "It's just us sitting down with a pad of paper, an open mind, and a desire to get better."

Ted Gee, who spent eight years as an army officer, is using an AAR practice to prepare for new model introductions at Harley-Davidson's Kansas City plant. Gee leads his team in three pre-builds in which the team articulates its planning assumptions, sets a standard, tests its processes in the production setting, conducts a series of AARs, and then repeats the process, each time raising the standard, until the team is confident that it can perform to standard at product launch. According to Gee, "If you invest the time to go through this process, you'll get deliverables all the time. It's not about beating results out of people. It's about helping them to grow."

Steve Danckert, who also served in the army for eight years, including six months in the Persian Gulf, is now operations manager at Geerlings & Wade (G&W), a wine retailer and distributor operating in 30 states across the US. Danckert uses an AAR practice to manage warehouse operations. Over the course of his past three jobs, Danckert has perfected his own approach of using AARs to manage the operations function.

Danckert conducts formal, quarterly AARs with his team. These quarterly AARs are conducted by phone conference and focus on one particular event that happened over the quarter. For example, the focus of the 2000 fourth-quarter AAR was a two-week pre-holiday spike in orders. The spike was not a surprise to anyone, but it gave the team a chance to look at how its systems function under stress: "What did we do regarding hiring and training temporary help? Did we have the packaging and materials that we were supposed to have when we were supposed to have them?"

"Quarterly AARs are a discipline for me," says Danckert. Scheduled quarterly AARs discipline him to make sure that this is an ongoing part of his business process. "If you look hard enough, you can find an event every quarter on which to do an AAR. It might be a slowdown or an uptick in business. Find a set of events that you can focus on. Because it's not just to improve that event—it's to get everyone in the habit of analyzing successes and failures." Danckert has seen these formal AARs keep a team of people thinking and learning together, which is critical to building a learning culture, he feels.

Danckert pairs these formal, quarterly AARs with informal, one-on-one, 10 to 15 minute "spot" AARs. As an example, he described an AAR he had just completed the day of our interview:

One of my warehouse managers kicked out a ton of orders after one of our wines had been on back order. I asked him, "How'd you do that?" Even if he tells me things I already know, it's still important to say, "Hey, that was great." And you never know. I could be assuming that he's doing what everyone else has done. On the other hand, maybe he's refined the process a bit. And that's how you grow, by raising the bar a little bit at a time.

The quarterly and spot AARs reinforce each other. Says Danckert, "Every topic in a formal AAR has been covered with a warehouse manager in advance. So the formal AAR has become more specific and grassroots-driven." And in return, he notes, the discipline of the quarterly AARs has kept him from turning the spot AARs into lectures: "The response has been uniformly positive. Never once have I heard or felt people react as if it's a waste of time."

At least within Danckert's operation, AARs at G&W are taking on a life of their own. According to Danckert, "It's part of the culture. You're always thinking, 'What can I learn from this? OK, we didn't get all that shipped out today. Why not? What could we have done?'" Warehouse managers are taking the initiative to call him about events to review. Their willingness to do so, he believes, comes from their confidence and work experience. It comes down to a desire—a mindset—to improve, and a collective sense that things *will* improve as a result of the AAR.

Danckert thinks of this as "the humility of the craftsman before his task." Thinking back over his army experience, Danckert observed: "I think the typical squad leader really cares about how well his men do against their mission, no matter how minor. Whether or not he gets promoted, whether or not his squad's proficiency wins the war, there is a craftsman's approach to the task here." He sees the lack of this attitude as a huge challenge in today's business environment, "where it is considered to be 'entrepreneurial' to want to retire at age 35."

Mary Paul, of Harley-Davidson, described a similar, very simple, and straightforward learning practice that her team conducted when she worked with the Rider's Edge product development team, which was new at the time: "We know that we are going to make mistakes. There's so much we don't know yet." In their weekly team meetings, the team leader, Lara Lee, repeatedly asked the simple question, "What did we learn?" Then, in larger, quarterly, all-day staff meetings, the team did larger, more formal AARs. In the process, Lee created a simple, yet consistent learning discipline focused on learning from the work within the team's scope. As Paul described the practice, "For our group, it's like exercising every day."

Emergent Learning

Each iteration of this simple learning practice may look somewhat inconsequential. But because each practice is actually a learning infrastructure, these simple learning events quickly build on one another until, as Lieutenant Colonel Moore describes it, performance starts to "go vertical." As he describes it, "You'll only fix so much in one AAR,

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and then you'll do it again, and then you'll do it again and again, and all of a sudden that curve starts to go vertical as it gets into your subordinate organization, so that they're doing AARs concurrently." What does it look like in practice when learning "goes vertical"? From Moore's perspective, "Probably the most obvious thing you notice is that the outfit stops 'doing it the same old way' all the time. They don't use that same excuse, and they rarely repeat the mistake the same way twice. That does not mean they get it right, but they don't repeat an error." If a unit uncovers a problem in an AAR, and if that problem is then acted on by their commander, Moore has observed that "they lose a good part of the 'we-they' attitude and do not fight change anymore, probably because they've bought into the change through repeated AARs."

We have come to describe this as "emergent learning." Emergent learning is a practice that a team or business unit uses to improve its planning and performance. The practice is simple and repeated; the team uses its own current challenges as its field for learning; and the team relies on tapping into its own experiences and shared thinking as the primary vehicle for improvement. With such a practice, learning "emerges" from the team's own work, rather than (or in addition to) coming from the traditional method of classroom education. An emergent learning practice creates immediate performance gains while simultaneously building a team's capacity for improvement and generating as a second-level artifact a body of validated "lessons learned." Simply put, emergent learning is about getting better at getting better by weaving learning into ongoing work.

Emergent learning is about getting better . . . by weaving learning into ongoing work.

AARs are the best example we have uncovered of a long-lived (more than 19 years) emergent learning practice. It is our study of this practice from which we have adopted this article (Darling and Parry, 2000).

Can such a simple learning tool result in true organizational learning? According to Mitchel Resnick, the field of emergence focuses on "how complex phenomena can emerge from simple interactions among simple components" (Resnick, 1996). If complex phenomena can emerge from simple, local interactions, what might emerge through the iteration of a simple, local learning structure, such as the disciplined application of after-action reviews?

We have observed, as have others in the field of organizational learning, that training programs alone tend to result in a conceptual understanding that can be difficult to apply in daily work processes. By themselves, AARs cannot "teach" organizational learning principles. We have observed, however, that teams that apply such practices over time develop an intuitive grasp of some of the basic concepts and values of organizational learning, such as the importance of inquiry and of articulating assumptions; that there is no outside; that the greatest leverage point to solving a problem may be counterintuitive; and that there may be delays in the system's response to any intervention. Emergent learning practices can provide the grounding and the "pull" for training. In our experience, teams that are applying practices like the AAR are more open to learning the tools of organizational learning because they intuitively understand their value and have developed their own learning laboratory in which to apply them.

Jim Tebbe of Shell Exploration and Production Company reported that a team had become "hooked" on the AAR process after he helped them apply it as the US Army does—*before* the event to plan, *during* the event to attend to anticipated issues, and *after* the event to reflect and plan for the next one. After holding an initial AAR halfway through an annual planning process and a "before-action review," as Tebbe termed it, to take what they had learned and apply it in the next phase, the team asked him to schedule a follow-up AAR without prompting. "These meetings are actually increasing the capacity of the team to learn and improve the process," observes Tebbe.

Relationship of the Tool to a Learning Infrastructure

Why do so many practitioners make the error of treating the AAR as a one-time retrospective event? In our view, it is part and parcel of the error of focusing on the tool, not the practice or the structure that surrounds it. When Steven Spear and H. Kent Bowen studied the Toyota Production System, they came away with a very different perspective about

what makes it tick (Spear and Bowen, 1999). Its success does not lie in *kanbans* or *andon* cards or specific inventory methods that are commonly replicated. As Spear and Bowen explain, "Observers confuse the tools with the system itself. . . . The key is to understand that the Toyota Production System creates a community of scientists. Whenever Toyota defines a specification, it is establishing sets of hypotheses that can be tested." Their observation was validated by Fujio Cho, Toyota's president (Cho and Ohba, 1999).

So it is with the US Army's after-action review. Those who replicate the AAR meeting and thereby expect to replicate the team learning successes they have observed at the army's National Training Center will be disappointed. And so, we believe, it is with corporations implementing knowledge management systems. KM systems that are treated as an entity unto themselves become an orphan. In each case, adopters make the error of placing the tool at the center of the solution, not the people and processes and systems for which these tools are created. If the appropriate focus is maintained, then when and how to integrate these tools into a team's practice and how to create a learning infrastructure becomes much more obvious.

We might look at the US Army's doctrine as a counterexample to this common error. We have observed that army officers have a very different perspective on the role and value of doctrine than those in the civilian world might imagine. General Sullivan (retired) describes doctrine as a "professional dialogue about how to conduct operations." To him, doctrine is "not *what* to think but *how* to think" (Sullivan and Harper, 1997). Doctrine does not exist independent of the learning system that created it. Lieutenant Colonel Jay Simpson described doctrine as beginning with imperfect plans and experimentation. Simpson described his experience at the NTC:

> Exceptions work their way into doctrine. Counter-reconnaissance is an example. We used to just set up a couple of observation points. The bad guys regularly infiltrated it. One company took on the task of aggressively finding and killing OPFOR reconnaissance.

Their success, he explains, made its way into doctrine. One of the jobs of army trainers, in fact, is to be on the lookout for new, innovative solutions to sticky problems. Without being too sentimental about this process, it is not unlike the national dialogue citizens maintain with the US Constitution. It is used within an infrastructure that supports the dialogue between the Constitution itself and the people by whom and for whom it was created.

In our work with client organizations, the focus begins not with trying out a new technique, but with understanding the business team and designing a learning and knowledge infrastructure that fits with their business challenges, their work processes, and their existing practices and work habits. This learning infrastructure does not have to be big or complex. It may not even last for longer than a few weeks, depending on the team's goals. Then, emergent learning techniques such as the AAR are introduced, if needed, into that structure in such a way that makes intuitive sense to the people who will be responsible for implementing them.

A well-constructed AAR practice gives a group of people the structure to learn iteratively from their own experience.
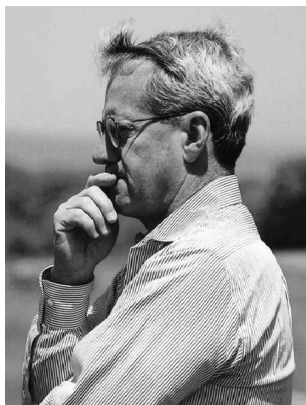
Civilian adopters would do well to understand and adopt not just the AAR meeting, but the AAR *practice* that supports it. A well-constructed AAR practice gives a group of people the structure to learn iteratively from their own experience, focusing on their own compelling challenges. In the process of producing immediate performance improvements, they also develop an intuitive understanding of the larger system in which they operate. This, in turn, causes new, strategically relevant knowledge—validated knowledge that is linked to action—to emerge within a complex and dynamic environment.

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Commentary

by John R. O'Shea

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The principle reference for this article is the study, "From Post-Mortem to Living Practice," a work that represents an exhaustive examination of the role of the after-action review (AAR) in the US Army's organizational learning strategy. While many have written about the AAR, no other authors have uncovered the dynamics of the process as have Marilyn Darling and Charles Parry. Indeed, their study may provide a source for method improvement as the army goes through a historic transformation from a Cold War force to one structured to meet the challenges of asymmetric conflict.

At the core of their analysis is the concept of the AAR as a living process that is ongoing, internalized by the participants, and simultaneously retrospective, while also being current and future oriented. This protean style of visualizing the future by examining the past did not come easy nor can it be sustained without an investment of time and energy guided by disciplined performance. The result—achievement of goals—becomes the strength of the process.

Some organizations rush to implement an AAR program and, as a consequence, focus only on the mechanical sequence of activities used in an AAR. But, as Darling and Parry caution, such action causes the participants to focus on the tool, not on the practice. Beyond merely being a retrospective as a post-mortem, the AAR practice is one of discovery learning and continuous improvement. As Darling and Parry say, the people, processes, and systems for which the AAR was created need to be at the center of the solution.

In a systems sense, the AAR begins with a clear, unambiguous goal that is understood and accepted by all and against which performance can be objectively measured. As the event proceeds, the team will periodically stop and retrospectively examine performance against the goal to be achieved. It is during the examination of results against this standard and concurrent discussion that system dynamics reveal themselves and allow the discovery learning process to unfold. The army has come to see one-time improvements made to "correct" failures, minus the discovery process, as a lost opportunity.

Well-led teams that work together over time share both triumphs and disappointments. Through those shared experiences, they develop a level of empathy that becomes an enabler of discussion and discovery learning. As these teams learn to perform better, their successes from this process encourage continued use of the AAR until it does become a living practice. Those of us who see the value of the AAR will well appreciate the contribution to the field of learning by the Darling and Parry study.

Unleashing the Power of Connecting Disciplines

Diane H. Schmalensee

I am a business consultant and not an expert in organizational learning, but I have been privileged to observe the power of connecting different disciplines or viewpoints. The possible breakthroughs and insights from combining two skill sets and ways of viewing the world are far beyond what is usually possible using just one discipline.

While talking with Ed Schein recently, I realized that my experiences might be relevant to organizational learning experts. Here I give some personal examples of the benefit of connecting disciplines and my tentative thoughts on how to encourage the connection.

Solving Problems by Focusing on Other Interests

While I was in my early twenties, a good friend, who had studied romance languages and Dante, told me that he had a great breakthrough in deciphering the structure of Dante's work. He had been searching for months for new mathematical structures in Dante's poems, when doing the Sunday *Times* crossword puzzle suddenly made him wonder if Dante might not have used a form of linking letters like a puzzle. Eureka! There was such a structure, and my friend published a paper on his new insight. It was simple and elegant and would not have occurred to him if he hadn't loved crossword puzzles as well as Dante.

When I was a young working mother, I found that I didn't have enough time for job and family. I took a highly recommended time management course and was shocked when the instructor told us to take up a hobby. The instructor explained that we are more productive when we work smarter rather than harder. Sticking only with what we know each day can make us more efficient in a narrow sphere but does not make us more productive or valuable. The most valued employees are those who know what's important and who can bring flashes of insight and new thinking to the job. Hobbies or other outside interests are great sources of these creative ideas, so the instructor recommended them as a way to cut through the clutter that comes with a narrow focus on one issue.

While deciding whether to accept this counterintuitive advice, I recalled a business professor telling me that he got his best ideas in the shower when he let his mind roam freely—from movies to books to his usual course work. He invested in a larger hot-water heater and felt it helped his creativity and career. So I decided to take the time management instructor's advice. I still felt too busy. But, by continuing to make time for my family and outside interests, I was forced to focus on what was truly important at work and to find creative ways of getting my job done.

One of my main tasks at work was to translate and transmit marketing practitioner thinking to marketing academics and vice versa. In searching for ways to save time, I decided to schedule meetings to bring the two groups of people together instead of acting as their go-between. Ola! This saved time but also allowed the people to collaborate in ways that would not have been possible if I hadn't created the shared-interest group meetings. We all were proud of what we were able to accomplish with this new process.

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Connecting Academic and Business Thinking

In the 1980s, I worked for the Marketing Science Institute (MSI), an organization based on the power of connecting business and academic thinking. Founded more than 40 years ago by Thomas B. McCabe (longtime chairman of Scott Paper Company), MSI was created to encourage academics to advance marketing science by working on issues important to marketing executives. Over time, MSI has evolved into a powerful force for the best, most creative marketing thinking, with a sizable percentage of the articles in the leading marketing journals evolving from MSI-sponsored work. It regularly brings business people and academics together to share insights. As vice president of research for MSI, I was able to see the power that resulted from merging their viewpoints.

When I joined MSI, little academic research focused on services marketing. However, as the service industry began to boom in the 1980s, the services marketing executives began to ask for insights into how to measure and improve service quality. Three academics from Texas A&M (Leonard Berry, Parsu Parasuraman, and Valarie Zeithaml) agreed to find a way to measure service quality, a risky decision as they had to strike out into uncharted areas instead of expanding on previous research. However, their pioneering work, which they called ServQual, became the basis for measuring customer satisfaction and loyalty. They showed businesses how customer perceptions of services differed from perceptions of products and how expectations played a major role in satisfaction. In the process, they all received recognition and awards for their work. Voila! Business has benefited, and the careers of all three academics have prospered because they were willing to bring their academic thinking to bear on a practical, unstudied issue.

Crossing Boundaries

While I was at MSI, we sought to improve the product development process. In order to develop hypotheses, we encouraged our marketing executive members to bring counterparts in their firms' operations, supplier relations, quality improvement, and manufacturing to MSI meetings on new product development. Two members from Harris Corporation—one in marketing and one in manufacturing—reported that this ended a history of suspicion and made them both heroes in their firm when they were able to find quicker, more effective ways of developing new products. A quality expert from Armstrong and a marketing researcher from DuPont, who were asked to speak on an MSI panel, found that they learned so much from each other that they became more valuable to their firms. And a researcher from Marriott reported that she learned to speak the same language as her operations team, which meant that the team was finally willing to act on information she provided.

Bringing together different mind-sets, languages, and approaches . . . broke down silos, created lasting friendships, and led to breakthroughs.

Bingo! Bringing together different mind-sets, languages, and approaches to shared issues broke down silos, created lasting friendships, and led to breakthroughs in work processes. These improvements could not have happened if people had not crossed their comfortable thought or departmental boundaries.

Connecting Mind–Sets and Disciplines

My husband, an economist, worked early in his career on the issue (raised by a Federal Trade Commission case) of why consumers were not buying a cheaper lemon juice made by Golden Crown instead of the more expensive Real Lemon brand, which dominated the market. Contrary to economic theory, consumers were paying more for a brand that tests showed to be comparable in quality. He just couldn't understand those pesky, unpredictable consumers, but my experience as a household purchasing agent and user of lemon juice suggested an explanation. Consumers don't always have perfect knowledge about quality and may be reluctant to try something new just because it is less expensive. Since the difference in the prices of Real Lemon and Golden Crown was less than a penny a meal and the risk of ruining a meal was high if Golden Crown did not taste as good, I was personally

reluctant to try Golden Crown. Thus, my husband used naïve but real-world consumer experience in the case to explain the seemingly inexplicable consumer behavior.

Similarly, around 1987, a marketing academic at University of Texas-Austin asked a finance/accounting colleague to work with him on the problem of how to measure brand equity and how much to invest in building a brand—a high-priority topic at MSI at the time. The combination of marketing with accounting and finance led to some of the best early work on brand equity and made breakthroughs that would have been impossible by relying on marketing knowledge alone. The connection of academic disciplines advanced both disciplines and careers and created an exciting research stream for both people that continued for a decade.

A final example is the collaboration at MIT of economists, atmospheric chemists, climatologists, oceanographers, biologists, statisticians, and political scientists working on the global climate change issue. They began by meeting regularly for lunches and then held Global Climate Change Forums once or twice a year to bring business and government representatives to the discussion. As a result of this merging of viewpoints, they produce many important publications and influence public debate on the topic. One conclusion from their work together has been the realization that because temperatures naturally fluctuate, it is difficult but not impossible to determine trends in the midst of so much fluctuation. Another result has been the need to bring scientific evidence to bear on a political issue. The team has realized that, with a topic as difficult and complex as climate change, no one discipline could have the impact that the collaboration has been able to achieve.

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Learning a Second Discipline

In the late 1980s, Curt Reimann of the Department of Commerce and I began to correspond on how customers evaluate quality and how to increase customer satisfaction. He was in charge of developing a national quality award (now known as the Baldrige Award for Performance Excellence) and wanted to integrate the concept of customer satisfaction with other quality improvement concepts. While I feared the correspondence might not be time well spent, I knew and cared about the subject, and so continued the process.

When the award was finally announced, Curt asked me to become an examiner. The training course took nearly a week and revealed that I was quite different from the other examiners. Most of them were quality engineers, who used process design, flow charts, and statistical process control approaches and terminology that were completely new to me. I told Curt that I felt I should resign because I didn't fit the usual mold, but Curt said that he had asked me to join the group because I was from a different discipline. He felt the engineers and I could learn from each other. How right he was! The eight years I've spent as a Baldrige examiner and ten or so years with the Massachusetts quality award (MassExcellence) have been among the most productive and exciting of my career. The merging of the quality and marketing disciplines has given me insights I never could have had if I had stayed in my comfortable marketing zone.

For instance, the Baldrige model focuses on how a whole organization is managed. It draws on many disciplines to do this, including engineering, organizational development and management, and marketing. As a marketer, I had never understood why top managers didn't act eagerly on the valuable marketing advice we marketers provided. By adding the Baldrige perspective on how to manage an organization, I was able to see that executives must weigh the needs of employees and shareholders along with the needs of customers. I also learned that a firm's incentive structure has a big impact on what gets done. Based on these insights, I was able to write an award-winning article with a long-time marketing colleague entitled, "From Information to Action"

(Schmalensee and Lesh, 1998/1999). Drawing on the quality improvement, change management, and marketing literatures and experiences of many marketers and top executives, the article seeks to expand marketers' view of why firms do or don't act on customer information and how to increase the odds of action.

Another example is the perspective Baldrige has given me on leadership. Years ago, I attended an executive gathering at the Wharton School on the nature and development of leadership. We spent a great deal of time discussing whether leadership was more than charisma. Although the meeting was interesting, I didn't feel that management science had all the answers. Once I began to study Baldrige's leadership category (which draws on learnings from organizational theory and management science), I began to see that leadership was a process rather than a personality trait. This has allowed me to help executives and organizations develop their leadership skills. I could not have written the article or helped boost company leadership if I had not added the things I learned from Baldrige to my skill set.

What Can We Conclude?

I hope my personal examples have brought to mind similar ones from your own experiences. There are many ways in which disciplines can connect—when individuals develop more than one interest or skill set, when academics and business people collaborate, when different academic disciplines work together on a topic of mutual interest, or when business people from different departments cooperate. Regardless of how the disciplines connect, the connection releases creativity and power that would be impossible if people had remained rooted in their original mind-set.

Why is this connection of disciplines so powerful?

- The connection often provides a tool for solving problems or offers alternative solutions for problems that can't be solved using the usual methods. The Dante puzzle, the brand equity collaboration, and the new product development cooperation are examples.
- The connection allows us to view our own discipline's concepts in a broader context, in the way that the Baldrige view of company management helped me put my original marketing viewpoint into a broader perspective.
- The connection fosters communication among people with different but tangential backgrounds. MSI is an excellent example of mixing business and academic backgrounds and of encouraging different academic disciplines to talk in order to produce innovative publications and insights.
- The connection encourages creativity by removing us from single discipline ruts and helping us master something new or see something in a new light.

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How can we best encourage the connection of disciplines? Connections between people from different disciplines work best when people meet face to face—preferably on neutral territory—to discuss a topic of mutual interest. When they listen with respect to the others' viewpoints and learn the others' language, they can learn and make discoveries together. At MSI, people in the same firms and academics from different departments met face to face, discussed topics they all found important, and communicated despite their different terminologies.

Connecting disciplines within individuals as they add new skill sets could occur through outside forces (as when Curt Reimann invited me to join the Baldrige team), through a hobby (as with the Dante puzzle), or when a person consciously decides to study a new subject. Regardless of the cause, the results are almost certainly best when a person invests enough time to understand the new subject well. It takes time and planning to connect disciplines, but the results are well worth the effort.

Is the effort of connecting disciplines and mind-sets always worth the effort? Might there be times when the results do not justify the effort? From my own experiences, I think not. But I recommend these questions as worthy of further study.

Reference

Schmalensee, D.H. and A.D. Lesh, "From Information to Action." *Marketing Research* 10 (Winter 1998/Spring 1999): 23–36.

Commentary

by George L. Roth

Schmalensee powerfully illustrates the importance of looking outside traditional approaches to solve old problems in new ways. In particular, she finds that academics are more innovative when they learn from developing new hobbies, working with industry people, or collaborating with colleagues from different disciplines. Her observations and insights about connecting management research, consulting, and practice are a tenet of SoL.

When professionals with different traditions, training, and skills work together, they can give each other new insights that produce innovative results as they reexamine their theories, assumptions, and models. Similar to more formal learning situations in which people are introduced to new theories and techniques through education or consulting, examining existing data in new ways creates opportunities for the emergence of new worldviews and effective action strategies.

Should we be surprised to learn that creating these "connections" is unusual or extraordinary? The institutional contexts that Schmalensee describes are generally all part of disciplined scholarly pursuits. In each example, a traditional approach was unable to yield the outcomes that "straying" into related pursuits did produce. The results from these innovations were both professional—achieving desired objects and yielding significant contributions—and personal—building interpersonal relationships and providing individuals with a sense of satisfaction. The expectations of our professional roles and how we report what we find constrains the ways in which we present our accomplishments. In academic publications, we rarely read about the sources of the powerful insights that come from discipline-connecting collaborations.

There is a deeper lesson in these examples for academics and practitioners alike. The benefits of personal results, pursuing our passions, finding common ground, and developing shared interests are the ingredients of a recipe that makes for significant accomplishment. We often fail to collaborate and connect with people who are different from us because it is hard work, takes more time and extra effort, makes us talk about things that do not seem "work related," and requires us to let go of the way we have always done things. These collaborations are risky because we never know what, if anything, will come from our efforts. In terms of what we produce, when we collaborate, and the significant new insights that arise from these connections, it is often hard to attribute them and decide who gets credit.

In my current role as Executive Director of the Ford-MIT Alliance, it is a daily challenge to build connections among MIT faculty and Ford managers. The Ford-MIT Alliance is a five-year, $20 million program examining engineering, education, information technology, and environmental concerns at Ford and in the automotive industry. The alliance involves matching commitments of funding, access, support, and involvement from Ford with education, research, teaching, and participation from MIT. It is made up of a series of projects, many like the Global Climate Change Program that Schmalensee described.[1] The goal of the alliance, similar to 11 alliances that MIT currently has,[2] is to bring faculty from various disciplines together to work with industry people. The industry-connected research can help MIT enhance its groundbreaking research reputation and make direct connections, through these industrial partners, for getting feedback and implementing research results.

MIT's alliances, like "the power of connecting disciplines," sound good in theory. In practice, however, it is hard work to make these arrangements function to everyone's benefit. The people involved do not share an institutional context or sense of what is most important. At the same time, the very thing that makes collaborative arrangements difficult is also what makes them attractive;

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that is, the opportunity to work with someone unlike you, someone who thinks differently and sees the world from another perspective. It is those differences that create challenges and opportunities for original insights, novel solutions, and new opportunities.

For academics and managers, collaboration is hard work because it involves stepping away from familiar objectives. We have learned that a personality match is equally important to the research subject (technical) match. Each collaborative project matches an MIT faculty member with a Ford manager as co-principal investigators. The choice of collaborators depends on the intellectual interests of the MIT faculty member and the Ford manager's area of business responsibility. While an overall strategy might specify what is relevant, important research, if the potential collaborators are not carefully matched, the project does not move forward. When assessing a possible project, we ask if the people involved have an appropriate attitude and the mutual respect needed to be able to learn from each other. Are they tolerant of others with different viewpoints? Do they want to spend time with each other? Thus, is there a possibility of connecting across disciplines? Not surprisingly, the research projects that have been most successful by both academic and industry standards are those in which the co-principal investigators had extended, significant interactions with one another during the research process.

What we have not done to date is use this insight—that creating a shared vision and common understanding in a new project gets better results—to facilitate activities that would help a shared vision develop. In the successful research projects, the shared vision, common understanding, and mutual sense of purpose have come from informal interactions when people spend significant time together. It would be possible to facilitate such a process if people would commit time, attention, and energy. But, much as in business, there is a sense that people are too busy, the interpersonal and shared vision goals too soft, and there is not enough time to spend on broad, philosophical inquiry. Yet, as Schmalensee proposes, finding and developing shared interest is key to connecting across disciplines. When we draw on the personal results of learning and possible professional accomplishments that connecting different disciplines might provide, we have a recipe for creating conditions that produce innovative results by everyone's measure.

Notes
1. For more on the Global Climate Change program, see http://web.mit.edu/globalchange/www/.
2. MIT's mega-partnerships involve multiple projects and programs with funding of more than $25 million over five or more years. See http://web.mit.edu/newsoffice/nr/2000/alliance.html for a listing and description of MIT's alliances.