33 Strategies for Working with Mental Models

A man visits a therapist and says, “I’ve just gotten fired, for the seventh time in the last five years. I’m having trouble with my wife, and I’ve already been divorced three times. I desperately need you to help me understand: Why are there so many screwed-up people out there in the world?”

Imagine that instead of a therapist, this man came to you. And you genuinely wanted to help him. What would you say? You might find yourself speaking empathetically: “Yes, a lot of bad bosses exist, and I’m sure there are some unpleasant spouses out there.” But if you wanted to do any good in the long run, sooner or later you would have to show him how his problems were not created “out there.” They stemmed, at least in part, from his own assumptions and beliefs about other people. Unless you found a way to help him see this, all your other attempts to help would be short-lived and probably doomed to failure.

Mental models are the images, assumptions, and stories which we carry in our minds of ourselves, other people, institutions, and every aspect of the world. Like a pane of glass framing and subtly distorting our vision, mental models determine what we see. Human beings cannot navigate through the complex environments of our world without cognitive “mental maps”; and all of these mental maps, by definition, are flawed in some way.

A common workshop exercise involves asking people to arm wrestle with a neighbor. We tell them that “winning” means bringing their opponent’s arm to the table, and we ask them to “win” as many times as they can in fifteen seconds. Most people pit themselves against their opponent, struggling to push the other person’s arm down. But a few partners look at each other, and then spend the fifteen seconds flipping their arms back and forth, without any resistance, a dozen or more times. They are not held back by the mental model that only one person can “win.”

Differences between mental models explain why two people can observe the same event and describe it differently; they are paying attention to different details. Mental models also shape how we act. For example, if we believe people are basically trustworthy, we may talk to new acquaintances far more freely than if we believe most people can’t be trusted.

But because mental models are usually *tacit* , existing below the level of awareness, they are often untested and unexamined. They are generally invisible to us—until we look for them. The core task of this discipline is bringing mental models to the surface, to explore and talk about them with minimal defensiveness—to help us see the pane of glass, see its impact on our lives, and find ways to re-form the glass by creating new mental models that serve us better in the world.

Experts are particularly susceptible to difficulties with mental models. Among educators, there is a widespread tacit assumption that “parents don’t really know much about what their children need.” As a result, well-intentioned school reform efforts have alienated parent groups. The health professionals’ mental model that “hospitals are foremost repositories of scientific knowledge for healing the seriously ill” has diminished opportunities for hospitals to serve as community health centers. In manufacturing companies, the deep-seated mental model that “poor quality is caused by laziness or sabotage by hourly workers” endures even among managers who espouse the principles of the quality movement. In work with systems thinking, many insights directly confront our mental models; unless we can suspend and test our attitudes, we will tend to react by saying, “That’s interesting … but not really relevant to us,” with no deeper consideration of the implications.

MENTAL MODELS

The concept of mental models goes back to antiquity, but the phrase (to our knowledge) was coined by Scottish psychologist Kenneth Craik in the 1940s. It has since been used by cognitive psychologists (notably Philip Johnson-Laird of Princeton University), by cognitive scientists (notably Marvin Minsky and Seymour Papert of MIT), and gradually by managers. In cognition, the term refers to both the semipermanent tacit "maps" of the world which people hold in their long-term memory, and the short-term perceptions which people build up as part of their everyday reasoning processes. According to some cognitive theorists, changes in short-term everyday mental models, accumulating over time, will gradually be reflected in changes in long-term deep-seated beliefs. * **—AK**

Reflection and inquiry

TWO TYPES OF SKILLS ARE CENTRAL TO THIS WORK: THEY ARE REFLECTION (slowing down our thinking processes to become more aware of how we form our mental models) and inquiry (holding conversations where we openly share views and develop knowledge about each other's assumptions). The techniques we most favor for learning these skills emerged from "action science," a field of inquiry developed by theorists and educators Chris Argyris and Donald Schön, aimed at exploring the reasoning and attitudes which underlie human action, and producing more effective learning in organizations and other social systems.

The tools of action science are deceptively simple. For example, the ladder of inference (see this page), which shows how rapidly we can leap to knee-jerk conclusions with no intermediate thought process, as if rapidly climbing up a ladder in our minds, is a modest metaphor. Yet incorporating it into everyday conversation, so that we internalize the

principles of the ladder, has proven to be a pivotal component of learning organization work.

The value of these skills is perhaps most apparent in their absence. Individuals who are undisciplined in reflective thinking have difficulty hearing what others actually say. Instead, they hear what they expect others to say. They have little tolerance for multiple interpretations of events because they often "see" only their own interpretation. In teams and groups, people who have not mastered a threshold level of inquiry skills will spend hours arguing their ideas. Eventually, in frustration and exhaustion, they end up with some kind of compromise, in which no one wins—or they defer to the most senior person in the room, who wins through authority: "This is the strategy. Thank you for your input." The strategy turns out to be far less than it could be.

***Research by Faith L. Florer and Thomas Fritsch of Miami University and conversation with Professor Johnson-Laird contributed to this lexicon.**

And what of people who have learned to reflect, talk more openly, and make their assumptions explicit? As you might expect, they have more penetrating conversations, in which talk of strategy always considers their mental models of (for example) where the world is going, what customers want, what competitors will do, how the marketplace is evolving, and what technologies will exist. Moreover, their conversations tend to be more naturally suffused with openness and humor. This makes working with mental models a natural antidote for the typical political gamesmanship bred by conventional "command-and-control" hierarchies. People find ways to diffuse defensiveness by laughing good-naturedly at themselves. At GS Technologies, whose work with labor-management dialogue is described on this page , the union members went out and bought one of the plant managers a

stepladder. He keeps it in his office, and jokes with visitors, “They tell me I live my whole life up on the top rung.”

Scenarios and learning laboratories

THE FRONTIER OF THIS DISCIPLINE LIES WITH CREATING INNOVATIONS IN infrastructure where work with mental models can take place. One of the most influential such innovations, scenario planning, has become increasingly widespread and diverse in the last few years. Scenario work, which emerged in the “nonintrospective” culture of Royal Dutch/Shell, traditionally encouraged people to look outward, using stories of the future to surface assumptions about the business and political forces of the present. Gradually, this work seems to be embracing more of an ability to increase interpersonal understanding. For example, former Shell planner Adam Kahane has adapted the scenario approach to work with political leaders in South Africa. He has found that diverse, even antagonistic participants could safely talk about even the most emotionally charged issues. By describing plausible futures, they developed a better understanding of each other’s tacit beliefs. The scenario, when used this way, becomes a shared “memory of the future”: as people rehearse their views of what will happen, they reveal the differences and similarities in their current views of the world. Says Kahane:

> You may wonder what keeps people, in these highly charged meetings, from walking out. Conservatives and radicals kept coming back because they felt they were learning a great deal—and enjoying themselves. The advantage of scenarios is that, unlike in a negotiation, people don’t have to commit their constituents, but they can see a common language—a common way of understanding the world—emerging fairly early in the process. Once the scenario process is over, that common language should make subsequent negotiations easier to conclude successfully. *

Mental models work is also very central to the design of learning laboratories. When the reflection and inquiry exercises are built into them, laboratories become mental model practice fields, where people develop the skills to talk about their assumptions in "real time"—in the moment that they are dealing with an issue. To talk coherently about attitudes and beliefs, to allow others to point them out, to hear comment about them with involvement but without rancor, and to look more clearly at the sources of our own actions—these capabilities all improve with practice, and particularly with well-structured, supported team practice.

> **See, for example, the Ford Learning Lab cameo on this page .**

***"Scenarios for Building Community," by Adam Kahane (1994; Emeryville, Ca., Global Business Network).**

34 What You Can Expect ... in Working with Mental Models

Charlotte Roberts

This discipline offers the highest leverage for change. Though it seems to some, at first glance, to be strictly an intellectual exercise, with little relevance to the "real world," it is probably the most practical of the five disciplines. As teams which incorporate this work into their practice will attest, it directly enhances the ability to navigate through changing times.

Unfortunately, it is also the most difficult place from which to *start* building a learning organization. It takes a great deal of perseverance to master this discipline, perhaps because very few of us have learned how to build the skills of inquiry and reflection into our thoughts, emotions, and everyday behavior. When we begin practicing those skills, we bring to the surface some of our unconscious, automatic responses. We see, perhaps for the first time, what we have done to ourselves and others through automatic or incomplete thinking. Even after we get glimpses of our mental models, knowing how to act differently is not obvious.

Practice together over time

THE MOST PRODUCTIVE WAY TO LEARN THESE NEW SKILLS IS WHILE TRYING to get to the bottom of the mental models which have created chronic business problems. Hold regular sessions with the same team, perhaps for a period of months. Be prepared to have someone who is skilled in this discipline assist the team for the first few sessions.

Prepare for dealing with strong emotions

PEOPLE WHO ACCEPT DIFFERENT POINTS OF VIEW INTELLECTUALLY MAY have trouble with the emotions raised by this work. When the assumptions behind your models are exposed, they will often be shown to be flawed or incomplete. People will now know why you do the "stupid," "irritating," or "bureaucratic" things you do. You may be chagrined to discover (unfortunately, at the same time as everyone else), that your actions (or those of your team or organization) are based on erroneous data or incomplete assumptions. At the moment of discovery, feelings may rise to the surface: anger at the reasons you gave for your actions; embarrassment at an incorrect assumption; uncertainty about how to challenge someone else; reluctance to talk about a heretofore "undiscussable" concern; confusion about how to proceed; or fear of retaliation.

Because most management teams have little experience as a team at dealing with such fierce emotions, they often let the emotions escalate; dismay and uncertainty turn into opposition and feelings of betrayal, instead of genuine inquiry and learning. Or, worse, they change the subject and deny that these emotions exist; which paralyzes the group until the subject can be resurfaced and understood. The alternative is to set time aside for dialogue or skillful discussion about the emotions that have been raised.

> **Exercises that may help include "Moments of Awareness," this page , and "Undiscussables," this page . Also see "Dialogue," this page , and "Skillful Discussion," this page .**

Use frustration as a source of new inquiry

TEAMS STRUGGLE IN MENTAL MODELS WORK , EVEN WHEN IT 'S ORIENTED to a business problem. Sometimes they sense that their ability to communicate together is not yet up to the task. Sometimes members need time to reflect, or time to build up a sense of comfort. The team needs to develop strategies for pacing itself—for knowing when to pause, when to pick up again, and how to deal with impasses.

An atmosphere should be established in which frustrations can be brought up for inquiry. If people feel the group lacks enough knowledge

to have an adequate mental model of (for example) their customers' needs, they can use questions to explore that perceived inadequacy:

What do we know as a fact about our customers?

What do we sense is true but cannot support with data?

What don't we know? What are our questions and ponderables?

What is unknowable?

What limited experiments can we design to test our current model of our customers?

Beware of excitement and unbridled action

WHEN THE TEAM BREAKS THROUGH THE LIMITATIONS THEY HAVE PUT ON themselves, and they feel that at last they "see" the truth about themselves, their work, or their customers, they will be tempted to take grand action immediately. "No, our customers don't buy on price! They only care about prompt delivery!" They have merely constructed another mental model which, without testing, will produce more blinders. They might rush out to build speedy delivery systems, when the customers really cared about breakage and better packaging. This is the time to pause and reflect upon strategy. Design small experiences to test the new model before making it a standard part of the infrastructure of the organization.

You can create new mental models

MENTAL MODELS MAY BE GENERATIVE; YOU CAN SET ABOUT TO CREATE an attitude which you do not have. The scientists who created the space program (and who still provide that program with its successes) had to envision unimagined possible futures. They conceived of changes in travel, in the ability to create environments, in research, and in energy use that have still not fully taken place.

Generating new mental models, if they are to hold, can take place only by linking imagination with action. Ask yourselves, "If we *did* hold a better model of our customers, how would we behave?" Then try the behavior, and over time see if the new view of the world feels closer to reality.

35 The Ladder of Inference *

Rick Ross

We live in a world of self-generating beliefs which remain largely untested. We adopt those beliefs because they are based on conclusions, which are inferred from what we observe, plus our past experience. Our ability to achieve the results we truly desire is eroded by our feelings that:

- Our beliefs are *the* truth.
- The truth is obvious.
- Our beliefs are based on real data.
- The data we select are the real data.

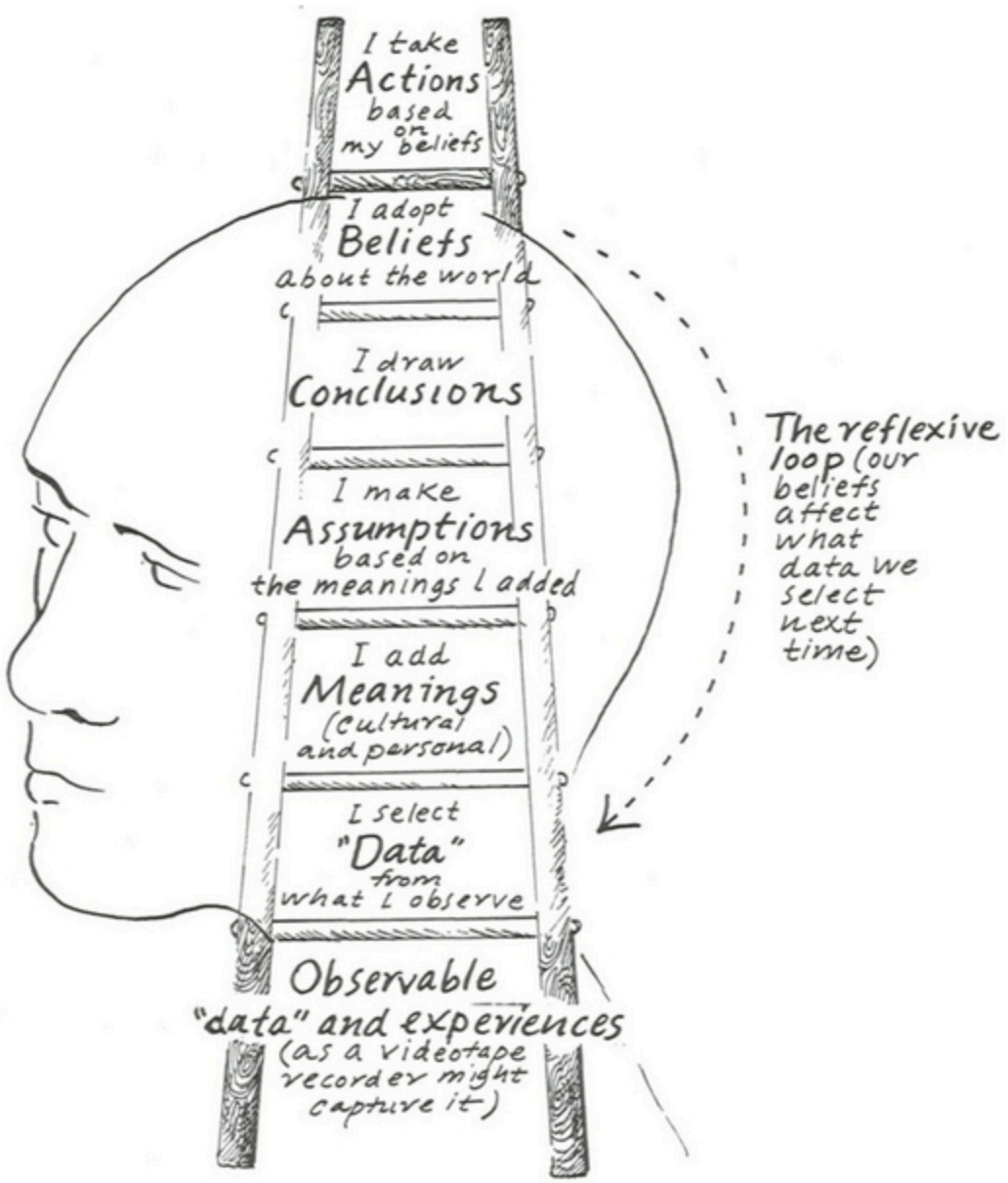
***Our ladder of inference material includes concepts and examples adapted from *Systems Thinking: A Language for Learning and Acting: The Innovation Associates Systems Thinking Course Workbook* (1992, Framingham, Mass.: Innovation Associates); suggestions from Philip McArthur and Robert Putnam; material from *Overcoming Organizational Defenses* by Chris Argyris (1990, Needham, Mass.: Allyn and Bacon), pp. 88–89; *Reasoning, Learning, and Action* by Chris Argyris (1982, San Francisco: Jossey-Bass) pp. xvii–xviii, pp. 176–78;**

Action Science **by Chris Argyris, Robert Putnam, and Diana McLain Smith (1985, San Francisco: Jossey-Bass), pp. 57–58. See *Fieldbook* , p. 264 for more on these books.**

For example: I am standing before the executive team, making a presentation. They all seem engaged and alert, except for Larry, at the end of the table, who seems bored out of his mind. He turns his dark, morose eyes away from me and puts his hand to his mouth. He doesn't ask any questions until I'm almost done, when he breaks in: "I think we should ask for a full report." In this culture, that typically means, "Let's move on." Everyone starts to shuffle their papers and put their notes away. Larry obviously thinks that I'm incompetent—which is a shame, because these ideas are exactly what his department needs. Now that I think of it, he's never liked my ideas. Clearly, Larry is a power-hungry jerk. By the time I've returned to my seat, I've made a decision: I'm not going to include anything in my report that Larry can use. He wouldn't read it, or, worse still, he'd just use it against me. It's too bad I have an enemy who's so prominent in the company.

In those few seconds before I take my seat, I have climbed up what Chris Argyris calls a "ladder of inference,"—a common mental pathway of increasing abstraction, often leading to misguided beliefs: *

***See *Overcoming Organizational Defenses* , p. 87.**



- I started with the observable data: Larry's comment, which is so self-evident that it would show up on a videotape recorder …
- … I selected some details about Larry's behavior: his glance away from me and apparent yawn. (I didn't notice him listening intently one moment before) …
- … I added some meanings of my own, based on the culture around me (that Larry wanted me to finish up) …
- … I moved rapidly up to assumptions about Larry's current state (he's bored) …

- … and I concluded that Larry, in general, thinks I'm incompetent. In fact, I now believe that Larry (and probably everyone whom I associate with Larry) is dangerously opposed to me …
- … thus, as I reach the top of the ladder, I'm plotting against him.

***The "reflexive loop" was first published in William Isaacs's 1992 working paper, *The Ladder of Inference* , published by the MIT Center for Organizational Learning.**

It all seems so reasonable, and it happens so quickly, that I'm not even aware I've done it. Moreover, all the rungs of the ladder take place in my head. The only parts visible to anyone else are the directly observable data at the bottom, and my own decision to take action at the top. The rest of the trip, the ladder where I spend most of my time, is unseen, unquestioned, not considered fit for discussion, and enormously abstract. (These leaps up the ladder are sometimes called "leaps of abstraction.")

I've probably leaped up that ladder of inference many times before. The more I believe that Larry is an evil guy, the more I reinforce my tendency to notice his malevolent behavior in the future. This phenomenon is known as the "reflexive loop": our beliefs influence what data we select next time. And there is a counterpart reflexive loop in Larry's mind: as he reacts to my strangely antagonistic behavior, he's probably jumping up some rungs on his own ladder. For no apparent reason, before too long, we could find ourselves becoming bitter enemies. *

Larry might indeed have been bored by my presentation—or he might have been eager to read the report on paper. He might think I'm incompetent, he might be shy, or he might be afraid to embarrass me. More likely than not, he has inferred that I think ***he's*** incompetent. We can't know, until we find a way to check our conclusions.

Unfortunately, assumptions and conclusions are particularly difficult to test. For instance, suppose I wanted to find out if Larry ***really*** thought I was incompetent. I would have to pull him aside and ask him, "Larry, do you think I'm an idiot?" Even if I could find a way to phrase

the question, how could I believe the answer? Would *I* answer ***him*** honestly? No, I'd tell him I thought he was a terrific colleague, while privately thinking worse of him for asking me.

Now imagine me, Larry, and three others in a senior management team, with our untested assumptions and beliefs. When we meet to deal with a concrete problem, the air is filled with misunderstandings, communication breakdowns, and feeble compromises. Thus, while our individual IQs average 140, our team has a collective IQ of 85.

The ladder of inference explains why most people don't usually remember where their deepest attitudes came from. The data is long since lost to memory, after years of inferential leaps. Sometimes I find myself arguing that "The Republicans are so-and-so," and someone asks me why I believe that. My immediate, intuitive answer is, "I don't know. But I've believed it for years." In the meantime, other people are saying, "The Democrats are so-and-so," and they can't tell you why, either. Instead, they may dredge up an old platitude which once was an assumption. Before long, we come to think of our longstanding assumptions as data ("Well, I know the Republicans are such-and-such because they're so-and-so"), but we're several steps removed from the data.

Using the ladder of inference

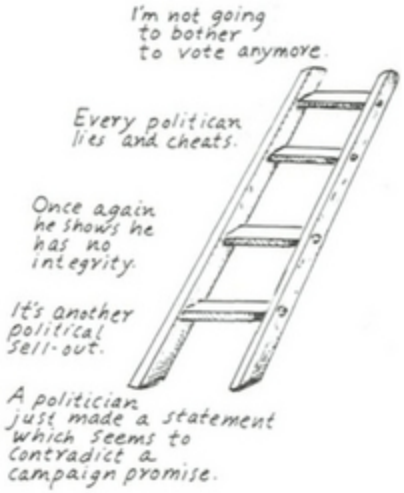
YOU CAN ’T LIVE YOUR LIFE WITHOUT ADDING MEANING OR DRAWING CONCLUSIONS . It would be an inefficient, tedious way to live. But you *can* improve your communications through reflection, and by using the ladder of inference in three ways:

- Becoming more aware of your own thinking and reasoning (reflection);
- Making your thinking and reasoning more visible to others (advocacy);
- Inquiring into others’ thinking and reasoning (inquiry).

Once Larry and I understand the concepts behind the “ladder of inference,” we have a safe way to stop a conversation in its tracks and ask several questions:

- What is the observable data behind that statement?
- Does everyone agree on what the data is?
- Can you run me through your reasoning?
- How did we get from that data to these abstract assumptions?
- When you said “[your inference],” did you mean “[my interpretation of it]”?

I can ask for data in an open-ended way: “Larry, what was your reaction to this presentation?” I can test my assumptions: “Larry, are you bored?” Or I can simply test the observable data: “You’ve been quiet, Larry.” To which he might reply: “Yeah, I’m taking notes; I love this stuff.”



Note that I don't say, "Larry, I think you've moved way up the ladder of inference. Here's what you need to do to get down." The point of this method is not to nail Larry (or even to diagnose Larry), but to make our thinking processes visible, to see what the differences are in our perceptions and what we have in common. (You might say, "I notice I'm moving up the ladder of inference, and maybe we all are. What's the data here?")

This type of conversation is not easy. For example, as Chris Argyris cautions people, when a fact seems especially self-evident, be careful. If your manner suggests that it must be equally self-evident to everyone else, you may cut off the chance to test it. A fact, no matter how obvious it seems, isn't really substantiated until it's verified independently—by more than one person's observation, or by a technological record (a tape recording or photograph).

Embedded into team practice, the ladder becomes a very healthy tool. There's something exhilarating about showing other people the links of your reasoning. They may or may not agree with you, but they can see how you got there. And you're often surprised yourself to see how you got there, once you trace out the links.

***This exercise is based upon the two-column research method developed by Chris Argyris and Donald Schön. The research method was first presented in their book *Theory in Practice* (1974, San Francisco: Jossey-Bass).**

The Left-Hand Column *

Rick Ross, Art Kleiner

STEP 1: CHOOSING A PROBLEM

Select a difficult problem you've been involved with during the last month or two, the kind of tough, interpersonal difficulty that many of us try to ignore.

- You can't reach agreement with your close associates.
- Someone else is not pulling his or her weight.
- You believe you are being treated unfairly.

- You believe your point of view is being ignored or discounted.
- The rest of the organization is resisting—or you believe they will resist—a change you want to implement.
- You believe your team is not paying much attention to the most crucial problem.

Write a brief paragraph describing the situation. What are you trying to accomplish? Who or what is blocking you? What might happen?

STEP 2: THE RIGHT-HAND COLUMN (WHAT WAS SAID)

Now recall a frustrating conversation you had over this situation—or imagine the conversation that you *would* have if you brought up the problem.

Take several pieces of paper and draw a line down the center:

(You can also enter this in a word processor with a two-column feature. Use side-by-side columns, or "table" columns, rather than newspaper or "snaking" columns.)

In the right-hand column, write out the dialogue that actually occurred. Or write the dialogue you're pretty sure *would* occur if you were to raise this issue. The dialogue may go on for several pages. Leave the left-hand column blank until you're finished.

PURPOSE

To become aware of the tacit assumptions which govern our conversation and contribute to blocking our purpose in real-life situations, and to develop a way of talking about those tacit assumptions more effectively.

STEP 3: THE LEFT-HAND COLUMN (WHAT YOU WERE THINKING)

Now in the left-hand column, write out what you were thinking and feeling, but not saying.

A SAMPLE CASE

Here is an example of the format. An R&D project manager (Jim) assumes his supervisor (Todd) feels harshly about him. In the right-hand column, Jim writes down his last conversation with Todd. In the left, Jim recalls his own thoughts.

OVERVIEW

Analysis of a transcript of a real exchange—probably recalled, possibly tape-recorded.

TIME

One and one-half to two hours.

What I was thinking	What we said
We're two months late, and I didn't think he knew. I was hoping we could catch up.	*TODD: Jim, I'd like to come down there next week. We're a few weeks behind, and I think we might all benefit from a meeting at your office.*
I need to make it clear that I'm willing to take	*ME: I've been very concerned about these deadlines. As you know, we've*

responsibility for this, but I don't want to volunteer for more work.	*had some tough luck here, and we're working around the clock. But of course, we'll squeeze in a meeting at your convenience.*
He never offers this help in the planning stages, when I could really use it. It's too late now to bring that up.	*TODD: Well, it's occurred to me that we could use better coordination between us. There are probably some ways I could help.*
The changes he keeps making are the real reason we're late. He must have another one.	*ME: Well, I'm happy to talk through any changes you have in mind.*
	TODD: I don't have anything specific in mind.
It's a shame I can't tell him that he's the cause of the delays. If I can hold him off two more weeks, I think we'll be ready.	*ME: I'd like to have a prototype finished to show you before you come down. What if we set up something for the twenty-seventh?*

STEP 4: REFLECTION: USING YOUR LEFT-HAND COLUMN AS A RESOURCE

You can learn a great deal just from the act of writing out a case, putting it away for a week, and then looking at it again. The case becomes an artifact through which you can examine your own thinking, as if you were looking at the thinking of someone else.

As you reflect, ask yourself:

- What has really led me to think and feel this way?
- What was your intention? What were you trying to accomplish?
- Did you achieve the results you intended?
- How might your comments have contributed to the difficulties?
- Why didn't you say what was in your left-hand column?
- What assumptions are you making about the other person or people?
- What were the costs of operating this way? What were the payoffs?
- What prevented you from acting differently?

- How can I use my left-hand column as a resource to improve our communications?

For example, I (Rick) have developed a way of describing my left-hand column to others in a nonaccusatory, nonjudgmental way. I'll use language like this: "Look, I feel like I'm between a rock and a hard spot. The rock is our conversation, my right-hand column. You're saying you want to move ahead with this project rapidly. On the other hand, my own thoughts, my left-hand column, say that if we move ahead with it, we're likely to lose Joe's and Bill's participation. I'm leery of raising this with you because in the past, when I've asked you to slow down for other reasons, you've gotten upset with me."

In group meetings, when you feel angry or frustrated, the left-hand column is particularly valuable. You can stop the action and say, "I realize we've got important work to do, *but* once again I don't think we're focusing on the real issue. Can we check some of our assumptions before we go any further? Let me tell you what I've got in my left-hand column …"

In other cases, leverage lies with the conversation itself. Begin by rewriting the previous conversation as you *might* have held it. How could your right-hand column (what you said) bring some of your important left-hand column thinking to the surface? How could you have revealed your thoughts in a way that would contribute to the situation turning out the way you wanted? What could you have said that would effectively inquire into the other person's left-hand column?

For a reality check, show the revised case to a third party (such as a partner; see this page).

You can also show selected parts of it to the person with whom you had the original conversation. If handled with a sense of inquiry and care, that might be a way to break through your impasse: "I have been making some assumptions about our last conversation, and I wanted to check them with you." Sometimes you may find you both remember the same conversation completely differently. Even when you agree on what you have said, you may have been thoroughly unaware of each other's unvoiced concerns.

When you show your case to the other person, don't approach it as a way to finally clear the air and get your points out in the open. Nor is your purpose to "prettify" your left-hand column by redefining your thoughts in a cosmetically kinder, gentler context. As Robert Putnam

notes, some of your left-hand thoughts probably *should* stay hidden. Our internal censors often have a good chunk of wisdom; sometimes these comments would wreak havoc if voiced. Your purpose is to raise the assumptions and mutual misunderstandings whose resolution will most contribute to more fruitful future conversations.

> **Two good points to continue from here are "Opening Lines" (see this page) and "Recipes" (see this page).**

Risks and opportunities with "the left-hand column" *Robert Putnam*

Robert Putnam is a long-standing associate of Chris Argyris, and a partner in Action Design, a consulting firm that helps organizations incorporate and implement reflection and inquiry skills. He helped us quite a bit in articulating this chapter. When he read over this material, he said that we should emphasize that achieving the learning potential of this exercise, in particular, requires a skilled facilitator. Because we think the exercise is both conceptually and practically significant, we asked Bob to expand upon his comment. For Bob's insights on using "recipes" to promote learning, see this page .

When left-hand column cases are discussed in pairs, the learning potential is limited by the abilities of the partners to coach each other effectively. Fundamental learning often requires talking about issues that are difficult to face without being defensive. There are three ways that a coach's ability to help may be limited:

- The coach may share the assumptions and blind spots that limit the case presenter's effectiveness;

- The coach may join in commiserating with the case presenter; “Look how screwed up those other people are.” That establishes a sense of good feeling, but it distracts attention from the case presenter’s tacit assumptions.
- The coach may not know how to raise the subject of the case presenter’s “shortcomings” in a way that promotes inquiry. Imagine that you are a case presenter, and your coach says, “In a spirit of learning, I think you really screwed it up. You say you want to be honest, but *this* is not honest.” You might feel self-conscious, or wonder if you had revealed too much. If you felt misunderstood, you would probably stop yourself from saying so (thereby further diminishing inquiry), for fear that the coach would see you as defensive.

In groups of six to eight people, there is more chance of someone having a valuable insight into the way case presenters create their own difficulties. But most groups are even worse than pairs at raising shortcomings in ways that promote inquiry. A case presenter may receive a barrage of comments that are abstract, attributive, and bluntly advocated. The danger of a poor learning experience is especially high when only one or two members of a group have their cases discussed. They may feel unfairly singled out or ganged up on.

Discussing cases in an intact team creates opportunities for greater impact, but also poses difficulties. As one manager said to me privately, “You want me to lay out my real left-hand column before the group? But that’s like my secret sauce. It’s helped me survive all these years. If others know what it is, it might not work anymore!”

More serious problems can occur if members of a team give in to the temptation to “let each other have it” with resentments and hitherto-unvoiced judgments that have been building up for months or years. There is often good reason that people have not told each other what is in their left-hand columns. Getting unexpressed thoughts and feelings on the table may be an essential first step, but few teams have the capacity to turn these lemons into lemonade on their own.

At a recent meeting of a business unit, a regional sales manager stood up and said, “Our biggest problem is marketing. They don’t know what they’re doing. I’ve been saying this for years, and nothing happens!”

At this moment, Bill's left-hand column might have read: *I'm the only one who's responsible around here for raising this key organizational problem. But I'm not from headquarters, so they figure they can ignore me.*

The others, meanwhile, might have had something like this in their left-hand columns: *Here goes Bill ranting again. He's never willing to take responsibility. Demanding we hire more marketing people is not real-world; we are under pressure to cut expenses. How can we get past this ranting to get something useful done?*

Suppose that this team decided everyone should speak openly about their left-hand columns. Bill would advocate his position, adding that the others were irresponsibly ignoring him because he was from out of town. Others would advocate the opposite position, adding that Bill was an irresponsible obstructionist, and would he please shut up? People would feel angry, tense, and hopeless about resolving the matter. In the best case, some might feel a sense of catharsis at expressing their feelings. Participants would have reason to decide this "left-hand column business" was unproductive.

A skilled facilitator might inquire into each party's reasoning: "Do others confirm Bill's view that too few leads is a major problem? What leads you to doubt that hiring a marketing person is the answer? Bill, when others say we don't have the money to hire someone, do you have any information to the contrary? If not, what leads you to keep arguing for it?" The facilitator might prompt Bill to consider if he is acting from a mental model that says: *My responsibility is fulfilled when I tell people about the problem.* Similarly, the others might consider if they are acting from the mental model: *When someone points out a problem, we can hold them responsible for telling us how to fix it.*

SHOULD YOU HAVE A TRAINED FACILITATOR?

Revealing left-hand columns creates enormous opportunities for learning. To take advantage of these opportunities, it is important that at least one participant has the willingness and skill to promote inquiry, the presence of mind to recognize subtle mental models at play (including his own), *and* an eminent enough position that everyone else in the room will listen to him. In many cases, this requires an outside facilitator.

Here is a way that I imagine a team could test itself to see if it has the necessary skills, before making the decision to go ahead on its own. Bring together some core members of the team, and ask yourselves: imagine what we think is really on the other team members' left-hand columns. Now imagine if everybody actually said those things in a room together. Could we handle it? Would it lead to good things, or would it just be a recipe for people blowing up at each other, or getting entrenched in their own positions? Are we sophisticated enough in the mental models concepts to recognize our own potential for prodding each other's defensiveness?