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## The Profession of IT The Other Side of Language

*The conversation for action gives a framework for completing professional actions effectively.*

**N**EARLY FOUR DECADES ago, Fernando Flores had the first ideas that led to his formulation of the conversation for action, which has become so influential in networked business and professional communities. The question of effective communication in organizations first came to him while he was a cabinet minister in the Chilean government.

Flores came to the U.S. and in 1980 completed a Ph.D. thesis at UC Berkeley on a new theory of communication for organizations. In the mid-1980s he wrote a series of unpublished essays on his theory, beginning with the conversation for action. Many of these essays have long circulated in an underground of his students and business clients. They have recently been published as a book edited by his daughter, Maria Letelier.<sup>2</sup> They are a treasure trove of timeless insights into professional issues we encounter today.

The core of Flores's theory is that action depends on commitments, and conversations are the sources of commitments. He argued that the elemental building block of coordination is the conversation for action, in which two parties commit to producing a valued outcome together. He viewed organizations as networks of commitments, enacted by recurring conversations for action. Effective managers tend conversations rather than direct and optimize the movements of workers. The network



of commitments idea fit the Internet much better than previous management theories, and resonated with the knowledge-work idea promoted by Peter Drucker.

In the early 1980s, Flores founded Action Technologies, a company to build a distributed laptop-to-laptop email service called The Coordinator, based on his theory. By 1990, nearly half a million copies of The Coordinator were in use in organizations around the world. Action Technologies extended the technology to a workflow management system for organizations. Their system mapped

the network of commitments, managed assignments of people to roles in the network, and tracked the progress of work. They won several awards for pioneering the workflow industry.

Flores's communication theory energized a research community for computer-supported cooperative work (CSCW). It also attracted the ire of skeptics who regarded machines that tracked promises as a form of unwelcome workplace surveillance. His theory also energized a community of language-action software designers who focused on user practices around artifacts rather than artifacts them-

selves.<sup>3</sup> Their language action perspective has been more influential in designing apps for mobile devices and social networks than in traditional software engineering.

In the mid 1980s I was encountering management breakdowns in a research institute I was leading. My three dozen research scientists believed they were responsible for serendipitous discoveries in no particular time frame, while their funding sponsors believed they were responsible for deliverables with definite due dates. I treated the sponsor dissatisfaction as a communication problem and stepped up the flow of information about what our scientists were doing—brochures, pamphlets, tutorials, presentations, reports, and research papers. Unfortunately, this approach produced few results. Noting my quandary, a colleague recommended I contact Flores, which I did, and soon found myself reading his essays on conversations for action. His insights hit me like a lightning bolt. My management breakdowns were the result of scientists and sponsors having different commitments. I had been powerless to resolve them because I was oblivious to the language of commitments. After I began hosting scientists and sponsors in the missing conversations for action, most of the breakdowns disappeared.

Flores's essays gave me new insights into why other things important to me as a practicing professional did not work as well as I wanted. I learned how to influence moods and alter my timing when moods were bad. I learned that the practice of publicly sharing grounded performance assessments in teams makes it possible for team members to learn constructively from each other. I learned that the conversation for action and the network of commitments were not plans for machines to run organizations, but were tools for observation, helping to see how others in the network were responding and what their unspoken concerns were. Another essay (not in this collection) interpreted education as acquisition of capabilities for action at various skill levels, inspiring me to map out a program of reform for engineering education.<sup>1</sup>

Figure 1. Structure of a conversation for action.

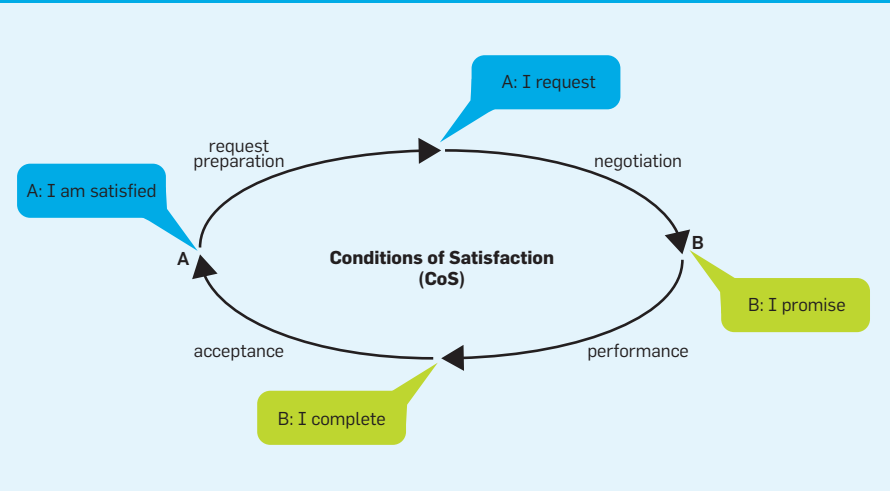
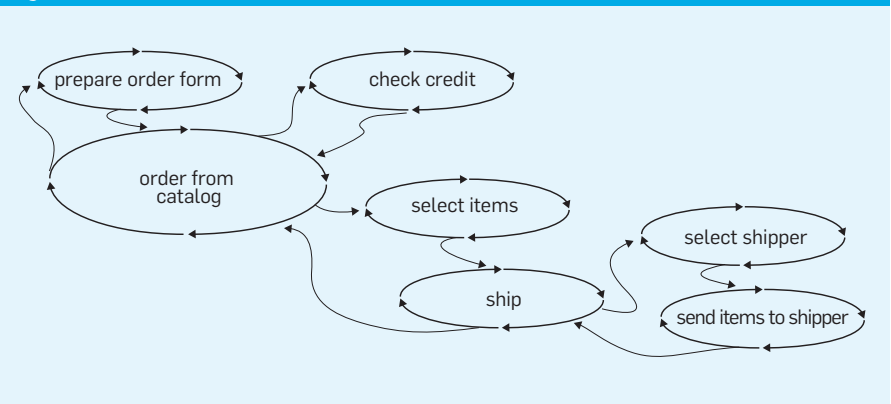


Figure 2. A network of commitments.



## Two Sides of Language

Language has two sides. The familiar information side interprets language as a means to communicate messages containing information. Through these messages, we communicate facts, desires, intentions, and models of the world. This side places a great emphasis on facts, how we represent them with expressions in language, how we build models to explain related sets of facts, and how we communicate with each other about the truth of claims.

The less familiar commitment side interprets language as emotional, social, and historical. In our conversations with each other, we invent new realities, we negotiate, and we make history happen. We perform actions with requests, offers, promises, and declarations. We evaluate actions with assessments, and we make assertions about what is true.

The most common breakdowns in getting our work done come from four sources: misunderstandings,

even when speakers believe they have been clear; miscoordinations, when different persons have different expectations of the intended deliverables; negative moods, which dispose people to be uncooperative; and distrust that builds with repeated misunderstandings, miscoordinations, and failed deliveries. None of these can be explained as failed information flows. They are all traceable to differences of listening and commitment. We depend on our skills with the commitment side to deal with them. Flores's essays are powerful exposés on this other side of language and the powers available to those who master it.

## Anatomy of Conversation for Action

The original conversation for action (CFA) paper (and summary in the Winograd-Flores book<sup>4</sup>) made clear that the structure of coordination can be precisely described and accurately observed, and it can effectively guide actions. The CFA structure is something that anyone can master with practice. I

will review it to remind us of its precision. Then I will discuss an important pitfall that arises paradoxically because the structure is so precise.

The CFA has a loop structure (see Figure 1) that sequences four commitments between two parties Alice (A) and Bob (B):

- ▶ Request or offer
- ▶ Promise or acceptance
- ▶ Declaration of completion, and
- ▶ Declaration of satisfaction

Alice is the “customer” and Bob is the “performer” in their loop.

The purpose of the loop is to cause a mutually agreed condition of satisfaction (COS) to become true. Alice proposes the condition with a request, and she and Bob may change it in negotiations before Bob accepts the request. Each segment of the loop represents a state of the conversation, and transitions between them are marked by observable “speech acts” of Alice and Bob in their conversation. After Alice declares satisfaction, the conversation is complete—at that point, the COS is fulfilled and the parties have no further commitments to each other. To complete the loop, the parties must coordinate smoothly during its performance.

The CFA diagram and structure are tools for observation. All the commitments, including the COS, are plainly visible to the parties and to observers of the conversation. Both parties become accountable for their own commitments, and each can assist if necessary to help the other person fulfill theirs.

Organizations set up recurrent CFAs between people filling various roles. We can draw maps like Figure 2 that show the organization as a network of commitments, in which subsidiary requests are linked to the segments of other requests that initiate them. The network is activated every time a customer initiates a request to the organization.

There are numerous ways to break a loop. Sometimes one of the four commitments is missing. For example, Alice might have thought dropping a hint was sufficient but Bob did not hear the hint as a request; or Bob might insincerely make a promise but has no intention of carrying it out. Sometimes the COS is ambiguous or understood differently by the two parties. Sometimes one of the two parties is missing,

for example the customer is missing when a producer generates a result no one has asked for, or a producer is missing in an office where no one tends the inbox. Sometimes one of the parties is in an uncooperative or otherwise bad mood. Sometimes one party does not trust the other, perhaps because of a poor track record. The number of ways to break a loop is truly amazing. This is why it takes a skill to automatically recognize the structure, spot any missing elements, and take immediate corrective action. It is a way of observing and reacting to how the parties are *listening* to each other.

### A Paradoxical Pitfall

A paradoxical pitfall arises because the CFA’s precision invites mechanization. The Winograd-Flores book (page 65) unfolds the loop of Figure 1 into a nine-state machine diagram that includes additional states corresponding to other possible moves—for example, the four common responses to a request, namely accept, decline, defer, and negotiate. The state machine was embedded within The Coordinator software and was its tracking engine. The pitfall is that many people do not distinguish between the CFA as a machine and the CFA as a tool for observing and tracking commitments. The machine can detect speech acts, record state transitions, and measure the times spent in each state. However, the machine cannot make commitments. Only the human participants can. It is a mistake to equate the CFA with a machine.

The CFA was intended from the beginning as a guide for observing commitments and listening for concerns. With this guide, a skilled team leader could navigate around bad moods, distrust, and environmental distractions. The skill of performing in a CFA this way is not difficult to learn once you understand the structure and its purpose.

### Other Conversation Types

Conversations for action do not happen in isolation. They are almost always preceded by one or both of

- ▶ Conversations for possibilities
- ▶ Conversations for context.

A conversation for possibilities identifies possible actions, without committing to any one. It is done in a mood of speculation. For example, we

could invent possible ways to solve a problem or respond to an opportunity. Some of the possibilities can become action when they become requests or offers in a CFA. A conversation for context frames the purpose and meaning of a team or project so that conversations for possibilities and for action can meaningfully follow.

If as team leader you leave either of these out, you are likely to have coordination problems because your team does not understand the purpose or cannot make sense of the proposed actions.

### Conclusion

The conversation for action interprets basic human coordination as a loop cycle of four commitments progressing toward a mutually agreed goal. It creates a precise framework for observing commitments and allowing the parties to adjust should a conversation veer off track. This conversation exists in the commitment side of language rather than the information side.

It is remarkable this simple linguistic structure for coordination is universal. It is observable in every language.

Professionals who master the skill of completing their loops will reap benefits including increased productivity because of reduction of wasted steps, delivery of more value to customers, fewer coordination breakdowns with teams and clients, and significantly improved reputation for integrity and reliability.

Now that the collection of seminal essays on these topics is available, you have the opportunity to use them to help you reflect on the breakdowns you are experiencing with your customers, clients, and teams. Maybe a lightning bolt of insight will strike you, too. **□**

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