# Reflections

The SoL Journal on Knowledge, Learning, and Change



# FEATURE ARTICLES

Speaking Truth to Power: Nurturing a Reflective Culture at the U.S. Defense Intelligence Agency Adrian Wolfberg & Nancy M. Dixon

Educating the Next Generation of Systems Thinkers: An Interview with Tracy Benson Tracy Benson & C. Sherry Immediato

Climate Interactive:
"Sims" for Improving Our
Thinking About Addressing
Climate Change
Andrew Jones &
Elizabeth Sawin

# **BOOK EXCERPT**

Action Trumps Everything: Act Your Way into a New Way of Thinking Charles F. Kiefer & Leonard A. Schlesinger, with Paul B. Brown

Published by The Society for Organizational Learning reflections.solonline.org



# Speaking Truth to Power: Nurturing a Reflective Culture at the **U.S. Defense Intelligence Agency**

ADRIAN WOLFBERG AND NANCY M. DIXON

As information moves upward through management levels, how does an organization ensure that what reaches the top is accurate? The Defense Intelligence Agency struggled with this question following the 2001 terrorist attacks against the United States. As a result, the Agency identified building and communicating knowledge as a core objective in its 2003 strategic plan. In this article, Adrian "Zeke" Wolfberg, director of the DIA's newly established Knowledge Lab, tells the story of how the Lab set the stage for culture change at the Agency using approaches such as Chris Argyris's left-hand/right-hand column activity for recognizing counterproductive conversational habits.



**Adrian Wolfberg** 

### Introduction

ollowing the 2001 terrorist attacks against the World Trade Center and the Pentagon, the intelligence community in Washington, D.C., was bombarded with criticisms, the most serious of which focused on the apparent lack of coordination and communication among its various agencies. In 2003, the Defense Intelligence Agency (DIA) undertook its first institutional attempt to address the communication issue by including it in its strategic plan. As a long-time Agency analyst and recent graduate of the National War College, I was recruited to lead this effort.



Nancy M. Dixon

In approaching this challenge, I saw both a broader need and a fresh opportunity for the Agency. From my perspective, people working at the DIA would have to learn how to change their behavior before they could become more collaborative. This would require nothing less than a culture shift for the organization, a shift away from its control-based environment toward becoming a knowledge-based one.

# **Creation of the DIA Knowledge Lab**

No one at the DIA disagreed that the organization needed to be more collaborative. Still off balance from the harsh criticism directed at it from all sides following the terrorist attacks, the Agency's director and senior leaders initiated and actively supported my plan to improve the DIA's execution of its primary task – ensuring the security of the United States.



I understood that effecting such a change was going to be an exceedingly difficult job and that signs of progress would be slow to surface. The DIA had no model for designing a collaborative culture. It would have to learn new ways of thinking and behaving. It would have to learn how to learn, a challenge that was included as an objective in our post-9/11 strategic plan. These shifts would contribute to the overarching objective of creating a knowledge-based culture.

# The DIA had no model for designing a collaboration culture.

What would change rather dramatically was the process that we would use to get there. I knew that no level of technology could fix the Agency's lack of collaboration. The problem was far too complex and deeply rooted, and it was characterized by a combination of systemic issues: our lack of familiarity with the principles and behaviors associated with working as a team; our countercollaborative nature, evident in our existing

organizational structure; and the individual nature of intelligence work that kept us isolated in our respective silos of responsibility.

In 2004, the senior leadership of the DIA sanctioned a research project whose purpose was to identify organizations that had succeeded in changing their behavior to the extent that their cultures were also changed. We wanted to understand how those organizations learned and what specific factors enabled them to do so.

Based on our extensive research, we identified two critical success factors for our own culturechange initiative. The first was that the initiative would have to be carried out with a small team of employees whose only job for a specified period of time (three months in our case) would be to learn how to bring about change. The second condition was that the team would report directly to the headquarters level. Without this direct reporting line to the DIA's top command, there was little chance that the initiative would be taken seriously enough to eventually introduce its principles and learning to the broader organization.

We also identified a third critical success factor, although it was not apparent or suggested in our research. We believed that in order to optimize our chances of success, we would have to avoid the "zero-sum factor." The zero-sum factor is present to some extent in all systems, but it is particularly engrained in government agencies. When something new is introduced in one part of a system, it necessarily "disturbs" and impacts some other part of that system. Further, this disturbance and impact is often negative or perceived as negative. The result is a zero-sum game, in which gain or positive change in one entity is achieved at the expense of another.

To minimize the likelihood of a zero-sum outcome for this project, we determined that the change team would have no physical home, that it would require little or no funding, and that no additional management or oversight personnel would be assigned to it. I would assume the management oversight role as part of my job. The third critical success factor, then, was that at no time during the course of the project would we request additional resources of any kind from any part of the Agency.

Once we identified the parameters within which the project would operate, we created a small organizational capability that would be known as the "DIA Knowledge Lab." Its purpose was not to train DIA employees. Its purpose was to create a psychologically safe space that allowed employees to discover their own solutions to the most fundamental social capital challenges, leading to a new kind of organizational knowledge that could be used to modify the Agency's uncollaborative behavior.

# The Knowledge Lab in Action

In early 2005, the DIA director formally established the Knowledge Lab. As the Lab's founder, I decided that its initial effort would focus on the Agency's knowledge-flow problem, which had been revealed during an earlier initiative in which I was also involved. That initiative was an in-depth review of the DIA's intelligence analysis performance in 2003 during the planning for Operation IRAQI FREEDOM. One of the key findings of that review was the great difficulty the Agency had in moving accurate knowledge up through the chain of command. Analysts were very sensitive to the number of reviews that their assessments had to pass through before they were accepted, and many found themselves adjusting their assessments to increase their chances of successfully navigating the many gates that were part of the DIA's standard process.

One of the key findings was the great difficulty the Agency had in moving accurate knowledge up through the chain of command.

# **Communication Dynamics**

Modifying deeply engrained behaviors such as the arduous process of moving knowledge up through the chain of command was a daunting task, and I knew I would need additional help. Nancy Dixon, an independent researcher and communication expert, was recommended to me by academic contacts. We discussed the project and its objectives and decided to work together. Based on the behavioral challenges I identified, Nancy developed an intervention technique designed to engage Agency employees in real-life experiences in which they would be able to clearly see what was happening to work-related knowledge – and why – as it made its way up the chain of command. We called this technique "Critical Discourse."

Critical Discourse was based on the work of Chris Argyris. Argyris found that employees at all organizational levels learn relatively quickly how they are expected to act and interact in certain situations, and they do so because the behaviors are engrained in the culture of the organization. It's just how things are. Eventually, these patterns of behavior become a natural part of an employee's day-to-day interactions, thus reinforcing the culture that spawned them.

When employees encountered potentially embarrassing or confrontational situations, they instinctively took actions to save face, regain control, and maximize the impact of their particular point of view.

In the course of our project at the DIA, we saw the same set of behaviors that Argyris predicted. When employees encountered potentially embarrassing or confrontational situations, they instinctively took actions to save face, regain control, and maximize the impact of their particular point of view. And they did so by using the same conversational tactics that Argyris identified in his research:

- Asserting their own views without revealing the reasoning behind them
- Discouraging inquiry into their own reasoning
- Minimizing or avoiding any inquiry into another person's point of view
- Asking leading questions to convince others that their own point of view is the correct one

Responding and acting on untested assumptions – usually negative – about the motives behind the other person's actions

When Nancy first conducted her Critical Discourse seminars at the DIA in 2005, participation was on a volunteer basis. The result was that in each seminar we had groups of people who didn't know each other and who hadn't worked together. The significance of this is that, when they returned to their respective positions, they had little if any opportunity to put into practice the techniques they had learned. After conducting the second and third seminars, we realized that we had a flawed design and that to accurately assess the true benefits of the intervention technique, we would have to test it with an intact team in which participants would be fully committed to the process from beginning to end.

Nancy and I went back to the drawing board and designed a framework in which Critical Discourse would be the key mechanism for learning new behavior that would interrupt and change the dysfunctional internal dynamics that were currently in play. We called this framework "Fresh Look."

# Fresh Look: Leveraging the Opportunity for Change

hile Nancy and I were refining the Critical Discourse intervention that we would use as the main vehicle" for shifting the organization's counterproductive behavior, the Agency was simultaneously experimenting with other ways to improve interpersonal and interagency collaboration. Prior to 9/11, the Agency relied almost exclusively on hardware and software technology as the way of bringing people and information together. After 9/11, however, decision makers looked to policy in addition to technology as a means of encouraging greater collaboration. But policy and technology were not enough.

Because I strongly believe that human factors impact every situation, I was encouraged when I learned that a few key Agency leaders were about to test a new approach for improving collaboration that would involve employees directly. The experiment focused on creating an environment in which employees' workspaces would be physically closer together than was the DIA's accepted standard. By 2005, the DIA had completed a renovation of the entire seventh floor in our main building, known as Building 6000, with the intent to let form follow function.

The renovated space had curved interior walls made of see-through glass instead of the original wood and steel walls, many large meeting spaces, and no individual cubicles. It was a dramatic change, and DIA's senior leadership wanted to kick off the completed renovation with a collaboration-related initiative. This was just the kind of opportunity I wanted for testing the Critical Discourse intervention that Nancy Dixon and I had been working on. The Agency's senior leaders agreed to sponsor a pilot project, which was to become known as "Fresh Look."

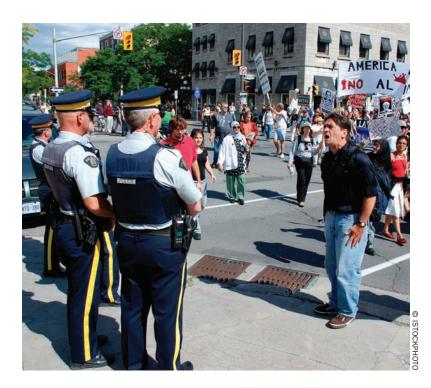
# The Fresh Look Team

The Fresh Look team consisted of 12 employees who were "contributed" by their supervisors. Most were analysts, with the exception of one visualization technologist and one collection specialist. None of them knew each other. There were two criteria for being selected. One was that each person on the team needed to have sufficient expertise to contribute to resolving the issue. The other was that, in the eyes of their supervisors, these individuals were not rigid in their thinking and were open to new possibilities.

I personally presented the Fresh Look project to each supervisor who would be contributing a team member. I described it as a way to empower employees, bring out the best in them, and shed new light on old problems. Both supervisors and participants came to the project with the expectation that each team member's unique knowledge would be tapped and that members would have the opportunity to explore new approaches, technology, and techniques that would benefit their home offices when they returned at the end of the pilot.

The Fresh Look team worked on a real-world intelligence issue, the "content" of the experiment. At the same time, the group participated in three Critical Discourse workshops and received individual coaching on interpersonal skills, the "process" component of the experiment. The Fresh Look group, at first a collection of strangers, soon became an intact team.

Nevertheless, at the beginning, no matter what we as experiment facilitators said or promised or safeguarded, the team maintained behavioral patterns typical of a hierarchical, siloed organization. We wanted the team to be free from imposed structure, to let knowledge creation drive structure, but instead we found that the embedded regime of structure was driving knowledge creation. At some point, we realized that the team was in danger of failing to create new ground and decided that we should apply the Critical Discourse technique more deeply. By doing so, we could



help team members communicate and share information based on knowledge that they would discover during the process and not be trapped in the structure we were trying to overhaul. In a real way, Critical Discourse saved Fresh Look.

At the beginning, the team maintained behavioral patterns typical of a hierarchical, siloed organization.

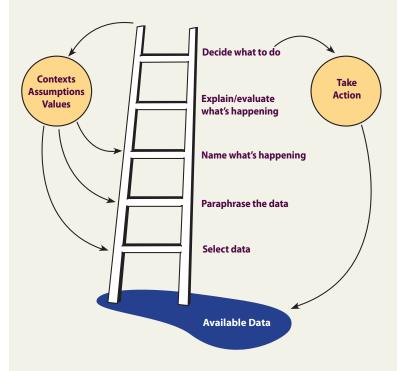
The Fresh Look team participated in Critical Discourse seminars as an ongoing part of their team program. Each seminar required team members to write up cases about communication problems they experienced prior to or during their participation in Fresh Look. They highlighted interactions that were preventing them and their coworkers from sharing knowledge that was critical for the team to succeed.

The process of gaining awareness of one's own negative patterns can be frustrating and embarrassing, an experience that some team members would have preferred not to participate in. Through analysis of their cases, however, they began to see the counterproductive impact of their actions on others. They learned to recognize damaging conversational tactics and began to point them out to each other. As the Fresh Look

team members practiced their new skills, they became more effective at listening carefully and critically to what others said. They were better able to understand what the speaker really meant by his or her words, giving each other a chance to speculate and question without the fear of retribution or ridicule for asking what they might have otherwise thought was a "dumb question."

# Ladder of Inference

he "ladder of inference," another tool pioneered by business theorist Chris Argyris, illustrates how and why we leap to knee-jerk conclusions in our encounters with others – and gives guidance for climbing back down. In a nutshell, from our observations, we unconsciously and instantaneously select data, based on our cultural norms, background, and other factors. We then add meaning, make assumptions, and draw conclusions – often incomplete or erroneous – about why other people are behaving the way they are. Finally, we take action. From our interpretations of the data, our actions make perfect sense to us, but they may not correspond to the other person's "reality." When two emotionally charged perspectives conflict, the situation can easily spin out of control.



Reprinted with permission from "Beyond Beer Diplomacy: Climbing Down the Ladder of Inference" by Janice Molloy (Leverage Points Blog, July 30, 2009).

# The process of gaining awareness of one's own negative patterns can be frustrating and embarrassing.

To help team members become aware of specific factors that prevented them from engaging in constructive, candid conversation, Nancy and I instructed them to recreate a difficult or unsettling workplace exchange, preferably one that took place with a coworker from their respective home offices. The group used Chris Argyris's left-hand/ right-hand column activity. In this activity, each participant divides a piece of paper into two columns. In the right-hand column, they transcribe a dialogue as it occurred. In the left-hand column, they document what they were thinking but not saying during that conversation. They then compare the left-hand column (their internal dialogue) with the right-hand column (their external dialogue) and look for counterproductive or self-defeating patterns.

# Roger's Case

Below is the reconstructed case of a Fresh Look team member, whom we will call Roger. This case is similar to the more than 150 cases that Nancy collected at DIA over a three-year period. Roger's case includes a stage-setting introduction, the left-hand/right-hand column dialogue, and a brief retrospective reflection.

# 1. My Case: The Review Meeting

I walked into the room, ready to defend a year's worth of analysis that had led to some significant findings - findings I hoped would get a fair hearing and maybe even lead to a change in government policy. I am an intelligence analyst who has been studying the prospects for peace between two longtime rival nations for well over a year. In my written report, I argued that the leader of one of the two countries had changed his mind and was ready to make compromises on a contentious issue on which his nation had historically held a deeply entrenched position. I argued that this new willingness had come about because of changes this leader had experienced at a deep personal level that would lead to a reinterpretation of recent political events. I concluded that this leader was seeing the world differently than he had a year ago and that he would make different choices now.

The review process meant a face-to-face meeting during which I was to defend my findings. When I entered the room, I saw three very senior analysts seated behind a long table, with a single chair for me facing what looked like a tribunal. A copy of

my report lay closed in front of each reviewer, who had supposedly read it – I say supposedly, because I'm skeptical that reviewers always read every word of every report.

Senior analysts are supposed to make sure that what moved through their part of the quality process was accurate and complete. I was there to get the report past this step in the process so that it could reach the policymakers who had only a slim window of opportunity to bring about a historic peace. But being junior to this imposing body, I wanted to accomplish this without damage to my own career. I had heard enough stories to know that reviewers had the potential to stall my career at DIA if I angered them and, as much as I wanted this report to make a difference, I did not want it at the cost of my own future.

After a few pleasantries, one of the senior reviewers, August, who had himself followed these two rival countries over a period of 20 years and certainly thought he knew more about the situation than this junior analyst sitting in front of him, raised the first concern he had with my findings. Here's our exchange:

# 2. Roger's Left-Hand/Right-Hand Columns

What I thought or felt but didn't say	What August and I said
There's more than enough evidence to make these assertions, not to mention the current course of action by the leadership.	August: I don't think you have enough evidence to go on to make such bold statements in a product. There's not going to be a peace agreement tomorrow.
What August doesn't understand is that the personal side of this conflict has changed – but he's not open to that idea.	Me: I know there won't be an agreement tomorrow. I'm just saying this is a unique situation given the leadership calculations on both sides, and if talks last long enough, the sides might be able to achieve peace through attrition.
Here we go again. Why can't he be proactive instead of automatically assuming things will go south?	August: I've seen this before. We should put a time cap on how long we think these talks will last. Besides, the conflict usually heats up around this time of year anyway.
4. At this point I don't know what to say. He's not going to see it my way, and if I argue more I might make myself look bad. I've got to pick my battles.	Me: All I'm saying is that I think the leadership calculations may have changed. Talks wouldn't have even lasted this long if their intentions weren't different now.
5. Now I've compromised my argument by saying "may have," even though the evidence is clear, and he's getting irritated. I'd better back off.	August: Well, we saw the same leadership in the same situation two years ago shock the world, so don't be so quick to take their word for it.
6. He must think I'm an amateur.	Me: Well, I didn't think I was just taking their word for it, but maybe I can try to soften the language in the product so it sounds less certain.

# 3. Roger's Reflection

Coming out of this meeting, I felt disappointed in myself that I had not summed up the evidence in a more articulate manner. And I was afraid that my attempts to not argue with a highly respected senior analyst had actually backfired on me, and that the other senior analysts now perceived me as lacking the ability to present my own position. I walked away thinking, "There's no way to win: if you push, you insult them; if you don't, they think you're incompetent!"

We discussed my case during the Critical Discourse workshop, and my peers were able to help me see my conversation with August in a way I had not thought about it before.

**Reflection:** My seniors define their role as "error detectors."

**New Learning:** The senior analysts in this review meeting felt accountable for the quality of the information being packaged, and primarily saw their responsibility as identifying and pointing out weaknesses and discrepancies in the reports I produced. August stated his criticisms as facts rather than as issues that were open to discussion and interpretation. For example, he told me, "You don't have enough evidence to go on to make such bold statements in this product." In criticizing me in this way, August saw himself as schooling me, teaching me caution about what I took for evidence. August saw himself as having been successful because he was able to detect and point out errors in my assessment.

**Reflection:** I might be as closed-minded as my seniors are.

New Learning: I jumped to the conclusion that August was closed-minded when I interpreted his criticism as sounding to me as if he did not want to be challenged. My thinking was, "What he doesn't understand is that the personal side of this conflict has changed, but he's not open to that idea." I came to this perception about August based on the tone of his remark. That perception resonated with my

preexisting view that "it is difficult to challenge the assumptions of the old guard who are set in their ways." After thinking about the incident, I realized that I was closed to the idea that August might not be closed.

**Reflection:** I sometimes back down unnecessarily.

**New Learning:** When I heard August's strongly stated criticisms, I responded with tentative words such as "they might be able" and "I'm just saying." As August continued to make critical comments during the review meeting, I essentially gave up and decided to cut my losses, thinking, "He's getting irritated. I'd better back off." My hesitancy and reluctance to push my view came from the assumption that August was closed to new thinking and could not be influenced, no matter how persuasive the argument. I chose to pick my battles.

**Reflection:** My seniors are sometimes condescending.

**New Learning:** I realized that August was offended when I persisted because he made nasty comments about my competence in order to win his point. For example, August said, "Don't be so quick to take their word for it." That comment (1) implied that I did not do a thorough job of analysis but rather took the short cut of "taking their word for it" and (2) chided me for doing so as though it were a proven fact. August was putting me down but in a way that maintained a facade of civility. It refocused the review session from the content of the report to a personal attack, and I responded to the personal attack rather than focusing on the content issues.

**Reflection:** Historical experiences

New Learning: August used his past experience to validate his opinions, saying, "I've seen this before" and "We saw the same leadership in the same situation two years ago." I interpreted these statements as August not wanting to be questioned. I realize now that I did not give August a chance to explain how he used his past experience to come

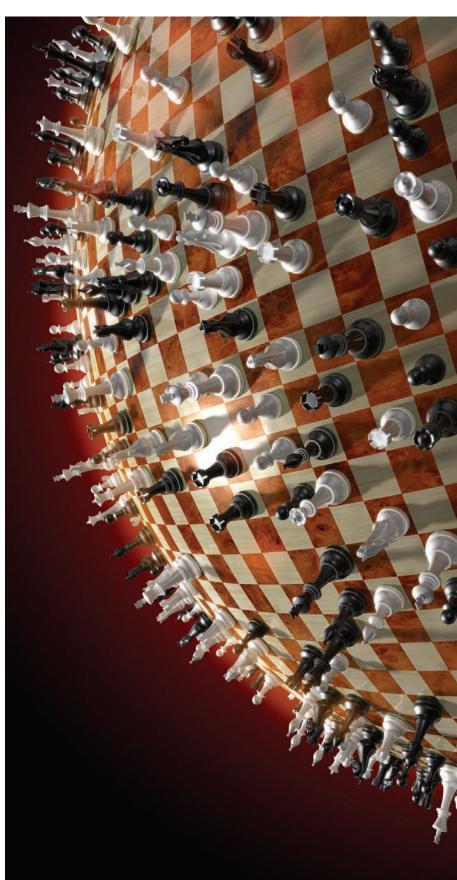
to his conclusion. He might have been right or wrong, but I really prevented myself from discovering his logic.

**Reflection:** We were not asking questions of each other.

New Learning: Neither August nor I asked questions. Although we stated our opinions and positions, we did not ask why we held those positions. For example, when August said, "Don't be so quick to take their word for it," I should have tried to find out what he had seen in the report that indicated I was "taking their word for it." There might have been some important evidence from which I could have learned, but I didn't ask the question and I interpreted the "putdown" only as, "He must think I'm an amateur," reacting to the slam at my competence, not the potential substance of August's critique. Nor did August, when he claimed that I "did not have enough evidence to make such bold statements," ask me what support I might have had for any specific "bold statement" in the report, which might have led him to construct a more informed opinion.

# My Perspective as Fresh Team **Day-to-Day Sponsor**

Seeing cases such as Roger's, I quickly began to understand the critical role that language and conversation play in everything we do. Earlier in my career as an analyst, I had taken conversation for granted, placing a higher value on thinking and writing. Now my understanding had flipflopped. I began to see knowledge creation as a social phenomenon with language as the medium of exchange. If the language was "broken," then knowledge and learning would also be broken. Recognizing this has led me to a new understanding of collaboration. It is the successful use and correct interpretation of words and conversation that allow two or more minds to share and organize information using a common language. Common language leads us to deeper understanding and the discovery of new knowledge.



© THINKSTOCK

The conversation that Roger described illustrates a problem that I call "speaking truth to power." One of the ironies revealed in his case is that because of my own day-to-day choice of language, I also often leave much knowledge undiscovered. One way to minimize this is to view conversation as a "harvesting" of other minds, something from which we can reap the benefits of a better understanding of what is meant and of a more accurate engagement in conversation.

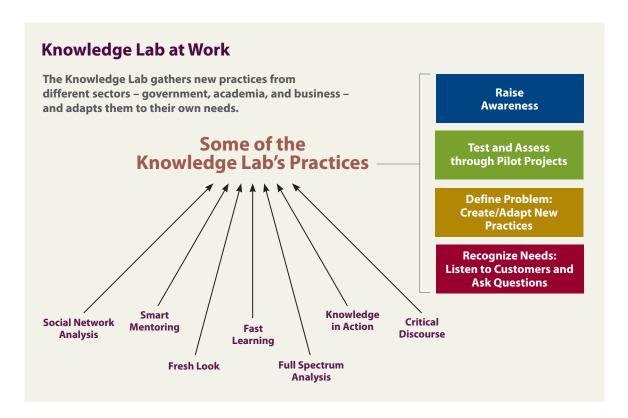
I began to see knowledge creation as a social phenomenon with language as the medium of exchange.

### What We Have Learned So Far

Through the Fresh Look project, with the use of Critical Discourse, the Defense Intelligence Agency has embarked on a path of "learning how to learn" and has laid the foundation for our shift toward a culture of improvement. Chief among these learnings was an understanding of the social nature of knowledge. We found that attending to the "people piece" was a critical success factor for creating a learning organization at DIA. We could no longer take for granted the most basic elements of conversation – teamwork, trust, a common vocabulary, shared goals and assumptions. Nor could we assume that we always had a psychologically safe space in which to operate. If we are to realize and capitalize on the full potential of cognitively diverse teams, each of these elements of conversation needs to be identified and explicitly addressed.

While testing targeted Knowledge Lab intervention techniques, we frequently discovered and built upon unanticipated side benefits. For example, we discovered that, when introduced at the beginning of a project, the use of Critical Discourse combined with team goal-setting sessions accelerated and augmented the team-building process.





Applying Critical Discourse as a routine part of our team meetings kept us aware that we all had room for improvement and reminded us to think about our left-hand columns as we were conversing. Because we were all learning this new skill at the same time, we also had the psychologically safe space that we needed to reflect openly and candidly on our own and others' need for improvement.

Over the past six years, we have also incorporated and tailored Fresh Look's approach to resolving existing and ongoing complex issues. We refer to these ongoing efforts as "Full Spectrum Analysis," which the DIA considers fundamental in how we go about addressing conflicts and emerging challenges.

We launched the Knowledge Lab in 2005 as a means of engaging in purposeful targeted innovation. At that time, few people in the Agency understood the relevance of our work to the intelligence mission. As the Knowledge Lab's capabilities have matured, the internal demand for our services has risen. People within the DIA now recognize that the intelligence mission requires gathering and analyzing two kinds of knowledge: traditional knowledge about threats to the security of the country and subjective knowledge about how we operate among ourselves. Employees now value the process of discovering how DIA actually goes about doing its job and appreciate that the Fresh Look effort has provided them with a set of entirely new tools. Gradually, the DIA is coming to understand that what we can know about the world is only as good as what we know about ourselves.

# **Shaping the Future**

The process of learning to be a knowledge-based culture has been about our willingness to probe and uncover the complexity of the DIA's internal organizational life. It has also been about creating a new, shared language through which we can more successfully communicate complex issues. If we were to have any chance of becoming a knowledge-based culture, we had to create an internal demand and appreciation for reflection, particularly self-reflection. It is our ability to reflect and our continued willingness to work at improving that ability that has set us on a path toward becoming a collaborative, knowledge-based organization.

Our ability to reflect and our continued willingness to work at improving that ability has set us on a path toward becoming a collaborative, knowledgebased organization.

The Knowledge Lab project, which started out by addressing the needs of a small group of frontline employees, has steadily progressed through levels of management to the highest levels of leadership at the DIA. As our new way of learning has worked its way up through the organization, the complexity of the issues that challenge us has also grown.

Successfully resolving these increasingly difficult matters of security is critical to the future of the DIA and to our reputation in the intelligence community. The way in which we choose to go about resolving them, however, is important not only to increasing our traditional knowledge base but to maintaining and improving our organizational health.

While our effort to transform the DIA culture has had a positive impact, it has come at a cost. Sharing and dispersing what we have learned through our long and bumpy journey has been the most difficult part of this project to date, and I believe that our greatest challenge going forward will be in institutionalizing what we have learned.

The journey continues. ■

### RESOURCES

Argyris, C. (1990). Overcoming Organizational Defenses. Prentice-Hall.

Argyris, C. (1993). Knowledge for Action. Jossey-Bass.

Kean, T. H. and L. Hamilton (2004). The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States. U.S. Government Printing Office.

# ABOUT THE AUTHORS

Adrian "Zeke" Wolfberg created and led the Knowledge Laboratory at Defense Intelligence Agency, U.S. Department of Defense, from 2005-2010. He continues to build upon the successes of the Knowledge Laboratory to focus on organizational performance improvement. adrian.wolfberg@dia.mil

Nancy M. Dixon is an independent researcher and consultant. She was a professor of administrative sciences at the George Washington University and is the author of eight books and over 60 articles on organizational learning. nancydixon@commonknowledge.org