

Investing in the Social Capital of Knowledge

Adrian (Zeke) Wolfberg
Defense Intelligence Agency
Office of the Chief of Staff, The Pentagon
Washington, D.C. 20340-5100
May 2005

The views expressed in this article are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.

Abstract

The nature of how we use and transfer knowledge is deeply correlated with social behaviors of the intelligence analyst. Recognizing how these social dynamics impact knowledge sharing and the resulting change in these behaviors should help improve what the analyst knows and what customers can expect. More importantly, an improved understanding of the role of social capital¹ in the creation of knowledge should benefit the developers of analytic tools. We are investing in an organizational and resource approach to make explicit this social dimension of knowledge in order to modify behaviors one step at a time to improve the quality of knowledge creation and increase the extent of knowledge sharing.

1. Introduction

The Defense Intelligence Agency (DIA) has created a virtual and independent Knowledge Laboratory to help improve all-source analysis. The Agency is using the Laboratory to help manage change while maintaining stability by developing an internal “engine” capability to continually anticipate and respond to emerging needs. As a result, the Laboratory is benefiting the components of all-source operations: improving the analytical capabilities of the analyst and collectors; engaging in the social networked environment where knowledge is created and communicated; and exploring the

¹ By social capital, we mean the value that social connections between people have in providing measurable advantages in what we know and how we leverage what we know in the work place.

operational impact of actions that result from knowledge. The Laboratory uses short-term, pilot projects to experiment with improving knowledge- and social capital-related behaviors in the work place within either the intra-agency or inter-agency environment.

2. Imperative for Change

The role of foreign intelligence analysis activities (analysis and analytic strategies for collection) has been generally consistent over the past fifty years, reflected in two assumptions. One has been the perception that intelligence plays an enabling function to support policy and operations. The other has been the model of attrition-based conflict.

Our behavior as intelligence analysts has been shaped by these assumptions. We need to reexamine them. The first has tended to make intelligence activities reactive instead of proactive to changes. As a result, there have been long periods of maintaining the status quo, shattered only when shocks occur to the system. The second has tended to focus our thinking about the relationship with our adversaries in a binary way, we either win or lose.

3. To Face the Future

While we currently frame our main adversary by radical Islamic terrorism, future threats will be even more diverse, and their methods of attack more complex, nuanced and lethal. Such a future will be characterized by the uncertainty of threat agents as well as the methods of exerting their will.

The end of the Cold War in the late 20th century, and 9/11 terrorist attacks in the beginning of the 21st century, provides a window

of opportunity to change intelligence. However, we have generally seen modification to structure or technology as the principle solutions to overcoming deficiencies in intelligence performance. For example, the 9/11 Commission Report published in 2004 cited the inadequacy of the way the intelligence community is organized and recommended the creation of a Director of National Intelligence with overall budget authority to oversee national intelligence.² While this approach has been an important strategy in the past, it cannot be the only strategy for the future because it takes too long to understand, respond to and anticipate new threats. The Chairman of the 9/11 Commission simultaneously recognized the non-structural cultural aspects of organizations that need to change: "I think there's a lot [of] good going on, but a lot of its top-down at the moment, and it's really got to get into the bowels of these organizations to change the culture if it's going to be effective."³

To minimize the disruption of organizational change and operating rules from external sources while maximizing the potential for emergent growth, we need a capability that senses change and then lets whichever part of the organization best suited to this change respond with agility and speed. To do this, we have to change the way we see ourselves. We need an analytic culture – regardless of organizational structure – that accepts and demands self-examination of its people, technology and processes, encompasses a total analytic focus on all-source operations, and will not be afraid to promote individual and group learning as a high priority.

4. Benefit to Intelligence Analysts

The traditional view of analysts is that their value to national security lies in *what* they know. However, the premise of this paper is that change has to start from within, and therefore the value of analysts must also include *how* they think.

² The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States, (New York: W.W. Norton and Company; 2004) 407-411.

³ Chris Strohm, "9/11 Commissioners Worry Federal Reforms May Not Stick," GovExec.com Daily Briefing, August 11, 2004. http://www.govexec.com/story_page.cfm?articleid=29206&printerfriendlyVers=1& accessed September 9, 2004.

But it's more than just simply addressing *how* analysts think. We tend to believe that thinking is purely a mental activity that takes place within the mind of an analyst. But, this paper proposes a broader view. What is proposed is that thinking encompasses the connection between the individual and other analyst minds where information is converted into knowledge, the communication journey from the analyst to other people, and a resulting action that occurs.

Analysts, therefore, operate in a dynamic social environment. The major pieces are the capabilities of the analyst, the social environment through which knowledge is created and communicated, the action that results from knowledge, a changed threat environment, and then the cycle is repeated.

5. A New Behavior Model

By adopting a social model of knowledge, analysts can make adjustments to the pieces of this dynamic social environment. The model can be used to improve analyst intellectual capabilities within the context of the entire all-source operation framework, to improve the social context which will have direct impact on the quality of knowledge, and to explore the operational impact of all-source analysis.

The basis for organizational change is that it has to be generated from within – operating with an internal locus of control. First, as humans, regardless of how we organize ourselves, we tend to defer to hierarchy, and as a result, perceive ourselves as operating in organizational units belonging to power centers in spite of the fact that "real problems do not come neatly packaged [for these units]...[and] cross-cutting problems require cross-cutting solutions."⁴ Second, research shows that new and effective ideas for adapting to new and challenging situations typically come from people at the fringes of the organizational structure, from the "grassroots," by people who best understand the issues and needs and become energized to develop a solution.⁵ Third, research shows that

⁴ Karen Stephenson, "Towards a Theory of Government," in Network Logic: Who Governs in an Interconnected World? Ed. Helen McCarthy, Paul Miller, and Paul Skidmore, (UK; Demos, 2004), 43.

⁵ Michael Hammer, "Deep Change: How Operational Innovation can Transform Your Company," Harvard Business Review, April 2004, 89.

the way in which organizations manage their development of new ideas is absolutely critical in determining success; the creation of independent units separate from the operating business line but reporting to senior management is almost always successful.⁶ By doing so, the independent group can develop its new processes, structures and culture to implement the new idea thereby potentially overcoming the natural tendency for organizations to be inherently change-averse.

6. The “Internal Engine” – Knowledge Laboratory

To overcome and leverage these dynamics, the DIA has recently created a centrally managed, yet distributed and independent capability focused on solving specific socially-based challenges to the creation and sharing of knowledge.

The capability is a small, virtual activity to test new processes through pilot projects. This activity – a virtual “Knowledge Laboratory” – becomes an engine for change inside DIA and potentially the wider intelligence community. The laboratory intentionally is not a line organization, nor embedded into a line organization, so as to not explicitly come into competition with standard operating procedures which could then promote resistance to change.

Cross-organizational representatives from each of the line and staff organizations form the Laboratory’s management team, based on membership criteria and an interview process. Today, the team consists of 25 employees who share the following characteristics:

- has a bias for action
- defines professional success in terms of having an impact
- not afraid of taking risks
- views the world strategically but typically framed by the context of their work assignment
- considers collaboration a force multiplier
- understands the “as is” condition of DIA and wants to move towards a “to be” state.

⁶ Charles A. O’Reilly III and Michael L. Tushman, “The Ambidextrous Organization,” Harvard Business Review, April 2004, 76.

Last year, a smaller management team of nine employees created the strategy of the Knowledge Laboratory, and developed the pilot projects that are in place this year. Five of today’s 25-person team are alumni of last year’s development team.

During the development cycle last year, the team learned some valuable lessons. First, any framework to solve a problem came from looking outside DIA for expertise or previous experience. Second, that meant the team was advocating a new approach and the challenge was finding management advocates within DIA who would be willing to risk a new approach. Third, the team generated more approaches than were initially funded with the remaining pilot project ideas in reserve. This reserve list came in handy and has been tapped for follow-on projects. Fourth, not all ideas required funding. Finally, pilot projects had to be linked to strategic goals.

7. Today’s Pilot Projects

This year, the laboratory team is working at two simultaneous levels. The team is currently implementing projects that were planned last year while developing pilot projects for next year. In the near future (next year), the laboratory will work at three levels simultaneously: we will work new projects, develop ideas for future projects, and further develop last year’s successful projects potentially for transition into existing or new process managers.

We have two types of short-term (six months or less) pilot projects. The first type of pilot is research using industry, academia or other resources. A research pilot is used when we do not have enough information or resources to test a new process. The research pilot is used to acquire more knowledge about the proposed subject matter and to make recommendations for how to proceed. One of the research projects DIA is exploring is how knowledge organizations effectively use performance measures. The researcher for this project works in DIA’s Directorate for Administration and has commercial experience with logistics and engineering. The individual works half-time as a Joint Military Intelligence College (JMIC) Research Fellow to pursue this project. He is currently in the process of sending out surveys to commercial and government organizations to collect data. In another research project, we are

exploring the role of corporate branding and its impact on the quality of intelligence analysis. The individual is a graduate student at the JMIC and has selected this topic for his thesis. He will use the extensive results of the Knowledge Laboratory team selection interviews as data for his thesis.

The second type of pilot is an executable project. An executable pilot is used when an idea for experimenting with a new process can be clearly defined – there is an outcome and some measures of success – and a line or staff organization can host the project. The Laboratory has a number of projects underway. They began in February/March and are expected to end in June/July.

One executable pilot project is called “Fast Learning.”⁷ Fast Learning is a way to do lessons learned and dynamically take advantage of these lessons. The team initially framed the pilot project to help teams of analysts and collectors sequentially rotate through our new 7th floor collaborative environment. As the date to begin implementation neared, the intended target for the pilot changed from the content analyst/collector teams to the support function that provided all the administration and operational support to the analytic/collector teams. There were many unforeseen obstacles to supporting the content teams. For example, in order for cleared non-DIA analysts or collectors to be part of these content teams, they had to have access to DIA computer systems. However, it was not a simple matter to do this. It turns out that the names of the non-DIA team members had to be added into DIA personnel administration databases because there is an interdependency not previously considered between personnel data and computer system data.

Interestingly, before the kick off of the pilot began, through dialogue between the pilot lead and her peers about the concept of this pilot project, a new idea surfaced that was an extrapolation from the baseline concept. It turns out an employee with 40 years of operational and intelligence experience in air defense was retiring in 30 days. The supervisor of this employee thought it would be great idea if the

retiring employee could leave behind valued knowledge so that new employees could be more productive quicker. The pilot team agreed to add this aspect to the Fast Learning project. The retiring individual was video taped a number of times using business case interviewing methodologies. Video clips and transcribed text will be organized into a “Smart Book,” a value-based presentation in a web page addressing concepts and issues of relevance to new employees.

The same supervisor then wondered why DIA could not access this individual after retirement. This was a great idea for which DIA does not have a systematic capability to handle but for which other organizations have. This idea is now part of the Knowledge Laboratory’s team’s repertoire of new ideas.

Shortly thereafter, other individuals familiar with the Fast Learning pilot idea, and aware of the Smart Book efforts in-progress, suggested that we interview an analyst who was just returning from a long deployment in Iraq to capture that individual’s perceptions and changes in perceptions. The analyst was returning in days. The Fast Learning project team quickly made the decision to video tape the analyst within days of his return from Iraq and will process the data and present in the form of the Smart Book.

All this has happened and the Fast Learning team has not yet had a chance to complete the original capturing of the support team’s assistance to the 7th Floor analytic/collection teams. That effort will begin in a few weeks.

Another pilot project is called “Critical Discourse”⁸ and presents the hypothesis that focusing on conversation to improve the identification of implied assumptions can result in a better outcome. This is particularly germane to analysts who engage in debate with other analysts about their conclusions and then wonder why one side wins and theirs loses. The pilot began not as a pilot but as the potential to help the Knowledge Laboratory team be more effective. Access to the Laboratory selection interview data informed the possibility of

⁷ Fast Learning is a methodology pioneered by British Petroleum and today implemented by SAIC, <http://www.saic.com/km/methodology.html>

⁸ Critical Discourse is the Knowledge Laboratory’s term for addressing some of the work of Nancy Dixon at Common Knowledge. <http://www.commonknowledge.org/page.asp?id=29>

helping team members with uncovering their assumptions. During one of the team meetings, a information presentation was made about this topic and the team responded positively. The pilot will start in May and consists of three interactive one-day sessions to a group of 12 people. Each one-day session is separated by 30 days where the participants are asked to practice new conversation skills. The participants are coached during the 30-day period.

Another pilot involves the use of social network analysis (SNA) in two ways. One is a Leadership SNA.⁹ The top three tiers of leadership at DIA are the participants, numbering about 85 leaders. The Director of DIA is the first tier; the Board of Directors, his direct reports (about 13 in this SNA) are the second tier; and the direct reports to the Board of Directors (about 71 in this SNA) are the third tier. The purpose of this pilot will be to identify the horizontal and vertical communications both internal and to customers to get a baseline of how integrated we are and a roadmap to improve integration.

The second SNA is targeted at the working-level using the Knowledge Laboratory team as the participants.¹⁰ This SNA has two purposes. First, it exposes the broader employee population to the potential to use SNA as a diagnostic and prescriptive tool to improve performance. Second, it specifically attempts to improve the performance of the Knowledge Laboratory team. Both SNA pilots will begin in April and end in July.

Lastly, in another pilot, the team is beginning a project to get at the heart of the way users of technology and developers of technology interact with each other at a fundamental level. The pilot could not have begun until mutual recognition of the dysfunctional way these two populations currently interact. The user complains that the technologist did not deliver what was asked for while the technologist complains that the user did not articulate their requirements. That recognition was recently acknowledged which led the way towards the establishment of a very small, selected working group.

⁹ The leadership SNA is being conducted by Karen Stephenson, <http://www.netform.com/html/stephenson.html>

¹⁰ The working-level SNA is being conducted by Rob Cross, <http://www.robross.org/>.

The Knowledge Laboratory-sponsored working group's initial task will be the creation of a terms of reference and a roadmap to move from the "as is" state of the current model of interaction to the "to be" model, and to then test out this new model on a fresh opportunity. The idea for this pilot emerged from last year's developmental effort leading to the creation of the Knowledge Laboratory but at that time, the pilot idea was focused on identifying a specific opportunity. We had not addressed the need to create a new framework first; we assumed we all knew what was needed. We would have started in the wrong direction and limited the opportunities for spreading the dialogue. Today, representatives from both populations are agreeing to the need for a shift from the way things are to the need for improvement. We do not know what the "to be" model will be but now we can embark on that journey in a shared way instead of a divisive way.

8. Tomorrow's Pilot Projects

Currently, the Knowledge Laboratory is developing pilot project ideas for next year through in-depth interviews with each of the 25 team members. Each member was interviewed twice, each interview lasting one hour, using a total of 15 questions. From these questions, the members generated about 50 ideas to improve DIA. After analyzing these ideas for duplication and relatedness, we culled the ideas down to 27 themes. As new ideas are generated from the team, the workforce or leadership, those will be added to the project list and evaluated for execution throughout the year.

To process these 27 themes, the Laboratory team was divided into four teams. We did not tell the team members how to divide into teams; they were asked to self-determine membership. The team members did this to instantiate ownership of the process. The four small teams then prioritized the 27 themes based on their individual and collective interests. Each team sequentially stated their first priority theme but when a team declared their interest in a theme, it was removed from consideration by other teams. At the end of series of selection rounds, each team had identified seven unique themes (one team had six). The teams were given a chance at the end of the rounds to trade themes and two teams took advantage of this opportunity.

Each small team has the task to validate their list of themes. They must determine how these themes relate to the DIA Strategic Plan,¹¹ how they relate to the DIA Director's Intent,¹² and the paradigm each theme is attempting to improve. Their next step will be the development of specific pilot project ideas to support the themes they will have already selected and connected to strategic goals. By the summer of 2005, we will have completed an analysis of specific pilot projects and have made recommendations to DIA leadership for their implementation in 2006.

While the above method of pilot project selection helps kick-off the Knowledge Laboratory this year, it will have to change in the future because this group of 25 has a somewhat limited ability to know every significant process that might need improvement in DIA. That limitation is the reason why we designed the need for an extended network so that a sense-making capability can be achieved. Each of the 25 team members was asked to identify 5-10 colleagues they thought would have similar characteristics as themselves, as state above. So far, the team has identified a network of about 125 people. One of the challenges of the Knowledge Laboratory team this year will be the setting up of the mechanics for this larger group of employees to share ideas and develop ideas for 2007. We fully expect the network to grow beyond 125 people.

Finally, let's return to the notion of the third simultaneous activity for the Knowledge Laboratory, that is, after this year's pilot projects are completed, some will be successful and there will be a demand by employees and/or leadership to move these project ideas towards full implementation. For example, if the Fast Learning project(s) is successful and demand for institutionalization eventually emerges, we might need new organizational functions or structures to replace the temporary activities currently performed by the Knowledge Laboratory pilot

projects and contracted practitioners. How we do this transition remains to be determined.

9. Looking Back to the Present

By looking into the future, we can imagine a number of changes that were influenced by the efforts of the Knowledge Laboratory. Imagine an intelligence agency where the internal stovepipes no longer exist because the social networks created through pilot projects have reconfigured the way business is conducted. Intelligence professionals can quickly tap into the accumulated wisdom of both internal and external subject matter experts and an environment of continuous learning permeates the agency.

This future started today with the introduction of various pilot projects into the Defense Intelligence Agency. It is just the initial step towards this imagined future, and we believe it will flourish even though the only concrete observable that exists in the present is a vision of the future and the beginnings of exciting activities.

¹¹ The DIA Strategic Plan, published January 2004, is the basis for the creation of the Knowledge Laboratory, specifically Goal #3: To Become a Knowledge-based Organization.
http://www.dia.mil/internet_strat_plan/52712_cov.htm

¹² The DIA Director's Intent, published December 2004, is another basis for the operation of the Knowledge Laboratory.