# News & Views

# The New Intelligence Organization (NIO)

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The President only wants one thing from the NIO: the gift of prophecy. As the great American philosopher, Yogi Berra, once said, "Prophecy is particularly difficult, since it is all about the future." The ability to predict the future is illegal in the state of New York, and impossible most other places. This is particularly true if the future is the result of the coupling of complex, nonlinear, interrelated variables such that what has not yet happened is not a secret, but is really an "unknown unknown." The best we can do with such situations is to be humble, agile of mind, flexible, and seek out early indications and warnings of what might happen, and not even pretend to be able to make predictions. A flexible, agile, and innovative mindset is necessary, and although giant computers crunching on terabytes of data might be helpful, harnessing the power of a multidisciplinary group of clever people with a diversity of thought is going to be the most valuable asset of the NIO. It is important

to stimulate innovation, reward risk taking, and not punish reasonable failures in this group while it tackles this most difficult job, and it is essential that the group be encouraged to regularly question the assumptions of our own political leaders.

Those of us trained in the physical sciences have rigorous methods for dealing with solutions to well understood phenomena, but are not good at handling ambiguous, poorly defined and rapidly changing data that is obscured in a noisy environment. We also don't tend to have the imagination of artists, don't understand the importance of love and hate in decision making, and don't interact well with people who don't talk our language. We are not, however, totally useless in the analysis business, since we do know how to apply rigor and logic when it is called for, but not in the way we normally operate. Aggregation of many complex and contradictory bits of information might best be done through creation of metaphors in order to cross the gap between many relevant disciplines, including the social and physical

sciences. This task might be done through game playing, competition, and sharing food. Capturing the occasional and greatly sought after "Aha's!" requires a supportive environment and facilitators that are good at synthesis and have the ability to listen for nuance and occasional connections. The process of collective wisdom will be enhanced by an environment captured by some rules of behavior such as the need to be good listeners, to be open to the outcome of discussions, and to always tell the truth. Much of the information available to the NIO will not be secret and pretending to be engaged in protecting what is generally known, will get in the way of sharing information and creative thinking.

## Inside this issue

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The NIO workplace environment needs to be one of sharing and trust with a major emphasis on getting diverse people to know and understand each other through games, competition and exercises that allow the analysts to experience the way the adversary lives, thinks, enjoys, suffers, and decides. I envision a workplace environment that is a combination kindergarten/ sports bar with many people sitting at bar stools watching display screens and writing all over the walls. When the intelligence problem was to count numbers of things, it was alright for everybody to go off on their own and count, but now it is about people and ideas, and diverse collective thinking is essential. It would help if we knew a lot more about the brain, consciousness, and what is hardwired in from birth that could emerge someday in the future under the right circumstances. Since we can't predict today what any individual would do in a particular circumstance, it is impossible to predict what a group, or society would do, particularly over the long term, but imagining a variety of possible futures is helpful. The long view is not the next few years, which is probably already written in stone—or at least in wet sand. Inescapable trends in demographics, economics, and resources, can be projected if we allow our minds to stretch out as far as possible, and then back off to the short term of a few to ten years.

The charter of the NIO should be to look for trends and early indications of a hypothesis that they have created through imagination, game playing, and simulations. If they want to monitor that which does not exist, they must first imagine it, and tell themselves a story about it, then modify the story under various circumstances and re-imagine it.
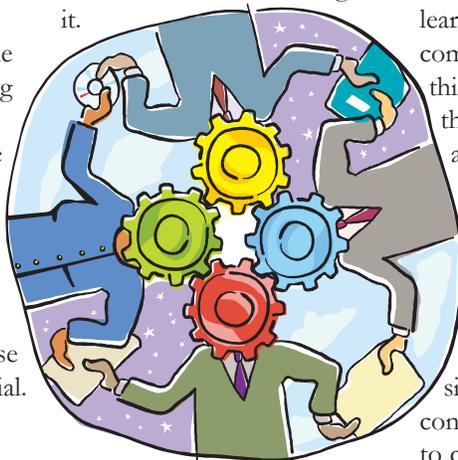
They should also always have within the NIO a group of smart, mean, highly motivated "just pretend bad guys," who like to play the game and beat the good guys. This can be done in simulated environments, including computer supported video games, and it would help if there were a psycho/ physiological monitoring system of the game so that the players receive feedback and are coached to improve their skills. Someday we will have non-invasive physiological/brain monitoring so the individuals and the group are coached individually by their own computer assistants and the group by its own computer facilitator that provides tips, coordinates, selects and amplifies leaders, and

minimizes the disruptive effects of the poor team players. Computer simulation of the group behavior as modified by observation of real games can lead to a fast and flexible system of modeling and observation in order for the NIO to become a learning and adaptive organization. They need to play games and do continuous simulations and learn from them through computer enhanced collective thinking and interaction with the ever changing data they are collecting from the real world. They should create the collective computer- enhanced team through processes that study the simulated adversary society. A tool for society simulation would take considerable effort and time to create but would be worth the investment. This simulation tool could be a combination of agent based and societal network simulation teamed with actual game play that takes the complex but anecdotal information from the social scientists and creates a framework that is descriptive in a 3D totally immersive visual/sound/smell environment.

The NIO needs to create teams that combine new technology with new thinking that brings the best of government, university, industry, and labs together in a collaborative environment in order to transform ideas into real tech capabilities, which can be rapidly developed and deployed. They need to learn to think

and behave as the adversary does so they can think red, play red, and continuously improve their simulations and learning as new information is fed into the system. Then they will be able to outthink, outplay, and out maneuver our adversaries by anticipating their actions, and thus giving the President his needed look into the future. ∎

# War of the Words

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*L*eaders, followers, and pundits alike often say that the "battle for hearts and minds" and the "war of ideas" are paramount in the war on terrorism. Unfortunately, we don't seem to have a coherent strategy for this part of the conflict. Worse, what we are saying and doing on a daily basis is often working against our success in fighting for hearts and minds.

The hearts and minds we hope to win are not those of current terrorists. Our strategy against terrorists is to kill them or put them behind bars. The target audience for the so-called "war of ideas" are those who sympathize with the Jihadist movement—those who do or might support the movement or might even join it. Our goals should be to prevent the growth of the Jihadist movement, reduce allegiance to it, and restore, sustain, and strengthen civil societies that do not tolerate terrorism.

This is very much like a political campaign. People can choose sides or not. They can be active or passive. Their interactions with others and with the media, and their own experience shape their convictions. It is not just what the "candidates" say and do that matters, but also what their supporters and perceived supporters say and do, how the media portrays people and events, and how the public reacts.

The Jihadists have many advantages in this campaign; they have much in common with the undecided population culturally, ethnically, politically, and religiously; they champion Palestinian home rule and other popular causes; their message is simple and unequivocal; and they are held to a lower standard of conduct and success than those who oppose them. Most important, increased confusion, misrepresentation, animosity, and polarization likely benefit the Jihadists, and these qualities are far easier to elicit than clarity, harmony, and moderation.

The target of the campaign for both sides is the undecided population—who

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## What if they merged...?

Hale Business Systems, Mary Kay Cosmetics, Fuller Brush, and W. R.Grace Company will merge and become: Hale, Mary, Fuller, Grace

Polygram Records, Warner Brothers, and Zesta Crackers join forces and become: Poly, Warner, Cracker

3M will merge with Goodyear and issue forth as: MMMGood

Zippo Manufacturing, Audi Motors, Dofasco, and Dakota Mining will merge and become: ZipAudiDoDa

FedEx is expected to join its major competitor, UPS, and become: FedUP

Fairchild Electronics and Honeywell Computers will become: Fairwell Honeychild

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are largely Islamic and living in or near the Middle East or retaining strong ties to that region. Both sides attempt to affect the target directly—through the internet and the media—and indirectly, through other people, including you and me. What we say matters. Each of us is a soldier in the "war of ideas," and each of us can be used by either side in this campaign. The "war of ideas" is fought in editorial pages, at cocktail parties, in hallways, online chatrooms, and in carpools.

**Four Principles for Success in the War of Ideas**

Since this is so important, and since we are all participants, it is worthwhile to figure out how to act responsibly in the midst of this campaign in which the Jihadists are fomenting violence by portraying Westerners as against Islam and against the East. If we are going to be persuasive, we must understand the "undecideds" better than the Jihadists do; we must learn to see the world and read the propaganda from the "undecided" perspective, and we need to learn to communicate ideas in ways that don't send the undecided running toward the Jihadist camp. Here are a few basic principles for doing this.

BE CLEAR ABOUT WHOM YOU ARE SPEAKING AND AVOID VIEWING POPULATIONS MONOLITHICALLY. We hear and read about how "they" hate us, "they" want to take over the world and set up a caliphate, "they" have no value for human life, etc. When we lump together (whether or not intentionally)

al Qaeda, Hamas, Chechnyan rebels, Iraqi insurgents, perhaps even all Muslims, we speak falsehood, we demonstrate ignorance and insensitivity, we insult people, and we further the notion among some of our listeners that we are against Islamic people and their causes—against a Palestinian homeland, against Pakistani claims to Kashmir, against Chechnyan independence—when these thoughts aren't even in our minds. All of this leads to misunderstanding and more polarization. It also leads to sloppy thinking on our part, in which we forget that the Jihadists are not monolithic and their motives are complex.

BE PRECISE IN YOUR TERMS AND AVOID EXAGGERATION. For example, "religious war" commonly means a war between religions: two religions seeking to conquer or eradicate each other. This is not at all the same as saying that the Jihadists are religiously motivated. It is a common Jihadist claim that the West is trying to destroy Islam. Don't say "religious war" unless you mean it. Don't feed the Jihadist propaganda machine.

SEEK TO UNDERSTAND ALTERNATIVE VIEWPOINTS AND SHOW RESPECT FOR THEM. (This is not the same as agreeing with them.) If we really want to understand this conflict and learn how to end it or diffuse it, we must consider all sides and take them seriously: the various Jihadists and their sympathizers, Middle Eastern governments, the Bush Administration, U.S. opposition, "old" and "new"

Europe, *Al Jazeera*, etc. We will not communicate effectively with people we don't understand. Propaganda often prevents deeper understanding. It seeks to convince us of the one "correct" position; it distorts the position of the opposition and it polarizes people. Civil society also works against understanding opposing views. When we identify a common enemy, we are predisposed to try to enforce unity and to stifle dissent within our group (e.g., all of the "Support our Troops" bumper stickers). When an individual tries to understand opposing viewpoints, he becomes suspect and subject to ridicule or even ostracism. All of this promotes unity within our group but often fosters fear and hatred outside our group, especially in this era of instant global communications in which it is difficult to keep our message within the group. This is not about being "politically correct" and embracing total relativism. It is about genuinely seeking to understand alternative points of view, regardless of whether we disagree with them or find them threatening.

LEARN YOUR OWN BLIND SPOTS. Propaganda (ours and theirs) is designed to take advantage of assumptions, biases and blind spots to convert us to a specific point of view. Many Americans want the U.S. to be in the right and are therefore vulnerable to believing anything that supports this view. Those who are strongly opposed to

the current Administration have opposite vulnerabilities.

A current example of propaganda I hear is this:

"We all know what this war is really about. It's really about religion. But it's not OK anymore in this country to say that someone else's religion is bad. The liberal, moral relativists won't allow that. So we pussyfoot around and talk about a War on Terrorism. This would all be a lot simpler if we could just say what we mean."

This is a clever piece of rhetoric that seeks to convince us that the real problem is Islam without offering any supporting evidence for this claim. Instead it points out that people in the U.S. are loathe to denigrate a religion. This rhetoric appeals to those of us who are uncomfortable with the current politically correct, morally relativistic movement. Those who blame this movement for many of the ills of society might also be eager to blame it for the War on Terror as well. When rhetoric works on us, we don't notice that someone changed our opinion about the war by appealing to our biases instead of our senses and our wits. So long as we are unaware of our own particular biases, we are easy prey for propagandists. The more we learn about ourselves, about what we want to believe and disbelieve, about our own predisposition, the better equipped we are to read propaganda without being overly swayed by it.

### Self-Awareness Leads to Success

These principles are little more than the basics of good communication: listening well, empathizing with others, thinking clearly, and saying what we mean. But these are not things people do well in periods of conflict and violence. Amidst daily attacks and deaths in Iraq and elsewhere, we are continually drawn back toward black-and-white perspectives. In these periods, we are especially intolerant of alternative viewpoints, especially from people on our own side.

Black-and-white works well when the war is fought with bullets and mortars. But black-and-white is a disaster for the U.S. in the "war of ideas." Black-and-white benefits the Jihadists; they know it; and they take advantage of it.

The alternative to this black-and-white world is a thoughtful and enlightened view built on a firm foundation of self-awareness. The biggest obstacle in our way is not our ignorance about "the other;" it is our unwillingness to engage in self-examination in a time of war. ∎

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# Death and Life in the Power of Language: How Words Might Reveal Developing Threats

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One of the challenges increasingly facing intelligence analysts, along with professionals in many other fields, is the vast amount of data which needs to be reviewed and converted into meaningful information, and ultimately into rational, wise decisions by policy makers. This is a key problem we have been considering in the ACG, and in this article I discuss some of the ideas we have had which could help to address the challenge.
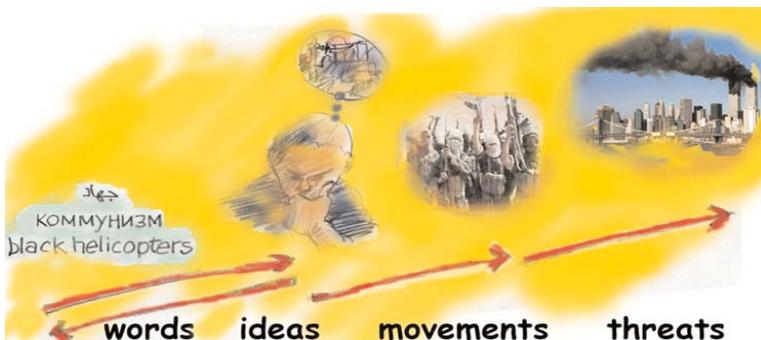
It goes almost without saying that the internet has been a significant contributor to the change in the nature of intelligence analysis. From the analyst's point of view, the volume of available data has increased; but we should consider too how the landscape has changed for the adversary. As a number of commentators point out, the internet is increasingly leveraged by groups which pose a threat to the United States, such as al-Qaeda, as a low-cost, quick means of propagating ideas. Hamas has an on-line children's magazine, *al-Fateh*, which it uses as a recruiting tool, a means of educating children in hatred and terrorism. And, via online chat rooms and weblogs, it is possible for a Muslim in North America or

Europe to receive real-time counseling direct from an imam in Saudi Arabia. It is easy to see how this medium could be abused by radical groups.

In recent history, it is probably fair to say that all threats to U.S. national security have come from ideas, and all these ideas have



been put into writing at an early stage. For example, it could be argued that much of what Hitler did in the 1930s and 1940s was born of ideas he had written about in *Mein Kampf* 10-20 years earlier. Lenin, too, wrote prolifically in the 10 years leading up to 1917. Ideas are what persuade people to join a movement, and without the numerical strength that a movement implies, the risk to national security is, by definition, small.

The end of the Cold War coincided fairly closely with the start of the "internet boom," and the timing of this had implications for the way threats emerge. Until the end of the Cold War, intelligence analysts had to deal with closed societies; information was hard to come by. In a sense, al-Qaeda has been as much a beneficiary and product of the internet boom as

Amazon.com (to take a well-known example). Like Amazon, al-Qaeda sells its product—ideas—via the internet. In reality, of course, al-Qaeda represents a network of radical theorists who mobilize others to their cause. But these theorists are essentially doing the same thing that Lenin and Hitler did decades before, just using a different publication medium. In today's world where even whole libraries are being digitized, it would be hard to imagine a threat crystallizing without the corresponding ideas first appearing on the internet.

While the increasing volume of information represents a challenge to the intelligence analyst, the other side of the coin is that the same ideas which radical theorists publish to gain a following among the public are more available to the analyst; and there are increasingly sophisticated tools, technologies and techniques which can be used to separate the intelligence "signals" from the "noise."

One such technique is Latent Semantic Analysis (LSA).[1] LSA is, in the words of its developers, "a theory and method for extracting and representing the contextual-usage of words by statistical computations applied to a large corpus of text."[2] LSA represents the

meaning, or semantics, of language units such as words, sentences, and documents as vectors in a multi-dimensional "semantic space." According to the (simplifying) assumptions of LSA, the vector representing the meaning of a sentence is simply the sum of the vectors representing the meanings of its constituent words. Further, the similarity between the meaning of one word, sentence, or document and the meaning of another can be measured as the cosine between the two vectors in the multi-dimensional semantic space. Thus, two words with very similar meaning will have a cosine approaching 1, and two words with unrelated meanings will have a cosine of 0. Computations of semantic similarity along these lines underlie the workings of many common search engines.

We believe there is potential to apply techniques such as LSA to identify, early on, ideas which appear to be "transformational." These are ideas which, because of their emergent nature, are not yet on the "radar screens" of intelligence analysts, but are rapidly gaining a following. The extent of the "following," and the rate of its growth, could be measured according to the density of idea "clusters" in the type of semantic space LSA envisions; such clusters could be represented visually in a $V_x$Insight[TM]-type map.[3]

The fact that all emerging transformational ideas are likely to be represented on

the internet in some form, then, can be turned to the intelligence analyst's advantage, because the internet itself represents the universe of data which can be mined for these clusters and relationships.

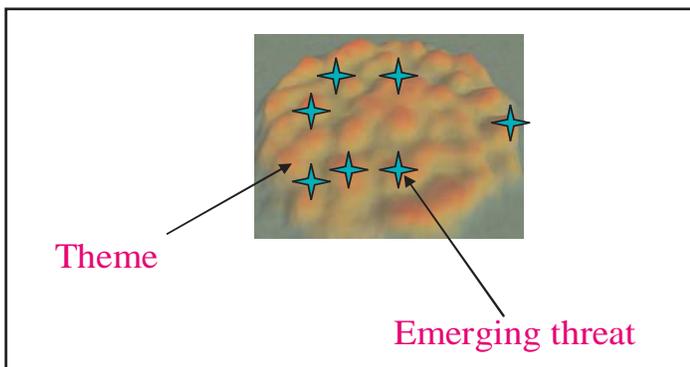In short, then, while the internet has shortened the life cycle in which published words become ideas, ideas develop into movements, and movements develop into threats, and while this changes the nature of the challenge facing the intelligence community, we are optimistic that the internet also presents considerable opportunities to the intelligence community. Given the fact that ideas continue to be expressed in words, just as they were in Lenin's and Hitler's day, we believe that linguistic analysis (such as LSA) will be a key tool for intelligence analysts in taking advantage of these opportunities.



Theme

Emerging threat

A V$_X$Insight$^{(TM)}$ map showing how emerging threats might be visualized.

1 See *An Introduction to Latent Semantic Analysis*, Thomas K. Landauer, Peter W. Foltz and Darrell Laham, 1998, in Discourse Processes 25, 259-284.

2 Ibid, p. 259.

3 For a description of V$_X$Insight$^{(TM)}$, see http://www.cs.sandia.gov/projects/VxInsight.html. ■



*Quote of the day:*

"When you rule your mind, you rule your world. When you choose your thoughts, you choose results."

--Imelda Shanklin

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