Walking Through
The Halls of Intelligence:

A Second Look at Recent Graduate Research

By Mercyhurst College Intelligence Communications Class 2007-08

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A hardback edition of this book is available through the Mercyhurst College Institute of Intelligence Studies Press. This "coffee table" edition will be available for $65 through the Mercyhurst College Bookstore Web site, http://lakershop.mercyhurst.edu/noname19.html.

Mercyhurst College
Institute for Intelligence Studies

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Introduction

This book is about two groups of students from Mercyhurst College, specifically, two groups of students from Mercyhurst's Intelligence Studies program. Some are first-year graduate students struggling through a class, Intelligence Communications, which was designed to test not only their ability to master a body of knowledge but also their ability to handle real-world time pressure and the demands of a real-world decision maker. On the side, as almost an afterthought, they also had to write a book – this book.

The second group of students, the subjects of this book, are all graduates of the Mercyhurst College Masters Program in Applied Intelligence. Each of them has graduated and gone on to a career in intelligence. They have left behind, however, some "treasure": the fruit of up to two years of research – their theses. Gathering dust in the basement of the Hammermill Library here on campus, these gems, these carefully researched, rigorously documented findings, these statistically significant contributions to the new discipline of Intelligence Studies, lie forgotten, unused and unheralded.

Sure, the authors of these studies were all going to turn their research into journal articles; they were all going to seek publication beyond the narrow confines of their thesis committee. But life got in the way. All went to work, a few in places where publication is discouraged, and a few, in places like Afghanistan, where further research is impossible. Some of this, though, is an excuse. By and large, the students who graduate from the Intelligence Studies program at Mercyhurst like to *do* intelligence, but sit down and write academic articles about it? Not so much.

This left me in a quandary. I knew the research was good and, in some cases, groundbreaking. There are studies here about open source indicators of clandestine nuclear programs and about methods that generate accurate and nuanced estimates with non-subject matter experts in a matter of weeks (to name only two). I knew that others would want to know about these studies and perhaps use these results to improve their own processes. How best to get these results into the open marketplace of ideas?

My second problem was with the thesis itself. All of our graduate students currently have to write a thesis. Virtually none of our students understand what this means when they get here, however. Over and over, they are left scrambling for topics and time to do the research and writing. Many do not finish on time and some do not finish at all. How could I help better prepare these students for the academic challenge of formulating, researching and writing a thesis?

Finally, as a part of the Communications class, I have traditionally asked my students to learn how to write for publication. To do this, I actually have them go through the process of selecting a topic and a trade or consumer magazine appropriate to that topic, write a query letter and then write the article. I only grade the mastery of the process, but each term only between 10-20% of the class typically manages to get their article published. It is pretty exciting for those published and a good experience for all, but I

was often left wondering if I was doing my students any real favors by focusing on "dead trees" publishing when the world of blogs and wikis and print-on-demand services was exploding all around us. Likewise, even if the students were published, it was often on a topic only modestly related to intelligence. How could I combine something that was more forward looking from a publishing standpoint while also being more relevant to their field of study, intelligence?

From the intersection of these three challenges emerged the book you hold in your hands. I asked the students to select a thesis, to read it, to summarize the key findings, to interview the author (or, if unavailable, the thesis advisor and second reader), to write a "feature article" about what they had learned (we used the feature articles from the magazine *New Scientist* as the model) and, finally, to bundle it all into a book. Oh, and they had roughly eight weeks to do it.

I will leave to you, the reader, to comment on such things as quality, utility and rigor. For me the issue is already decided. The best thing about Mercyhurst College and its Intelligence Studies program is, and always has been, the students. Resourceful, innovative, creative and dedicated, the students who wrote these theses and who put this book together are all that and more. I could not be more proud.

Kristan J. Wheaton
Mercyhurst College
Erie, Pennsylvania

15 February, 2008

Photo by: Ergo Martini-Gone 'til December; http://www.flickr.com/photos/rodluvan/1622907058/

The Formation of Homeland Security Within State-Level Governments: Establishing Areas of Central Responsibility and Defining Main Objectives

By Allison R. Goffredo
Feature Article by Ryan S. Abbey

We saw on our television screens the destruction of homes and cars, the scared faces of people on rooftops, and the blatant thefts that took place. These were the images after Hurricane Katrina slammed into the Gulf Coast of the United States on August 29, 2005. The images that were not shown on CNN and Fox News until later, but were just as real, were the images of radios that could not communicate with whom they were supposed to, motor homes that did not get to those who needed them, and funds that were slow in getting to the proper authorities.

Hurricane Katrina highlighted a problem that also plagued officials during and after September 11th: the inability of federal, state, and local officials to work together during a major disaster, whether man-made or natural. These tragedies beg the question, "What are the homeland security roles of the federal government, the state government,

and the local government in crises such as Hurricane Katrina and September 11th?" Much has been written on how Congress and the White House implemented governmental restructuring following September 11th and again after Hurricane Katrina, what about the states? What homeland security structures do they have in place to deal with a catastrophe the size of Hurricane Katrina? Thanks to the analysis of Allison Goffredo, a graduate student at Mercyhurst College in Erie, Pennsylvania, we can now understand the structures and the means by which state officials established homeland security organizations within the states.

Goffredo analyzed homeland security from a state-level perspective based on three principles. First, she determined what areas within the state governments are responsible for homeland security. Secondly, she evaluated legislation that designates homeland security responsibilities within state governments. Thirdly, she looked at states' mission statements defining homeland security and compared it to federal homeland security guidelines. Finally, before completing her study she decided to also analyze how federal requirements impact the state-level homeland security strategies and goals.

Significance of Research

The groundbreaking aspect of this study lies in its focus on state-level responsiveness to homeland security needs. Mercyhurst College Intelligence Studies Professor David Grabelski, who was the primary thesis advisor, stated that after the federal government said that the states needed certain structures in place, the states took the prerogative in determining how best to establish their homeland security structures. This was the crux of the study according to Grabelski because no uniformity existed in how states created their homeland security structures. Goffredo brought together all the states' homeland security research and analyzed and compared it together.

The second reader of the thesis, Intelligence Studies Instructor Dawn Wozneak, echoed Grabelski's thoughts in stating that Goffredo sought to examine what, if any, coherence existed with the manner in which the states structured their homeland security organizations. Also, according to Wozneak, no overarching study had yet analyzed how all fifty states had implemented the federal guidelines into state-level structures.

How Goffredo Researched the Thesis

According to Grabelski and Wozneak, Goffredo took four or five months to do a literature review (which involves looking at most if not all of the relevant information relating to one's topic) of information relating to state-level homeland security. Goffredo stated in her thesis that she drew most of the research from federal and state government policy and legislation.

Even though this policy area is new, Goffredo uncovered some independent research, such as National Governors Association (NGA) homeland security surveys and Congressional Research Service (CRS) reports. Goffredo also conducted some interviews to inquire in more detail about some states' homeland security structures. According to Grabelski and Wozneak, interacting with these individuals proved to be one of the biggest obstacles for Goffredo as she researched this topic. Many of the homeland security representatives tended to be guarded about the information they gave to her given the secretive aspect of the subject matter.

Upon completion of this somewhat dry task of sifting through endless pages of documents, Goffredo concluded that she would use the research method of *content analysis.* This method of research would enable her to examine the breadth of each state's manner of implementing homeland security structures instead of a depth study, such as a case study method.

Just as with any type of research with large amounts of data, Goffredo had to categorize all the information that she had collected. She settled on putting the information into matrices to highlight the primary areas of homeland security responsibilities and principle definitions within each state government.   Goffredo also used a matrix to analyze how various states interpreted the federal mission statements in the Homeland Security Act of 2002 and the 2004 US DHS Strategic Plan. This allowed Goffredo to grasp an overall sense of how the states understood their role in homeland security. Although Goffredo made some informal matrices to help her conceptualize the various state positions on structure, mission statements, etc., Grabelski and Wozneak suggested that she insert formal matrices into the thesis for the reader to be able to make the visual comparisons across the fifty states.

The Results

Structure – Goffredo first looked at where the state officials placed the homeland security functions within their state government organization. She identified three areas within the state government where state leaders placed the homeland security apparatus. These three are the following:

1. Within the office of the Governor
2. Within an already established state agency (including Military Affairs, Public Safety, Emergency Management departments, etc.)
3. Within a stand-alone Homeland Security office or department

Goffredo analyzed her research further by breaking down the categories into subcategories. For instance, she cites how Alaskan officials placed the Office of

Homeland Security within the Division of Emergency Management and Homeland Security under the Alaska Department of Military and Veteran's Affairs.

Breaking down the categories into percentages, Goffredo found that

> *The majority of states, thirty-two out of the fifty (64 percent) structure main areas of homeland security within existing safety, preparedness, and security departments. Out of the remaining 36 percent, eleven states (22 percent) designate this as a primary responsibility coordinated in an office or agency through the governor's office and seven states (14 percent) created an official department or office, separate from established executive departments.*

To highlight a key finding, Goffredo notes a recent trend among states to transfer the homeland security function from an office of the governor to either an official stand-alone department or into an existing department. She gave the example of Arizona establishing an independent Homeland Security department in 2006 following five years under the Governor's Office.

In showcasing another divergent means of organizing the homeland security structures, Goffredo found that states put the homeland security function primarily within six department types:

- Safety
- Emergency Management/Services
- Public Defense
- Law Enforcement
- Military/Veteran's Affairs
- Adjutant General.

The means by which these various homeland security actions took place was through executive or legislative action, and Goffredo examined this aspect next.

Legislation – Goffredo's research underscores the diversity of homeland security within state government as a central theme. The legislative action bringing about homeland security changes is no exception. Although she initially looked only at legislative action, Goffredo realized that executive policy also had a significant impact on the formation of homeland security structures within the state governments.

Many states took several steps from different branches of the state government. She gives the example of Colorado where the governor swiftly made changes through executive action which the Colorado legislature later followed with formal legislation. Although many states took similar steps like Colorado, the states differed in where they

located the homeland security apparatus. While Colorado eventually placed the homeland security area within the Department of Public Safety, South Carolina placed theirs within the South Carolina Law Enforcement Division and authorized the chief of that division as the state's homeland security director.

As discussed under structure, many states incorporated homeland security structures under the governor's office. Goffredo cites Virginia, as an example. The Virginia governor placed homeland security within the governor's office in 2002, but the Virginia legislature did not codify this until 2006.

Legislative action to establish the first state-level homeland security department occurred in Alabama in 2003. Other state legislatures that have created official, stand-alone homeland security agencies include Arizona, Indiana, New Jersey, New York, Oklahoma, and Oregon. An interesting note in Goffredo's research is that New Jersey's and Oregon's agencies still exist through executive action alone (as of the conclusion of Goffredo's research in May of 2007).

Homeland Security Definitions – While the first two sections dealt with a diversity of ways that the states incorporated homeland security within their governments, this section showcases how the states closely adhered to federal homeland security guidelines. States closely followed the language laid out in the Homeland Security Act of 2002 and the US Department of Homeland Security's 2004 Strategic Plan. Goffredo noted that the language was used by all states regardless of where they placed the homeland security area, whether in the governor's office, stand-alone agency, or within an existing agency.

Goffredo took data and placed it within a matrix that listed each state's definition of homeland security and identified the commonalities between state and federal homeland security objectives. Goffredo found that more than 50 percent of states include key terms used by the federal government such as *prevention, recovery, coordination,* and *response*. Although not directly cited by the federal government, 80 percent of states used *preparedness* as a central homeland security objective.

Federal Requirements – Although not originally part of her study, Goffredo decided to analyze how federal requirements impact state strategies and goals, since she found that many states referred to these requirements in their homeland security strategies. A direct connection lies between state strategies and goals and federal requirements given that the federal Homeland Security Grant Program (HSGP) ties these two together when evaluating state's funding levels.

Goffredo gives the example of Homeland Security Presidential Directive No. 5 (HSPD-5) which states that in order for states to receive homeland security funding they must

prescribe to the terms of the National Incident Management System (NIMS). In response, states directly tied their strategic planning to the NIMS in order to receive federal funds.

Other presidential directives have called for infrastructure protection and national preparedness guidelines. The states have implemented these standards into their strategic goals and have openly acknowledged that federal guidelines bear a heavy influence on these goals. For example, Florida's 2005 Domestic Security Annual Report cited the National Preparedness Goal at the "center of Florida's position to maximize federal funding in support of our most important domestic security initiatives."

Further Possible Research

To take Goffredo's research and expand upon it is a desirable goal in order to discover the best practices within state level homeland security. When asked what research could follow Goffredo's work, Grabelski noted that in a couple of years someone may want to examine whether the federal homeland security requirements have changed and, if so, how have the states implemented these changes. Wozneak noted that further research may analyze how effective are the homeland security structures in carrying out the mission statements and do they have the proper authority to carry out such stated homeland security goals. I also noted that a variation of this research method may be used to analyze how major US cities have implemented homeland security guidelines, not only from the federal government, but from the state government as well.

Discussion and Conclusion

Although states adhered closely (and still do in many cases for funding) to federal requirements following 9/11, some states have disagreed with the federal government on some occasions and blatantly resisted it on other occasions. For instance, according to Fox News on January 11, 2008, the recent REAL ID Act showdown pitted seventeen states against the Bush Administration. These seventeen states passed legislation or resolutions that objected to the REAL ID Act. They stated that it would cost the state too much money to comply with the rules set out in the act.

Another situation involved local emergency managers being left out of the writing process of a DHS plan to clarify who is in charge during a disaster, according to the Associated Press on September 10, 2007. In response to this plan, Michael D. Selves, Kansas' Director of Emergency Management and Homeland Security, stated that "any plan that's not the result of a collaborative process is suspect in our view."

According to the 2007 NGA's Center for Best Practices Homeland Security survey found that states have expressed concerns relating to the federal government, which include the following:

- Uneven progress in their relationships with the federal government, specifically DHS
- States need federal funding to support officials who implement federal guidelines at the state level
- The need for a central source for gaining security clearances so that a clearance is recognized by all other agencies.

As evidenced, the state governments have begun to question and even resist federal leadership of some homeland security guidelines. This ability to question may be a good thing for federal government. It allows for a free exchange of the best practices that enable homeland security officials at the federal, state, and local levels to better do their job. Individuals do not want to see images of helpless people stranded on rooftops, and looting in the streets because government cannot deliver a unified response during and after a large-scale disaster, such as Hurricane Katrina.

Although, homeland security is a new policy area and the federal and state governments still grapple with the proper methods and structures for homeland security, at the end of the day, citizens desire their government to protect them, and to assist them if a disaster strikes. It is this knowledge that lies at the heart of Goffredo's research - how have the states structured themselves to assure the protection of their citizens? Goffredo's analysis has established a baseline which enables further research and policy leaders to examine how best to structure and set guidelines that will best protect the citizens of the United States.

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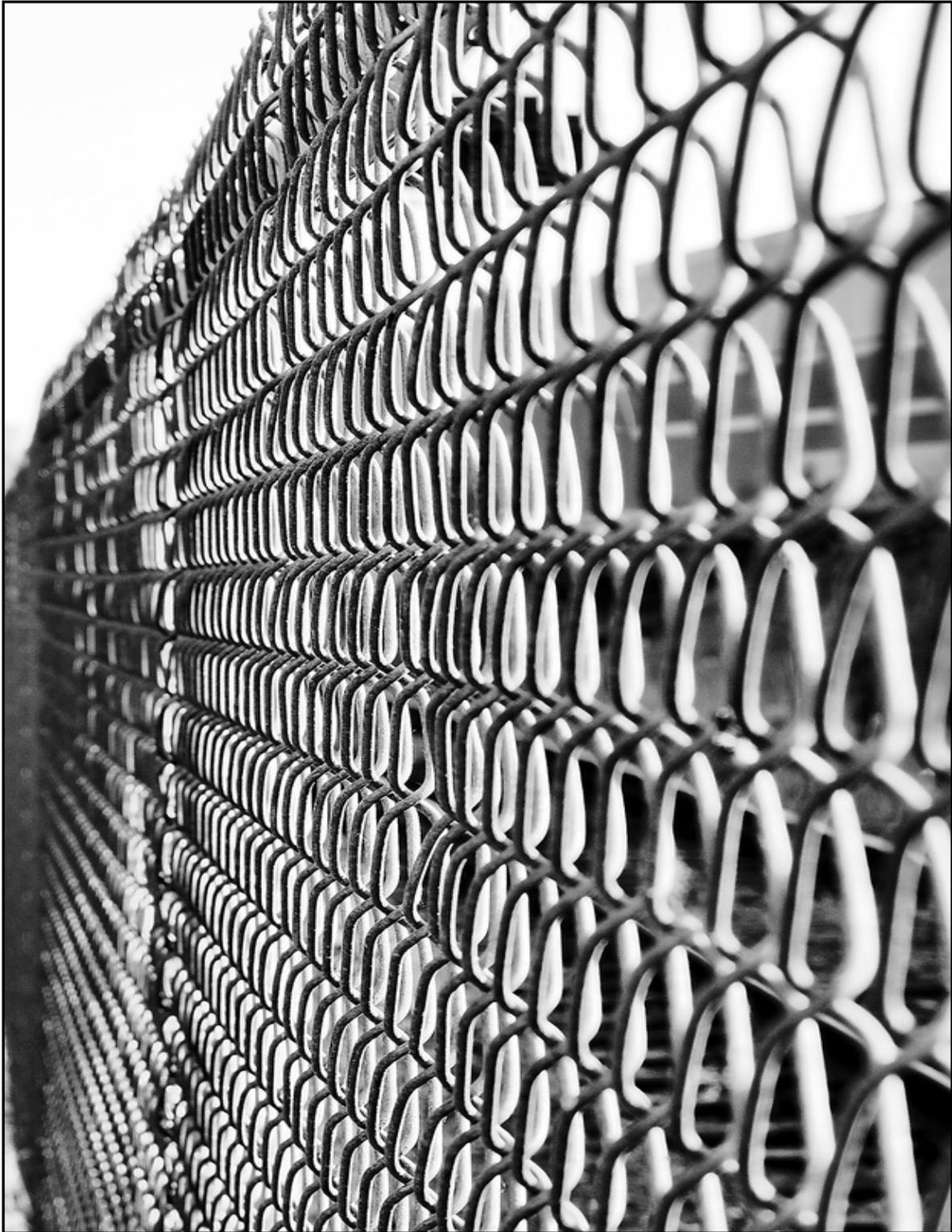
Weak Links:
The Collapse of Soviet Espionage in America

By John Kingston
Feature Article by Michael Butler

The business of espionage attracts some kooky characters. Between the wild eccentrics and the occasional ego-manic, sometimes the world of human intelligence is truly stranger than fiction.   A recent thesis from the Mercyhurst College Institute for Intelligence Studies (MCIIS) shows that the strange coupling of American communists and Soviet intelligence before and during WWII is no exception.

Most students of intelligence history know that the Cold War began long before Yalta and the final shots of the Second World War. Before the War even began, the Soviet Union had extensive spy rings operating in the United States, stealing secrets and sabotaging national interests.   These spies subverted American policy with virtual impunity from the early 1930s until 1945, when the Federal Bureau of Investigation (FBI) abruptly dismantled the networks. Research for the thesis by MCIIS graduate

John Kingston explains the sudden disintegration of those seemingly thriving Soviet espionage networks. The thesis indicates that the Soviet intelligence's inability to control American spying rings, coupled with the additional counter-intelligence experience that the War gave the FBI, allowed the United States to dismantle Soviet capabilities by the late 1940s.

Kingston began work on the thesis in the spring of 2006 after receiving a graduate assistantship at MCIIS working on a project with the Centre for Counterintelligence and Security Studies (CI Centre) of Alexandria, VA. The CI Centre was compiling a database to identify historical intelligence sources using the declassified VENONA cables and other historical documents released through the Freedom of Information Act (FOIA).

As Kingston became more involved with this project, it sparked his interest in the VENONA cables and the insight they could bring to Soviet intelligence activities. Upon deciding to make that the topic of his thesis, Kingston began to independently research the large body of VENONA literature, including Robert Benson and Michael Warner's *VENONA: Soviet Espionage and the American Response: 1939-1957,* Nigel West's *Venona: The Greatest Secret of the Cold War*, and Allen Weinstein and Alexander Vassiliev's *The Haunted Wood: Soviet Espionage in America – the Stalin Era.*

In an effort to thoroughly understand the organizational structure of the inter-war period FBI and KGB (though Soviet foreign intelligence went through a number of different names during this period, Kingston simply uses the acronym KGB for reader ease), Kingston also examined numerous biographies and memoirs. These works included the memoirs of Soviet case officers Alexander Feklisov *The Man Behind the Rosenbergs*, Oleg Gordievsky's *KGB: The Inside Story*, and former FBI Agent Robert Lamphere's *The FBI-KGB War: A Special Agent's Story.*

With the help of MCIIS Director Robert Heibel, Kingston also contacted and collaborated with national security historians from the Library of Congress and FBI Historian John Fox. These individuals helped Kingston sort through and contextualize the abundant tactical information from the VENONA cables.

Through the course of his work with the CI Centre and this research, Kingston learned that Soviet HUMINT operations in the United States were largely successful from the early 1930s to the end of the War. The Soviet HUMINT apparatus provided them with copious amounts of political and technical intelligence on the United States. This includes the successes of infamous rings like the Rosenberg network and Klaus Fuchs, as well as some lesser-known cases such as the networks of Jacob Golos, Nathan Silverman, and Issac Folkoff, whose networks succeeded in penetrating the State

Department, the Treasury Department, and other elements of United States government and industry.

These and other networks operated without significant disruption from the United States for over a decade. However, as author Stephen T. Usdin notes, "Soviet espionage in North America was built on a house of cards, which collapsed soon after American counterintelligence shifted its focus from its World War II enemies to its erstwhile ally." In a mere two years (1943-1945) of concerted effort, the FBI had shattered the entire espionage apparatus, forcing the Soviets to start nearly from scratch as the Cold War picked up speed.

It was this sudden shift that intrigued Kingston. Why had the Soviets been so successful previously and yet so easily and summarily defeated after the War? The findings of Kingston's thesis work indicate that Soviet espionage was initially successful not because they practiced ideal tradecraft, but largely because the USG was unwilling or simply unable to stop them.

In fact, Soviet HUMINT operations had many serious problems. First and foremost, the Communist Party of the United States of America (CPUSA) heavily influenced and often even controlled espionage networks. From the early 1930s the KGB used CPUSA members as cutouts, agents, or sub-agents. However by the late 1930's, the KGB's lack of direction and control of CPUSA networks allowed members to become entrenched network leaders directing collection without oversight from Moscow. Thus, by the beginning of WWII the KGB had already lost its ability to directly control collection.

Because CPUSA members involved in espionage commonly lacked or ignored operational training, poor tradecraft also helped expose the networks. Numerous agents had nearly unrestricted knowledge of other agents and operations. Indeed, this lack of compartmentalization dealt the killing blow to Soviet espionage in the United States when Elizabeth Bentley, a heavily-connected agent and courier, defected in 1945 exposing the majority of key network hubs.

The dynamics of the CPUSA exacerbated the problem. Like any political organization, the CPUSA formed itself around personal relationships and connections between key individuals. While some of the characters that conducted espionage under the CPUSA were intelligent and dedicated, many were idealistic, radical, and very often emotionally and mentally unstable – characteristics common for agents, but not very useful for effective case officers. Furthermore, because several key network ringleaders wanted to protect 'their turf,' infighting deprived Soviet intelligence of access or knowledge about agents. This further crippled the KGB's ability to direct collection efforts and often excluded them from the intelligence process altogether.

In the end, however, the CPUSA's blunders might not even matter. Dzerzhinsky Square itself was in such disarray that it might not have been able to coherently direct the American operations even if it had control over the ringleaders. Stalin's continuing purges of intelligence personnel and the resultant suspicion and distrust caused the Soviets to miss several opportunities to reign in the CPUSA. A lack of decisive leadership also caused Soviet intelligence to fail to act when there were serious indications that the networks were in danger, such as the markedly erratic behavior of Elizabeth Bentley or signs of increased activity by the FBI.

In the face of these glaring troubles, it is a wonder that the networks lasted as long as they did. In fact, only the United States' lack of counterintelligence (CI) experience or desire to improve it afforded the networks over a decade of effective intelligence gathering.

Before WWII, the FBI had little practical experience with CI operations. There simply had not been a significant need or desire for the Bureau to divert attention from its traditional law enforcement duties, especially from its chief priority of combating organized crime. Many Soviet officers and agents noted that they could easily identify and avoid FBI agents because the latter had not yet developed proper surveillance techniques. Only after several years of conducting wartime CI operations against agents of Germany and Japan did the FBI gain the needed experience to effectively surveil and disrupt Soviet networks.

In addition, because the FBI dedicated the bulk of its CI resources to combating the Axis-power intelligence services, it devoted little attention to Soviet espionage activities. Only when the war was coming to a close and the future Soviet threat became apparent (circa 1943) did the FBI divert resources to CI against Soviet networks in America.

Finally, the Roosevelt Administration held back what limited resources the FBI had used against the Soviet threat because it was reluctant to alienate the USSR during their wartime alliance. The State Department in particular blocked many of the FBI's proposed arrests or disruption efforts, often leaving the FBI only the options of denial and deception operations. However, once the close of the War allowed the Truman Administration to remove the diplomatic roadblocks, the USSR immediately became the predominant CI priority at FBI. In short, when the FBI actually turned their attention towards the issue, they quickly dismantled the already vulnerable networks.

By expounding on the above points, Kingston's thesis effectively and comprehensively explains why Soviet intelligence suddenly collapsed when it did. However, the research does more for the study of intelligence than just answering that one question. As a document of academic historical research, it is a valuable resource to anyone who is

interested in the history of Soviet intelligence, the FBI, the beginnings of the Cold War, and espionage studies in general. The thesis is an especially fine tool for intelligence historians who wish to expand their knowledge of these particular cases as Kingston thoroughly describes the organization, operations, and complications that plagued each of the major Soviet networks.

By extension, the thesis could also be useful as an in-depth case study in education and training of current practitioners. Though it is a historical work covering operations from over 60 years ago, the basics of tradecraft never really change. The thesis covers a laundry list of bad examples of intelligence collection and CI operational models. The new CI officer will find a surfeit of vulnerabilities inherent in informal and under-controlled espionage networks. On the other end, Kingston's work can expose the training case officer to some common 'rookie' mistakes, the dynamics of a poorly constructed network, and the exploitable weaknesses in foreign CI services.

Finally, Kingston's work is also somewhat of an innovation in intelligence history studies. Though VENONA itself has certainly been well covered in literature, before Kingston no one in intelligence academia had attempted this type of primary source research, linking up VENONA with FBI documents and other materials released through FOIA. Though it by no means exhausts the material, as MCIIS's Heibel puts it, "[Kingston's thesis] is a great initial step in that direction. Other researchers could easily use it as a springboard into deeper studies."

Photo by James Gordon

Predictive Model for Clandestine Nuclear Programs

By Maryam Tatavosian
Feature Article by Michael Esper

Picture This:

It is a lovely Monday morning in New/Los/San York/Angeles/Francisco, D.C. Weekend warriors grumble as they punch their alarm clocks at 6:30 AM. A light hint of smog forces the occasional cough from health-nuts jogging in the nearest park. Café customers waiting for their lattes mimic the bumper-to-bumper traffic lining up on Main Street. The noise from impatient car horns drowns out the cooing and cawing of hundreds of pigeons and seagulls desperately searching for breakfast. First-shift dockworkers take over unloading the previous night's cargo containers. Children are laughing and running amok in worn out school hallways. Cubicle dwellers swap stories about Saturday's wild bar crawl while standing around the water cooler. International package deliverymen are hitting on the young, attractive receptionists in the over-extravagant, marble-floored lobbies of every major office in the city.

A chocolate brown cargo container, perhaps one that is still sitting on its ship or one that leaked through customs, erupts in a bright flash of fire, heat, and radioactivity. The dock and all its personnel vaporize in less than one-millionth of one second. The outward radial shockwave obliterates everyone and everything in its path. Skyscrapers blow away like leaves on a gusty autumn day. People do not have any time to cry out; their skin ignites and their bodies literally melt into nothingness. The city, which was once teeming with life, is no more.

Those who were fortunate to survive face a greater terror. Their clothes brand permanently into their person. Radioactive fallout, which spreads even further with help from the prevailing winds, slowly (or quickly depending on the level of exposure) eats the organs of all living creatures that it exposes. The land is uninhabitable. Poisoned water flows into the ocean, further damaging the ecosystem.

A frantic US government attempts to determine the source of the attack. The military scrambles to its highest alert and war seems inevitable. The announcement no one wants to hear broadcasts that evening on every news channel in the world. Foreign country "X" reveals:

1. It secretly developed the weapon that destroyed the city
2. They possess more…a lot more
3. They are not afraid to use them

This is not exactly a great start to the workweek.

Can You Help?

The threat of nuclear conflict has brought the world to the brink of extinction on several occasions. The downfall of the Soviet Union, which provided a brief moment of reprieve from the fear of nuclear war, actually made the world *more* dangerous to live in. The abundance of nukes used to dissuade US aggression is now available on the black market. Terrorists, regardless of their nationality or religion, will stop at nothing to obtain these weapons of mass destruction. The power to control nuclear weapons is the defining characteristic for any group or nation that wishes to participate on the world's stage.

How do we know that country "X" is trying to develop nuclear capabilities?

It would be easy to think that the multi-billion dollar intelligence technologies of not only the US, but also all of Western civilization would be able to answer this question quickly and decisively. However, in the post-9/11 world, how can anybody be sure of anything?

Enter Maryam Tatavosian. As an intern for the International Atomic Energy Agency, she attended a workshop discussing the ways in which the organization could better detect clandestine nuclear programs. She concluded that it was possible to create a model that everyone could follow and understand without having to access classified equipment and information. Open source research is easy, cheap, and accessible. This means that any ordinary citizen can sit at their computer and make their own analysis. Could this really work? She thought it could, and she did it in less than seven months.

Beginning the thesis, however, was the most difficult part. "You can't write about clandestine nuclear programs without knowing anything about nuclear physics," she states. "It is the one area where I was afraid of being wrong." Lucky for her, though, she had access to premier authorities on the subject: co-workers at the IAEA, some folks over at the Manhattan Project, and the Carnegie Endowment for International Peace.

With the technical aspect under wraps, she then analyzed what types of preparation go into the development of such a complex process. As a result, from 40+ hour workweeks over that seven-month stretch, Maryam developed several key findings that act as indicators revealing a nation's true intentions when it comes to advancing their nuclear aspirations. Should any non-nuclear nation exhibit any of these signs, chances are highly likely that it is possibly researching or currently instituting a clandestine nuclear program.

We Cannot Function Without Them!

A country needs to have a motivational need to go nuclear. A prominent politician simply does not wake up one morning and declare, "It would be nice to have a nuke." The process of making just *one* will drain heavy amounts of resources, including finances and personnel. The public does not necessarily have to hear these reasons, but they do have to be justifiable. Some common ones include the defense of the homeland or protection of an ally from aggressors, or the use of nuclear energy for "peaceful purposes," i.e. fuel.

Who is Responsible for All This?

Maryam observes, "Any state wishing to pursue a nuclear option (whether peaceful or not), will develop or strengthen an atomic energy authority." This organization "legitimizes" the procurement of nuclear materials. It will represent its nation's government when dealing with international oversight committees. The energy authority will also proceed to enlist the assistance of academics and private sector scientists for nuclear research and development.

We Are Smarter Than You Think…

Scientist activity reveals a great deal of information about clandestine programs. "They are a very large and close knit society," Maryam writes. "In order to advance and become respected in this society, one must be on the cutting edge of research and well known based on publications and technical presentations." A large majority of country "X's" scientific community begin to write articles on laser fusion. Conversely, the same majority suddenly begins to publish nothing at all or articles in alternate scientific fields. Perhaps that majority attends international technical conferences for networking and learning purposes. All of these are indicators for increasing nuclear experiments.

The increases in journal publications on nuclear techniques reveal methods that the academic community is currently pursuing and experimenting. The government can enact security measures to safeguard information, thereby decreasing the number or content of articles published. Observing the entire academic community of country "X" paying a little too close attention to every word from the presenters at the technical conference should be a cause for concern all in itself.

Funding, Please!

Maryam points out, "Under the cover of university research, scientists were not only able to secure funding from the government for their research, but also procured sensitive materials without raising suspicion." Funding, especially for university research, is critical for the program to be a success. In addition, it allows the guise of education to cover conducting research. For example, the physics program at "Podunk University" located in country "X" suddenly goes from graduating three students a year to building a multi-million dollar radiation laboratory facility should immediately raise a red flag.

"Podunk U" has also secured the following materials for specialized experiments: explosives more powerful than TNT, such as RDX, HNX, or PETN, radiation monitoring equipment, neutron measuring devices, and alpha-emitting materials. Hardware stores do not carry these items. They require time and money to procure. Moreover, if someone understands what *any* of the aforementioned items do, then concluding that a clandestine nuclear program is underway might be easier than expected.

Graduate students' training also has a great need for time and money. In order for country "X's" program actually succeed, someone is going to need to fully understand exactly what is going on. American and Western European schools offer excellent, hands-on educations in the fields of physics, chemistry, metallurgy, electronics, and

explosives. Tuition is not cheap. An oversight committee should pause for concern if they find that half of a graduate program's physics class hails from country "X."

Do You Require Assistance?

Country "Y," who is despised and feared as much as country "X," provides "X" with the technology and training needed to jump-start their nuclear program. Although "Y" does not publicly announce this intention, they cover it up under a protection agreement. "Y" will guard "X" from any enemy attack with a nuclear response. On the surface it looks like a big, powerful country is standing up for a smaller, weaker one. In reality, "Y" is charging "X" massive amounts of money as payment for nuclear information.

This method is actually quite common. The USSR utilized this with China in the 1950s. In 2007, North Korea allegedly cooperated with Syria in building a reactor before Israel promptly destroyed it. Maryam states, "In today's world, starting a clandestine nuclear program indigenously is very difficult. They [rogue states] would be very accepting of any types of funding in order to advance their nuclear research or expand their nuclear arsenals."

A Canary in a Uranium Mine

Of course, all of this preparation is quite pointless unless you actually have the fuel to build the weapon: Uranium. Mining for this naturally forming mineral takes place on or in the earth's crust. Now an average person would sit back after reading this and think, "Well obviously if country "X" is mining for uranium, how could anyone *not* know what they're doing?"

Here is the problem. Since this is a clandestine program, country "X" is not going to announce to the world that they are looking for deposits of the mineral. On top of that, international nuclear oversight committees, such as the IAEA, do not monitor products coming from uranium mines or mills unless they are heading to a declared conversion plant.

It would be a little odd to see an oil-abundant country constructing numerous "coal" mines, stating that they are simply supplementing their energy resources.

Maryam comments, "Because of the value of uranium, a state seeking to build a clandestine nuclear weapons program, especially ones that have abundant natural resources, will likely mine and mill uranium indigenously. This procedure is not a safeguards concern, so a rogue state can easily procure the necessary items for this process without having to sound off any export control bells."

The "export control bells" she is referring to come in the form of provisions regulated by the IAEA. Any country that has not signed the Nuclear Non-Proliferation Treaty may not purchase uranium from a supplier. However, this type of transaction is not totally out of the question. "Any cooperation between rogue states and the uranium rich states must be monitored for possible clandestine uranium sales," she adds.

Indicator Checklist

This article did not discuss all of Maryam's indicators in full. The following is for a quick reference to her main findings (and perhaps simple clarification purposes):

- ✓ A nation possesses a rational (or not) motivation to possess nuclear weapons. This includes public statements/comments provided by the media or prominent political figures.
- ✓ The nation's government establishes an Atomic Energy Authority to handle the procurement and regulation of required materials.
- ✓ The scientific community acts in ways that are different from its established normal function, or compliant with nuclear research. The actions can include patterns in journal publishing and conference attendance.
- ✓ Academic programs that study the specific aspects of nuclear technology will suddenly see a boon in their budgets and participation levels. New facilities and expansion/specialization of programs clearly reveal interest in research.
- ✓ A country with an established nuclear program begins to work closely in suspicious ways with a nation that does not have a program.
- ✓ Previously neglected locations see a major increase in mining operations.
- ✓ Residential communities now possess new buildings not designed for housing people. It is easier to camouflage nuclear facilities in areas that are heavily populated.
- ✓ In addition, remote locations see new buildings constructed far from environmental factors. A sure way to detect nuclear testing is to use "environmental sampling," which is the measure of the radioactivity levels in the surrounding environment (i.e. rivers, trees, soil, etc). Clandestine programs build nuclear facilities away from these features to avoid revelation by contamination.

A Safer Tomorrow…Today!

With every passing day, the public demands more and more protection from their government. While it is the government's responsibility and obligation to meet these needs, it is disturbing to see that the same public is not willing to do anything to help

them. People need to take an active role in their safety. Maryam Tatavosian's model provides that opportunity. By simply using sources that everyone has access to (internet, books, public satellite imagery, international science and oversight publications, etc), she was able to develop common indicators that reveal another nation's true nuclear ambitions.

Maryam concedes, "I was hoping that my model could be used to teach students about nuclear non-proliferation. I was not trying to gear it toward the non-proliferation community." In a way, now everyone is a part of that community.

Can We Retake That Picture?

It is a lovely Monday morning in New/Los/San York/Angeles/Francisco, D.C. Weekend warriors grumble as they punch their alarm clocks at 6:30 AM. A light hint of smog forces the occasional cough from health-nuts jogging in the nearest park. Café customers waiting for their lattes mimic the bumper-to-bumper traffic lining up on Main Street. The noise from impatient car horns drowns out the cooing and cawing of hundreds of pigeons and seagulls desperately searching for breakfast. First-shift dockworkers take over unloading the previous night's cargo containers. Children are laughing and running amok in worn out school hallways. Cubicle dwellers swap stories about Saturday's wild bar crawl while standing around the water cooler. International package deliverymen are hitting on the young, attractive receptionists in the over-extravagant, marble-floored lobbies of every major office in the city.

One early riser buys the morning paper from a kiosk on his way to work.

"Anything new today?" he asks the vendor.

"Not really," the vendor replies. "Just the usual stuff happening. I guess we bombed some country, 'X,' I believe. Found out they were hiding some nuke program."

The early riser smirks. "Well, they deserve it. Thinking they can go around messing up stuff. When are people going to learn?"

It is just another start to a workday in America.

Photo by House of Sims: http://www.flickr.com/photos/houseofsims/2178169007/

Comparing Competitive Intelligence Education to Competitive Intelligence Practice

By Daniel J. Bukowski
Feature Article by Shannon Ferrucci

The Scenario

The closer you get to the entrance the more feverishly you attempt to prepare yourself for the next eight hours. In an effort to establish confidence in your own abilities, and to convince yourself there is nothing to worry about, you mentally recite the classes and training you have so skillfully mastered. Your hand slips on the handle to the front door as the perspiration on your palms and brow increase, along with your heartbeat. Slowly you start the next stretch of your walk, which will ultimately end at your office. Halfway through the trek your new boss greets you, falling in step beside you and launching into a description of the first project you will be working on and the analytic techniques you will be employing in order to complete it. With a growing sense of dread, you register the fact that while the analytic techniques mentioned sound vaguely familiar you do not have any solid knowledge regarding these methods.

Congratulations, you have just begun your first day of work at one of the major Competitive Intelligence (CI) firms within the United States…

The Story

Daniel Bukowski, author of the thesis *Comparing Competitive Intelligence Education to Competitive Intelligence Practice*, has shown through his research that this type of scenario is happening all too often in the world of CI. In fact, Bukowski's thesis clearly emphasizes the disconnect that currently exists between CI course content and the common responsibilities of CI practitioners.

Bukowski has an undergraduate degree in Finance from Grove City College in Pittsburgh, Pennsylvania and a professional background in business. For seven years, throughout high school and his undergraduate career, Bukowski worked for the same small software company. He has also held two sales positions, worked on CI contracts and has experience with freelance consulting. Additionally, in May 2007 he graduated from the Mercyhurst College Institute for Intelligence Studies with a Master's Degree in Applied Intelligence.

Originally, Bukowski intended to focus on CI while pursuing his graduate degree. However, this plan changed when he received an internship and job offer from Booz Allen Hamilton, an opportunity too good to pass up. In an interview, Bukowski stated, "I received CI job offers, but I could not turn down the Booz Allen job. From my perspective, it is easier to move from cleared government work into CI than it is to move from CI into cleared government work. I love my job as it is!" Today he works for the company as part of a team that focuses on United States Government Strategic Communication.

Surprisingly, even though Bukowski's education and career goals had taken an unexpected turn, he still decided to research a CI topic for his thesis. The specific idea for his project came to him one day in September 2006 while he was listening to August Jackson's CI Podcast (www.cipodcast.com). On this particular day, Jackson, an expert on emerging information and communication technologies and their impact on business, was interviewing the Society of Competitive Intelligence Professionals' (SCIP) former executive director Alexander Graham regarding the 2005 *State of the Art* survey. According to the Competitive Intelligence Foundation and Cipher Systems, the CI consulting firm that conducted the survey, the study provides "a better understanding of how competitive practitioners are working in the field today, differences in CI activities across industries, and overall best practices." Following Graham's interview, Bukowski became interested in delving deeper into the findings stemming from the *State of the Art* survey, specifically the section focusing on the frequency with which CI practitioners

are asked to complete different tasks or use specific analytic methods. Bukowski made the final decision in November 2006 to use the survey as a basis for his thesis project.

The Research

Bukowski chose James G. Breckenridge, Dean of the Walker School of Business at Mercyhurst College, and Daniel F. Mulligan, a CI professor in the Applied Intelligence Department at the college, as the readers for his thesis project. Bukowski believed their background, skills and experience would prove valuable during his research. The journey down the arduous and time-consuming path of thesis writing began for him in November 2006 and the process continued through April 2007 when he finished defending his work.

Bukowski took a rather unique approach to his thesis research by observing and comparing trends in existing CI courses to data gathered from SCIP's *State of the Art* survey. In order to do this Bukowski decided to examine CI education programs by analyzing the content of graduate level syllabi from courses taught in colleges and universities since 2003. Because there are so few CI courses in comparison to other academic disciplines, Bukowski was faced with a limited pool of syllabi to analyze. As a result, he attempted to find the delicate balance between using as many syllabi as possible for his study with the need to conduct accurate and reliable analyses. Consequently, his finished product draws from only seventeen course syllabi.

Bukowski's biggest obstacle in researching and writing his thesis turned out to be the issue of finding syllabi that contained enough useable and pertinent information to include in his study. That problem aside, he did not come across any other notable complications throughout the course of his work. When asked about his overall impression of the thesis experience Bukowski provided valuable advice for all graduate students whose programs require them to complete such a long-term and in-depth product. He stated, "I did not mind it at all…The key is to pick a topic you will be interested in for at least six months. It is also important to set a manageable scope for your project. I made sure I would be interested in the topic and that I would be able to finish on time." Nevertheless, Bukowski did express regret in regards to the approach he took in conducting his research. If given the chance to start fresh Bukowski would make an effort to communicate more directly with CI professors, as he did not conduct any primary-source interviews. Instead, he relied heavily on syllabi and articles, only contacting the professors through email to request permission to use their syllabi in his study.

The Findings

Bukowski's comparison of existing CI graduate courses to the most recent body of data regarding CI job descriptions and responsibilities highlights useful lessons to help ensure that CI students are able to fulfill the duties professionals will expect of them within a CI organization.

Bukowski's research findings illustrate the CI community's need for the development of a standard Body of Knowledge (BOK). The BOK needs to specify exactly what CI is and what it is not. Furthermore, the CI community must create the BOK with the intent of reflecting existing job practices and must be prepared to update it on a regular basis. This will greatly improve the ability of CI educators to align curricula with current and future CI job functions. Dr. Craig Fleisher, who specializes in business strategy and CI research, emphasizes in his article *Competitive Intelligence Education: Competencies, Sources, and Trends*, that it will be difficult for CI to thrive in higher education if there is no accepted BOK and no official professional or governmental oversight body.

Bukowski's thesis also stresses the need for CI educators to be sensitive to changes in practice within the CI field. Teaching students practices and analytic techniques that are out of date or are no longer relevant in the marketplace is problematic. It is critical for CI instructors to cover the topics most important and appropriate to actual CI practitioners within the field at the current time. Bukowski's research calls for significant improvements in this area due to the finding that many of the analytic techniques and intelligence deliverables reported in the data as being used frequently or sometimes amongst over half of CI practitioners are not taught in any courses. Bukowski stated that:

> *Most CI courses only teach one or two analytic methods. This creates a situation where CI practitioners have a hammer, so every problem looks like a nail. Practitioners do not have a large toolkit of analytic techniques. A large part of this problem is that most CI professors only have one course to teach students everything.*

Additionally, Bukowski's research shows the importance of the clarification of CI's place within academia. Fleisher points out, in *Competitive Intelligence Education*, that CI courses are in "business, management, library and information science, information systems, journalism and military studies." Elements of CI are also encompassed in political science and intelligence studies departments that aspire to train analysts for national security or law enforcement intelligence positions. Due to the interdisciplinary nature of the CI field something as basic as which department to place CI courses in has not yet been agreed upon. Confusion surrounding the proper placement of CI within

academia has led to the fact that few CI books are written and designed as textbooks for classroom use. Currently, there is a dearth of teaching materials and scholarship on the subject of CI in general.

Finally, Bukowski's findings suggest that the CI field should attempt to learn from the broader intelligence community. In particular, CI educators ought to study the United States government's intelligence education efforts in areas outside of business that are more developed. A careful examination of what government agencies deem to be most valuable for their analysts would be beneficial to CI educators. With the exception of classified data and programs, this knowledge is widely available in books, articles, and on specific agency websites.

Bukowski recommends that CI educators place a strong focus on the analytic techniques that are most used within the professional CI community, while at the same time providing students with a strong foundation in structured analysis in general. Professors might accomplish this by providing students with books and supplemental materials they could turn to if they were ever in the position where they needed to learn more about a specific technique or method of analysis. Finally, Bukowski thinks it is important for educators to stress to the future managers and executives in their

Top 10 Analytic Techniques Used by CI Practitioners According to the 2005 *State of The Art* Survey
1. Competitor Analysis
2. SWOT Analysis
3. Industry Analysis
4. Customer Segment Analysis
5. Financial Ratio Analysis
6. Customer Value Analysis
7. Scenario Analysis
8. Issue Analysis
9. Strategic Group Analysis
10. Sustainable Growth Rate Analysis

classes that instituting and maintaining a CI division within their company, or the company they are working for, will be both advantageous and economical.

The Importance

In its present form, CI is more of a field than a profession. As a result, SCIP is trying to outline in black and white what exactly CI is and what skills a competent CI analyst should be required to have. In other words, SCIP is actually working towards the development of a comprehensive, standardized BOK for the CI community. Bukowski wrote his thesis with an eye towards aiding SCIP in this process. According to SCIP's *Foundation News* newsletter:

> *The body of knowledge project is the CI Foundation's most audacious goal and is perhaps the single most important initiative for the*

intelligence profession since the creation of SCIP over twenty years ago. When completed, it will define a common knowledge base to develop training programs, job descriptions, career paths, and publications. It will be an inventory of what an individual must know to achieve success. It will explain now and into the future what the CI profession is.

SCIP is pushing the academic side of CI. Presently, many of the professionals within the CI field are retired government analysts who still want to work and apply their intelligence skills. However, as the field of CI expands and the amount of courses on the topic increases the CI community will increasingly be comprised of a younger generation of professionals who are straight out of undergraduate and graduate programs. Therefore, it is crucial to determine how well educators are teaching and preparing these individuals. The current lack of standards within the field of CI often leads to inconsistencies between the techniques educators teach CI students and the skills practitioners expect new hires to know upon entering the job force.

The importance and relevance of Bukowski's thesis to the field of intelligence is best summed up by the author himself. Bukowski stated, "I hope this study will help CI professors emphasize the importance of analysis in their courses. They have a tough job fitting one year's worth of content into ten or fifteen weeks. Analysis is the core of intelligence…the better the analysis; the more managers will value CI."

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Analytical Techniques for Intelligence Analysis: A System for Selecting Alternative Methods

By Darci M. Leonhart
Feature Article by Lindsey N. Jakubchak

"I would like to dedicate this thesis to intelligence analysts around the world, who know what it is like to need just a little more time."- Darci Leonhart

The clock on the wall is ticking; newspapers and journal articles cover the analyst's desk. After countless hours of reviewing RSS feeds and online databases, information fills the analyst's mind. He has collected a wealth of information; yet, he stares blankly at his computer screen wondering what to do next. Time is running out to meet the decision maker's deadline; however, the analyst cannot decide on the best method to analyze his data, transferring it from mere information to actual intelligence. Should he stick to a method he is familiar with, or is that analytical technique not suitable for assessing this data? Perhaps the analyst's problems would disappear if he had access to a simple methodological index, one that would assist him in selecting an appropriate

analytical technique for analyzing his information, without costing him the time required to research these methods on his own.

In Darci Leonhart's thesis, *Analytical Techniques for Intelligence Analysis: A System for Selecting Alternative Methods,* she tackled the idea of creating an index containing numerous analytical techniques that were located all in one place and available to analysts across the three fields of intelligence; business, law enforcement and national security.   The intent of this system is to aid an analyst in selecting an appropriate technique to better assess their information, thus saving them time from searching out various methods independently while producing more effective intelligence.   In her thesis, Leonhart stated:

> *It would be helpful for all types of analysts to have access to such a selection tool to improve analytical products across the intelligence fields. The availability of such a tool would afford analysts the opportunity to identify and understand different techniques without having to spend at lot of time researching on their own, and potentially repeating this work over many times. With the ability to use multiple analytical methods, analyses will improve and aid decision-makers in making better choices for their organizations. Analysts will save time looking for a proper method and increase efficiency and improve analytical findings by easily identifying the most suitable method for their needs.*

Since time is an issue for most intelligence analysts, why waste it searching for a methodology best suited for analyzing the previously collected information, when one could simply refer to a selection index, created for just such a purpose?

Topic Selection

An interview with Leonhart's primary thesis advisor, James Breckenridge, Director of the Intelligence Studies Program at Mercyhurst College, provided insight to how Leonhart chose this topic. He indicated that Leonhart had a legitimate interest in the subject matter, as well as an interest in the field of business intelligence. Additionally, as part of Leonhart's internship with Eastport Analytics, she frequently dealt with databases and she wished to further explore and expand the idea.   It was Leonhart's background that initially led to her topic selection and together with Breckenridge, brainstormed the idea further. He commented, "She (Leonhart) wanted to conduct research that would be beneficial to the business field." On a more personal note, Breckenridge commented that this type of methodology fit Leonhart's personality. He stated, "Leonhart was a very meticulous, precise person. She did not like being dependent on other individual's efforts. She did not want to wait for someone else to get things done for her. She wanted to get them done by herself."

Methodological Narcissism

One problem with inexperienced analysts is the idea of methodological narcissism, or the selection of an analytical method that they are most familiar with and utilizing it predominately when they produce intelligence reports. While it is acceptable to work with the methodology with which one is both familiar to and comfortable. It is important for junior analysts to broaden their horizons and expose themselves to new analytical methodologies. When reviewing new methodologies, one might find analytical techniques more suited for meeting the needs of their specific requirement. In her thesis, Leonhart touches on the importance of this concept, commenting:

> *Within business, law enforcement and national security intelligence, different analytical techniques are used to meet specific requirements and analytical needs. Therefore, analysts must retain knowledge of various methods that they can apply to their perspective spheres of concern. Unfortunately, analysts can be stuck using the same techniques repeatedly. They can blindly apply the same templates without regard to their applicability to the specific problem at hand, because they lack the time it takes to find and implement new strategies. Analysts also may be unaware of the variety of available analytical tools and are limited to those which their company or agency has taught them.*

Leonhart understood that the value of analysis coincides with choosing the proper analytical tool for review; therefore, she wanted to open the eyes of analysts across the three fields of intelligence, as well as research-based analysts, and expose them to the numerous analytical methodologies available to them.

From the opposite end of the spectrum, time constraints can cause veteran analysts to run into the problem of methodological narcissism as well. In his book, *Intelligence Analysis: A Target Centric Approach*, Robert Clark states:

> *Time constraints work against the analyst's ability to consistently employ the most elaborate predictive techniques. More often, veterans tend to use analytical techniques that are relatively fast and intuitive. They view scenario development, red teams (teams formed to take the opponent's perspective in planning or assessment), competing hypotheses, and alternative analysts as being too time consuming.*

The more an analyst familiarizes himself with a particular methodology, the more comfortable he or she will be with it and the more apt to use it later in his career. In addition, veteran analysts may avoid methodologies that they have never heard of, fearing that it will take them longer to conduct an analysis without fully understanding

the technique. Exposing analysts to a variety of methodologies early in their career and continuing to update them on developing methodologies over time will likely increase the chance of utilizing varied and appropriate techniques later in their career that perhaps may be better suited for their requirements.

Literature Review Yields Several Problems

To begin establishing her catalog of methodologies, Leonhart reviewed literature across all intelligence fields, noting several frustrations along the way. She indicated that several useful tools had limited publication or were available to only qualified users. While some of these techniques proved to be valuable, it was of no help to those who did not have access to them. Additionally, some methodologies were difficult to understand and required several sources to fully comprehend the method. This created a problem, as analysts would waste time referencing numerous sources to clarify one technique. In her thesis, Leonhart wanted to provide analysts access to numerous analytical techniques with simplified explanations, thus eliminating the need to look at multiple sources in order to understand a technique and saving the analyst time. Further confusion is often possible when looking for specific techniques because there are often several names for the technique. To combat this, Leonhart provided a reference guide at the front of the matrix, listing alternative names for techniques with more than one name. Furthermore, after researching the possible methodologies across all fields, Leonhart found it difficult to find a variety of tools within the still developing field of law enforcement. Thus, she located methodologies that could be used interchangeable within the three fields.

Creation of the Matrices

After reviewing literature, Leonhart compiled a list of all analytical techniques for which adequate information was available. She then divided techniques into "profiles" containing a description of the methodology, the process, the form of the results, and provided a list of any strengths and weaknesses that would come from using the particular technique. To ease the reader's understanding and to aid in the selection process, Darci created two matrices. The first matrix, the Field of Intelligence Matrix, sorted the analytical techniques into the fields of intelligence based either on the recommendations of the utilized sources or on her personal assessment of the technique. Each method was applicable to business intelligence, law enforcement intelligence, national security intelligence, or non-specific/research based categories. The second matrix, the Analytical Techniques Matrix, matched a particular technique with the specific objectives of the analyst. After either matrix identifies technique selection, the analyst can refer to the aforementioned accompanying profile of each methodology to learn further details about the method, its applications and source references.

Synthesis of Information

Due to the vast number of analytical techniques, how does one decide which methods to include in such a catalog? Professor Breckenridge commented, "One of the most important aspects we had to consider when working on this thesis was deciding when the collection process had to stop." He added that a primary concern was to answer the question, "At what point does it become too much information for analysts to sort through?" Additionally, "At what point is this research no longer useful?" Breckenridge commented that an additional frustration for Leonhart was capturing her ideas into writing; therefore, she made this research more applicable and user friendly by making it interactive. Leonhart accompanied her thesis by creating a CD that provides direct links from the matrices to the profile of the analytical technique. Professor Breckenridge commented, "Making Leonhart's thesis visual was the most difficult part for her to complete; however, it was the most necessary for answering the questions she sought out to find." Additionally, Breckenridge indicated that Leonhart's thesis evolved during the research process. He commented, "Originally, she (Leonhart) imagined that the database would be much larger; however, in order for the index to be organized and useful; methods within each field were narrowed down. A reduction of methods allowed for more precise findings within each section." Furthermore, Breckenridge commented that the most important thing Leonhart got out of her research was "the ability to transfer a synthesis of large body of technical information to a practitioner."

Findings

After a review of over 80 methodologies, Leonhart established a number of findings concerning the use and applicability of the selected methodologies. Her primary finding was that a variety of analytical techniques are available in all fields. Additionally, even if a field has fewer techniques than other fields of intelligence, an individual can manipulate or directly apply a number of alternate techniques to these fields. It is also important to note that many analytical methodologies are not specific to a given intelligence field, but rather to all fields. In this case, individuals can apply these methods, usually intended for non-intelligence based academic research for the Intelligence Community as a whole, to any analytical need. The applicability of various methods extends beyond the field of intelligence. Individuals commonly use many of the methodologies in other fields, although they originated outside the field of intelligence. Finally, these matrices merely provide a template for managing knowledge about analytical methods. The template allows for expansion, modification and reforms, with the creation of new methodologies and the development of new information. It is a useful tool aimed at managing information in a constantly developing field.

The Next Step

In her thesis, Leonhart made tremendous strides in presenting the numerous methodologies available to intelligence analysts. However, she left an opportunity to take this research to the next level through the development of the quality aspect of each methodology. As recommended by both Breckenridge and Kristan Wheaton, Professor of Intelligence Studies at Mercyhurst College, the next step in continuing her research would be assessing the value of each technique. This would require testing each method to indicate how each applies to specific requirements and providing suggestions as to which methodologies work. In order to do this, an individual might review Leonhart's completed research, test each selected methodology present in her thesis, and then highlight which methods are most applicable and effective. Furthermore, Professor Wheaton indicated that the practicality of Darci's research would increase after testing each method and making the success of each one is known.

In addition to suggestions provided by Breckenridge and Wheaton, I feel that it would be useful to divide the matrices by period of research. For example, after testing each methodology, an additional qualifying category of the matrices could be strategic, operational and tactical intelligence. Rating the quality of methodologies by temporal spectrum would be beneficial to analysts across all three fields to identify the strengths and weaknesses of methodologies suited for front line conflict verses long term predictions. Unfortunately, according to Breckenridge, at this point no one has expressed an interest in continuing with Leonhart's research.

Thesis Review

A strong point of Leonhart's research was the application of the thesis from a written product to a technical application. My first thought when reviewing Leonhart's research was that maybe it was not as sensible as she had originally planned it to be. After all, is it practical to assume that an analyst will take the time to match the requirements of their project to the areas of the matrix, and then sort through the numerous pages of a book in order to confirm that the profile of the analytical technique is actually the one that they need to use? At first thought, one would probably say analysts are unlikely to use this index, and more likely to rely on something they are most familiar with. However; after reviewing the technical requirements of the thesis, the methodology appeared more plausible and practical. An analyst would have the time to identify their requirements in the matrix and click on the direct link that connects them to the analytical technique profile. An additional thought is that this research and matrix type is best suited for an entry-level analyst. Perhaps it is more of an encyclopedia of methodologies for junior analysts to learn about a variety of processes than a tool for experienced analysts to search out methodologies. By providing and outlining the most commonly used methodologies across all three

intelligence fields, beginning analysts can start to familiarize themselves with the variety of methodologies that exist. In that sense, I feel that Leonhart's research is not so much a reference tool utilized by analysts when producing intelligence reports as it is a learning guide necessary for introductions to intelligence courses. Not only does the index open an analyst's eyes to ways to asses and analyze data, but it also helps beginning analysts to identify areas of similarities and differences within the three fields, as well as identify areas of cross-over. By adopting, learning about, and utilizing a variety of methodologies early in their careers, by the time analysts are veterans, they will have a working knowledge of more applicable processes. Thus, analysts will save time from picking methodologies not suited for their requirements, and having to re-do the analytical process. In addition, it will allow analysts who move across the fields during the career, to distinguish which methodologies are useful in other fields.

In conclusion, an important question to answer is whether the research accomplished what Leonhart set out to do. In other words, does this collection of methodologies provide a time saving tool for intelligence analysts to seek out and utilize new methodologies? Perhaps Leonhart succeeded in finding a way to save analysts time; however, she succeeded in a different way than she originally set out to do. What Leonhart did was introduce numerous types of methodologies.   If an analyst can have a general knowledge of a variety of these methodologies in their head, and have had enough understanding of how each works, selecting a variety of methodologies would be second nature, and they would no longer need to refer to the matrix to select a method for them. Therefore, Leonhart succeeded in taking the next step in producing quality intelligence, by providing a catalog of methodologies that will aid in producing intelligence that is timely, focused and properly suited for meeting the decision maker's requirements.

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From Budyonnovsk to Beslan: Terrorist Hostage Takings in Russia and Their Lessons for America

By Alexander Sansone
Feature Article by Lauren Lindgren

Q. What's the difference between a Russian optimist and a Russian pessimist?
A. A Russian optimist says that things can't get any worse. A Russian pessimist knows that they can.
- Popular Russian joke in the Yeltsin era

"The Beslan attack made a huge impression on me," says Alexander Sansone, "both because of the audacity of it, and because of what it would do to American society."

The Beslan hostage crisis in September of 2004 coincided with Sansone's arrival at Mercyhurst College—and as a new student in the Applied Intelligence program, he couldn't stop thinking about it.

Little wonder then, that when it came time to pick a thesis topic several months later, Beslan was one of the first things that occurred to him. "I couldn't help thinking about something like that happening in the U.S.," he says.

The idea seemed like a natural fit for Sansone, a Russophile who spent 2 years studying the language at Mercyhurst. Looking for a way to combine his interests—Russian law enforcement and international terrorism—proved to be the key the narrowing down his topic.

"The process wasn't too bad, actually," explains Sansone. "I knew I wanted to do something that combined Russian and terrorism, and I talked to Mr. Heibel about it earlier. We had a pretty short list of possible topics from the beginning—basically the IMU [Islamic Movement of Uzbekistan] or the Chechen conflict, and I didn't see much material on the IMU. [But] the Beslan attack was still fresh in my mind."

Beslan had been a wake-up call for Sansone. Similarly, the Chechen terrorist hostage takings in Budyonnovsk, Moscow, and Beslan, Russia served as a warning to the rest of the world of the destructive capabilities of terrorist groups to carry out large-scale sieges with high civilian death counts. Sansone concluded that a review of the tactics and techniques used by terrorists during these attacks was likely to produce valuable insight for American decisionmakers to model strategies for the event of a similar attack in the U.S. Thus *From Budyonnovsk to Beslan* was born.

"Mr. Heibel and I pretty quickly hit on the idea of surveying these hostage-takings and trying to figure out what lessons and warnings we could take for the U.S.," Sansone explains. The process of finding a second thesis advisor seemed to fall naturally into place from there. "Once I'd gotten going, it was pretty easy to get Mr. Grabelski as a second advisor, since there weren't many theses that dealt with law enforcement issues. Both advisors really helped me a lot, especially when it came to trying to figure out the differences between Russian and American procedures."
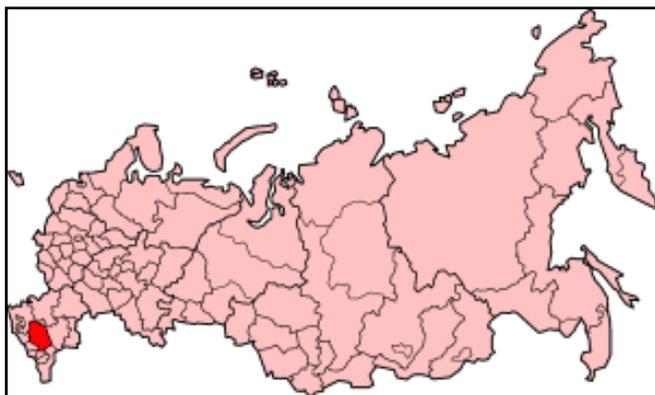
Stavropol Krai, Russia
Image Source:
http://www.tinyurl.com/3dgv39

From there on in, the thesis process was largely wattage. At first, Sansone spent most of his time reading, beginning in the summer before it was due—almost a year before the project would be turned in. "Later on," he says, "I began taking notes on the relevant sections and comparing them, trying to draw some

conclusions and putting together an outline. I'd say I spent maybe 20 hours a week on that, and then even more once I started writing. After the first draft was done, I spent less time, since all I had to do was address some of [my advisors'] comments. I'd say I spent somewhere in the neighborhood of 4-500 hours on the project—but most of the time was spent reading and rereading a bunch of sources, including many that turned out to be worthless."

Budyonnovsk, Russia
Image Source:
http://www.tinyurl.com/yvwd8m

In fact, chasing down dead ends proved to be one of the major difficulties of Sansone's topic. "At first, I just had an idea and needed to find stuff to read," he says. "There were a lot of dead ends and I wound up sifting through a lot of stuff that just wasn't relevant." Even with his language experience, Sansone says that finding Russian language sources proved to be difficult. He accordingly turned his attention elsewhere. "The first important thing was finding descriptions of the 3 sieges and comparing them. [But] even finding descriptions was tough with Budyonnovsk."

Katrin Ayrapetov could have told Sansone a thing or two about Budyonnovsk. Now a graduate student at Michigan State University, she was 10 years old at the time of the hostage crisis in 1995. She remembers a sleepy summer day in a quiet provincial town quickly turning nightmarish.

"It started when we heard shots," she says. "All the neighbors went outside. People were saying that since there was an army base close by, it was the soldiers practicing. But a neighbor that knew these things said that the shots sounded too close."

Their neighbor also recognized that the shots were coming from some heavy weaponry. "He said that [that kind of gunfire couldn't have been] just from 18 year old army recruits practicing," Ayrapetov continues. "Then some neighbors said that the telephone lines were cut off—and that's when my mom figured out that something was wrong, because that's apparently the first thing terrorists do during a pogrom, cut off the phone lines."

Budyonnovsk is a small city in the south of Russia, about 70 miles north of the Chechen border. People knew about the war in Chechnya, of course—that was inescapable—but this was something completely unexpected. "Even after they understood that there were shots being fired," Ayrapetov says, "people still stood around outside and talked, because no one really believed that anything could be happening."

But Ayrapetov's mother was nervous. After having lived through the Nagorno-Karabakh conflict in Azerbaijan, she understood that things could happen out of the blue. As the shots got closer, she quickly took her two daughters inside the house. "She was looking out the kitchen window, keeping watch," Ayrapetov explains. "Then she saw one of the terrorists pass by the window with a machine gun."

The Ayrapetovs immediately looked for a place to hide, settling quickly on the neighbor's cellar. "We sat there for about…a day..." Ayrapetov says, remembering. "They gathered hostages in different places, including a school right across the street from us. Then they got buses and took everyone to the hospital."

Ayrapetov's mother had been scheduled to take her younger daughter to the hospital that day, but for one reason or another, the family ended up staying home.

"We were lucky," Ayrapetov sighs. But not everyone was so lucky. "Our neighbor was taken hostage because he continued to stand outside. They just drove by and picked him up," she says. "People really didn't

believe it was happening. A lot of people got shot just because they wouldn't go inside."

After the hostages were taken to the hospital, things quieted down. Ayrapetov says, "From then on, there wasn't any immediate danger, except to the people that were in the hospital. So we came back to the house and watched the news all day. It was giving instructions to people in the town. They told us to lie under the windows, and stuff like that."

In the meantime, Budyonnovsk shut down. "There was nothing to eat for a few days because all of the food came from the market. People had to drive out to get the food for the market, and no one drove out for a while." With the roads barricaded by Russian authorities, there was nothing to be done—no one could get in or out of the city. Budyonnovsk was left to watch and wait.

Finally, the crisis came to a head. "We heard Russians 'storm' the hospital—it was like fireworks for a few hours," Ayrapetov says. "Then they left, and then you just heard people tell stories, and you found out who died little by little. They converted the bathhouse we went to into a morgue. Needless to say, we never went back to that bathhouse," she says with a wry laugh.

When asked whether or not she thinks the Russian government handled the situation well, she pauses. "On the news, they were constantly telling everyone that the shootings has ceased…as we heard the shootings," she remembers. "And people were saying that they should have evacuated us-they left a whole town paralyzed. On the other hand, I don't think you *can* handle the situation well. More negotiations?" Ayrapetov shrugs.

Of the Chechens, she says, "It was the first terrorist attack on their part. I guess people realized it could hit home, like 9/11…and then there were other attacks."

She listens attentively as Sansone's thesis research is explained to her. "I think that's actually a very good non-trivial research," she says immediately. She is most interested on his focus on the lessons that Russia's experiences hold for the rest of the world. [*See text box on previous page for a summary of Sansone's findings]* "One good thing— probably the only good thing—about a situation like this is that a country and its alpha teams gain experience in the face of a crisis," she says. "We both know that terrorist attacks can happen in any country, no matter how strong they are. It's how they deal with them that differentiates one country from the other." She feels strongly that the United States—and many other countries—can learn from this.

Sansone, for his part, says that in writing his thesis, "I thought it might help our thinking on hostage takings, and might better prepare us for something like this to happen in the U.S. Ideally, I'd show it to American police chiefs, SWAT teams, hostage negotiators, and FBI counterterrorism analysts in an effort to prepare them for the type of tactics they might see from terrorists who tried to pull one of these [attacks] off [*sic*]."

He then adds, "One of the things I noticed while reading about American hostage tactics is that nobody really seemed to address the possibility of a suicide hostage attack…sort of like the concept of a suicide hijacking before 9/11. I thought it would be very worthwhile if we could learn something from Russia experiences without having to make their mistakes over again."

Ayrapetov is thoughtful as she considers the possibility of a similar terrorist attack occurring in the United States. "It wouldn't take much," she says.

Sansone maintains, "The more I researched, the more attractive this kind of thing looked from a terrorist perspective." However, he quickly discovered that similar attacks in the U.S. would be more difficult to coordinate on such a large scale**.** The proximity of Beslan and Budyonnovsk to the Chechen and Ingush borders enabled terrorists to move large numbers of people and weapons into their target areas with relative ease. Conducting the same type of large-scale attack in the United States would be difficult to carry out without detection.

"The biggest challenge would just be to get the people into the U.S.," Sansone says. "Once that happens, they could do a lot of damage to the national psyche. It wouldn't even have to be in a big city. Any school with a few hundred kids in it would have the desired effect."

Ayrapetov agrees. But, she says, pointing out a passage in Sansone's thesis, if the ultimate goal of the terrorists is to cause panic, she thinks it would be far easier to create the desired effect in the present climate of the U.S. than it was for the Chechens in Russia. ""Long-term fear?" she says. "I don't think Chechens ever were able to scare Russians like 9/11 scared Americans. It was Russia in the 1990s…not America at the turn of the millennium." She becomes more animated. "I mean, we're talking about *'90s Russia*: crazy inflation, unemployment, government upsets. I think it was one more thing in a line of things to deal with. With the U.S., it was more snow in the middle of July. No one expected 9/11."

In Sansone's thesis findings, he writes that the primary demands of terrorists will almost certainly be large-scale demands that governments are highly unlikely to meet. Therefore, the real goal of the terrorists is to create mass panic among the population

and to force authorities to respond violently to the situation. This sows distrust of the government among the populace.

But Ayrapetov also says that she thinks the Chechens missed the mark there as well in Budyonnovsk. Instead of sowing mistrust of the government, she says her hometown rallied behind then-president Boris Yeltsin after the hostage crisis. "During the next general election all the presidential candidates came to this little provincial town and that's how I saw Yeltsin. I ran away from school to see him!" she laughs. "It seemed like the entire town was there!"

Russians continued this trend into the late 1990s and early 2000s, most agreeing with current leader Vladimir Putin's hard line against terrorism—especially after the attacks in Moscow and Beslan. Just a few years after Beslan, Ayrapetov wonders if the climate in Russia might have significantly changed, making it riper for the kind of effect that terrorists want.

"A terrorist attack on Russia now, during economic prosperity and rising nationalism might have totally different effects…" she says, thinking out loud, "but probably still not. I think it would still be a completely different response to the type that Americans had to 9/11—and that Americans would have to an attack similar to Beslan carried out in their country."

Sansone muses, "I guess I was expecting these hostage takings to be less well-planned and the terrorists to be less sophisticated. It surprised me to see how quickly the terrorists adapted their tactics and how far in advance they did the reconnaissance and planning."

Of his thesis, Sansone says his advice to people just beginning the long writing process is, "…just that it's really important to pick a topic that you're interested in. Even though I loved my topic, it still got frustrating and dragged sometimes. Whatever your topic is, it will be a major focus of your life for at least a year."

But, he is quick to add, he also gained quite a bit during his research. "I got really interested in the Russian special forces, the connection of Chechen terrorists to al-Qaeda, and hostage takings in general. I read a lot about traditional hostage situations, and really enjoyed learning about all the factors that law enforcement has to take into account while dealing with them. I also started looking more at the Chechen conflict, its history, and the tension between Chechen nationalists and Islamic extremists within the movement."

He continues, "I also got a good look at some of the difficulties faced by Russian law enforcement. That was fascinating, especially comparing them to the FBI. I got really

into reading about Alpha and Vympel [Russia's elite special forces teams that deal with terrorist attacks], some of their historic operations and training. I also really enjoyed trying to figure out the course of some hypothetical future hostage taking in the US. It made me seriously consider trying to become an FBI analyst!"

But, he warns, the thing that most surprised him about his research was "how little preparation our law enforcement agencies had for such a situation."

His research may serve as a valuable warning to the U.S. intelligence community of the attractiveness of this type of attack for future terrorists.

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Images of Twentieth Century Genocide: Decoding Signals & Heeding Warnings

By Diane Chido
Feature Article by Marley McKenzie

Introduction

After the War in Iraq, the Abu Ghraib Scandal, the establishment of the controversial detainment facility at Guantanamo Bay, and President Bush's aggressive foreign policy, most people would agree that the United States' public image could use a little "pick me up." Diane Chido offers policymakers an approach to this situation through her work, *Images of Twentieth Century Genocide: Decoding Signals and Heeding Warnings*, in which she points out the opportunity that the United States has to create an effective Indicators and Warning (I&W) System, which would help detect and prevent ethnic genocide in foreign countries before the damage is done.

Diane Chido received her Bachelor's degree in International Studies and Russian & Soviet Studies from the American University. She also earned a graduate certificate in Russian & Eastern European Studies, a Masters degree in Russian from the University of Pittsburgh, and a Masters degree from Mercyhurst College in Applied Intelligence. Currently employed by the management-consulting firm McManis & Monsalve in Erie, Pennsylvania, Chido has an ever-growing interest in international studies and conflict resolution, with a focus on Russian studies.

The motivation to research this particular thesis topic stemmed from Chido's personal interest in ethnic conflicts and power shifts. She framed her research based on the work of Susan Powers, in her book *Problem from Hell: Genocide in the 20th Century.* Power's book focuses on "determining similarities among these (ethnic) conflicts to find shared conditions and precursors and suggests the Intelligence Community develop a watch team to determine where, how, and when these conditions begin to coalesce." Once looking at the evidence from the past acts of genocide, it is apparent that the same types of events are occurring in the same pattern, leading up to the actual act of genocide. Chido recently submitted a proposal to the U.S. Army War College External Research Program for the construction of a timeline to collaborate with her thesis research. It would focus on studying propaganda as a predictor of ethnic genocide, in an attempt to prevent these crimes before they occur.

Ethnic Genocide

The United Nations Convention on the Prevention and Punishment of the Crime of Genocide defines genocide as:

> *Any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such:*
> *•(a) Killing members of the group;*
> *•(b) Causing serious bodily or mental harm to members of the group;*
> *•(c) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;*
> *•(d) Imposing measures intended to prevent births within the group;*
> *•(e) Forcibly transferring children of the group to another group.*

Chido's paper focuses on ethnic genocide alone. She claims, "It is highly likely that the economic dislocations caused by globalization will continue to exacerbate the problem of genocide in the Twenty-first Century." Ethnic genocide does not happen overnight or in the heat of passion. Chido argues that if genocide were simply "just a passionate outburst" the situation would be much easier to handle because it would be possible for the tensions to dissipate just as quickly as they erupted. However, Chido explains that this is not the case, and as history shows us, "a successful genocide requires years of planning, the coalescence of a particular set of environmental conditions, and careful

psychological preparation of both the target and the aggressor populations." Chido emphasizes the importance of incorporating a variety of different conditional factors to prevent ethnic genocide from occurring.

Factors to Consider

Chido's thesis cites four specific examples of recent ethnic genocide to prove to readers the systemic nature of the process. The Armenian Genocide of 1915, the Nazi extermination of European Jews during World War II, the Serb aggression primarily limited to Bosnia-Herzegovina, and the Hutu Power coup in Rwanda in 1994 all displayed the same patterns to portray the predictability of ethnic genocide. These patterns become apparent once analyst teams have the training to know what warning signs to look for.

The Failed State Index is only one small factor while considering which states are in danger of ethnic genocide. The Failed State Index ranks 177 countries based on their social, economic, and political pressures, according to founders, Fund For Peace. Chido discusses the importance of using more factors than simply the Failed State Index to predict ethnic genocide before it occurs. While the Failed State Index is an excellent tool for focusing on the failure of states politically, a state does not necessarily have to fail for an ethnic conflict to take place, (Rwanda for example). Therefore, the Failed State Index is simply just one of the many factors to consider when predicting the next outbreak of ethnic genocide in a country.

Chido uses these examples of ethnic genocide to prove that an actual process exists for when a state is planning ethnic cleansing. Chido proposes that an effective I&W System would allow the U.S. to predict the next hot spot for ethnic tensions and take action before those tensions result in genocide.

Genocide as a Process

Many psychological developments occur during escalating ethnic tensions. Chido discusses a number of different techniques to describe the gradual process that causes ethnic tension, and eventually genocide.

Ethnic identity and the concept of "them" and "us" is a natural human condition, instilled from birth. Chido claims, "the fear of unfamiliar people may be the beginnings of the determination of who belongs to 'us' and to 'them' categories for individuals." This primal instinct is the basis for which ethnic tensions build upon.

The next step in the process involves nationalist politics. This ideology relies on the idea that there needs to be a threat involved in the "them" and "us" concept. Chido

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states that "in order to create a unified concept of 'us' worth fighting for, the effective nationalist politician must show the populace that there is a 'them' threatening the integrity of that unity."

Chido argues that, "Propaganda and the national media provide a set of images linked to events that can clearly illustrate for the masses that the territory, way of life, and even their very identities are in peril from the target [them] population. This incites the masses to join the struggle intellectually." When people join in groups, individual responsibility is lost and people have more courage to do things they may not normally do without the encouragement of others.

These factors all have an effect on build up of ethnic tensions and need consideration when predicting the next hot zone for ethnic tensions. It is vital to consider these factors when evaluating what different ethnic groups are capable of carrying out when tensions increase.

An Effective Indicators and Warning System

The first step in creating such a system is to identify which locations have the most severe levels of ethnic tension. Looking at the Failed State Index, current events within the political and social realms of the state, and observing the propaganda efforts within these states allows a team of analysts to identify which states have the highest risk of ethnic conflict.

Once the hot spot location is determined, the creation of a team of experts on the area is essential. Their function is to provide the understanding needed to predict the conflict. The personnel are selected based on the requirements of the region. The particular team is solely responsible for "watching" the region and making sure that if tensions increase, the team is aware and prepared to act accordingly.

Chido also emphasizes the importance of having a base knowledge available to the team of analysts responsible for evaluating the problem to tap into before an issue actually occurs. By the end of 2005, the United States intelligence community was still not prepared to deal with intelligence collected on al-Qaeda after the September 11, 2001 terrorist attacks. There were insufficient numbers of trained Arabic translators and specialists in the needed areas.

Projected Outcome

Although her proposal has not been used by decision-makers as of yet, Chido hopes that the United States will take advantage of its key position in the world to present this system to the UN, effectively improving our much-damaged global image. Ideally, this I&W System would be most effective if the United Nations took responsibility for the project as a global effort rather than letting it devolve onto individual nations. The system would prove beneficial to all countries in the long- run, as prevention of ethnic genocide is much more cost-effective than global efforts to aide nations after ethnic conflict.

Ethnic genocide is preventable as long as a team of qualified analysts is prepared to identify the signs. Genocide is also not a simple act, but a process that requires much preparation and organization. A dedicated watch team, equipped with knowledgeable analysts, can assuage and resolve ethnic tensions before conflict erupts.

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Is China Stable?
An Intelligence Analysis Perspective on the Question of Stability in China in the Next Five to Ten Years

By William James Welch
Feature Article by Brent Pearson

The Topic

In his bestselling book *The World Is Flat,* New York Times columnist Thomas Friedman said that, "If current trends prevail, countries like India and China and whole regions like Eastern Europe are certain to narrow the gap with America, just as Korea and Japan and Taiwan did during the Cold War. They will keep upping their standards." He also highlights a conversation with a Mexican journalist that had an interview with a Chinese central bank official, and told him about China's relationship with America: "First we were afraid of the wolf, then we wanted to dance with the wolf, and now we want to be the wolf." In his 1979 book *The White House Years,* former National Security Advisor and Secretary of State, Henry Kissinger said, "Once

China becomes strong enough to stand alone, it might discard us. A little later it might even turn against us, if its perception of its interests requires it."

We often hear analysis in the media about China's emerging economy overtaking the United States and its military expansion posing a threat to American global hegemony. Such quotes from scholars like Friedman and Kissinger lead us to believe that China's rise to superpower status is inevitable. However, according to Bill Welch and his use of the Analysis of Competing Hypothesis method, China's so-called rise is not as certain as scholars and commentators may lead us to believe.

The Idea

An accomplished journalist and newspaper editor in Erie, PA, Welch wanted to challenge himself for his graduate thesis at Mercyhurst. "I wanted a real thesis, not a glorified term paper." In Welch's mind, a real thesis would need to answer a non-academic question. Mercyhurst Applied Intelligence Professor, Kristan Wheaton, suggested the idea of answering questions about the future stability of the People's Republic of China using the method of Analysis of Competing Hypothesis (ACH). Until this point, Welch only had a casual interest in China largely due to the volume of media coverage China receives. He explained: "Since ten years ago we perceived China as an emerging peer rival to the United States. I was suspicious of their intentions."

The Method and Research

As an experienced journalist, Welch was confident that he knew what the research aspect of the thesis would entail. To determine what would be the best indicators of stability in China, Welch did some background reading and stayed abreast of current events in China and new academic articles as they came out. Learning more about the ACH method was his new challenge. His only previous experience with ACH was the *Intelligence Theories and Applications* class at Mercyhurst, a required course for all first year Applied Intelligence graduate students. For the course's final project, each student does a country study and uses the ACH method to determine their assigned country's stability for the next two years. Welch's thesis would be similar to the country study but much bigger and required an in-depth knowledge of ACH. The introduction to ACH in the theory class did not make Welch a wholesale convert to its use. "It looked like an interesting tool, but an analyst could manipulate it by just increasing the relevance of a piece of evidence." Even former CIA Analyst Richards Heuer who developed the ACH method admits "ACH can reduce cognitive biases, mindsets, and perceptions, but not completely eliminate them."

For Welch, staying honest with ACH was the trick. He applied the ACH method the way that Mercyhurst explains it, by requiring analysts to grade the consistency of each individual piece of evidence against multiple hypotheses. Welch came to see the advantage that ACH gives both the decision maker and an analyst. By having a visible format that presents each piece of evidence and a rating of its consistency with the analyst's hypotheses, the decision maker can review an analyst's process and an analyst can defend his or her findings. Welch further explained how the evidence and analysis in media and academic journals have good logical assumptions about China but generally do not use any method. [To learn more about ACH, reference *Structured Analysis of Competing Hypotheses: Theory and Application* from the Analytic Methodologies Project of 2006. Published by the Mercyhurst Institute of Intelligence Studies Press].

It was easy for Welch to pick out the growing problem of civil disturbances throughout China. China's environmental crises were also prominent in his research. Welch describes the environmental crises as China's "real disaster." Further reading about China's environmental disasters brought out evidence of corruption being a major cause of China's environmental problems, especially at the local levels. Anger over this corruption was the driving force behind civil disturbances. The other sub-topics of keeping China's economic engine running, relationships between central and local governments, energy needs, controlling the media, and the functioning of the Communist Party also fed on one another.

Welch eventually developed three different hypotheses that would compete against each other. Shown below are the hypotheses from Welch's ACH matrix.

> ➤ The first hypothesis tested the government losing control in five to 10 years as it loses the struggle to balance these conflicting forces.

> ➤ The second hypothesis questioned the regime losing balance even sooner and going into a "high-speed wobble" or crash. In this scenario one or more forces listed above gets out of control, precipitating a major crisis. Most likely, growth would stall or the people would grow too frustrated with this trend. This would cause too great a level of instability for the government to handle. The Communist Party of China would lose power over most or all of the country, or it would radically re-form itself and make a radical change in direction, such as reverting to a Marxist economy or imposing ruthless totalitarian controls.

> ➤ The third hypothesis was that the regime would find a way to integrate the competing forces so that they might work in harmony rather than in opposition to each other. The CPC regime would continue its more gradual reforms while maintaining its authoritarian hold on the nation. To do this, it is highly likely the

government would have to arrive at some compromise with several of the competing forces, such as finding a way to keep full employment while keeping the economy growing at a stable rate would fit in this hypothesis.

The Findings

Upon examination, the evidence corroborated the first hypothesis. Below is a review of the evidence consistent with the first hypothesis.

Civil Unrest: Protests increased each year in the past dozen years, and will likely continue to increase. Non-governmental organizations (NGO) and lawyers giving aid to people with grievances toward the government are increasing their activism for changes in government at the local and central level. A major national incident will likely instigate widespread protests and more violence is likely to occur. Many of the people's frustrations have to do with grievances at the local level, but frustration with the central government will continue to grow.

Corruption: Corruption continues to be widespread in the government and party officials. It is prevalent among non-governmental officials such as private businessmen and factory officials. Compounding China's non-performing loan problem is corruption and this provokes civil unrest.

Central Government Versus Local Authorities: The central government cannot/will not rein in the economic decisions of local governments. Local officials decide how much they will cooperate in enforcing central government directives. The Chinese way of doing business, which capitalizes on favors and relationships (*Guanxi*), continues to have a negative impact on the government.

The Economic Engine: The failure to rein in local government resulted in the economy growing faster than the central government's targets. Despite its growth, the economy fails to employs the tens of millions of job seekers each year. Reliance on exports and increases in consumption leaves the Chinese economy vulnerable to external factors. The coastal region outpaces new 'socialist countryside' development initiatives. Even as rural poverty eases, rural residents' incomes fall further behind urban incomes.

Political Pressures on The Zhongnanhai: Divided leadership exists in the Communist Party of China (CPC), and the rank-and-file are moving away from party ideology. Failure by the Central government to ease the plight of the rural masses is also contributing to the deteriorating of the CPC's 'harmony' with the masses. The nationalist fervor centered on the Olympics, and the Shanghai Expo can hold anti-regime dissent in check only until the end of these events. [The Zhongnanhai is the

complex of buildings adjacent to the Forbidden City that serve as the headquarters for the Communist Party of China].

Environmental Disaster: Local officials dodging environmental rules are a major cause of increased air and water pollution. Desertification is increasing and arable land is decreasing.   Residents in rural areas protest the pollution in their communities.

China's Quest for Energy: As oil prices increase the government will increase its subsidies, which will strain the government's budget over the long-term. Coal accounts for 65% of China's energy consumption.   The environmental damage and costs of health hazards will continue to cost the regime over the long term because of China's low energy efficiency.

Controlling News and Comment: China's use of Internet Police and filters is currently keeping adequate control over unwanted information. Over the long-term increasing use of the Internet, blogs and countermeasures by dissidents will be more than the regime can monitor. Increasing mobile telephone use will spread information faster than the government can monitor it and the people's determination to circumvent government controls will increase.

Welch's findings using the ACH method indicates that because of its internal strife, China will not become the "wolf" described in Friedman and that it is likely they will not be able to "discard us," or "turn against us" as described by Kissinger. Welch's current view is that all focus of the Chinese government is dedicated to internal stability, or as Welch put it "keeping a lid on the domestic scene." He does not believe China to be a significant a threat to Taiwan and does not see them emerging toward global hegemony.

When asked if the thesis effects how he views the current discourse about China in media and politics, Welch smiled as he thought about his answers. He says the research and analysis definitely affects his views on the current discourse about China. He sums it up best when he said "The sick thing is, I find myself rooting for them [China] to go down."   When asked about how his journalism background prepared him for the thesis and using the ACH method, Welch jokingly responded: "No journalist I know uses a method. Journalists love to be their own analysts."

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Accountability:
Process and Outcome Systems for Intelligence Analysts

By Alyssa Sundy
Feature Article by Morgan Russell

Introduction

There are times in every graduate student's academic life when they contemplate throwing in the towel to pursue the easier path of a steady income and a stable nine to five job. But the Mercyhurst Institute for Intelligence Studies (MCIIS) is breeding a different type of student…an intelligence analyst. Intelligence analysts are interesting specimens, composed of extreme personality traits, a self-imposed responsibility with a dash of arrogance. Molding young analysts is a complicated task of teaching the importance of questioning reality of today, so that they can paint a better picture to ensure the global stability of tomorrow.

Intelligence analysis is not a new concept, but as the world is changing so are the consequences and repercussions of an analyst's estimate. The MCIIS makes this fact known to its students every day, to prepare them for the challenges that lie ahead in the

Intelligence Community. Intelligence relies on trust, an analyst's trust in their sources and their own estimate, and the decision maker's trust in the analyst's assessment. One important factor imbedded in this trust is accountability. Alyssa Sunday, a graduate of the MCIIS master's program, understood the importance of accountability in the Intelligence Community but wanted to determine what level of accountability would prove must successful in yielding the best analytic results.

There were several types of accountability in the intelligence process that Sundy felt necessary to evaluate. For an intelligence analyst, process accountability refers to the accountability that exists as an analyst is working through a problem such as source collaboration, in-depth data, and exhausting every possible avenue for collection. Outcome accountability is as simple as whether or not the estimate (product) turns out to be correct. The last type of accountability that emerged in Ms. Sundy's thesis work was internal accountability. Internal accountability is that moment in time when the intelligence analyst contemplates throwing in the towel, but decides not to because they alone understand the importance of their work and the repercussions that could occur should they decide to quit. Students at MCIIS and professional intelligence analysts alike, in one way or another, understand the rhetorical question, "If not me, than who?"

Accountability is not tangible and therefore hard to explain, which makes it even harder to measure. Alyssa Sundy decided though to tackle this problem by comparing 65 students at MCIIS using a quantitative experiment that would measure the process accountability against outcome accountability. Her findings would reveal the impact of the third type, internal accountability, and open the door to a whole new avenue of research that could change the internal functioning of the entire Intelligence Community.

Importance of Accountability

In E.J. Dahl's *Warning of Terror: Explaining the Failures of Intelligence Against Terrorism*, he emancipates the analyst from any accountability, stating that "there is no fault among analysts because one cannot expect an individual to predict or foresee the future." However, Intelligence analysis is not meant to foresee or predict the future but instead aims at reducing uncertainty for decision makers. Is it possible that Intelligence analysis muddles the idea of accountability because there is not necessarily a wrong or right answer, but merely an estimate to reduce uncertainty?

In this changing world, coupled with the introduction of heightened internal and external threats, the intelligence community needs accountability, not to encourage analysts to produce their best work but as safeguards against negligence and complacency. In recent history, intelligence failures such as the 9/11 terrorist attacks, the Iraq WMD National Intelligence Estimate and the explosion of the Challenger space shuttle has placed the community under extreme scrutiny. Alysaa Sundy addresses these occurrences as moments when the Intelligence Community lost credibility with the

public and called for an internal evaluation into how much 'trust' was being placed in intelligence process.

Trust is an uneasy word to use when it comes to intelligence analysis. It is hard to truly quantify how much of it you are bestowing onto an analyst. It seems that trust combines with accountability when an analyst confronts a decision maker with an estimate. A decision maker must place a great deal of trust not only in an analyst's assessment but also in their level of accountability.

Sundy's Thesis Relationship to Accountability

In attempting to find out the 'accepted' accountability in the intelligence community, Sundy found that agencies vary in their emphasis on process or product accountability. After interviewing two professors at Mercyhurst who spent worked as intelligence analysts at separate federal agencies, it became apparent that each agency had placed emphasis on different types of accountability. The first professor, Dawn Wozneak, a former analyst for the FBI whose experience was at a law enforcement focused intelligence agency, stated that she felt that the agency instilled more of an emphasis on product accountability. While the second professor, Kristan Wheaton, who was the faculty advisor on Alyssa Sundy's thesis and a Foreign Area Officer for US Army intelligence, felt that there was more of an emphasis on process accountability

After contemplating these contradictions, it became imperative for Sundy to breakdown this discrepancy to its simplest parts. She concluded that the law enforcement community possibly places more emphasis on product accountability because it gauges successes in seizures and arrest. In comparison, the National Security sector places more emphasis on process accountability because of the importance of reliable sources, founded accusations, and prevention. Needless to say though, process and product accountability are inseparable. To produce a reliable product you must have a reliable process.

However, Sundy's thesis did find one type of accountability that was taken into account in the intelligence community. Internal accountability is not a type of accountability that passed down from a supervisor or disseminated through an agency's standard operating procedures; internal accountability develops within each individual analyst. This kind of accountability defines intelligence analysis because decision makers depend on the work of analysts to help make decisions that could affect the lives thousands.

History of Accountability

In her thesis, Sundy built upon past studies that addressed accountability and attempted to apply the studies to the field of intelligence analysis. Philip Tetlock conducted the

most important of these studies in 1983. Tetlock's study emphasized the factors that could affect accountability. His findings are applicable to the duties of an intelligence analyst and also to the notion of the 'politicization' of intelligence.

Tetlock believed that external factors, such as the amount of supervision a superior had over a person's work, if the person's work would be solely associated with themselves, or if the person was familiar with their audience, could greatly affect accountability. One of Tetlock's hypotheses, as mentioned by Sundy, stated that "accountability will create better judgments if views must be justified by an audience." This hypothesis plays directly into the relationship between an intelligence analyst and a decision maker.

Tetlock stated that "Accountability studies showed that subjects would conform to the view of their audience." If this is so, at what point does internal accountability become subservient to external factors, such as, a decision maker's personal agenda or the analyst's opinion of the right way to sway a decision maker? {need first name} Matthias states this perfectly when he says "[T]here is pressure that occurs from working in a hostile environment causing an invisible pressure and causing analysts to unconsciously skew their estimates."

Accountability can be broken down into two areas, one being agency driven and the other internally driven. Process and product accountability fall under the first area of agency driven, while internal accountability falls under the second.

Accountability Experiment

When approaching Alyssa Sundy's thesis, it is important to understand how she discovered the idea of internal accountability despite her initial focus on process and product accountability. She aimed to evaluate the importance of process and product accountability in the intelligence analysis, but instead stumbled upon a simple but un-noticed idea of internal accountability.

Sundy used a quantitative approach to break down accountability in a group of young intelligence analysts at the Mercyhurst Intelligence Studies Institute. The experiment included 65 subjects randomly divided into three groups. The subjects varied in educational status from college freshmen to second year graduate students. The subject's accountability group acted as the independent variable, while the score of the subject's report served as the dependent variable. A written intelligence product was assigned to each student with a one week due date.

Sundy notified each group on which criteria applied to which group: scorers would evaluate outcome only for Group 1, process only for Group 2, and Group 3 acted solely

as a control group with no responsibilities. The external factor that played into the experiment was the fact that as long as a student completed the assignment, they received extra credit in one of their classes. This factor would influence Sundy's findings.

The assignment for the written intelligence product was to write an estimate on the crude oil price for the beginning of next month. The criterion set out for the participants was as follows: Group 1 was evaluated on the correctness of their estimates only, Group 2 was evaluated on their process to reach the analysis and Group 3 was not held accountable for either the process or outcome. Although the criteria only help each Group responsible for either process or product, each report received both a process and outcome score for analysis reasons.

Three Mercyhurst professors scored the student's reports, giving each a process and outcome score. Each report received a score for both process and outcome to allow for further comparison between all three groups. The professors gave each report a process score on a ten point scale (on criteria provided by Sundy) and then an outcome score, which measured the accuracy of the report estimate to the actual answer. Sundy describes this as "[F]or example, with an actual result of 62.5 and an estimate of 68 the subject received an outcome score of 5.5. Therefore, higher scores are better for process, lower were better for the outcome."

After receiving all of the scores back from the professors, Sundy's next step was to input all three Groups process and outcome scores into a table to determine a group average. The experiment yielded the following results: Group 1 earned a process score of 6.29 and an outcome score of 4.32, Group 2 had a process score of 6.38 and an outcome score of 2.75, and Group 3 earned a process score of 5.74 and an outcome score of 3.26. She also calculated the average of how far from the actual outcome each group's estimate was in terms of the price of crude oil at the beginning of next month.

Sundy arrived at the conclusion that her earlier hypothesis that process accountability will have better analysis and estimates is deemed null due to the lack of great deviation between Group 1 (Outcome) and Group 2 (Process). The next step to incorporate into the thesis was the understanding of what these numbers meant and if there is possibly an overlooked factor that played into the results.

Findings

Sundy's findings concluded that neither process nor outcome accountability proved to be an "overriding factor in how well an analyst will perform his or her job." Her hypothesis originally stated that the process scores would be higher than both the outcome and control group scores, and with the control group scores being the lowest of

the three. After the experiment, neither group's scores displayed any extreme deviation from the others.

The interesting aspect of the experiment was that the students participating in the study did not have to receive a certain score for extra credit; they merely had to turn in a finished product. Sundy states that "only approximately half the people that signed up for the study followed through with it." She reports that the students that did not turn in any work at all cited not having "the time to produce good work." This response fostered the idea that the participants felt that if they could not put in the necessary time to construct an above average product, they did not feel able to adequately fulfill the assignment. This brought Sundy to the overlooked factor of internal accountability.

Sundy does point out that, while internal accountability did in fact play a big part in her findings, external factors will most likely always factor into an intelligence analyst's process and product. She came to the conclusion that it is likely that the type of accountability evident in the intelligence analysis process or product may not matter, but the existence of accountability at all is the determining factor in an analyst's work. In light of these new findings, future research could now provide more insight into the role and impact of accountability on intelligence analysis.

Future Research/Recommendations

Evaluating intelligence analysis is a new concept for researchers and practitioners alike. As mentioned earlier, intelligence analysts are interesting creatures with a new generation of analysts emerging every day. Understanding the inner workings of an analyst is just as important as dictating their external working environment. Many intelligence agencies tend to focus on these external factors as means of control and uniformity, while ignoring the dynamics surrounding each individual analyst.

Professor Wheaton suggests a good starting point for future research in the intelligence community on accountability. He proposes that researchers should consider a comparison study of accountability in fields that have pressures similar to those faced by intelligence analysts, such as practitioners of medicine or law. The Intelligence Community needs to fully understand the most efficient way for its intelligence analysts to produce quality products.

Alyssa Sundy does mention that a replication study of her experiment that accounts for internal accountability and factors in external factors would provide a more thorough picture on the overall topic of accountability. External factors mentioned by Sundy for the replication study focuses on the importance of understanding the directions of the experiment by highlighting the accountability in each group and how the subject's audience (professors in her experiment) plays a role in the entire process.

Accountability continues to play an enormous part in the intelligence community and in the production of analytic products for use by decision makers. Research into the factors affecting accountability and the means needed to establish it in the Intelligence Community is essential to the continued production of good intelligence.

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Identifying Personality Types of Intelligence Analysts Using the Myers-Briggs Type Indicator

By Stacy Gilchrist
Feature Article by Travis Senor

"I have always been interested in the mind and the cognitive process." This quote is from Stacy Gilchrist, a masters-level graduate of the Mercyhurst College Institute for Intelligence Studies, and now a full-time employee in the United States Intelligence Community. In May 2007, Mr. Gilchrist composed a thesis analyzing the personality types of intelligence analysts. His research yielded surprising results that could signal a change in the future of intelligence analysis.

According to Gilchrist himself, his interest in intelligence analysis stemmed from his initial desire to work as a detective or investigator for a federal law enforcement agency like the FBI. However, after receiving a bachelor's in Criminology, he felt that "the program and course work was too focused on theory and that it didn't really provide me with the knowledge or skills necessary to attain the type of position I desired. This realization, along with an ongoing desire to further my education, drove me to seek out

graduate programs that would focus more on hands-on or practical skills." After initially considering law school, Gilchrist found the Mercyhurst program.

The Mercyhurst Institute for Intelligence Studies (MCIIS) is part of a small Catholic college located in Erie, PA. The Institute itself consists of both graduate and undergraduate students, trained in national security, law enforcement, and business intelligence analysis. Gilchrist confesses that he "wasn't really aware of the field of intelligence analysis until I discovered the program at Mercyhurst." After a personal visit to the campus and meeting with Robert Heibel, director of the MCIIS program, Gilchrist became convinced that the program was for him. "I think the work an intelligence analyst does is intriguing for someone with a problem-solving mindset

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The Myers-Briggs Type Indicator

Building, in the 1940s, on a model originated by Carl Jung, Katherine Briggs and Isabel Briggs Myers, her daughter, devised an instrument to measure individual personality types. This became known as the Myers-Briggs Type Indicator, or MBTI. It measures traits spread across the four dichotomies that make up personality: Extraversion vs. Introversion, Sensing vs. Intuition, Thinking vs. Feeling, and Judging vs. Perceiving.

Extraversion: energized by being with other people; act, then think; think out loud; respond quickly, enjoy a fast pace; prefer breadth to depth

Introversion: energized by spending time alone; think, then act; think in their own heads; prefer depth to breadth;

Sensing: trust what is certain and concrete; like new ideas if they are practical; value realism and common sense; are oriented to the present

Intuition: trust inspiration and inference; like new ideas for their own sake; value imagination and innovation; oriented toward the future

Thinking: apply impersonal analysis to problems; value logic, justice, and fairness, one standard for all; tend to be critical; motivated by the desire for achievement and accomplishment

Feeling: consider the effect of action on others; value empathy and harmony, see the exception to the rule; like to please others; motivated by a desire to be appreciated

Judging: happiest when a decision has been made; work first, play later; set goals and work towards achieving them on time; see time as a finite resource and take deadlines seriously.

Perceiving: happiest leaving their options open; play now, work later; change goals as new information becomes available; see time as a renewable resource and deadlines as elastic

because it blends the known with the unknown and can essentially create a never-ending problem (or at least one that doesn't present a clear solution)."

So how does a budding intelligence analyst end up writing a master's thesis on personality types? All MCIIS graduate students are required to compose a thesis as a condition of their successful completion of the program. As for Mr. Gilchrist's particular inclination towards the topic, he states, "I enjoyed the psychology courses I took as an undergraduate so much that I decided to earn a minor in the subject." At one juncture, he considered turning his psychology minor into a major, but ultimately decided against it. He continues: "A book titled *A Whole New Mind* by Daniel H. Pink proved to be the catalyst in developing my thesis idea. In this book, Pink discusses how the workplace is changing and how certain types of people will be in higher demand than others." The book describes the different qualities inherent to "right brained" and "left brained" people. It also details how certain qualities will be of value in changing job fields. "This discussion of inherent cognitive qualities led me to wonder how these qualities were distributed among a population of intelligence analysts." After discussing this thesis idea with his primary reader, Professor Kristan J. Wheaton, Gilchrist was steered toward examining personality typing, specifically using the Myers Briggs Type Indicator (MBTI).

Previous intelligence authors, such as Clark, Lahey, and Krizan had also tried to assess the personality types of intelligence analysts, describing an "ideal" candidate as someone who is logical, objective, unemotional, calm, well organized, and efficient. Some of these incorporated MBTI terminology, but not the methodology. However, the only previous, true MBTI study of intelligence analysts took place over the course of nine years in the late 1980s and early 1990s, when Ronald D. Garst surveyed students at what was then known as the Joint Military Intelligence College (JMIC, though now known as the National Defense Intelligence College or NDIC). JMIC prepares members of the U.S. Intelligence Community for senior-level jobs in the Armed Forces and national security agencies. In his research, Garst chose a sample of 1,288 students from the JMIC and administered the MBTI test. He published his findings in 1995 under the title *Intelligence Types: The Role of Personality in the Intelligence Profession.* Garst found an overwhelming percentage of Introversion types, and fifty-six percent of students tested scoring as Thinking-Judging types. However, according to Gilchrist, and as Garst himself even admits in his published findings, the study lacked a fully representative sample of the Intelligence Community.

The nature of the JMIC, in preparing existing members of the armed forces or other government employees for senior job positions, is such that it attracts very specific personality types. Many of the students in Garst's study were also of a military background, which further attracts specific personality types. With regard to his own study, Gilchrist said of Garst that, "I don't think I expected my results to fully mirror

Garst's results since his sample was from a population concentrated with a different type of analyst. Most of the analysts in his population were on a career path toward management or senior level positions and many had military backgrounds." Additionally, according to Gilchrist, Garst did not provide any kind of analysis or interpretation as to what his findings might mean for the makeup and future of the Intelligence Community.

In conducting his own thesis study, Gilchrist used Mercyhurst Intelligence Studies undergraduates as his sample. Due to the size of the undergraduate class for the program, the sample was restricted to one hundred students, fifty underclassmen (freshman and sophomores) and fifty upper classmen (juniors and seniors). He contacted students via e-mail requesting their participation. The MBTI test given consisted of ninety-three questions and took about twenty minutes to complete. Gilchrist also surveyed the MCIIS faculty to assess their expectations of the personality types of their students, and therefore of future intelligence analysts. However, it was the results the study yielded, and not the methodology, that was of significant interest.

Among the underclassmen, there was a 62.5% to 37.5% relationship between Extroversion and Introversion tendencies (see the associated text box for a full description of these preferences), respectively, a 13 percent upward variation from the US national average. Sensing and Intuition preferences split evenly, but this was a dramatic difference from the US national average, which favors Sensing preferences by 73.3% to 26.7%. The underclassmen also showed a greater tendency toward

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The Most Prevalent Upperclassmen Personality Types At MCIIS

ISTJ: Quiet, serious, earn success by thoroughness and dependability. Practical, matter-of-fact, realistic, and responsible. Decide logically what should be done and work toward it steadily, regardless of distractions.

ESTJ: Practical, realistic, matter-of-fact. Decisive, quick to move to implement decisions. Organize projects and people to get things done, focus on getting results the most efficient way possible. Take care of routine details. Forceful in implementing their plans.

ESFJ: Warmhearted, conscientious, and cooperative. Want harmony in their environment, work with determination to establish it. Like to work with others to complete tasks accurately and on time. Loyal, follow through even in small matters.

ENTJ: Frank, decisive, and assume leadership readily. Quickly see illogical and inefficient procedures and policies, develop and implement comprehensive systems to solve organizational problems. Forceful in presenting their ideas.

Thinking preferences at 60.4%, over Feeling preferences at 39.6%, an inversion of the US national average. Judging and Perceiving tendencies were consistent with national averages.

Among the upperclassmen sample, Gilchrist's results were consistent with those of the underclassmen sample, the lone exception being a greater tendency towards Judging rather than Perceiving preferences. Since these upperclassmen are the students that enter the Intelligence Community, Gilchrist judged them as a reliable proxy for drawing his conclusions about the personality makeup of the Intelligence Community.

Among faculty members surveyed, there was a strong consensus as to the personality composition of MCIIS students, and by correlation, future analysts. The faculty scored students as strongly having Thinking, Judging, and Sensing preferences, which was generally consistent with the actual type distributions. However, the faculty heavily favored Introversion preferences even though the MBTI tests did not bear out this result. This particular tendency was also at odds with the results of Gast's own JMIC study. When asked if these results surprised him, Gilchrist said,

> After learning about the different personality dichotomies
> and types, I think I imagined Mercyhurst students would definitely
> exhibit tendencies toward Thinking as opposed to Feeling. I also
> thought there would be a higher distribution of Introverts than
> Extraverts. Naturally, the widespread stereotypical perception of
> intelligence analysts (or analysts in general) may have led me to
> presume there would be an overrepresentation of introverted types.
> I was surprised to see that there was, in fact, an overrepresentation of Extraverts instead.

What could possibly account for the prevalence of extraverts in the MCIIS

Gilchrist's Own Personality Type

So did Gilchrist apply the same MBTI test to himself?
Here is what he had to say:

"I "tested" myself only after I had completely finished the experiment, research, and writing as I wanted to avoid, as much as possible, any bias or distraction knowing my own type would have on my research. It was, however, inevitable that I started identifying more with specific type dichotomies or individual types as I performed the research. I was confident as to how my own assessment would turn out even before taking it though, which may serve as a warning that the results of my own personality assessment may be flawed due to my knowledge of the MBTI. If it did affect my results, it was likely only in a way that produced a more concentrated or higher score along each of the dichotomies, but I feel that the results suit the type of person I am and the personality I have. The self-administered MBTI found me to be an INTJ."

program? The MCIIS website states that a successful program candidate should have the ability "to communicate" and "work in a team environment," and should have "an interest in the world around them." According to Gilchrist, these qualities are more associated with Extraversion preferences than with Introversion preferences. He also states that, while not significant in determining a candidate's application decision, these statements could possibly deter those who have Introversion tendencies.

The prevalence of Extroversion preferences raises several issues for the Intelligence Community. Traditionally, the IC has been a very compartmentalized and introverted community. The degree of secrecy involved in the work has generally not allowed for the type of cooperation and team exercises favored by extraverts. Garst's JMIC study yielded a large number of introversion tendencies and Gilchrist's own faculty survey saw the staff as projecting their students as having introversion tendencies as well. When compared to the data in Gilchrist's study of the Intelligence Studies program, it suggests that a shift is taking place within the Intelligence Community from an Introversion-dominated environment to a more Extraversion-dominated one. However, this transition could very well cause significant problems for new analysts entering the field.

Extraverts entering this work environment face the possibility of job dissatisfaction when they arrive in positions requiring them to work as individuals instead of with a dynamic team. The danger in this is the risk of high employee absenteeism and even high turnover in the IC. This not only affects the IC in that they lose valuable human resources, and with it any consistency in analysis over time, but there is also a financial loss, in the time and money it takes to properly train and admit a new recruit into the community. In his work *Analytic Culture in the US Intelligence Community*, Dr. Rob Johnston explains how the Intelligence Community because of the IC's inherent nature only exacerbates this phenomenon of "culture shock" or "entry shock." The high levels of privacy that pervade the community severely hinder discussion of the inner workings of the IC to meet this unexpectedly changing paradigm. Instead, new analysts meet with a work environment that differs radically from the one they had imagined before entering the Intelligence Community.

Gilchrist states that he is too new to the IC to notice any general trends, but does recall one instance in which a co-worker, influenced partially by the isolated environment of his workspace, left his department after just seven months on the job. On the other hand, Gilchrist has not had any trouble adjusting personally, a fact he attributes to his own introversion tendencies. He asserts that he is quite comfortable with his current work environment and has yet to notice any significant conflicts arising from personality differences. However, Gilchrist does qualify that "A lot of the work we do (and the increasing amount of it) seems to promote an individual-style working environment;

although, I haven't witnessed a lot of dissatisfaction with it. That doesn't necessarily mean there isn't any."

Yet according to Intelligence Community Directive (ICD) 200, which outlined a policy of increasing cooperation, collaboration, and information sharing among analysts (all Extraversion traits), a shift towards a more Extraversion-led community, would be welcomed. Gilchrist himself has "heard some discussions and seen some measures taken to create a more extroversion-oriented environment, or at least extroversion-influenced research/analysis. There is ongoing talk of ensuring widespread product dissemination and information sharing, not just within the office or department, but community-wide." He does note though that he has not observed any real progress in this direction, owing to his short time in the IC. However, there are initiatives by new management urging increased collaboration between analysts and an effort to establish 'esprit de corps.'

If this shift is indeed taking place, Gilchrist feels that it will have a positive impact on the methods of dissemination of intelligence. He has noticed a community-wide effort towards greater information sharing, however he notes that it will most likely be some time before there is any major shift in the production of intelligence.

Note: In June 2007, Stacy Gilchrist submitted his research findings to the Journal of Psychological Type. However, as of this writing these submissions are still unpublished.

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Availability and Viability
of Open-Source Operational Tradecraft

By Ashley Derrick
Feature Article by Daniel Somavilla

Technology's getting better all the time, and that's fine, but most of the
time all you need is a stick of gum, a pocketknife, and a smile.
-Nathan Muir (played by Robert Redford)
Spy Game

For so long, the notion of intelligence operations has been irretrievably mysterious, shrouded in myth, cloaks, and daggers. Novels and cinema have influenced the idea of the "spy" to the point where few people really understand what is involved in intelligence operations. Fewer still have imagined that the necessary skills involved can be learned outside of the dark fortress of the intelligence community or military special forces. Ashley Derrick was not unique amongst her peers at the Mercyhurst College Institute for Intelligence Studies (MCIIS) in wanting to know more about these sorts of

things, but was the first among them to use her graduate thesis as a means towards finding out more.

The graduate program at MCIIS was, and is, primarily concerned with training analysts as opposed to operators, contrary to some popular perceptions of MCIIS as a "spy school". Hence, with that in mind, she wanted to explore what someone would have to learn, in contrast to analytic training, in order to become a spy. That, coupled with the program's focus and dependence on open source information, prompted her to use her analytic training to discover how the other half of the house (operations) lives. The first question that needed answering was: What exactly *does* it take to be a spy?

Sorting that out would become the focus of Derrick's literature review. She consulted a wide variety of sources, ranging from MCIIS required texts like Sun Tzu's *The Art of War* and Mark Lowenthal's *Intelligence: From Secrets to Policy* to works by former Intelligence Community (IC) professionals and dedicated scholars, such as former CIA Director Allen Dulles' *The Craft of Intelligence*. Ms. Derrick also studied some readings from somewhat more unconventional sources, like *Access All Areas*, a training manual for the art of "urban exploration", a euphemism for sneaking around places one isn't supposed to be.

The second topic of the thesis was the fun part: Can the average joe or jane get what it takes to be a spy with nothing but open-source information? Answering this question would ultimately require an experiment involving 54 of her peers at MCIIS, prodding and poking away at pin-tumbler locks with lockpicking tools.

The Literature Review: The Spy's Mind, Body, and Soul

According to Derrick, the process of the literature review was the longest and most difficult part of the thesis project. Since the end of the Cold War, and especially since September 11, 2001, many Americans have had less-than-favorable attitudes about the United States Intelligence Community—keenly aware of its failures (both real and perceived), and largely ignorant of its successes. This results in a tremendous amount of broadcast and literary commentary about spying and American intelligence, much of which is inaccurate. Some sources, such as Dulles, are beyond reproach, but for the most part, collecting reliable existing research and scholarly work on this subject is a long, drawn-out process of separating a little wheat from a lot of chaff. Derrick had the inclination and the discipline to get it done, however, and when she did, she was able to present a clear picture of what the archetypal modern spy was all about.

In her thesis, Derrick hypothesizes that "Being a spy is more a mindset than a skill set." The ability to control one's fear and keep from panicking in high-pressure situations is critical—uncontrolled fear dulls the spy's ability to identify real threats and can result in

the mission's failure, as well as the spy's death or capture. In addition to being able to maintain composure under fire, the spy needs to have a good memory and exceptional intuition. In an interview, when asked what attributes were most important for a successful spy, Derrick replied, "Keen observation and adaptability are likely the most crucial skills of a HUMINT collector."

Besides just being able to think like a spy, one must act like a spy as well. Spies must be able to evaluate their targets quickly but thoroughly. They must be able to conduct surveillance from fixed positions, on foot, or by some mode of transport, and using a wide variety of techniques as the situation demands. Sometimes, spies may need to gain entrance to a restricted area, which requires stealth and possibly some means of forced entry, such as lock picking. Weapons training and hand-to-hand combat skills may not be needed as often as Ian Fleming would have you believe, but sometimes may be the only way out of a situation gone bad. Lastly, communication skills are critical to the spy's trade. Whether recruiting an agent, eliciting information from a target, fast-talking one's way out of trouble, or sending a cable, a good spy must be able to speak and write well.

Even with a spy's mind and body, one isn't cut out for intelligence operations without what Ms. Derrick calls "the spy's soul". Deception is an important and necessary part of intelligence, and much of what spies do is only possible by virtue of a false identity and lifestyle and their ability to tell totally believable lies. In some cases, a spy would have to spend years pretending to be someone, or something, they are not. For some, this is a psychological and spiritual strain that is too much to bear. For others, this may come quite naturally. Beyond the issue of deception, a spy may have to compromise his or her own ethical compass in the interests of completing the mission they have been given. According to John Nolan, former operations professional, "Your success depends on your limitations and your limitations hinge on the points of your own moral and ethical compass."

The Lockpicking Experiment

Now, Ms. Derrick could address the crux of the issue: can people learn the spy's trade using only open source material? The only way to get the answer would be through an experiment of some kind.

Ms. Derrick discussed possibilities for the experiment with her advisor, professor Kris Wheaton. They considered several options. Given that Derrick would carry out the experiment in association with MCIIS and using volunteers from the Mercyhurst student body, the experiment proposal would have to survive critical examination from the college's internal review board (IRB). Derrick considered experiments involving surveillance, firearms, explosives, elicitation, and language, but rejected all of them

because of ethical concerns, measurement difficulty, or both. However, lock picking presented an opportunity to test the demonstrable application of open source information on an inanimate opponent, yield quantifiable data, and stand the best chance of approval by the IRB. Derrick and Wheaton carefully worded the proposal to address any possible ethical concerns that might arise, and the IRB returned the proposal without any changes. The experiment was a go.

Ms. Derrick provided each of the 54 participants with a practice lock stand that could be fitted with one of five pin-tumbler lock mechanisms, each with a varying level of difficulty (1 being the easiest with a single-pin set, 5 being the hardest with a five-pin set), and a five-piece lock pick set including the four major pick designs (hook, ball, diamond, and rake) plus a tension wrench. The plan followed a pre-experimental, one-group before-after design: the group began with 25 minutes to attempt to open the locks with the tools provided, and recorded the number of defeated locks and their difficulty. Then, the group received selected texts from the *MIT Guide to Lock Picking* and *The L.I. Guide to Lockpicking* and 30 minutes to read them. Then, Derrick gave the group another 25 minutes to defeat the same locks as before, and record the results.

Overall, the participants defeated 127 locks in the pretest, and 171 locks in the posttest—a 35% increase overall. The sharpest increases in the posttest involved the harder locks, as shown in the table below. While some of the increase might be due to additional practice, the results suggest that the open-source literature had a significant effect on the participants' ability to defeat pin tumbler locks.

	PRETEST	POSTTEST	% CHANGE
LOCK 3	20	31	55%
LOCK 4	8	29	263%
LOCK 5	3	15	400%

The experiment was certainly a strong endorsement of Derrick's hypothesis: Utilizing open-source information is a viable way to obtain at least some operational skills. Hopefully, this will open the door to more research and experimentation along the same lines. Trying a similar experiment with weapons training, improvised explosives, or martial arts are not advisable due to obvious safety concerns. However, other skills, such as target evaluation, surveillance, observation and elicitation, can hypothetically be tested under safe and ethical conditions, but the challenge there is to come up with a measuring technique that is accurate and effective.

Conclusion

Ms. Derrick's thesis can best be summarized in her own words:

> *Dulles assumes that an individual "more interested...in observation and thought than in action, will make a better analyst than an operator." I disagree. While analysts may naturally exhibit academic characteristics consistent with analytic positions, this does not mean analysts abilities are in contrast to operational requirements. Due to the shroud of secrecy veiling espionage tradecraft, analytic skills are easier to identify and pursue. Academic endeavors do compliment analytic thought, but they do not preclude operational aptitude.*

Her defense rings true. The inverse of Dulles' logic seems to suggest that an individual more interested in action than in observation and thought would make a better operator than an analyst. Clearly, without proper critical thinking and observation skills, such a person would make a terrible operator. Not every analyst is cut out to be a spy, but when looking to fill an operational job, starting the search in the ranks of current and prospective analysts is a good idea.

Before concluding my commentary on Ashley Derrick's thesis, I wanted to make sure that I'd left no stone unturned in getting myself a decent context to work with. During our interview, I asked Derrick if, in her experiences since graduation, she had learned of any other qualities or considerations that it was important for the spy to have. While she indicated that she thought that many of her conclusions were still valid, there was one new thing: however well-qualified an individual may be for a career in intelligence operations, they have to worry about people besides themselves.

A stable home and family life is not part of the common lore of the intelligence operator. Think back on almost every James Bond film you have ever seen—he gets a new girl in each film, but by the time the next film begins she is nowhere to be found. John Kiriakou, a former CIA operative who led counterterrorist operations in Pakistan, commented on the effect his job had on his family life: "I love the agency. I loved my career there. But at the same time, if you want to have a strong marriage and relationships with your children, the agency is not the place to work." Professor Kris Wheaton recalled his experience with the issue from his years in the Army, having to spend 20 months in the Balkans while his wife was left to raise their two children in a 900-square-foot apartment in Stuttgart. "She and I had many discussions about it before I took the job," he said. "I didn't propose until she was sure that she could deal with the situation. And even understanding exactly what was involved and what she would have to go through, the first few months were still pretty rough." James Breckenridge, Chairman of the Department of Intelligence Studies at Mercyhurst, favorably compared

the life of some career analysts —"ensconced in a much more routine, bureaucratic environment, making for a much more stable family life,"—with that of the operator, as it pertains to family.

Possibly, then, it is that sort of sacrifice, and the very specific orientation of the soul, that makes truly great intelligence operators so rare, and those sorts of things cannot be taught in a school or learned from books. As for the rest—the technical aspect of operational tradecraft—it is no longer possessed of that forbidding mystique. It has been hiding in plain sight for some time now, and the only thing preventing us from taking advantage of it is our own inertia. For myself and the rest of us who are, at the very least, curious about a career in intelligence operations, we can proceed knowing a great deal more than we otherwise would have without Derrick's pioneering research and experience—and have hope that it may be more attainable than we once thought.

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The Efficacy of Accelerated Analysis in Strategic-Level Estimative Judgments

By Michael Lyden
Feature Article by Raymond Wasko

At approximately 7:30 a.m. on a cold November morning teams of analysts shuffled through the hallways vying for positions in the war room. Some analysts were leaving to catch up and steal a few hours of much needed sleep while others were returning with breakfast items in hand and intense looks on their faces. Coffee cups, maps of the world, and "mind maps" depicting the analytical models that were under production littered the war room. Brightly lit computer screens registered the day's take of news feeds and statistical information while small teams of analysts were huddled in the corner hashing out ideas, mindful of the clock as their deadlines drew near. The scene is reminiscent of a typical day at CIA headquarters in Langley, Virginia. However, the analysts depicted above are in fact students at Mercyhurst College in Erie, Pennsylvania and our story begins with an examination of the methodologies utilized at the Mercyhurst College Institute of Intelligence Studies (MCIIS).

Accelerated Analysis

The use of accelerated analysis at Mercyhurst College developed over time due to academic necessity. The college operates on a trimester system and student analysts are responsible for developing complex analytical products over ten week timeframes. Accelerated analysis allows students to begin a project with little to no prior knowledge of the subject matter in question. Students develop a series of small analytic products much like building blocks, which over time develop into a comprehensive product. Strict timelines, individual accountability, and a team-working environment are essential components of the model. While working as a graduate student analyst for MCIIS Michael Lyden recognized the power of accelerated analysis. Lyden commented that:

> *I knew from my experience leading a summer research project (at Mercyhurst) for the Department of Defense how powerful the Mercyhurst method of accelerated analysis could be and was already being proven correct in a number of our estimates. I have a personal fondness, if you will, for strategic level estimates so when the National Intelligence Council began releasing declassified National Intelligence Estimates, I jumped at the chance to follow up on those predictions.*

Michael Lyden studied psychology at Case Western and began his professional career in the social services. His interest in current events and the study of intelligence prompted him to pursue a graduate degree in applied intelligence at Mercyhurst College. Lyden soon realized the need for additional analytic methodologies within the intelligence community (IC) and this prompted him to pursue the topic further for his graduate thesis. Lyden's thesis, *The Efficacy of Accelerated Analysis in Strategic-Level Estimative Judgments,* compares the use of accelerated analysis to traditional methods of analysis often utilized within the IC. The author realized that the IC is undergoing structural and cultural changes in the post 9-11 era and the time was right to finally study the traditional methodologies in an attempt to examine the extent that these methodologies are successful in strategic-level estimates.

Thesis Relevance

The intelligence failures that resulted in the terrorist attacks of September 11, 2001 and *The Iraqi Weapons of Mass Destruction National Intelligence Estimate* (NIE) signaled the need for immediate reform within the United States IC. Initially, post 9-11 legislation focused solely on restructuring the IC. However, unless reform efforts address cultural and analytical pathologies within the IC, bureaucratic reform alone will not adequately address IC shortcomings.

The attacks of September 11, 2001 turned the IC upside down and shattered many analysts' versions of reality. Fittingly, the government was finally prepared to take action and attempt to restructure the IC. Congress passed *The Intelligence Reform and Terrorism Prevention Act (IRTPA) of 2004*. This legislation created the Office of the Director of National Intelligence (ODNI), in addition to calling for the implementation of many of the recommendations from the *9-11 Commission Report*.

However, the disturbing fact resulting from post 9-11 IC reform is that scholars and practitioners alike had spoken about structural and analytical problems within the IC for decades since the attack against Pearl Harbor that prompted the establishment of CIA and the modern day IC.

Former DIA analyst Russ Travers noted in his research paper, *The Coming Intelligence Failure,* that government bureaucracy and lack of inter-agency cooperation would ultimately result in lackluster analytical products that lacked integration. Travers argued that the IC would ultimately overlook a potential threat due to the dysfunctional analytical methods within the community.

Dr. Rob Johnston, director of The Lessons Learned Program at CIA, describes an analytical arsenal of over 200 methodologies that analysts can use during product development. However, Johnston notes that the methods have not been measured quantitatively, thus it is difficult to determine individual methods that yield better results than others in specific situations.

Until the IC takes steps to analyze the effectiveness of the analytical methodologies used by analysts, the risk for impending intelligence failures will potentially remain high. Therefore, Lyden's research comes at a time when the IC needs to refocus its efforts on examining methodologies rather than becoming overly consumed by the concept of bureaucratic reform.

Key Findings

Lyden argues successfully that the current reform programs in the IC do not guarantee a comprehensive solution to the methodological shortcomings that traditionally plague analysts. Therefore, the author notes that if products developed using accelerated analysis produce results of similar quality to IC estimates then the IC would benefit from entertaining the possibility of utilizing accelerated analysis, or at a minimum investing in continued research of this methodology.

In his thesis, the author compared MCIIS Country Outlook Studies (COS) against declassified NIEs. The purpose was to examine the levels of nuance between the two, in

addition to examining overall predictive accuracy, and the extent that both final products included words of estimative probability (WEP).

In order to establish comparable levels of nuance between COS and NIEs the author utilized journalism techniques that examine who, what, where, when, why, and how. MCIIS COS were consistently more nuanced than their NIE counterparts prepared by the National Intelligence Council (NIC). This finding was particularly interesting when one considers the importance of nuance in intelligence estimates. Without significant levels of nuance intelligence analysts are tempted to develop estimates that are too broad in their analytical findings.

Lyden's research also demonstrated that MCIIS COS are statistically equal in their predictive accuracy when compared to NIEs. The differences between MCIIS products and NIC products highlight the possibility that non-traditional methodologies are of comparable value when producing strategic-level estimates. However, the author notes that this research finding does not declare an overall winner in predictive accuracy; rather the finding seeks to highlight the differences between the methodologies. An interesting secondary finding indicates that overall NIE predictive accuracy has varied over time due to the variance that occurs because of limited declassified sampling sizes. Lyden also noted that a longitudinal study examining overall predictive accuracy of MCIIS COS is not feasible at this time also due to limited sampling size.

Lyden's third key finding demonstrated that MCIIS COS that utilize words of estimative probability (WEP) are significantly more accurate than NIEs that utilize words of absolute certainty (WAC). MCIIS estimates solely use WEP such as "likely" and "unlikely" whereas NIE studies often employ WAC (i.e. is, has). Logic would dictate that the use of WAC in a strategic estimate would only occur when analysts were highly confident of their findings. However, Lyden's research indicates the troubling fact that NIC analysts appear to use WAC in a fashion that depicts them as being interchangeable with WEP.

The research conducted in Lyden's thesis marks the beginning of an important journey into assessing intelligence products quantitatively. The author tackled a task that has been off limits to researchers due to the traditional taboos that assert the difficulties behind defining and measuring "accuracy" within intelligence products. However, Lyden demonstrated that quantitative research analyzing the accuracy of strategic estimates is possible and his findings reinforce the point that this area of research is increasingly necessary. When interviewed about the methodological difficulties incurred during his research and his level of confidence in the statistical validity of his work, Lyden commented that:

While I think more folks need to study and write about accelerated analysis I'm not exactly sure what the next step is. Part of the problem is that it is difficult to make quantitative measurements, so you are mostly stuck evaluating findings qualitatively. Plus, there are all the arguments out there against measuring accuracy; even defining accuracy is a tough one. The arguments against measuring accuracy exist for a reason... it's hard to do even with historical facts. But at least the process begs additional questions for more robust study.

Practical Applications

One of the benefits of conducting research in an applied setting is that the findings are applicable to real world settings. In addition to potentially benefiting analysts in other fields of intelligence such as law enforcement and competitive intelligence Lyden's examination of accelerated analysis also applies to the daily routines incurred by consultants and analysts writ large in the work place. When asked about the implications of successfully utilizing accelerated analysis in the work place Lyden commented that:

I currently work at a small management-consulting firm in DC. I spent most of the summer working on a single project where a large defense contractor wanted to get into the homeland security market. We had about 15 weeks to give them thumbs up or down based on their competencies, homeland security trends, federal spending trends, and potential threats. It was a classic case of accelerated analysis.

MCIIS analysts have demonstrated their ability to produce estimates that are comparable to NIC level estimates while operating on a shoestring budget with limited amounts of analysts. When asked to identify the key benefits of accelerated analysis Lyden went on to say that:

I think the primary strength of accelerated analysis is that it allows primarily non-SMEs (subject matter experts) to take on a project in which they have no serious expertise and quickly come up to speed on the topic, and assuming they have the base analytic skills, write solid strategic-level estimates. It is important to note here that I think accelerated analysis really only works for strategic estimates. Basically, we are working under the assumption that while an analyst may not be able to pick up on the intricacies of micro trends, they certainly can grasp macro trends once they have reached a certain, surprisingly low, level of comfort with the material. Part of it is the law of large numbers.

Sure, a couple constituent estimates will be wrong, but as a whole, the thrust of the strategic estimate is correct.

The Future of Intelligence is Our Responsibility

The attacks of 11 September 2001 and the politicized NIE concerning Iraqi weapons of mass destruction highlight the need for accurate and timely intelligence. The IC continues to undergo reform efforts and the use of intelligence analysis in the realm of law enforcement and business continue to expand. Therefore, it goes without saying that intelligence analysts should be required to utilize new methodologies in an attempt to produce thoroughly nuanced products. Lyden's research indicates that new methods of analysis have the potential to assist analysts in their endeavors and that traditional methods of analysis are not necessarily effective for every project.

Intelligence analysts have a responsibility not only to their employers but also to themselves to ensure they do not forsake quality to ensure timely completion of a project under deadlines. The use of accelerated analysis has the potential to contribute to analysts' ability to perform their duties successfully. If the use of accelerated analysis serves only as an additional arrow in the analyst's methodological quill, then the IC at large should acknowledge Lyden's research as a success. Perhaps Lyden said it best when he noted, "I can now write quickly, confidently and simply about complex topics, and decision makers love it".

Mercyhurst College
Department of Intelligence Studies

Mercyhurst College, a fully accredited four-year institution in Erie, Pennsylvania, is the originator of a four-year program specifically designed for the education and training of intelligence analysts.

Today, thousands of research and intelligence analysts are employed throughout the United States and abroad by government agencies and private enterprises. The work of these intelligence analysts, whether relating to national security, criminal investigative activities (such as drug trafficking, organized crime, or white collar crime), business intelligence, or terrorism, involves the preparation of assessments based on collection, correlation, and analysis of information.

Despite the vital role of intelligence analysis and an ever-increasing demand for people trained in its skills, until 1992 there had been no college program designed to prepare for this career.

The Intelligence Studies Program, a multidisciplinary program within MCIIS, is designed to fill this gap. Conceived and organized by a 25-year FBI veteran with the assistance of outside experts, Intelligence Studies is specifically tailored to meet the entry-level needs of the students, agencies, and organizations employing Research/Intelligence Analysts.

Mercyhurst students present their Wiki on Global Disease to government decision maker.

In the fall of 2004, Mercyhurst started a unique master's degree in Applied Intelligence, which has concentrations in national security, law enforcement and competitive intelligence. This 33-credit thesis program is designed to provide a theoretical and practical framework for the study of intelligence and its application in a wide variety of contexts.

The Department of Intelligence Studies has more than 300 undergraduate BA (Intelligence Studies) students, 50 graduate MS (Applied Intelligence) students, and 80 graduate Certificate (Counterintelligence or Intelligence Studies) students.

Mercyhurst students attend class lecture.

To date, well over 90% of the program's graduates have been hired within six months of graduation. Internships/cooperative experiences are initiated with the objective of employment with an agency or organization. In the past few years, internships/coops have included positions with the National Security Agency, Department of Defense, Central Intelligence Agency, Department of Home-land Security, ConocoPhillips, Inter-national Atomic Energy Agency, Booz Allen Hamilton, Drug Enforcement Administration, Federal Bureau of Investigation, and the National Drug Intelligence Center, as well as state and local agencies and private companies.