at the Naval Postgraduate School

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We the people in order to...provide for the general defence and welfare of the people. . . .

United States Constitution

...there is a total lack of comprehension that an educated people is the real defense for a democracy.

*My Day* by Eleanor Roosevelt, August 14, 1961

To strengthen the national security of the United States by providing graduate level educational programs that meet the immediate and long-term leadership needs of organizations responsible for Homeland Defense and Security.

Mission Statement, Center for Homeland Defense and Security

School of International Graduate Studies

Naval Postgraduate School
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Executive Summary

In 2007 the Department of Homeland Security (DHS) requested an evaluation of the Center for Homeland Defense and Security’s (CHDS) master of arts degree in security studies (namely, Homeland Security and Defense), offered at the Naval Postgraduate School’s (NPS) School of International Graduate Studies (SIGS). This masters degree program was instituted in 2003 as a response to the threats posed by the 9/11 attacks and is funded by DHS.

CHDS (Center) was created through an interagency agreement between the United State Department of Justice’s (DOJ) Office of Justice Programs (OJP), the Office for Domestic Preparedness (ODP), and the Naval Postgraduate School (NPS). CHDS’s goal was to establish an evidence-based homeland security leadership development curriculum to help state, local, and federal leaders defeat terrorism by preparing participants to understand and develop strategies to strengthen the United States capacity to deter, effectively respond and defeat terrorist attacks, and to build the necessary interagency and civil-military cooperation.

The CHDS master’s degree program is enhanced by three additional homeland security educational efforts: the Executive Leaders Program (ELP), the Mobile Education Teams (MET), and the University and Agency Partnership Initiative (UAPI). CHDS has also developed and hosts the Homeland Security Digital Library (HSDL) and the electronic journal, Homeland Security Affairs.

The master’s degree is an eighteen-month program for local, state, tribal, federal, and military homeland security leaders. Participants attend in residence sessions of two weeks each to complete eleven courses, two research-methods courses, and a thesis related to policy issues confronting their jurisdictions. All eligible participants must hold a bachelor’s degree and be employed full-time by a federal, tribal, state, or local government organization. Selection is conducted via blind assessment by independent evaluators. As of September 2008, 1,220 completed applications were processed, 381 of whom were admitted.

In the process of examining strategies to evaluate CHDS’s master’s degree program, it was found that few protocols on the assessment of graduate education existed. One notable approach by Haworth and Conrad (1997) offers a framework of five strategies to identify a quality program in higher education. These five strategies are: diverse and engaged participants, adequate resources, interactive teaching and learning, connected program requirements, and participatory culture.

The methodology for the evaluation of CHDS’s master’s degree involved examining the reason the Center was created, the activities and processes it engages in to achieve its mission and how they function and perform, and what impact the Center’s operation and products have had on the practice of homeland security.
The evaluation used traditional strategies such as student satisfaction and alumni contributions. An additional strategy was developed to determine the impact, or "value added" to the discipline of homeland security the alumni had upon returning to their agencies.

The evaluation involved reading 147 of the 152 completed master's theses, 105 alumni interviews and five site visits. The principal evaluator was Dr. Joseph Ryan, professor and chair of the Department of Criminal Justice and Sociology at Pace University in New York, and a national expert on community policing and police management.

Interviews with alumni disclosed a high degree of satisfaction. The residency and the campus environment allowed participants to focus on the academic experience. Cited was the camaraderie developed with classmates and the value of evenings in residence, where the discussions reflected the knowledge gained during the day and extended to broad global issues affecting the discipline of homeland security. Participants’ perception of homeland security and the awareness of what other levels of government do and how other agencies see the world were broadened by the experience. The mix of all levels of government proved to be crucial. The interviews disclosed that homeland security is defined as requiring an "all hazards" approach and a "strategic agenda" with an integrated response from all levels of government.

Although organizational change was occurring, the potential for in-depth institutional change was limited by the structure of civil service, mostly at the state and local levels. Additionally large agencies such as NORTHCOM or New York City Fire Department were less flexible than smaller jurisdictions in adapting to change. Individuals in all agencies did cite personal successes involving outreach to other agencies, sharing knowledge through teaching and writing for homeland security publications, and obtaining grants to address regional needs. The mix of local, state and federal participants was cited repeatedly as valuable. There were mixed reactions about the possibility of having private sector individuals participate in the program.

Faculty were praised for their experience, knowledge and helpfulness. The majority felt that course work met their needs. One concern emerged over a perceived growing lack of interest in the issue of terrorism from all levels of government and communities as the distance from 9/11 lengthens. Several commented on the need to clarify the overlap of homeland defense and homeland security and suggested that an "all hazards" approach be made a national priority.

The highly successful thesis completion rate of 89 percent contrasts with rates ranging from 23 percent to 71 percent in other master's programs. At least 34 theses have been cited in other research in the field. A few theses had immediate impact on the writer’s agency but most reflected the student’s mastery of the discipline. On a scale of "outstanding," "good," and "poor," 16 theses were identified as outstanding; none were rated poor.

Contributions of alumni consisted of the formation of an alumni network and the co-hosting annual conferences to bring together alumni and recognized leaders in the discipline. Working papers from the most recent conference were published in *Homeland Security*.
Affairs. Alumni added value to the broad context of the discipline of homeland security by contributing their expertise in multiple areas of homeland security, drafting white papers, serving on panels as Subject Matter Experts (SME), and as visiting fellows in the agencies in DHS.

The review of student theses began with a search for “value added” that could be documented through a site visit. Site visits revealed demonstrable contributions to the discipline of homeland security. This was evident in part by the enthusiasm for reframing efforts such as intergovernmental cooperation (Seattle); the role of the alumni in intelligence fusion centers, most notably in Sacramento (CA) and Trenton (NJ); and regionalization strategies in Connecticut and North Dakota.

Conclusion: Quality Program Assessment Strategy

This study concludes that CHDS has successfully created an effective master’s degree in security studies (homeland security). In Emblems of Quality in Higher Education, the authors Haworth and Conrad offer a model assessment strategy to determine a quality program in higher education. Their strategy incorporated what they describe as five emblems of quality. CHDS’s program contains a full complement of each of these emblems; that is, a diverse and engaged participants, adequate resources and support; interactive teaching and learning; connected program requirements; and a participatory culture by all. CHDS is a model “community of learners.”

Most believe that it will take at least ten years for the impact of the degree to be felt because homeland security is an evolving discipline. This report finds that the funding of this program is proving worth its educational contribution to the real defense of democracy.

Recommendations

To insure continuity and maximum impact on the discipline and practice of homeland security, the findings of this study suggest the following: Congressional funding should be permanently allocated for CHDS; CHDS should remain in its current location at NPS within SIGS; the application and screening process as currently designed should be continued. Other recommendations are included in the full report.
CHAPTER I
INTRODUCTION

For the decade preceding 9/11/2001, the United States of America’s exposure to terrorist incidents was relatively significant. International and domestic incidents occurred to a considerable degree: earlier bombings of the World Trade Center in New York City, the devastation of the Murrah Federal Building in Oklahoma City, the Centennial Park Bombing at the 1996 Olympic Games in Atlanta, bombings of the American embassies in Kenya and Tanzania, as well as the 1995 sarin nerve agent attack in Japan.

The public’s perception and concern regarding all of this appeared to depend on both physical and temporal proximity to given incidents; in fact, the level of public interest is best characterized as episodic and ephemeral. Terrorism, homeland security, and weapons of mass destruction were issues that had not yet achieved top status for the American public. Beliefs that these issues were capable of exploding into more cataclysmic events were closely held by both internal governmental and external experts in terrorism.

The Impact of 9/11

The attacks on the World Trade Center and the Pentagon in September 2001 changed how Americans viewed their vulnerability to terrorism. Today the attacks remain largely incomprehensible to many Americans despite debate and dialogue as well as the publication of The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks upon the United States 2004.¹

Fear and confusion were dominant themes surrounding the attacks. Arguably representatives of the government were unable to respond. The police commissioner of New York, “recognizing the grave risk of even more death from above [decided] the city’s air space [needed] to be sealed,” was quoted as saying, “We have to call for air support…is there a number to do that?” As one writer noted in response to the commissioner’s quandary, “…it’s jarring to hear a man who led a 40,000 strong police force confront such a crisis with no road map.”²

The catastrophic upheaval following the attacks of 9/11 and the deaths of approximately 3,000 people³ later produced some reasonably predictable responses, many of

which represented personal and political opinions rather than measured conclusions based on data. Over the last seven years, in excess of $330 billion has been directed toward the enterprise of homeland security. Vagueness and confusion are not uncommon when allocating such an avalanche of funding in response to a crisis. These variables can lead to ineffective responses and expenditures that fall both short and wide of the mark.

The effectiveness of this spending remains a topic of debate as the United States enters a period of significant political transition. Federal, state, and local governments and agencies debate the use of limited funds for homeland security and keeping the public safe from natural disasters and non-terrorist criminal acts.

Attention is being given to examining what has been done in the name of homeland security and whether those things should be continued, reduced, increased, or eliminated altogether. Questions are asked about how funds were allocated, the existence of strategies and plans for spending the money, and the impact this had.\(^4\) Were spending decisions based on what people “thought” or “felt?” These questions will be asked more frequently and dominate the homeland security debate.

Among the responses to 9/11, one effort did emerge based on measured conclusions drawn from data. This program, funded by the Department of Homeland Security (DHS), is identified as the Center for Homeland Defense and Security’s (CHDS or the Center) Masters of Arts degree in Security Studies (namely, Homeland Security and Defense), offered at the Naval Postgraduate School’s (NPS) School of International Graduate Studies (SIGS).

In 2007 the Department of Homeland Security (DHS) reached a strategic decision to pursue an assessment of the role of education in homeland security as executed by CHDS. Specific attention was to be given to assessing the impact of the degree on the alumni and their agencies. DHS also sought reasons for the creation of the Center, the activities and processes it engages in to achieve its mission and how they function, and the impact the Center’s operation and products have had on the practice of homeland security in the United States.

\(^4\) Mimi Hall, “Rethink spending on anti-terrorism, report says: Police, mayors say shift more funds to fight crime,” USA Today, October 2, 2008.
CHAPTER II
ORIGIN OF THE CENTER FOR HOMELAND DEFENSE AND SECURITY

A. History and Development of CHDS

On April 11, 2002, following several months of intensive staff work, CHDS was created through an interagency agreement between the United State Department of Justice’s (DOJ) Office of Justice Programs (OJP), the Office for Domestic Preparedness (ODP), and the Naval Postgraduate School (NPS) establishing an evidence-based homeland security leadership development curriculum to help state, local, and federal leadership to defeat terrorism (see Appendix B for brochure for the 5th Annual CHDS Alumni Conference, which contains a chronology of the Center).

The Interagency Agreement specifies that graduates of the course of instruction be prepared to better understand how to develop strategies to strengthen the U.S. capacity to deter, effectively respond and defeat terrorist attacks, and to build the required interagency and civil-military cooperation that homeland security requires. Since 2002, the original agreement has been adopted and maintained by DOJ/OJP/ODP successor agencies in the United States Department of Homeland Security. The agreement has been modified numerous times, not in content or purpose, but to add additional funds for operation of the Center.

The nucleus of CHDS is its evidence-based homeland security master’s degree program. Over the last six years, CHDS has endeavored to become the nation’s premier educator for homeland security with programs that support, complement, and extend the reach and utility of the master’s degree program.

B. Education vs. Training

The U.S. DOJ/OJP/ODP, a predecessor to DHS, was the initial sponsor of the Center. By 1999, ODP was heavily involved in the delivery of training programs. A significant part of the mission and operation of ODP involved the promulgation of training programs for state and local personnel engaged in countering incidents involving weapons of mass destruction (WMD). Training providers and offerings were plentiful. However, concern was expressed about the ability of these programs to meet the needs of present and future jurisdictions being served. In fact, there were significant doubts that the programs being offered were evidenced-based and consistent with the tasks required.

Evidence-based education as noted was to be a paradigm by which education stakeholders use empirical evidence to make informed decisions about policies, practices, and programs. The key components of evidence-based education are:

1. promoting best-practices research and development,
2. facilitating review and evaluation of research,
3. disseminating research, and
4. developing and supporting an “evidence-based culture.”
1. Key Questions

Accordingly, ODP sponsored the collaboration of three subject matter experts (SME): a strategic planner, a WMD training developer, and an educational curriculum training specialist, to identify the multiple tasks to be performed by those in its training programs. This effort was combined with a study of approaches to the development, delivery, and revision of training programs, guided by taxonomies of educational objectives common to all major curriculum-development initiatives. These research activities resulted in a strategic process involving multiple SME reviews and ultimately yielding the ODP Training Strategy\(^6\) which focuses on five key questions:

- Who should be trained?
- What tasks should they be trained to perform?
- Which training instruction/delivery methods and training sites should be paired with which tasks to maximize success in training?
- Which methods are most capable of evaluating competencies and performance as a result of training?
- What gaps need to be remedied in existing training to assure consistency with the findings of the training strategy?

The key finding of the strategy most germane to CHDS related to this final question. The research discovered thirty-two complex tasks that were not being addressed through existing training programs; these involved coordination among disparate agencies and organizations and the management of activities within agencies. The strategy determined that these tasks fell within the cognitive domain,\(^7\) requiring educational, rather than training programs.

2. Focus of Training

Tasks outside of the higher cognitive domain of analysis, synthesis and judgment are generally tasks that can be taught via traditional training programs, lending themselves to performance via a protocol or list of instructions: how to enter a hot zone, how to put on protective gear, and other tasks requiring simple motor and basic skills at the level of knowledge, comprehension, and application. Tasks in the higher cognitive domain are rarely transferable through training programs. They are particularly suited to graduate education programs. The ODP Training Strategy identified this critical deficiency: there were no graduate education programs which prepared homeland security leaders for their work. The creation of CHDS in 2002-2003 was aimed at remedying this gap.

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\(^7\) The cognitive domain is defined in Benjamin Bloom, et al, *Taxonomy of Educational Objectives* (1956). Bloom and his co-authors identified three elements to the Taxonomy: Cognitive, Affective, and Psychomotor.
3. Focus of Education

For CHDS and Homeland Security leadership, the distinction between education and training and the relative merit of the two approaches to learning is highly relevant. Educational programs at the graduate level focus on analysis, synthesis, and evaluation or judgment. These programs produce students who are capable of assessing and judging knowledge as opposed to memorizing or recalling knowledge. Graduate students are expected to acquire and improve their capacity for critical and independent thinking skills. The desired outcome for CHDS was students prepared to perform effectively and accomplish complex, non-routine tasks that could not be performed by relying on protocols. This kind of preparation is particularly significant in an emerging and quickly developing discipline such as homeland security and is needed to insure that leaders are successfully prepared for the unexpected.
CHAPTER III
CHDS Programs

A. Characteristics

To understand the context of the master’s degree program offered by CHDS, it is important to know the range of educational efforts that enhance the ability of CHDS to accomplish its mission in the master’s degree program. To achieve the Center’s full potential, four allied programs capable of maximizing the nation-wide effect of the master’s program were developed and implemented between 2002 and 2008. These include the Executive Leaders Program, the Mobile Education Teams, the University and Agency Partnership Initiative, and online classes open to non-matriculated homeland security professionals. The Homeland Security Digital Library (HSDL) and the Center’s electronic journal, Homeland Security Affairs, were instituted to increase the broader dissemination of research in the field of homeland security. All programs are supported and enhanced by the Center’s web and teaching tools development teams. These additional educational efforts are described later in this report.

During its six year history, funding for the Center has been provided by the federal government via appropriations to the United States Department of Justice and to different divisions of the United States Department of Homeland Security. The Center’s FY08 funding was provided by appropriations to DHS’s Federal Emergency Management Agency (FEMA).

Four key principles have been cited by CHDS as setting it apart from more traditional programs:

- Collaboration: To provide a neutral collaborative educational forum, CHDS stresses the recruitment and participation of homeland security leaders from all disciplines and all levels of government. All programs require participants to engage in interactive learning with notable focus on student participation and a participatory culture in an atmosphere that emphasizes a “non-attributive comment” policy.
- Evaluation: To ensure that the content and delivery of CHDS curriculum is dynamic, current, and driven by homeland security leaders and actual practice, all CHDS programs are subjected to ongoing evaluation and modification. In areas such as faculty and student selection, this evaluation is necessary to ensure the Center attracts the most capable and promising leaders to the program.
- Multiplied Impact: All programs seek to ensure the presence of a multiplier effect, maximizing the national impact of CHDS resources and programs. This is most

- Entrepreneurship: The Center is dedicated to creating and maintaining an entrepreneurial organization and environment which encourages innovation.

**B. Master's Degree**

All other programs of the Center for Homeland Defense and Security are derived from and complement the master's degree program. This eighteen-month program is aimed at local, state, tribal, federal, and military homeland security leaders. Participants attend six in-residence sessions, complete eleven courses in addition to two research-methods courses, and a thesis related to policy issues confronting their jurisdictions. In-residence participation consists of two weeks each quarter with the remaining study and discussion completed via distance learning. The resulting degree, a Master of Arts in Security Studies (Homeland Security and Defense), is conferred by the Naval Postgraduate School’s (NPS) School of International Graduate Studies (SIGS) through the National Security Affairs (NSA) Department.

The degree is accredited by the Western Association of Schools and Colleges, the accrediting body for universities in the western United States. Classes for master's degree students are conducted on two campuses:

- The Naval Postgraduate School, Monterey, CA campus, is the delivery site for three cohorts focusing primarily on state and local government officials. The first cohort for this campus matriculated in January 2003.
- The delivery site for two cohorts each year is in the National Capital Region (NCR) in Shepherdstown, West Virginia. These cohorts are comprised primarily of federal DHS officials with some state and local representation. The first cohort for NCR, created as a result of an amendment to the Homeland Security Act of 2002, Section 845, was admitted in June 2007.

CHDS's ongoing student evaluation process established that all master’s degree students feel they receive an “extraordinary emphasis on personal attention, evaluation, and collaboration, from the recruitment stage of the program through completion of all degree requirements and participation in the CHDS Alumni Association.” This process is consistent with the Center’s mission of remedying a critical gap in educating homeland security leaders and establishing a participatory culture of leaders in practice.

1. **Recruitment**

Recruitment is from all key homeland security disciplines in the United States, as initially identified in the ODP training strategy.\(^8\) They include emergency management,

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\(^8\) Pelfrey and others, *WMD Training Strategy*. 

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emergency medical services, fire service, government administration, hazardous materials personnel, health services, law enforcement, public health, public safety communications, public works, public utilities, and transportation.

Much of the recruitment is done through professional networks and contacts, stressing personal communication with individuals. The Center has also focused recruitment efforts on national organizations such as the International Association of Chiefs of Police, and associations representing the various agencies. Formal relationships with the training and education directors of intergovernmental agencies and associations, particularly organizations involved with homeland security at all levels, have evolved over time. Each cohort has sufficient diversity of agencies, levels of government, geography, and demographics to obtain the maximum benefits from collaboration.

2. Application

All applicants must hold a bachelor’s degree and be employed full-time by a federal, tribal, state, or local government organization. Each applicant is subjected to a highly competitive selection process based on the following criteria:

- **Academic Credentials 30 percent of score:** a complete record of the applicant’s academic experience beyond the secondary level, including any post-graduate work, and transcripts of grades and scores from any graduate school entrance exams, although such exams are not mandatory for admission.
- **Essays 25 percent of score:** four essays which demonstrate qualities of analysis, synthesis, and evaluation and relate to the applicant’s professional experiences.\(^9\)
- **Self-Assessment 20 percent of score:** a written self-assessment of the criticality of the individual’s professional role/position relative to homeland security.
- **Letters of Support 15 percent of score:** three letters of support from leaders knowledgeable about the applicant’s homeland security responsibilities; a premium is placed on letters of support from the agency’s command staff and the applicant’s immediate supervisors.
- **Communication Skills 10 percent of score:** an assessment based on vocabulary, writing style, sentence structure, transitions, and continuity of message.

Assessments are based on a weighted formula and are conducted via blind assessment by independent evaluators.\(^{10}\)

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\(^9\)There is reason to believe that the requirement for writing exemplars in the application process produces better, more authentic criteria for admission. Perney concluded that written exemplars were better predictors of graduate success than grade-point averages or standardized tests such as the Miller Analogies Test. Her research involved a much briefer writing sample than is required in this application process but, even if the expanded writing samples required here were only as good as the abbreviated ones Perney investigated, her regression analysis shows convincingly the value of writing samples in making admission decisions for graduate studies. Jan Perney, “Using a Writing Sample to Predict Success in Masters Programs in Education” (Paper presented at Annual Meeting of the American Educational Research Association, April 1996).

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As of September 2008, 1,220 completed applications were processed and assessed (see Figure 1); of these, 311 were applicants who reapplied, submitting new or revised material. From this pool 381 were admitted. While this represents a 28 percent admission rate on completed applications, it should be noted that the completion of the entire application package of transcripts, five essays, three letters of recommendation and support, is relatively rare among those who begin the process.

Each application cycle (Spring and Fall), approximately 5,000 people begin the process and establish Application Accounts. Approximately 10 percent of these complete more than half of the application materials, with about 150 completing all of the materials and the full application assessment. On average, fifty previous applicants reapply each cycle. Thirty survive the screening process and are recommended for admission to the program, 6 percent of those who began the application process.

The process is designed to gather as much evidence as possible to assess the applicant’s criticality, impact, potential, educational preparation for graduate study, and ability to think critically at the upper levels of the cognitive domain.

![Figure 1: Total Applications vs. Total Accepted (2002-2008).](image)

A training process was designed to produce inter-rater reliability in the assessment of essays and credentials. These weights are applied, producing scores that can then be placed in a ratio scale of all remaining applicants, current and former, who have not been selected.
3. Selection

Final selection of applicants is made by a special review committee which considers the composition of each cohort in order to preserve the interactive and collaborative aspects of teaching and learning. The target for each cohort is thirty-two. A smaller class size was initially preferred but the number was chosen to educate as many individuals as possible.

CHDS believes that this number maximizes collaboration and interactive teaching and learning in two equally divided groups of sixteen students in each class; they are separated into two groups for seminars. A cohort composed chiefly of representatives of one area of the country, or one level of government, or a given discipline lacks the potential for cross-fertilization.

Student expenses are paid by funds provided to the Center via appropriations from the federal government. This is consistent with the fundamental reason for the degree: to maximize the number of adequately prepared leaders in homeland security practice at all levels of government. Students originally had to agree to remain in homeland security practice for a minimum of two years following graduation. In practice this was a challenge because of career moves such as promotions and transfers. (For example, one alumnus was promoted to a position with no homeland security opening.) However, it is argued that all positions in CHDS’s alumni agencies have some direct or indirect role in homeland security.

4. Curriculum and Faculty

Students participate in six two-week in-residence periods in eighteen months, with the remainder of instruction conducted online via distance learning. The curriculum includes eleven topical courses and two research methods courses to assist students with their theses. With the exception of the first in-residence, which starts with orientation, students complete a term in the first week of their in-residence and initiate a term in the second week of the in-residence section. This schedule requires significant attention to logistics and student support. Prior to each in-residence, CHDS staff works with students to arrange travel, lodging, and whatever else is required. Laptop computers and iPods are provided to facilitate the distance-learning process.

The relative infancy of the homeland security discipline suggests that vigilance over content and delivery is mandatory to ensure relevance, value, and gain of knowledge. Because of its status as an emerging discipline, CHDS does not offer tenured positions for its faculty, nor does it use traditional titles, such as assistant, associate, or full professor. Curriculum delivered by the Center is independently evaluated for relevancy, value, and knowledge gained. The goal of these evaluations is to yield a dynamic faculty and curriculum that receive ongoing modification as a result. Descriptions of courses and faculty are available in appendices C and D.
5. Master’s Thesis

Consistent with the program's goal to return educated leaders to homeland security practice, special emphasis is placed on the completion, quality, and relevance of the master’s thesis. The thesis requirement exposes students to the use of rigorous methodology and discipline as a way of reaching decisions on complex issues and helps students work within an analytical framework. Student thesis work begins early in the program to help insure completion.

The thesis must focus on policy issues in the students' jurisdictions, as determined by the students and their agencies. Sponsoring agencies have the opportunity to explore specific relevant issues while drawing on the full resources of CHDS. Quality is maintained through both the research methods course and the student’s thesis committee. The thesis is meant to reflect a tangible return on the sponsor’s investment and is thus a critical part of the Center’s mandate.

As homeland security evolves from its embryonic stages, the master’s theses help develop a mature discipline, characterized by the work of the best minds in the field to interpret what has already happened, identify and evaluate problems and gaps, capture smart practices, and apply critical and creative thinking to the issues and challenges on the horizon.

C. Learning Environment and Resources

The combination of in-residence instruction and distance learning requires innovative approaches for a diverse and sophisticated audience. For this reason, the Center maintains in-house facilities to develop web technology and learning tools tailored to the needs of the homeland security professional and student. These allow maximum dissemination of the research used and generated by CHDS students, affiliates, and faculty through the Homeland Security Digital Library (HSDL) and the Center’s online academic journal, Homeland Security Affairs.

1. Technology-Web Development

Since CHDS is a distributed community of students, instructors, experts, and staff, successful communication and collaboration requires a robust online environment. Because early attempts at out-sourcing web development did not provide the necessary quality product, web development was brought in-house. Examples include the Homeland Security Digital Library (HSDL) website, the Homeland Security Affairs website, CHDS Learning Management System (LMS), online program admissions, and other functions for blogs, wikis, forums, calendars, budgets, file-sharing, and more, within a secure, standards-based, open-source environment.

Over 20,000 homeland security professionals have used the websites to participate in CHDS programs with thousands more visiting these websites. Students, instructors, and staff
use the websites daily to research, communicate with each other, fulfill requirements, and share information.

The LMS uses MOODLE, an open-source product as its platform. Developed by individuals worldwide, with a source code available free-of-charge to any who wish to download and install it, MOODLE is easy to customize as CHDS program requirements dictate. Although there are several other open-source LMS available, MOODLE is the largest and most competitive. Its security and quality standards are high and the product is supported by a large, active community of developers and educators.

2. Learning Tools

Faculty members are supported by the instructional design and multimedia development team so they can adapt their instruction to in-residence and network-based learning. The team's primary responsibilities are: (1) to build the educational course websites in direct consultation with faculty to provide a continuous learning experience for the students; (2) to design and develop rich multimedia lectures and other educational course materials to enhance instruction; (3) at the request of the faculty to record, edit, and produce audio-books of required readings for students to download to portable audio devices; and (4) to video-record, edit, and produce guest lectures and interviews.

CHDS uses multimedia to provide a "blended learning" approach which research shows can be used effectively in higher education. Streaming multimedia-based lectures are used in many courses to deliver introductory material. By providing these lectures online prior to in-residence sessions, face-to-face time with the students is maximized and students are better prepared to participate in the presentation and discussion of complex concepts in a more interactive manner.

3. Digital Library

The Homeland Security Digital Library (HSDL) provides access to the most accurate and authoritative policy and strategy documents available and original research conducted at NPS. Master's degree students and the Naval Postgraduate School military students in homeland security both use this resource. HSDL was the first digital library to provide these documents and has become the nation's premier collection of material related to homeland security policy, strategy, and organizational management. The HSDL mission is to strengthen U.S. national security by supporting federal, state, local, and tribal analysis, debate, and decision-making needs and to assist academics of all disciplines in homeland defense and security-related research.

Moodle competes directly with the other, proprietary LMS that dominate the market, such as Blackboard, WebCT, and Angel. All provide similar features and functionality and are comparable products. However, in some cases, licensing costs are high, and support for the product is general not tailored to a specific user. Most schools have their own support staff in addition to paying for the LMS' support services. Moodle, on the other hand, has no licensing fees, and support costs, paid to internal rather than external staff, are reasonably low.
HSDL currently contains more than 62,000 individually abstracted items and receives more than 40,000 visits per month from 400 local, state, tribal, federal, and academic institutions and agencies. The HSDL is used as a research tool in 69 federal agencies, 91 state and local agencies, and 520 university and research institutions with campus-wide access. Additionally HSDL has more than 12,670 individual users including federal, state, local, tribal, and military accounts (see Figure 2). In 2008, HSDL became part of the Federal Depository Library System.

![HSDL Usage 2005-2008](image)

**FIGURE 2: HSDL USAGE**

4. Homeland Security Affairs, the Journal of CHDS

*Homeland Security Affairs*, the Center's online academic journal, was launched in August 2005 as a vehicle for disseminating research in homeland security and defense. As an open-access journal available at [www.hsaj.org](http://www.hsaj.org), *Homeland Security Affairs* is read by academics and practitioners from across the country and around the world. In 2008, *Homeland Security Affairs* had more than 73,000 readers, an increase of 76 percent over 2007, and more than 2,500 subscribers.

*Homeland Security Affairs* receives manuscripts from academics and practitioners in homeland security-related fields. Submissions to the journal are subjected to a double-blind peer review process. The editorial committee of the journal is comprised of staff and faculty of CHDS; other faculty members also serve as peer reviewers and sit on the Review Board. Since its inception, *Homeland Security Affairs* has published more than forty articles, ten working papers, and twenty-five essays. As the premier academic journal in this field,
Homeland Security Affairs assists in the overall mission of educating America’s homeland security leaders

5. Alumni Network

After graduation students are invited to join the CHDS Alumni Network to preserve and extend the participatory culture and networks created during the program. The alumni meet once a year to discuss the most relevant topics in homeland security, present original research, and reinforce alumni connections. The Alumni Network is a strong component of the degree program. More than 500 senior homeland security officials (from multiple CHDS programs) have the ability to tap into a secure network that provides best practices and intergovernmental collaboration on white papers and other issues and receive feedback from experienced colleagues.

D. Teaching and Outreach Programs

The investment in homeland security education is further maximized through teaching and outreach programs that leverage the experience, faculty, and curriculum of CHDS to produce a multiplier effect that reaches across the United States. There are four such programs:

1. Mobile Education Team

The Mobile Education Team (MET) program delivers half-day policy and strategic-level educational seminars to governors and their cabinets, as well as community leaders and their homeland security teams in large urban areas. The purpose of these seminars is to prepare state and local leaders to take on the new policy, strategy, and organizational design issues that homeland security presents.

Beginning with a seminar for the state of New Hampshire on January 29, 2003, the MET program has delivered more than 120 customized executive education seminars in forty-nine states and twenty-six urban areas, for more than 3,000 homeland security leaders.

2. Executive Leaders Program

The Executive Leaders Program (ELP) was created in 2006 to fill the educational opportunity gap between the eighteen-month master’s degree program and the half-day Mobile Education Team seminar. The nine-month program consists of four one-week modules which prepare homeland security leaders to develop and implement appropriate strategies and policies in a collaborative, collegial fashion and assist participants in building a homeland security network.
By August 2008, eighty-nine participants had graduated from the program: 34 percent from the federal sector, 38 percent from the state level, 21 percent from local jurisdictions, and 7 percent from the private sector.

3. University and Agency Partnership Initiative

The University and Agency Partnership Initiative (UAPI) provides all curricula and associated materials for a complete masters program at no cost to partner organizations, supports partners launching homeland security educational programs, helps prevent redundancy in curriculum development and encourages partners to improve and add to existing curricula.

It currently includes 155 university and agency members representing forty-four states and the District of Columbia. Five workshops have been held at NPS with twenty to twenty-five institutions represented at each.

4. Self-Study Courses

Non-credit online courses were initiated in 2006 to extend, at no cost, portions of the graduate-level program to a larger homeland security professional audience. These courses are developed by the CHDS faculty and draw on lecture material and course readings from the master’s degree curriculum.

As of September 2008 more than 1,900 homeland security professionals have enrolled in the online courses offered by CHDS. There are currently four courses offered online, with three more to be added in 2009.
Chapter IV
EVALUATING THE MASTER OF ARTS IN SECURITY STUDIES

In 2007 CHDS sought an evaluation of the Master of Arts in Security Studies (Homeland Security and Defense) to determine its value and the impact the Center’s operation has had on the practice of homeland security in the United States.

Much like the entire enterprise of homeland security, the assessment of the impact of graduate education in general is an endeavor about which expectations are extremely high but actual knowledge relatively low. Much of this disconnect is attributed to use of a model from the private sector, fed and nurtured by evaluators and auditors who misunderstand the rationale of private sector operations as opposed to public sector operations and accordingly, make and promote extraordinary assumptions about public sector capabilities.12

Elected officials, managers, and administrators establish public sector measures that parallel programs in the private sector, suggesting there is an ability to measure return on investment for all public sector programs.13 The reality is that very little is known about how to accomplish this.

A. Measuring the Impact of Postgraduate Education: The Challenge

In 2006, the United States Secretary of Education Margaret Spellings released the Spellings Commission Report14 detailing challenges facing higher education in this country and calling for major assessments. It encourages colleges and universities to improve accountability and measure student success on a value-added basis. No strategies or suggestions on how to do this are provided.

Traditionally, strategies such as alumni contributions, satisfaction, and percentages entering post graduate education have been used for measuring the effects of the bachelor’s degree in the private sector. However, few strategies exist for assessing post-graduate education in the public sector. Literature in this area focuses on program evaluation15 and

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12 J. Collins, Why Business Thinking is Not the Answer: Good to Great and the Social Sectors. A Monograph by the author to accompany Good to Great (2005)
strategies to examine government agencies. Conversely, the literature is abundant on the impact an individual has in the private sector, namely profit.

Glazer-Raymo’s historical overview of evolving master’s degree programs documents the continuing growth of master’s level education, citing 482,118 degrees awarded in 2001-2002, a 60 percent increase since 1982-1983. The impetus for seeking an advanced degree is the desire to “attain expertise in a particular field, whereas in undergraduate college the baccalaureate degree is more often the goal, and the field of study is only secondary (and often a mid-course) consideration.”

In the context of professional schools like CHDS, Glazer-Raymo notes that “in looking at degree proliferation and specialization as master’s programs become narrower, more specialized, and less adaptable to varying situations and circumstances, the connections between professional status and degree acquisition become more tenuous and comparisons more difficult to make.”

One area of research on assessing quality in higher education is offered by Haworth and Conrad (1997). They argue that a quality program provides enriching learning experiences for students that positively affect their growth and development. They have developed five clusters of seventeen attributes that can be used to assess quality in a graduate program: “Faculty, students and administrators, engage in mutually supportive teaching and learning through investing in” the five clusters. These five clusters are:

a) diverse and engaged participants,

b) adequate resources,

c) interactive teaching and learning,

d) connected program requirements, and

e) participatory culture.

The clusters include seventeen attributes of a quality program (see Figure 3). Simply stated, a quality program involves the mutually supportive input from each of the players,

19 Glazer-Raymo, “Professionalizing Graduate Education.” 104.
faculty, students and administrators, in an academic environment. These five clusters are used as an evaluation tool in this report.

FIGURE 3: AN ENGAGEMENT THEORY OF QUALITY IN HIGHER EDUCATION

Glazer-Raymo notes that learning outcomes in the context of a master’s degree education could be “tied to state exams and licensing and oversight of practitioner organizations,” or in the completion of a thesis, demonstrating the ability to take the knowledge learned in the program and using the thesis to reflect a mastery of the discipline. Crucial in this context is the status of the institution granting the degree, as well as the faculty who approve the thesis. In this evaluation, it is the CHDS faculty, who are part of SIGS, at NPS.

Research relating to theses is scant. One article from 1941 (Grusendorf), discusses the growing debate at that time of whether or not a thesis was necessary for the master’s degree. It concludes that the majority of institutions, 51 of 82 surveyed, held that “the writing...

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21 Diagram cited with permission of author, Jennifer Grant Haworth, email, 8/11/08.
22 Glazer-Raymo, “Professionalizing Graduate Education.” 104.
23 Interviews with Judith Glazer Raymo (7/23/08) failed to uncover strategies to evaluate a master’s degree in the public sector, or strategies to evaluate the value of a thesis beyond the credibility and reputation of the degree granting institution and its faculty.
of a thesis is not an indispensable element in advanced training,” although almost all of the 82 institutions believe that “every student should gain some familiarity with general methods of research.”

The thesis is also a rite of passage, often difficult and prolonged, culminating in one’s new status as a master of one’s discipline. In one case three faculty advisors lost their lives when one of their students on the day of his thesis defense shot and killed them (admittedly an extreme case, but somewhat reflective of tensions which can be involved).

Other research on higher education deals with degree completion rates. Foremost in this area is Lovitts (2001) who raises the topic of “The Invisible Problem;” that is, the attrition rates of students in postgraduate programs. Lovitts, whose research deals only with doctoral level students, acknowledges a national attrition rate in graduate programs of 50 percent, ranging from 33 percent in rural institutions to 68 percent in urban institutions. Other studies confirm this. Garcia notes an attrition rate of 23 percent to 54 percent, with a high percentage of the failures in the “all-but-thesis” status. The most successful degree completion rate of 71 percent is cited in research by Berkowitz (2003), who acknowledges that “doing the course work is the easy part of a degree program.” The only other substantial literature dealing with theses are handbooks on theses and dissertation preparation.

Glazer-Raymo states that the experience and research to date on the assessment of graduate programs yields little to those who seek a one-to-one relationship between completion of a master’s program and quantifiable returns on the investment of time and money. Nonetheless, this shortcoming must be understood in the context of what is known about graduate education in general: i.e., the connection between higher education and “success in American society.” This does not solve the question of “the desire for quantifiable data demonstrating that investments in education are good or bad”. However, it has proved useful in crafting a methodology for the investigation of the success/impact of the master’s degree program at CHDS.

B. Methodology

This evaluation examines why the Center was created, what activities and processes the Center engages in to achieve its mission, how those activities and processes function and

28 W.Y. Carter, Six Major Reasons Why Graduate Students Don’t Finish (Dr. Carter’s Educational Group, L.L.C., February 2004). info@tadafinallyfinished.com
32 Glazer-Raymo,”Professionalizing Graduate Education,” 104.
33 Ibid.
perform, and what impact the Center’s operation and products have had on the practice of homeland security in the United States. Since there is little guidance or structured strategies available to accomplish this task, it was necessary to tailor a new strategy to meet this challenge. This section of the report details how the evaluation was conducted.

The evaluation uses two traditional assessment strategies for higher education: student satisfaction and alumni contributions. However, recognizing the limitations of this type of assessment, two other efforts are employed: an examination of value-added impact and Haworth and Conrad’s strategies for assessing “emblems of quality” in higher education.

1. Traditional Measures

This evaluation utilizes the traditional measures of student satisfaction and alumni contribution. Student satisfaction is based on knowledge gained from the curriculum and faculty. Alumni contributions in the traditional sense, of funds given to support an endowment, are not an appropriate measure here. Rather, in this evaluation, alumni contributions to the discipline of homeland security are used. The theses prepared by the students, the establishment of an alumni association, post-degree involvement in homeland security-related activities, and participation in national discussions related to this discipline are viewed as appropriate means of assessing alumni contributions.

2. Additional Assessment Strategies

Recognizing the limitations of traditional measures, two additional strategies are included as part of this evaluation. The first effort is an assessment of “value added,” as observed and documented through site visits and detailed interviews with alumni at their agencies. The second assessment strategy is the use of Haworth’s and Conrad’s measures of a quality program.

3. Narrative of Evaluation Strategies

To begin this evaluation, interviews were conducted with alumni. Preparation included accessing names, contact information, reading each thesis, and framing the survey instrument for conducting the interviews. The interview instrument was shared with CHDS and others. The final questionnaire included seventeen open-ended questions (see Appendix A) and provided a framework for a discussion of personal satisfaction, institutional change and recommended future actions. Before starting the interview each alumni was informed of the nature of the survey and that it would take approximately forty-five minutes. Most interviews lasted at least one hour.

These questions addressed student satisfaction, changes in positions, responsibilities, and impact upon the individual’s organization. Interviewees were offered an opportunity for a site visit by the evaluator in order to elaborate on the impact of alumni within specific agencies.
Assessing impact was challenging due to changes in positions and agencies. Most public institutions have long-established organizational structures such as civil service and promotions in military rank. It was therefore important that the principal evaluator have a substantial background in public safety and law enforcement, the most prominent fields among the graduates.

It was anticipated was that many of the administrators who initially supported the alumni’s applications had retired, changed positions, or changed agencies. It was hoped that they would be able to articulate the rationale for their support. Therefore, since many agencies are naturally in some level of constant transition, it was difficult to assess accurately the role the alumni had before the program, and the impact of individuals upon their return.

A key component of the evaluation was a focus group of alumni. A meeting was held in the tenth month of the project when most interviews and site visits had been conducted. The goal of the meeting was to present the preliminary findings to assess whether, based on their own personal experiences, the participants found agreement or contradictions among the findings.

CHDS provided the evaluator with access to all theses not listed as “classified” to assess the usefulness of the theses to others as judged by downloads from the CHDS site, the citations of theses, and the publications stemming from the thesis research.

It was anticipated that the use of these methods simultaneously would require approximately one year to complete the analysis of Cohorts 1 through 7 (from January 2003 to September 2007), involving 153 alumni and 147 available theses.

4. Principal Evaluator

The principal Investigator for this evaluation is Dr. Joseph Ryan, a professor and chair of the Department of Criminal Justice and Sociology at Pace University in New York, and a national expert on community policing and police management. He has visited approximately 100 state and local law enforcement agencies and was awarded a Visiting Fellowship with the National Institute of Justice, the research branch of the U. S. Department of Justice. Dr. Ryan was also the co-principal investigator of the National Evaluation of the COPS Program34 and has been involved in security efforts that predate the master’s degree program. He served as chair of an advisory group of planners for the 1996 Summer Olympics in Atlanta, Georgia. He is a visiting professor at the Westchester County Police Academy and is a Certified Instructor by the State of New York Municipal Police Training Council.

Dr. Ryan is a twenty-five-year veteran of the New York City Police Department and is an expert dealing with the evaluation of all levels of police management. He is an expert on community policing and violence, especially as it relates to spouse, child, and elder abuse. He has conducted extensive research in a variety of crime-related areas and recently


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assisted the Philadelphia Police Department in developing a Model Policy and training to deal with the crime of stalking. He holds a Ph.D. in Sociology from Fordham University.
Chapter V
FINDINGS

The findings of this evaluation cover four broad sections: results from interviews with alumni, curriculum review, theses review, and additional areas best described as value added, or for the context of this report, the impact that the alumni had on their organizations and/or on the discipline of home security. It was anticipated that the evaluation would take one year, from July 1, 2007, though June 30, 2008. The full time period for the project was fourteen months since there were no parameters available based on similar evaluation projects. Two major factors added to the complexity of the project: reading 147 theses, some of which were highly technical, and scheduling interviews and site visits.

CHDS provided the evaluator with access to the CHDS web site for relevant information for the alumni: resumes, contact information, and unclassified theses. The target group was 153 alumni in cohorts 1 through 7.

A. Interviews

The first section below provides the results of phone interviews, discussed in three parts: student satisfaction and growth, evidence of institutional change and recommendations for future actions. Student satisfaction and growth is presented first since institutional impact hinges largely on one’s personal satisfaction and growth.

At the start of the evaluation, each alumnus was sent an email by the CHDS administrator with an overview of the goal of the evaluation, a request for cooperation, and an introduction to the evaluator. The evaluator then contacted the alumni to reiterate this information and to identify locations where a site visit might offer additional insights. After initial responses from alumni, this labor-intensive process slowed, requiring multiple emails and phone calls. In recognition of this challenge, DHS provided additional funding for a second interviewer, a thirty-year active and experienced chief of police known to the evaluator.35

There were 105 successful interviews. Figure 4 shows the alumni by their level of government and response rates. The sampling reflected each of the governmental levels participating in the program.

35 Anthony Chiarlitti, Chief of Police, Pleasantville, New York.
Interviews with alumni identified five sites to explore for organizational impact. Site visits were conducted in five communities: Seattle, WA; Sacramento, CA; West Hartford, CT; Nassau County, NY; and Trenton, NJ. The results of these site visits are discussed under “Findings.”

1. Personal Satisfaction and Growth

To the question about their original expectations of the program, some responded that they did not know what to expect but rejected the idea of any “government type training program.” Almost all indicated that “the whole experience exceeded their expectations.” One alumnus stated it was “more difficult than attending law school.” Most significant, there were no negative comments. Satisfaction was evident in participants from all levels of government. Cited were the camaraderie developed with classmates and the fact that learning did not stop at the end of the class day. Many expressed the value to them of their evenings in residence, where the discussions not only reflected the knowledge gained during the day, but extended to broad global issues affecting the discipline of homeland security.

Comments include:

- More than expected; created a need for a strategic level of critical thinking.
- Had expected an HS 101 learning experience, but it was “visionary” in terms of the need for critical thinking skills and analysis of everything being done.
- Offered a new perspective and provided insight that all face the same issues and challenges in dealing with HS issues.
• Expected an infrastructure focus but found a more valuable “strategic and policy” focus that provided a new way of thinking outside the box/silo; provided a broad base to understand the issues the USA faces since 9/11.
• Was very rigorous.
• Went in for selfish reasons, to get ahead, and with a sense of arrogance that he would re-shape CHDS. In the end, getting ahead was irrelevant and it was he who was re-shaped.
• Did not want another training program, but rather to be pushed to new heights, to develop personally, and to encounter a faculty who would treat him like an adult; had an extraordinary experience, especially since he also had to balance a family life. CHDS went beyond his expectations. He learned from the other disciplines; from the military he learned a different, strategic way of thinking; an exceptionally balanced experience.
• Program was grounded; expected military style training, but found a new experience in his interactions with colleagues; broadened what he learned and taught him to think in different directions.
• Sought a program that would help him become a better researcher and writer; it more than exceeded his expectations and helped him propagate the HS message.
• Just completed an MPA degree so was aware of what to expect, but the learning experience was “enormous.” MPA provided a focus in understanding public administration.
• Received a truly multi-disciplinary rigorous education, tougher than law school.

   Alumni agreed that their perception of homeland security and their awareness of what other levels of government do and how other agencies see the world changed. The mix of all levels of government proved to be a crucial aspect of the learning experience, adding a unique perspective to each course.

Other significant comments were:

• One student’s view outside the fire (fighting) world changed. As a former media person she saw the value of providing the public with information and is now in a crucial position to continue this in the context of homeland security by providing accurate information in a way that will allay rather than inflame the community’s concern; sees the need to include more players in the discipline: the public, local chambers of commerce, construction industry (because of building codes).
• The national perspective from others beyond state and local (officials) was valuable in that it provided “their” (Coast Guard and military) understanding of HS, which is more vertical than that of state and local government officials. It was interesting to hear their answers to the question of “Who is in charge?”
• One graduate walked away humbled, learning twice what he could have expected. It opened the doors for him and changed his way of thinking.

   One of the more important questions asked of the alumni was how they defined homeland security, “the million dollar question.” Although the answers varied based on the
level of government of the responders, there was overall agreement that homeland security requires an “all hazards” approach aimed at securing the homeland. Military alumni were more likely to start their responses by first acknowledging that HS is a defense issue, and then that it also includes security of the homeland against other internal and external crises.

Another unique perspective offered by military alumni was a clear understanding of a “strategic agenda” for their agencies: “We know what we have to do;” state and local authorities were less likely to think in long-term strategic planning. Their focus was more immediate, dealing with daily issues like crime. One local example: the rising cost of gasoline led one local entrepreneur to retro-fit a bus with large containers to drive to a state with cheaper gas. The bus was intercepted under suspicion that this might be a terrorist related activity. The vehicle was found to have significant safety violations, but no other illegal activity.

Homeland security was identified by participants as follows:

- Homeland Defense (HD) means protection from external factors. HS means “protecting the homeland through the formation of partnerships.”
- HS is making our homeland more secure at the border, in transportation, etc. The biggest problem is that we are all over the place based upon our position in government. How do you prioritize?
- HS includes defending here and abroad; one example is the problem of container ships. HD and HS overlap, but HS especially needs to be the focus for states and locals. Coast Guard and DOD play an important role. HD is provided by NORTHCOM and the National Guard.
- HS is all efforts undertaken by all levels of society, including the private sector, to enhance an all-hazards approach.
- HS is currently a traditionalist perspective; it is all risks and all hazards; it should be terrorism-centric.
- HS is an effort by government and community at all levels to deal with whatever internal and external threats exist.
- HS is a term still in its infancy. Everyone in the CHDS program uses HS with a different vocabulary, but with a special focus on counter-terrorism.
- HS is prevention, protection, response, and recovery at all levels of government.

Most alumni believe that they are contributing to a national homeland security strategy as a result of the CHDS program. Some were unable to articulate specifically how this was occurring, yet it was clear that the knowledge gained shapes their daily work activities and the activities of their agencies relating to homeland security. They generally agree that a national homeland security strategy requires an “integrated response from all levels of government,” the main focus of the program. One alumni stated the master’s program was an “epiphany for him,” and that he “wants to do this for another fifteen years,” recognizing that he is the next generation that will help define HS.
At least 25 percent of the alumni have made contributions to HS by writing articles published in magazines (e.g., *Police Chief*), related journals, or white papers for DHS.

Another academic outcome of the program is the alumni continuing their education using not only the CHDS course offerings, but also what they refer to as “Greta’s emails.” Greta Marlatt, a chief librarian at NPS, guides most of the students in literature searches for their theses. She also provides ongoing support by emailing links/attachments of information important to each of them. Her services are valued since some noted that they forward her information up the chain of command; in some instances those on top see it as their “find,” and in turn disseminate it downward to their commands, creating a multiplier effect.

Almost all alumni acknowledged their agencies’ support, especially during their residency periods. However, many pointed out that when they returned to their respective agencies, they were expected to handle their normal workloads while continuing their academic experience online.

In terms of obstacles encountered while they were participating in the program, those who had families expressed concern that keeping up with school, family, and work was a major challenge, although worth their time and effort. No specific obstacles were noted that would impede others from participating in the CHDS program.

These interviews revealed a high level of satisfaction with the experience.

2. Institutional Change

The impact of the alumni on their organizations is discussed in two sections: the brief summary that follows below, and in a separate section at the end of the report entitled “value added.”

Interviews disclosed one limiting factor on the potential impact they have when returning to their agencies, namely, civil service, most likely found at the state and local levels. In one instance an alumnus was promoted to the next civil service rank and a task not directly related to homeland security. Figure 5 below provides an overview of the total known promotions, although it cannot be directly concluded that the promotions were the result of the master’s degree.

Another limiting factor is the size of the organization. Large agencies such as NORTHCOM or New York City Fire Department limit the potential impact of the thesis. However, smaller jurisdictions, such as Concord, NH, can demonstrate significant impact.

Alumni were asked if they were doing anything differently. Almost all found it hard to describe in detail what they are doing differently, yet it is clear to them that they are thinking differently.

- One alumnus moved from a position in his city to director of his state’s Office of Homeland Security.
Another cited his education as a means to further relationships and to develop his interest in intelligence. He is now focused on getting information relevant to protecting his officers. For example, his [police] officers need to know if there is a terrorist cell in his city so they can take precautions when responding to a known location. Presently he is trying to set up 500 police/fire officer search teams in the ten FEMA regions, similar to what the Major City Police Chiefs were seeking to accomplish.

Another writes articles for homeland security journals and magazines, and, lectures at Berkley, and is now the de facto expert in the local intelligence fusion center. He is developing a multi-casualty plan using the National Planning Scenario.

One alumnus has developed training in his agency for senior level people who need to be briefed about topics that were provided through the CHDS program. He writes the training material for his executive who adopts it as his own.

Another CHDS stated that the program has developed his analytical skills and exposure to colleagues in the program has enriched his understanding of homeland security.

As a result of one alumni’s experience at CHDS, his agency now applies for grants beyond the state’s operational areas and seeks to address regional needs.

3. Future Actions

Alumni overwhelmingly supported the expansion of the design/intent of the CHDS degree beyond the audience of state and local agencies to federal government agencies and the military. This was seen as a significant aspect of the learning experience. Without the
mix, the program would have less impact.\textsuperscript{36} Comments offered by the alumni illustrate their perception of the value of the mix.

- NPS was about leadership development, the need for critical thinking skills, and the ability to recognize the needs of other government agencies.
- The level of cooperation has improved immensely, especially with the Coast Guard. The alumnus now knows that to reach out simply means “picking up the phone.”
- The program is applicable to 98 percent of what he does. For example, with the fires in California in fall 2007, this alumnus used his networks from NPS to facilitate communication. He got help from a referral to Dallas as a result of a call to NORTHCOM.
- NPS must be the host for fostering interaction among agencies.
- The goal of regionalism was achieved by pooling four fire agencies in a Mutual Aid pact: one fire agency acts as the anchor with the responsibility of allocating funds to build a bigger and better fire response for the community.

There was hesitation among some alumni about the value of including the private sector in the CHDS program, with most feeling the private sector should not be included because of its complexity and size. Statements reflective of this include:

- We have to include the private sector, but they should not be in NPS because of the level of intimate government conversations.
- It would be hard to bring them in because they are not part of the “inner circle.”
- We need more study on how the private sector can play a role in HS.
- The private sector has things to offer, but we need to avoid the Motorola’s of the world. Places such as Burbank Studio and Las Vegas are extremely high tech when it comes to profiling and we could learn from them.
- He draws the line at including the private sector.
- We need to have the freedom to talk among other government officials. If the private sector wants to get involved, they simply should join a federal government agency.
- The private sector’s number one goal is profit, and thus that will always be a factor against their involvement. The government’s role is to serve the people, not make a profit.

Alumni from local government agencies were more likely to see a need to include the private sector in the CHDS master’s degree program. Favorable comments for its inclusion are:

\textsuperscript{36} It should be noted that this acknowledgment of the positive influence of the mix of government levels indirectly bears negatively upon the second delivery site of the CHDS degree; that is, the NCR in Shepherdstown, Virginia, where the mix is heavily federal-centric.
From a community policing perspective, HS should include the private sector; everyone needs to be trained to recognize such dangers as, for example, propane tanks.

The private sector should play a role in critical infrastructure protection as information needs to be shared with them. They could be included in CHDS as long as they have a perspective other than selling toys. We can learn from them.

There is value in bringing the private sector into CHDS to talk about how they deal with threats related to their companies, particularly the bio-tech industry. They are the leaders in the area of infrastructure protection.

Not involving the private sector is like separating the discipline of biology from those who work for the government and those in the private sector. To be a true discipline all must be included.

Alumni were asked two inter-related questions about recommendations for future actions. The discussion that preceded these two questions included the comment that both questions made the assumption that homeland security is an academic discipline, a statement with which none disagreed.

With the exception of the first cohort to attend the program in 2003/04, the majority felt that course work reflected the breadth of the knowledge they need. The first cohort recognizes their role in helping build the master’s degree curriculum; they believe their academic experience was exceptional and that being asked to provide formative comments on their courses added to their learning. Suggestions for topics, courses and/or modifications to course offerings include:

- There is a need for a 101 course or a prerequisite course detailing how the various levels of HS agencies function. This student had no understanding, for example, of law enforcement problems in terms of intelligence gathering.
- The research methods course could be strengthened in terms of making the methodologies more scientific.
- There could be a course on how Islamic culture and other cultures and religions may contribute to conflict.
- A course on eco-terrorism would be relevant, as well as one on public health issues, especially as it may relate to the National Strategy for a Pandemic.
- The course on intelligence gathering leaned naturally to a more federal perspective. The intelligence course should explore theoretical/alternative options on integrating intelligence fusion centers.
- The research methods should not be on the internet.
- The breadth of the program was important.
- An international perspective on policy is needed. Our current international policy is in conflict with what is being done at the local level.
- HS currently has a traditionalist perspective; that is, it is all risks and all hazards; HS should be terrorism-centric.
- Other programs one student examined lacked the structure and faculty of CHDS.
● NPS needs a course on how to navigate bureaucracies, even if it is to just prioritize agencies’ budget needs.
● A specific course could be on “communicating the message” for leaders, and further development of a leadership component in certain classes.
● Would like to see how other countries handle HS issues.
● There is a need to partner with industry, celebrities, groups (e.g., seniors, Kiwanis) to prepare them for emergencies such as the California wildfires and Katrina. An agency like LLIS could collect best practices. An example might be “readiness” public service announcements in movies to reach parents.
● Course content needs to be regularly modified and updated.

A second question asked about the challenges still facing the development of homeland security. While the responses to this question were mixed, a common theme is the concern over a growing lack of interest in the issue of terrorism from all levels of government down through communities as the distance from 9/11 lengthens. One alumni was told by an agency head that if she heard the words “homeland security” one more time,” she would no longer sign off on future funding. (He was able to submit a proposal without using the phrase and received the needed funding. The proposal was judged “truly unique.”)

Other comments concerning challenges were:

● Reduce the multiple levels of filters in the law enforcement community.
● It is financially difficult to send mid-level government people to NPS and therefore help is needed with costs; the present funding strategy is very valuable.
● A valuable post-9/11 program that has not drawn appropriate attention is Prepositional Equipment Program (PEP). A separate entity needs to manage and maintain emergency management/response equipment.
● HS people should be able to influence foreign policy.
● Select younger members in the agencies. At least half his cohort (2003) have left government service for the private sector.
● There needs to be more fusion centers and better working relationships between government agencies.
● Include more players in the discipline, including the public in local chambers of commerce and construction industries; focus on emergency preparedness and how best to educate the public.
● Need ongoing support from DHS and the states and locals who should be recognized as a resource to DHS.
● Focus should be on three things: (1) the core requirements – this is a definition problem because of the overlap on HD and HS; (2) what state and local agencies need; and (3) the “all hazards” approach to be made a national issue, which requires government and involved citizens.
● Need a “scale-ability” strategy to be able to scale a response up or down, but within the limits of the resources of the agency.
Alumni agreed the program should remain at NPS because the campus environment contributed to the academic experience; being removed from their working environments allowed them to focus on the educational experience. The interaction with all levels of government and a variety of public agencies intensified the learning.

B. Curriculum Review

The finding of this report is that the curriculum offered at CHDS is reflective of the discipline of homeland security. The alumni strongly agree the curriculum provides comprehensive knowledge of the field. Only a few believe additional courses are necessary. One suggested a prerequisite course that would be a review of all government agencies that potentially contribute to the defense of the homeland, the services they provide, how they function, and how they can be accessed by other levels of government.

Another recommendation was for a course dealing with world religions and if and how they may be involved in world conflicts. A course for dealing with international/foreign policy as it relates to domestic policy was recommended as well.

Crucial in the context of the review of the curriculum is an acknowledgment of the qualifications of the faculty teaching CHDS courses. The curricula vitae of the faculty in Appendix C reveal that each is well qualified to teach relevant courses in their disciplines. One representative typical of the quality of the CHDS faculty is highlighted below.

The Psychology of Fear Management and Terrorism course is taught by Dr. Phil Zimbardo who has been a professor of psychology at Stanford University since 1968 and is internationally recognized as an innovative researcher in many areas of psychology. He has won numerous awards for his distinguished teaching, writing, research, and media productions. Zimbardo has been called the "voice and image of modern psychology" because of his popular PBS-TV series, "Discovering Psychology," aired nationally and internationally over the past decade. He has more than 300 professional publications, including fifty scholarly, text, and trade books. His text, *Psychology and Life*, soon in its 17th edition, is one of the major texts in the field. He has served as president of the American Psychological Association (2002) and of the Western Psychological Association.

C. Thesis Review

The examination of the theses is an important element in this evaluation. As defined by Glazer-Raymo, a thesis is a statement of an individual's ability to show mastery of a subject gained through the master's degree. This involves a number of strategies discussed below and also later in the report. Non-classified theses were reviewed for insights as to the impact the alumni have on their organizations, and/or, some other "value added" as suggested by the Spellings Commission.

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37 Glazer-Raymo, Interview on 7/23/08.
Evaluation in the area of higher education is minimal, with even less available on postgraduate education and on strategies to evaluate theses. Therefore searching for “value added” elements in each of the thesis was a realistic starting point. A separate discussion follows later in this report on those theses that may be judged as having value added. The difficulty in finding a significant level of value added in some cases required a different strategy to assess their relative contributions to the discipline of homeland security.

An assessment of theses requires clarifying what is involved in completing a thesis. For those who have completed a thesis, or who have mentored students through the process, the following artistic definition captures the essence of what is encountered; that is, as one author best described, a thesis is:

... an act of attunement that depends on the interrelated engagement of mind, body, emotion, and soul. As you work to conceptualize, clarify, and articulate ideas, as you strive to make meaning of mounds of data, as you yearn and struggle in earnest for moments of revelation and insight, and as you desperately search for exactly right words to say what seems so clear in your head and heart, you are engaged in an agonizingly elusive process of tough thinking and sense-making. Despite good intentions and strong will, sometimes you just have to surrender your reliance on your conscious, rational mind.38

For this evaluation a thesis should reflect a manifestation of knowledge learned in the master’s program and a mastery of the discipline of homeland security. As noted earlier in this evaluation (Glazer-Raymo), crucial in the context of assessing theses is the status of the institution granting the degree, as well as the faculty who guide and approve the theses.39 Each of the theses was examined for the relevancy of their research strategies and contributions to the discipline of homeland security.

One hundred forty-seven theses were read after reviewing the curriculum to ensure that, as viewed by the alumni and taught at CHDS, they reflect the discipline of homeland security. This report found that each thesis met the requirement that it be a “careful, systematic, patient study and investigation in the field of knowledge, undertaken to discover or establish facts or principles.”40

On a scale of poor, good, and outstanding, none are rated poor. Difficulty arose in defining the difference between “good” and “outstanding.” With the assistance of CHDS faculty a total of sixteen theses were identified as outstanding. The abstracts for these sixteen theses are included in Appendix E.

That the theses reflect quality is due in large part to the faculty advisors recognized as experts in the discipline of homeland security and to faculty who taught the required research methods course, especially singled out for the rigorous and demanding requirements.

39 In an email from Judith Glazer-Raymo on 7/24/08, she indicated: Your paragraph sounds quite accurate; feel free to quote me.
Thesis completion rates and downloads of these documents were also collected. One hundred and forty-seven theses were read after reviewing the curriculum to ensure that, as viewed by the alumni and taught at CHDS, they reflect the discipline of homeland security. The completion rate in this program 89 percent, contrasting with rates ranging from 23 percent to 71 percent in other master’s programs. CHDS’s Digital Library disclosed that approximately thirty-four theses were cited in other research. There is no comparable data for other master’s programs.

Most alumni found that their recommendations had little immediate impact on their agencies. Although agency heads were given copies of their theses, some alumni do not know if they (or others) have read them. However it is an error to expect that every thesis leads to institutional change. Some simply reflect the student’s mastery of the discipline.

Some theses had impact to varying degrees.

- One thesis formed the basis of the policy for the medical center where the alumna works.
- A second thesis served as impetus for the inclusion of emergency medical service in intelligence fusion centers. He distributes copies of his thesis in response to requests at conferences he attends. It focuses on how public health and EMS can be involved in intelligence fusion centers. His recommendations were being carried out while he was working on it.
- Another thesis crystallizes the essence of intelligence policing and is the strategy used by his agency.
- Some of the recommendations in a thesis on using the National Guard are being considered in the state legislature: one is to give the National Guard police powers.
- The thesis of one alumni reflected the complexity involved in intelligence gathering. This thesis served as the framework for the development of regional fusion centers according to a model entitled Regional All-hazards, Disaster and Anti-terrorism Resource (RADAR).
- The value of another thesis lies in the elementary issue of the need for “regionalism” as a means of distributing scarce resources.
- Another thesis, available on LLIS.gov, is being used by the FBI to formulate Terrorism Early Warning (TEW) performance measures for expansion to all UASI regions.
- A graduate stated that his thesis has been well received by senior level staff, despite the political challenges faced by the National Guard.
- NORTHCOM has circulated another thesis, even to government officials in Mexico. It addresses the function of the Department of Defense and is relevant to the 2010 Olympics in Vancouver.
- A thesis on the CSMART program is part of understanding how responses, such as decontamination efforts in case of a terrorist act, can change. It is getting attention, but there is a lack of funds for implementation.
- Another thesis shows that fire service has not caught up with up HS issues. It has broadened the perspective of the agency; for example, the thesis has made it clear...
that if someone is not being treated for radiation, the agency may be legally 
responsible.

- A CHDS graduate helped Illinois on its preparedness plan as it relates to the elderly. 
  Her CHDS experience was also instrumental in San Diego where 20,000 elderly were 
evacuated due to the wild fires, highlighting the necessity for a plan.

D. Alumni Contributions

Foremost among alumni contributions is the formation of an alumni association with 
formal by-laws adopted in 2008. Second, alumni helped co-sponsor five annual conferences 
to bring together not only the alumni, but recognized leaders in the discipline of homeland 
security. At the fifth annual CHDS conference, alumni participated in an open dialogue with 
the following leaders in homeland security:

- Joseph Billy, Jr., Assistant Director, Counterterrorism, FBI
- Dr. Donald Kerr, Principal Deputy Director of National Intelligence
- BG Christopher Miller, Director of Plans, Policy and Strategy, U.S. NORTHCOM
- David Paulson, FEMA Administrator, DHS
- Robert Stephan, Assistant Secretary, Infrastructure Protection, DHS
- Jack Tomarchio, Deputy Under Secretary for Operations, Office of Intelligence and 
  Analysis, DHS
- Peter Verga, Principal Deputy Assistant Secretary for Homeland Defense, DOD

The conference offered workshops on Intelligence and Information Sharing, Border 
Security and Public/Private Collaboration. Approximately 75 alumni attended, many using 
personal funds for travel and accommodations. There was a significant level of interaction not 
only with the guest speakers but also in the breakout sessions. Working papers from that 
conference were subsequently published in Homeland Security Affairs.

E. Value Added/Impact

The third aspect of the alumni contributions is the value added in the broad context of 
the discipline of homeland security and in their respective agencies. Many theses did not 
offer a value-added component. Research has shown that such an expectation is based on 
the assumption that a thesis will yield a product beyond the mastery of a discipline. The field 
of organizational theory offers a logical framework through the work of Bolman and Deal 
(1997) in Reframing Organizations: Artistry, Choice, and Leadership, for assessing 
organizational change.41

The author of this evaluation has extensive experience in research and evaluation in 
law enforcement. He is often asked what is the best law enforcement agency he ever visited 
and how do he knows it is the best. An understanding of how an art critic answers the

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question of what makes a great work of art calls forth similar comparison. To understand and evaluate an organization in the public sector requires experience, detailed knowledge of government agencies, and judgment. To understand the “artistry” in government evaluations requires knowledge of managers and leaders, their credentials, and their aims at reframing. This is how the “value added” aspect is addressed in this report.

The goal of the graduates upon returning to their agencies has been to use their newly acquired knowledge to reframe their organizations. It was clear in each interview that they are enthusiastic about this prospect. As part of the interview process, with the thesis as the background, the evaluator sought to find out what agencies were most likely to yield a value added aspect and follow up with a site visit.

Site visits were chosen based on this enthusiasm for reframing efforts, the support of the agency’s leadership, and the opportunity to observe changes in the participant’s organization that were occurring as a result of conclusions in the thesis.

This entailed four broad reframing strategies: intergovernmental cooperation (Seattle, Washington); the role of the alumni in intelligence fusion centers (Sacramento, California, and Regional Operations Intelligence Center (ROIC), also known as the Rock in Trenton, New Jersey) and their ability to articulate cutting edge issues in this area; regionalization (Hartford, Connecticut and North Dakota); and “white papers” written by alumni (the MMRS white paper).

1. Intergovernmental Cooperation

Seattle was selected as a test site for the evaluation for the number and diversity of the alumni. The eight CHDS graduates have been in contact with each other and have offered their related services. Two alumni were from FEMA, three from the Seattle Fire Department, two from the Seattle Police Department, and one from the Seattle State Police.

Seattle has a number of vulnerable points. It is large metropolitan area with a population of 582,454, in 2006, and a land area of: 91.5685 square miles of land and water. The city is at sea-level, but is also known for its many hills. The Seattle Fault Zone is an active seismic zone running underneath it. There are more than 150 bridges over the various waterways in use daily; major bridges, including the Ballard Bridge, Fremont Bridge, Southwest Spokane Street Swing Bridge, and the University Bridge, are the most traveled within the Seattle area.

Seattle has numerous tourist attractions that are vulnerable, such as the Space Needle built in 1962 in the center of the city, served as the symbol of the World’s Fair that year. The observations deck is 520 feet high and contains a revolving Sky City Restaurant. The Pike Place Market, one of the most visited places in Seattle, has existed for 100 years and is recognized internationally as one of the world’s premier markets. Seattle hosts two major sports teams: the Mariners (baseball) and the Seahawks (football).

Among the most vulnerable locations is the Battery Street Tunnel, built in 1952, 3,140 feet long, and consisting of two separate tunnels for each direction of travel along Highway
99. There are several seawalls in the city, the largest and most important of which is the Alaskan Way. It is built along Elliot Bay (Puget Sound) and was completed in 1934. The hilly terrain has over 600 retaining walls which help protect from landslides.

The SeaTac Airport and the Port of Seattle are vulnerable because they are crucial to travel in Seattle and are close to many local attractions. The main ports are popular among six major cruise lines.

Recognizing the potential homeland security hazards in the Seattle area, both the city’s police and fire chiefs were instrumental in not only permitting their members to attend the CHDS program, but also making personal contributions to the CHDS Executive Leaders Program as guest lecturers; the fire chief contributed to one of CHDS’s Viewpoint podcasts, entitled Homeland Security: Broadening the Horizon for Fire Service. While some may not consider improved collaboration a major accomplishment, the fact that both police and fire have gone beyond their past rivalries is a significant change.

2. Intelligence Fusion Centers

Many alumni play significant roles in the intelligence fusion centers in their jurisdictional areas by articulating the nature of the partnerships needed to build the centers. They are versed in the dynamics of one of the issues facing these centers: privacy versus security. This is a key aspect covered in the NPS degree and is at the heart of institutional cooperation and information sharing, a debate that has implications for both Congress and Supreme Court.

Three areas of “model intelligence fusion centers,” involving CHDS alumni, are Sacramento, California; Nassau County, New York; and Trenton, New Jersey. Although they operate in a similar fashion, (that is, each has significant involvement of various levels of government), each offers a slightly different component. Sacramento has a full complement of representatives from the various levels of government, including a public health representative. A public health official in the center is important because of the complexity of dealing with the issue of privacy versus security according to the Health Information Protection Act (HIPA) guidelines. One physician noted, “with HIPA on top of other intelligence related issues, you start walking a very fine line.”

The Nassau County approach has two significant components. The first addresses the complexity involved in the gathering and analysis of data, starting at the local police level. This approach is based on a CHDS thesis that deals with the concept of intelligence-led policing entitled “The Integration of Virtual Public-Private Partnerships into Local Enforcement to Achieve Enhanced Intelligence-Led Policing.” The second component of the Nassau County approach is the level to which the center reaches out to the private sector through the Security/Police Information Network (SPIN),

\[42\] The physician agreed to be interviewed as long as CHDS’s broad policy of “non-attribution” was adhered to.
Presently SPIN has sixty partners and expects to grow to 1,800. This can create a multiplier effect of up to 300,000 people who will receive important information relating to preparedness, crime, and terrorism. Sample alerts include those for missing persons, family preparedness planning, terrorism news, local events requiring police permits, crime, computer scams, and cyber stalking. Examples of these alerts are included in Appendix F.

The city of Trenton is the location for New Jersey’s Regional Operations Intelligence Center (ROIC), called “the Rock. It represents the state-of-the-art command and control center for any level of threat, with a full range of communication capacity.

A unique aspect of the Rock is its daily “10 AM huddle” to share what each government agency encountered during the previous 24 hours and during the weekend. Each representative addresses the group. The layout of the Center is conducive to free intelligence sharing, with each representative in an open cubicle that enables transparency.

Each of these intelligence fusion centers deserve the recognition as “models” and interviews with numerous representatives at these three locations disclosed that they were clearly able to articulate the reality of the current national debate centering on “privacy versus security.” It is the conclusion of this evaluation that this model recognition was due in large part to the contributions of the CHDS alumni from these agencies.

3. Regionalization Efforts

The first regionalization effort is in Hartford, Connecticut. William Austin’s thesis “The United States Department of Homeland Security Concept of Regionalization: Will it Survive the Test?” holds that the DHS-proposed national system of response to terrorism and catastrophic disasters would be more practical and efficient if handled on a regional basis throughout the country, and that regionalization is one of three overall priorities under the National Preparedness Goal. Austin lists six major reasons regionalization may fail and argues that a change of policy by the federal government will be necessary to increase the chance of success. The reasons include a lack of definition for regionalization; the impact of federalism; the influence of risk-based funding on local interest in regionalization; the impact of home rule and local autonomy; risk and liability questions; and the lack of leadership.

Three options are evaluated: maintaining the same program, creating a Regional Homeland Security Service Agency, and using the Regional Council of Governments (RCG) approach.

A visit to Hartford, Connecticut and interviews with various partners revealed that his efforts toward regionalization are succeeding using the Regional Council of Governments approach.

The second person working on a regionalization approach was Susan Reinertson, whose thesis is entitled “Resource Sharing: Building Collaboration for Regionalization.” It argues that the major challenge in securing the homeland is to provide all citizens with effective and capable prevention and responsiveness to chemical, biological, radiological,
nuclear, and explosive events. She notes that states have different homeland security organizational structures, priorities, funding strategies, and implementation methods. Consequently, the nation lacks a clear, uniform prevention and response strategy that translates into an overall capability that cannot be qualitatively defined.

She notes that to combat this situation, DHS has linked future funding to a holistic approach which includes implementing intrastate and interstate regional activity that effectively leverages resource sharing. Under her guidance, North Dakota responded to funding reductions by recognizing the need to devise a plan for a regional approach. It was necessary to develop standardized baseline equipment lists corresponding to each of the four levels of weapons of mass destruction capability as defined by DHS. The baseline list circumvents the complex and disjointed method currently in use and provides specific guidance for purchasing necessary equipment.

4. White Papers

DHS realizes that CHDS is developing a cadre of individuals who have expertise in multiple areas of homeland security and has begun to call upon them to draft white papers, serve on panels as Subject Matter Experts (SME), and as visiting fellows in the agencies within DHS. In 2007 a working group consisting largely of CHDS alumni was convened by the National Preparedness Directorate of the Federal Emergency Management Agency (FEMA). They were asked to conduct an assessment of the state of the Metropolitan Medical Response System (MMRS), and generate a series of recommendations to improve the program (see Appendix G).

In the June 2008 National MMRS Conference in Washington, DC, the MMRS white paper was used as the focus for discussions. According to participants who attended the conference, including one physician who is part of the Hartford, Connecticut Regional Council of Governments, the overall response was that this discussion was accurate in its assessment and proposed recommendations, and long overdue.
This study concludes that CHDS has successfully created an effective master’s degree in security studies (homeland security). The remaining discussion summarizes how this conclusion was reached and offers other pertinent conclusions, notably student satisfaction and alumni contributions.

A. Discussion

There is little research on evaluating a master’s degree in higher education. Therefore, as suggested by the Spelling Commission Report, it was necessary to develop some strategy to assess the overall value of a master’s degree program offered at taxpayers’ expense.

This evaluation utilizes three strategies, two of which are traditional: student satisfaction and alumni contributions. The third strategy developed specifically for this evaluation is a focus on “value added/impact” that the alumni have contributed to their agencies, the nation and/or the discipline of homeland security.

The first section of this report details the preparation, conceptual framework, and resources that were brought together in the aftermath of 9/11 to create the CHDS master’s degree in security studies. At that time it was recognized that more was needed, namely a strategy to engage homeland security personnel and equip them with the necessary critical thinking skills to prepare for whatever threatens homeland security.

B. CHDS Educational Development Process and Environment

Interviews with representatives of DHS, NPS/SIGS, and CHDS conducted during this evaluation reveal responses that give insight into the process of developing the discipline of homeland security and to providing the framework for a master’s degree in this discipline. There are several logical considerations that influenced the choices made.

In the aftermath of 9/11 it was clear that training programs were not sufficient. These are appropriate when goals are clearly defined, but as the 9/11 Commission Report revealed, what was missing as part of this country’s efforts to secure the homeland was an education that focused on imagination, understanding, analysis, and cooperation of personnel in all agencies involved, briefly, how people learn to think differently, using upper level cognitive skills.

CHDS recognized the existence of individuals who had imagination, but no forum to bring their ideas into existence via meaningful strategies. These individuals were working in the undefined discipline of homeland security at all levels of government. To utilize this
wealth of imagination, CHDS became the place to initiate the process of bringing these individuals together to define the essence of the discipline of homeland security.

The first constraint was the recognition that since these were working adults of various ranks in their governmental agencies, it was imperative that they be taken out of their daily work routines and be provided with an in-residence educational environment. Interviews with alumni revealed that the Naval Postgraduate School, located in Monterey, California, was ideal in many ways. Not only was it a distance from Washington, DC where many worked, it was already accredited as an institution of higher education. Alumni consistently acknowledge the advantages of the campus environment, such as the long library hours for research. Each of the two weeks in residence requires students to be away from their families, which none saw as an insuperable barrier.

A second significant step taken by CHDS was the recognition that adults tend to learn differently from traditional age students, that is, “unlike children, who must rely on lectures, slides, and movies to give them exposure to different experiences, adults already possess personal libraries of experiences.” In this context, a shift for faculty needed to occur, where “educators of adults...act more like ‘facilitators’ than content experts...” Thus the practice of pedagogy versus andragogy was debated, with the latter chosen as the style of instruction. Alumni acknowledge that the faculty respect their knowledge and experience, yet help them make sense of what they need to know.

The next crucial step was to recruit faculty but without the option of tenure. This is an issue in terms of academic freedom, “the signature mark of a free society”—articulated by the American Association of University Professors (AAUP). A statement by Cary Nelson, the current president of AAUP, has significant bearing for CHDS’ location within a funding source tied to political agendas of various administrations: “The world without tenure is a world of administrative fiat—first over all elements of shared governance, then over academic freedom as it applies to faculty speech in public and in the classroom.” As stated in AAUP guide lines, the sole purpose of tenure is to guarantee academic freedom which “differs fundamentally from the individual First Amendment rights that present themselves so vividly to the contemporary mind.” The difference is that while free speech rights are grounded in the Constitution, academic freedom rights are “grounded...in a substantive account of the purposes of higher education and in the special conditions necessary for faculty to fulfill their purposes.”

While a discussion of tenure is important for all institutions of higher education, it is not an issue for CHDS to address at the current time for two reasons. First, homeland security is not a formal discipline at this moment in its development; and no Ph.D. degree is in place, a

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43 B. Klingner, “The Relationship Between Learning Styles of Adult Learners Enrolled in Online Course at Pace University and Success and Satisfaction with Online Learning” (PhD dissertation, Walden University, May 2003), 44.
46 Ibid., 13.
normal qualification for faculty seeking tenure. Second, CHDS has judiciously used its efforts to recruit highly qualified faculty who are representative of homeland security disciplines, and they in turn have diligently guided the development of this discipline by consulting students, alumni and faculty about what is relevant not only to the curriculum, but also to the qualifications of faculty who are teaching in the discipline.

However, as homeland security evolves into a formal discipline, as most alumni agree it will, CHDS needs to develop strategies that will ensure the discipline is taught without interference from political considerations, and that changes come from students and faculty engaged in this educational endeavor.

CHDS also realized the need to provide students with access to technology. As busy HS professionals, working on a graduate degree while maintaining full-time careers at their home agencies, they face a major challenge. CHDS responded by offering library course resources in multiple media formats and providing students with the hardware (computers and iPods) to easily access these materials. Portability of course content was seen as important to students in order to make the best use of free time, especially during commuting and other travel time. The CHDS media development team produced many of the required course readings and video lectures in a portable format for iPods, which are used to access lectures and related interviews.

CHDS created web systems and a development team to support this goal. CHDS, as a distributed community of students, instructors, experts, and staff, needed successful communication and collaboration in a robust online environment. Early attempts at outsourcing web development were unsatisfactory; the quality of products returned did not suit the dynamic, collaborative environment existing at the Center. For both these reasons, web development was brought in-house and full-time.

The work of the web systems and development team allows the CHDS community to access educational resources, communicate effectively, and market CHDS initiatives in a digital environment. Data provided by CHDS discloses that over 20,000 homeland security professionals have used the websites to participate in CHDS programs. Thousands of others have visited them. Students, instructors and staff use the websites daily to do research, communicate with each other, fulfill requirements, and share information. This support includes the Homeland Security Digital Library website, the Homeland Security Affairs website, Moodle (CHDS’ Learning Management System), online program admissions, and functions for blogs, wikis, forums, calendars, budgets, file-sharing, and more, all within a secure, standards-based, open-source environment.

The development of additional programs at CHDS – the ELP, MET, UAPI, HS Digital Library and Homeland Security Affairs journal – enhances the educational environment not only for students and alumni, but for a broad community involved in developing the discipline of homeland security. The electronically published HSA journal provided not only a source of information but also a venue for contributions.

47 The Homeland Security Affairs journal uses both internal and external experts as peer reviewers.
C. Student Satisfaction

One strategy for evaluating success in higher education is student satisfaction. CHDS alumni express an extremely high level of satisfaction and acknowledge that the program is academically challenging. Many indicate that the relationships built in the cohorts are serving as valuable networks in their efforts to address homeland security issues. Student satisfaction and success is dependent upon the education received. Interviews reveal that students appreciate the level of academic challenge they face. Very few students suggested additional courses that might be added to the curriculum.

A key element in the success of the program is the faculty. Student satisfaction with faculty is extremely high, especially for the faculty member who teaches the research methods course, one of the most demanding courses in the curriculum. Usually any distaste for this course translates to a dislike for the faculty teaching it. This does not occur in the CHDS program.

The mix of government agencies enrolled in the program contributes to student satisfaction in two ways. First, it provides awareness of the role that each government level plays in the general defense and welfare of the country. Second, it serves as a philosophical discussion point around the issue of federalism: that is, how one reaches out to other and/or separate levels of government to obtain their services. (Such an example would have been valuable to the police commissioner of New York City who, on 9/11, did not know how to obtain support to protect the airspace above his city.)

Alumni reveal an enthusiasm for the continual unfolding and focus on how best to utilize the federalist model of government. Key in this context is the question of how the broader community fits in this discussion.

This raises the question of the enrollment of students from the private sector in the program and how that might contribute to securing the homeland. The issue of the private sector as a potential pool of candidates is a challenge CHDS will continue to face as they assess how the private sector can be useful and offer insights to the program.

A major threat to the stability of this program that may weigh against expanding it to non-governmental employees is the significant “comfort” level the alumni from the various levels of government feel with other government employees. CHDS’s "non-attribution policy" appears to have worked well in permitting honest discussions among the participants who believe they represent the government and are responsible for providing for the general defense and welfare of the people. Therefore the involvement of the private sector, especially where the potential for considering profits over confidentiality exists, weighs against their inclusion in the program.

Most alumni recognize that there is a discipline of homeland security however it is not clearly defined at this point. A useful strategy to reach a definition was to ask alumni how in their position of government, “they provide for the general defense and welfare of the people.”
Clear responds were evident; that is, military personnel stated, they provide for the defense, law enforcement provides for security, and public health for the welfare of the people.

Another concern that surfaced is a growing sense of complacency, with the threat of 9/11 becoming more distant, which could deter a focus on issues of defense in the face of another attack or catastrophe.

Alumni strongly believe that CHDS has more than fulfilled the mandate contained in its mission statement, to provide a graduate level educational program that meets the immediate and long-term leadership needs of organizations responsible for homeland defense and security. There was almost unanimous acknowledgement that the curriculum offered by CHDS is reflective of this need and that the faculty is more than qualified to teach this.

Alumni also argue strongly for keeping CHDS at NPS because it provides the proper academic atmosphere, as well as a forum where the “non-attribution” policy can be utilized.

The CHDS master’s degree completion rate of 89 percent is exceptionally high. Several factors contribute to this success. They include faculty mentoring, adequate resources, and an admission screening strategy which is effectively administered.

D. Alumni Contributions

Another strategy for assessing success in higher education is to examine alumni contributions. Recognizing that the alumni of CHDS work in the public realm where careers are not usually rewarded with large salaries required a new understanding of the traditional assessment tool of “alumni contributions.” For the context of this evaluation, contributions were viewed in a more realistic fashion, that is, in terms of contributions to the discipline of homeland security.

It is clear from the interviews, from annual meetings of the CHDS Alumni Network, from contributions to white papers, and from service in a pool of educated individuals who can be called upon to provide insight into the general discipline of homeland security, that the value of their contributions cannot be viewed in the context of simple financial endowments, but rather in terms of what they are giving to the discipline of homeland security. In this context, the alumni are providing a valuable contribution.

Interviews also disclose that alumni are having a multiplier effect when they return to their agencies. They are recognized as experts on homeland security and thus their knowledge is accepted by their professional communities. Additionally, some alumni have taken on roles as trainers and educators, as adjunct faculty in colleges and universities, thus further disseminating their knowledge and contributing to the discipline.

While some alumni feel that their theses did not prove to be specific assets to their agencies, they believe they have articulated pertinent issues in the discipline. Reviews of the theses reveal their general value in shaping the discipline. The theses enrich critical thinking and writing skills. Some graduates, as noted in the findings section, find that their theses do prove an asset to their agencies.
E. Value Added/Impact

The call for “value added” elements in the Spellings Commission Report is being realized. This aspect is evident in four areas: intelligence fusion centers, regionalization efforts, intergovernmental collaboration, and creating white papers. Each of these issues has broader implications for this country and should be addressed both by Congress and the Supreme Court.

F. Conclusion: Quality Program Assessment Strategy

In their published research and in subsequent interviews with the authors of *Emblems of Quality in Higher Education*, Haworth and Conrad offer a model assessment strategy useful in this evaluation. They believe that faculty, students and administrators must engage in mutually supportive teaching and learning by investing in the five clusters they identify as necessary for a quality program (see Figure 3 in chapter IV). The following discussion illustrates the interplay of the five clusters for the CHDS’s master’s program.

1. Diverse and Engaged Participants

In the first cluster, the three attributes necessary for a diverse and engaged experience are faculty, students, and leaders. Data compiled for this evaluation reveals that the faculty, students, and leaders/administrators are from a variety of government agencies, from local, state and federal levels and from all parts of the nation (see Appendix H for a map detailing distribution by states).

Each agency must engage others in the government, regardless of the level of service offered, if they are to be able to provide for the general defense and welfare of the people. CHDS administrators, through the admission screening policy, ensure that each cohort reflects diverse levels of government and the faculty and leaders/administrators reflect diverse disciplines.

2. Adequate Resources and Support

The second cluster focuses on faculty, students, and infrastructure receiving adequate support. Most students receive leave from their agencies to attend the residency periods and, through the DHS funding process, costs for student’s tuition, books, laptops, iPods, residency and travel are covered.

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Faculty have a highly functioning online teaching capacity, based on the Moodle LMS, and fully equipped office and classroom space provided through support from DHS and NPS.

3. Interactive Teaching and Learning:

Integrative learning, critical dialogue, mentoring, out-of-class activities, and cooperative peer learning reveal how the students in this program learn from each other. A common response in the interviews process was, “I was unaware what a [particular] government agency had to do to meet its mission.” Learning occurs not only when students return to their CHDS residences and continue their discussions, but through the use of their own networks developed in the program, as well as through free continuing online education courses.

Since the alumni represent in most instances, mid- to upper-management levels in their agencies, mutual exchanges among colleagues, faculty, and administrators enrich the experience for everyone associated with the program.

The 89 percent completion rate is attributed to the level of engagement between both faculty and administrators, who served as thesis mentors. Thus, the choice of andragogy proves to be an important strategy for working with an adult student population.

4. Connected Program Requirements:

The three attributes in the cluster designated “connected program requirements” are: professional residency, planned breadth and depth, and tangible product. Haworth and Conrad describe a professional residency in the context of a traditional academic program in which students are required to undertake a residency within their fields.

The work of the alumni in their agencies is a form of residency which extends the residency requirement at the NPS facility. For mid- to upper-level managers to spend time in an academic environment serves the same purpose as a traditional student residency: both apply their knowledge to their discipline. In the context of the CHDS alumni, the residency at NPS permits them the time to separate from their careers and focus their attention on learning in an academic environment, enriching their critical thinking and writing skills.

The planned breadth and depth of the program is evident in the responses from the alumni, who, as experts in their own right, recognize the dimensions of the curriculum as reflecting the broad discipline of homeland security.

The tangible product is the thesis completed by each student. This is a contribution in two ways: a value-added component of the discipline and an impact, potential or actual, on the agencies.
5. Participatory Cultures:

The fifth cluster focuses on three attributes of quality: shared program direction, risk-taking environment, and a community of learners. The attribute of a shared program direction is evident in several alumni responses: “We are all in this for one purpose: to develop strategies to secure the homeland.” Alumni feedback shapes and reshapes courses.

Haworth and Conrad emphasize the need for programs to have supportive and challenging learning environments in which students feel “safe” to take risks in their learning.49 Students have said they have a supportive and challenging learning experience in which they feel free to take risks. Traditionally bureaucracies do not encourage risk taking, but rather encourage “following the rules.” The non-attribution policy is a significant aspect of this.

One of the phrases heard not only from the alumni, but from faculty and administrators, is “the need to think outside one’s own silo.” One alumnus was told that “there were no rules to follow in this program. You will be required to think on your own and if you want to find a measure of success in the program, you will have to not only think outside your own discipline but will have to reach out to other disciplines.”

A major element in this evaluation is the level of excitement the alumni express at being in a program with others who were experts in their own areas, and thus, they could learn from their colleagues. The interviews disclose that CHDS is a model “community of learners.”

G. Summary

One difficulty encountered in this evaluation was the lack of comparable baseline evaluation. Another was how to measure prevention in terms of homeland security. Many alumni feel it is too early to measure whether they are having an impact, especially since the seven cohorts included in this evaluation cover only a five year period, with the last cohort being back to their agencies for only one year. Most believe that any impact will take at least ten years.

A recent book, The Tipping Point: How Little Things Can Make a Big Difference (2002)50 examines how change occurs and is useful in this context. One example cites the decline in crime in New York City from the peak year of 1992, not through a single action but through the confluence of many factors, such as a new mayor, more police, citizens tiring of crime, and even new subway cars. The tipping point in homeland security has yet to be reached since it is an evolving discipline.


Although the tipping point in homeland security has not been reached, CHDS is making a significant contribution to the general defense and welfare of the people through its successful educational efforts. To appreciate CHDS’s contribution requires a reading of the full quote from Eleanor Roosevelt cited in part at the beginning of this evaluation; that is, “There never seems to be the slightest difficulty in getting all the money we need for military defense, but there is a total lack of comprehension that an educated people is the only real defense for a democracy.” In this context, this report finds CHDS is providing for the “general defense and welfare of the people.” In terms of the funding offered for this program from 2003-2008, $101 million, which is .03 percent of the total expenditure by DHS of $333 billion, the CHDS program is well worth its educational contribution to the real defense of democracy.

**FIGURE 6: CHDS BUDGET VERSUS TOTAL DHS BUDGET 2003-2008**

In conclusion, the CHDS program fits the description of Haworth and Conrad’s quality program: it is an emblem of a high-quality program that provides an enriching learning experience for students which positively affects their growth and development.\(^{51}\)

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The data collected in this report as it relates to student satisfaction, alumni contributions, value-added elements, and the elements of the five clusters of quality, reflect positively upon CHDS. It is therefore the conclusion of this evaluation that the CHDS master's degree in security studies (homeland security) accomplishes its goal and makes an invaluable contribution to homeland security.
This report concludes that the CHDS’s master’s degree in security studies (homeland security) is a viable program and fits the description of a program that is an “emblem of quality in higher education.” To insure continuity and maximum impact on the discipline and practice of homeland security, the findings of this study suggest the following:

1. Congress should set a line item budget for continuing full financial support to CHDS, including all costs: tuition, technology, travel, and in-residence living expenses.

2. The non-attribution policy works well within the confines of a government facility and the location at NPS provides an academic forum that offers an environment away from Washington, DC and agencies’ politics; CHDS should remain at its current location at NPS within SIGS.

3. Because of the success in securing potentially successful candidates, the current application screening process should continue.

4. CHDS should continue to attract highly qualified faculty and provide the support necessary to address the needs of adult learners.

5. CHDS should, in the current absence of tenure, ensure that the academic freedom of the faculty is safeguarded.

6. CHDS should consider a new introductory or prerequisite course detailing the specific role each government agency plays in the general defense and welfare of the American people.

7. CHDS should consider adding a course on “religions of the world” to focus on the cultural context of many contemporary conflicts.
APPENDICIES
APPENDIX A

Alumni Interview Survey Instrument
The goal of my evaluation is to assess the impact of your educational experience on your organization, as well as whether the master’s degree in HS met your expectations, what are the future issues that should be addressed for others who will enroll in the program and what other issues you feel should be addressed in terms of HS. (Note: This call is not being tape recorded and CHDS’s non-attribution policy applies to this interview).

1. What were your original expectations when you started the program in terms of seeking an academic experience?
2. Has your perception of homeland security changed as a result of your experience? What is different now?
3. How do you define HS?
4. What are you doing differently that you would not have been doing before?
5. Do you believe you are contributing to a national homeland security strategy as a result of your participation in the program?
6. Have the recommendations of your thesis had any impact on your agency, (discipline, region, nation, etc.)?
7. What was your agency’s response to your recommendations? Have your recommendations resulted in changes in your agency (discipline, region, nation, etc.)? If so, what are they?
8. In terms of impact on your agency, would a site visit prove helpful in further elaborating our discussion?
9. Did you your agency offer you any support (beyond permitting your attendance) that enabled you to participate in this program? Were there any obstacles to your participation in the masters program?
10. Have you developed any initiatives (e.g., training and education to facilitate collaboration on issues associated with HS)? Have gaps been identified?
11. Is the mix of Fed, State, and Local an important feature of the CHDS degree?
12. Is there more that the private sector (e.g., utilities, Wal Mart, etc.) could contribute to facilitate homeland security efforts? Should they be participants in the CHDS masters program at NPS?
13. What topics are of greatest importance to the furtherance of the discipline of homeland security?
14. What challenges still face the development of the discipline of homeland security?
15. Is the location where the CHDS masters program is offered important in ensuring a high level academic experience (i.e., at NPS or a UAPI)?
16. Are you attempting to continue your education on HS issues related to your organization? Do you use CHDS Digital Library, conversations with others, journals or publications within the industry, etc.?
17. Have I not asked any questions that you feel should be addressed?
APPENDIX B

Brochure for 5th Annual Meeting of the CHDS Alumni, with Center Chronology
The Naval Postgraduate School (NPS) is very proud of our Center for Homeland Defense and Security and their accomplishments over the past five years. Their contributions to homeland and national security are clearly visible now, but even more importantly, the educational foundation that they have provided our nation’s leaders will serve the country well into the future.

Since January 2003, the Center for Homeland Defense and Security has served as a neutral educational forum for bringing together leaders from across the nation. They discuss and debate homeland security issues and work together to develop solutions to protect the American people.

Through graduate education and executive level coursework, seminars, and research, homeland security leaders gain analytical skills and substantive expertise to prevent, deter and respond to terrorist attacks and to bridge gaps in interagency and civil-military cooperation.

The Center has assembled a world class faculty that leverages the diverse talent not only of NPS, but also of academic institutions from across the United States. Faculty research and publications, as well as theses produced by homeland security master’s degree graduates, are providing solutions to complex policy challenges and facilitating debate on important national issues.

I want to thank the Center’s primary sponsor; the U.S. Department of Homeland Security, for its vision in supporting development of academic programs that are building local, state, tribal, federal and private sector homeland security preparedness through the education of leaders.

In addition, the Center’s success can be attributed to strong partnerships it enjoys with many other government agencies and academic institutions that have come together in an unprecedented way to share resources and collaborate on developing a new professional and academic discipline called homeland defense and security.

Please join me in congratulating the NPS Center for Homeland Defense and Security on its achievements and thanking all of our sponsors, partners and stakeholders for their commitment to realizing a safe and secure nation.

Daniel T. Oliver
A National Homeland Security Network
Alumni Include

MASTER'S DEGREE

Chief Rick Braziel
Police Chief, Sacramento Police Department
Sacramento, California

Capt. Mark Dolan
Chief, Current Operations, Coast Guard Command Center
U.S. Coast Guard, U.S. Department of Homeland Security

Charley English
Director, Georgia Emergency Management Agency
State of Georgia

Chief Calhoun Lanier
Chief of Police, Metropolitan Police Department
Washington, D.C.

BG. Michael McDaniel
Deputy Commander for Homeland Security
Department of the Army
U.S. Department of Homeland Security

Christopher Pope
Deputy Director of Homeland Security and Emergency Management
State of New Hampshire

Susan Reintons
Regional Administrator, Region I
Federal Emergency Management Agency
U.S. Department of Homeland Security

Chief Michael Weinlein
Assistant Chief, Port Authority Fire and Rescue
Newark, New Jersey

Harry Mayer
Regional Emergency Coordinator
U.S. Department of Health and Human Services

Nestor Duarte
Assistant Special Agent in Charge
Federal Bureau of Investigation

Chris Hetherington
Corporal, Police Management Officer
Office of Business Continuity
City of Chicago

Gregory Mandali
Special Agent, San Francisco Field Office
U.S. Immigration & Customs Enforcement
U.S. Department of Homeland Security

John Paczowski
Director, Office of Emergency Management
Port Authority of New York & New Jersey

Chief Donald Reed
Deputy Chief, Industrial Fire Operations
U.S. Department of Homeland Security

Shelly Schecter
Director, Office of Public Health Preparedness
Nassau County Department of Health, New York

EXECUTIVE LEADERSHIP PROGRAM

Capt. James Bjoulad
Military Assistant to the Vice President, Deputy Director
National Intelligence
U.S. Coast Guard, U.S. Department of Homeland Security

Nancy Dragan
Executive Director, Ohio Emergency Management Agency
State of Ohio

Stephen Iannucci
Managing Director, Emergency Preparedness
Bear Stearns

Jay Manning
Senior Client Advisor
Federal Bureau of Investigation

Chief Richard Sosio
Chief, Office of Emergency Medical Services
Archbold, Ohio, Division of Public Health

Commissioner Frank G. Pohl
Commissioner, New York City Fire Department (FDNY)

Alesia Edgington
Executive Director, Kentucky Office of Homeland Security
Commonwealth of Kentucky

MG Timothy Lowenberg
Adjutant General
Washington, Washington D.C., Department of the Army

Bob Robinson
Director, Office of Security and Emergency Management
Davie County, Texas

Chief Alan "A.D." Vickery
Assistant Chief
Seattle Fire Department
Seattle, Washington
CHDS at a Glance

Master’s Degree Program
- 120 local, state and federal leaders from diverse disciplines are enrolled in 4 cohorts
- Classes are conducted in Monterey, CA and the National Capital Region
- 179 leaders have participated in the program and produced research that is solving homeland security challenges across the nation
- Graduating 3 cohorts (96 officials) per year

Mobile Education Team (MET) Executive Education Seminars
- 95 MET seminars have been conducted around the country for more than 2800 senior local, state, and federal officials

Executive Leadership Program
- 57 alumni representing the most senior public and private sector homeland security officials
- 2 new cohorts each year, graduating more than 60 leaders annually

University and Agency Partnership Initiative
- 135 member institutions in 39 states
- Conducted 5 “Educate the Educator” workshops attended by more than 75 institutions
- CHDS sponsors with ON-Net and U.S. NORTHCOM’s HSDEC an annual Education Summit that attracts more than 100 agencies and academic institutions

Homeland Security Digital Library (HSDL) - www.hSDL.org
- 225,000 visits in 2007
- Exceeds 20,000 visits per month from 400 agencies, academic institutions and the military
- Over 55,000 documents selected by a staff of librarians and subject matter experts

Homeland Security Affairs Journal (HSAJ) - www.hSAJ.org
- 62,670 readers in 2007; readership includes policy-makers, practitioners, and academics from around the world
- Published 35 peer-reviewed articles and 15 essays in eight quarterly issues

Online Courses
- Offering 4 on-line courses with plans for adding 3-3 new courses each year
- 1,700 homeland security practitioners enrolled

Podcasts: Viewpoints in Homeland Defense and Security
- 23 downloadable Viewpoints interviews conducted with homeland security leaders
- In 2007 Viewpoints was visited 3,296 times on the CHDS website and was downloaded 21,574 from Apple’s iTunes

CHDS Serves as a National Resource
- The CHDS website had 482,262 visits in 2007 and served 102,801 different users; the various resources offered at the site were viewed more than 6.3 million times

CHDS Milestones

2001
- AUGUST
  DOJ Office for Domestic Preparedness (ODP) study identifies need for graduate education for senior state and local officials

- OCTOBER
  NPS & ODP begin collaborating on HS leadership development programs

- DECEMBER
  HS Digital Library established as first repository for DHS documents

- SEPTEMBER
  NPS undertakes initiative to educate the nation’s HS leaders

2002
- AUGUST
  DOJ sign MOU to develop graduate level HS programs

- APRIL
  NPS & DOJ sign MOU to develop graduate level HS programs
The Center’s classrooms are a one-of-a-kind learning environment that breaks down stovepipes and builds professional networks. Each Master’s Degree and Executive Leadership cohort is designed to be a snapshot of homeland security across the nation and includes local, state, and federal leaders from diverse disciplines.

The “Alumni Network” webpage provides students and alumni across the country with secure online forums to seek advice from one another, share information and work collaboratively to address issues.

The Alumni Association is a National Think Tank that is growing by more than 150 Master’s Degree and Executive Leadership Program graduates each year.

Alumni are leaders responsible for policies, strategies and organizations that support the nation’s homeland security system.

The Alumni Association as an organization contributes to the development of the discipline through ongoing research, collaboration, and DHS special projects.

“The Alumni Network continues to provide a wealth of knowledge nation-wide that I personally have relied on and look forward to reading daily.”

Jennie Temple, Homeland Security Planner, South Carolina Law Enforcement Division

Since 2003, CHDS has conducted:
- 41 State METs for individual governors and their cabinets
- 19 Urban Area METs for senior urban area leaders
- 33 Topical seminars covering issues ranging from COOP/COG to Agro-terrorism to Risk Communication

The scope of the MET program allows it to bridge the uniqueness of each jurisdiction and through discussion and debate facilitate the recognition of core homeland security concepts that need to be understood and addressed by leaders at all levels of government.

<table>
<thead>
<tr>
<th>JANUARY</th>
<th>JANUARY</th>
<th>APRIL</th>
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<tbody>
<tr>
<td>1st Master’s degree cohort begins</td>
<td>1st Governors MET conducted in New Hampshire for Gov. Lynch</td>
<td>3rd simultaneous Master’s degree cohort added</td>
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<tr>
<td>SEPTEMBER</td>
<td>SEPTEMBER</td>
<td>OCTOBER</td>
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<tr>
<td>2nd simultaneous Master’s degree cohort added</td>
<td></td>
<td>University &amp; Agency Partnership Initiative launched</td>
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<tr>
<td>2003</td>
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Homeland defense and security as an academic field is still evolving. Through classroom discussion, research, publications, and partnership workshops, CHDS is a leader in defining this new discipline of study.

**Rigorous Application Process**
Every six months, more than 650 online applications are opened. Approximately 17% are completed and submitted for consideration due to the rigorous eligibility application (e.g., essays) and curriculum requirements. The application is designed to ensure that selected applicants will:
- Be able to successfully meet NPS’ high graduate education standards.
- Contribute valuable insight and perspectives to classroom debates.
- Produce quality research and theses that contribute to the homeland security knowledge base.
- Maximize their agency’s and the federal government’s investment in their education by continuing to be a leader and innovator in homeland defense and security.

**Independent Evaluation**
Core CHDS programs are evaluated by independent evaluators to ensure that learning objectives are achieved and the curriculum content continues to evolve as homeland security across the nation matures.

**Theses and Research**
Master’s Degree students conduct research and write theses on actual policy development issues confronting local, state, tribal, and federal government; many theses are being implemented around the country and are cited as “best practices.”

Towards a Strategic Approach to Special Events Management in the Post-9/11 World, G.B. Jones - used by FBI and DHS for counterterrorism preparedness in support of major special events.


Implementing Maritime Domain Awareness, Robert Watts - implemented as MDA policy in USN and USCG as basis of the National Maritime Security Strategy.

**World-Class Faculty**
- Internationally recognized instructors from NPS as well as other academic and research institutions around the country.
- Faculty are well published and collaborate with program participants on pilot projects that take academic concepts out of the classroom and into the field.
- PhD instructors are paired with seasoned practitioners to ensure participants receive the academic foundation of concepts and models as well as the relevancy to current homeland security challenges.

**Recent Faculty Publications**


**2005**

**JANUARY**
HS Digital Library opens access and becomes national resource.

**APRIL**
1st Urban Area MET conducted in Seattle, WA.

**MAY**
Web-based Master’s Degree “Alum Network” launched.

**JUNE**
On-line application process for Master’s degree program activated.

**JULY**

**AUGUST**
UConn launches degree program using CHDS curriculum/resources.

**SEPTEMBER**

A FOUNDATION OF PARTNERSHIPS

The Center's foundation is built on a national network of partnerships – from its primary sponsors the U.S. Department of Homeland and the Navy to local, state, tribal, and federal agencies, academic institutions, the private sector, and Congress. It is the foundation of partnerships that allows CHDS to serve as a trusted broker and its diverse partners to openly share ideas in the neutral setting that NPS provides.

Mary local, state, and federal agencies - Seattle Fire Department, U.S. Coast Guard U.S. Northern Command, NJ State Police, the FBI – partner with CHDS and use the Center's programs to develop their leaders and shape agency policies and strategies.

"We are doing business differently since 9/11 and NPS has greatly influenced that process. Graduates are able to think broadly about the threat environment and that has a direct and global impact on strategies and policies for the Department." -FDNY Deputy Assistant Chief Joseph Pfeifer

FDNY Partner Profile
Partner Since: 2003
- # of Master's Degree Alumni: 11
- # of Master's Degree Participants: 3
- # of Executive Leadership Program Alumni: 2
- # of Executive Leadership Program Participants: 1

The University and Agency Partnership Initiative provides a cost-effective way to educate thousands of students nationwide by reducing the expense and difficulty of universities and agencies having to "reinvent the wheel" and build their own curricula and programs from scratch. CHDS shares with partners its course materials and resources. In return, partners share their curriculum and specialized expertise with CHDS and other partners.

The Pacific Basin Development Council (PBDC) and CHDS have partnered since 2004 to advance the discussion of homeland security issues facing the Governors and leadership of the Pacific area - Northern Mariana Islands, American Samoa, Guam, and Hawaii. The partnership has conducted 4 regional METs and 3 topical issue seminars focusing on public health, emergency resources, and information exchange. This effort has yielded strong relationships among the federal, state, military and territorial participants which have significantly furthered the safety and security of the region.

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<tr>
<th>JANUARY</th>
<th>APRIL</th>
<th>DECEMBER</th>
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<tbody>
<tr>
<td>1st Annual Alumni Conference and formation of the Alumni Association</td>
<td>1st self-paced, non-credit, on-line course available for HS officials</td>
<td>1st pod-cast of Viewpoints; HS officials discussing current HS issues</td>
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2006

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<th>JANUARY</th>
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<tr>
<td>1st University &amp; Agency Partnership workshop conducted</td>
<td>Executive Leadership Program launched</td>
<td>Army National Guard Certificate Program begins in Missouri and Arizona</td>
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A National Resource

CHDS leverages the federal investment in the Center by using cutting-edge technology to create a “multiplier effect” that pushes out around the United States the Center’s research, courses, learning systems, and other resources to support academic institutions and the tens of thousands of officials who are shaping the nation’s maturing homeland defense and security.

Homeland Security Digital Library
The nation’s premier collection of homeland security policy and strategy related documents, presidential directives and specialized resources from universities and agencies.

Curriculum Content
The University and Agency Partnership Initiative website provides members access to CHDS’ and other partners’ curriculum and course materials.

On-line Courses
Non-credit versions of the master’s degree courses are available on-line for officials who wish to enhance their understanding of key concepts but require the flexibility of self-paced instruction.

Publications, Research and Theses
A listing of more than 220 published articles, books and presentations by CHDS alumni and faculty as well as a complete list of master’s degree theses.

Homeland Security Affairs Journal
A national forum to propose and debate homeland security policies, strategies, and organizational arrangements. The peer-reviewed academic journal is published quarterly on-line. CHDS also holds an annual essay contest to stimulate original thought on homeland defense and security issues.

Multi-media Gaming and Simulation
These innovative tools are developed to support CHDS on-line instruction and are available to agencies and universities to assist in their preparedness training and education initiatives.

Podcasts: Viewpoints in Homeland Defense and Security
Viewpoints are downloadable interviews conducted with homeland security leaders. The interviews are also available at Apple’s iTunes website.

FEBRUARY
1st Annual Homeland Defense and Security Education Summit

MAY
1st Short Course offered; one week Intel course conducted for TSA

SEPTEMBER
1st annual Homeland Security Essay Contest is announced

APRIL
HS Digital Library opens a “restricted section” for authorized users to access intel alerts and unclassified “For Official Use Only” documents

2007

JUNE
4th simultaneous Master’s degree cohort added in National Capital Region; DHS leaders participate as part of the DHS Homeland Security Academy

OCTOBER
2nd Executive Leadership Program cohort added; DHS leaders participate as part of the DHS University System

71
A National Homeland Security Network
Alumni Include

**Master's Degree**

**Chief Rick Braziel**
Police Chief, Sacramento Police Department
Sacramento, California

**Capt. Mark Dolan**
Chief, Current Operations, Coast Guard Command Center
U.S. Coast Guard, U.S. Department of Homeland Security

**Charley English**
Director, Georgia Emergency Management Agency
State of Georgia

**Chief Cathy Lasier**
Chief of Police, Metropolitan Police Department
Washington, D.C.

**BG Michael McDaniels**
Governor’s Advisor for Homeland Security
Department of Military & Veterans Affairs
State of Michigan

**Christopher Pope**
Director of Homeland Security and Emergency Management
State of New Hampshire

**Susan Reinersten**
Regional Administrator, Region 10
Federal Emergency Management Agency
U.S. Department of Homeland Security

**Chief Michael Weinstein**
Assistant Chief, Manhattan Borough Commander
New York City Fire Department (FDNY)

**Harry Mayer**
Regional Emergency Coordinator
U.S. Department of Health and Human Services

**Nesior Dourie**
Assistant Special Agent In-Charge
Federal Bureau of Investigation

**Chris Hetherington**
Corporal, Crisis Management Officer
Office of Business Continuity
Citigroup

**Gregory Mandoli**
Special Agent, San Francisco JTTF
U.S. Immigration & Customs Enforcement
U.S. Department of Homeland Security

**John Paczkowski**
Director, Office of Emergency Management
Port Authority of New York & New Jersey

**Chief Donald Reed**
Deputy Chief Land Branch, 13th, future Operations
U.S. Northern Command

**Shelly Schechter**
Director, Office of Public Health Preparedness
Nassau County Department of Health, New York

**Executive Leadership Program**

**Capt. James Bjostad**
Military Assistant to the Principle Deputy Director
of National Intelligence
U.S. Coast Guard, U.S. Department of Homeland Security

**Nancy Dragani**
Fiscal Director, Ohio Emergency Management Agency
State of Ohio

**Stephen Iannucci**
Managing Director, Emergency Preparedness
Braemar

**Jay Manning**
Assistant Chief, Federal Bureau of Investigation

**Chief Richard Serino**
Chief, Boston Emergency Medical Services
Assistant Director of Public Health
Boston, Massachusetts

**Commissioner Frank Crutchers**
1st Deputy Commissioner
New York City Fire Department (FDNY)

**Alesia Edington**
Executive Director, Kentucky Office of Homeland Security
Commonwealth of Kentucky

**MG Timothy Lowenberg**
Adjunct General
Director, Washington Military Department
State of Washington

**Robie Robinson**
Director, Office of Security and Emergency Management
Dallas County, Texas

**Chief Alan “A.D.” Vickers**
Assistant Chief
Seattle Fire Department
Seattle, Washington
APPENDIX C

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<td>NS 3027 (4) [Guttieri] Civil/Military Relations for Homeland Security</td>
<td>NS 3180 (4) [Stockton] Introduction to Homeland Security</td>
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<td><strong>SPRING '03</strong></td>
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<td></td>
<td>SO 3210 (4) [Tucker] Asymmetric Conflict and Homeland Security</td>
<td>CS 3650 (4) [Lewis] Critical Infrastructure: Vulnerability Analysis &amp; Protection</td>
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**Readings & Faculty Information Forms (FIF) send to:**
Program Support Manager, Heather Isserman  
Phone: 851.444.2003  Cell: 851.444.4672  Fax: 851.444.2009  email: hiserman@nps.edu
NS 3180: Introduction to Homeland Security

This course provides an overview of the essential ideas that constitute the emerging discipline of homeland security. It has two central objectives: to expand the way participants think, analyze and communicate about homeland security; and to assess knowledge in critical homeland security knowledge domains: including strategy, history, terrorism, fear management, crisis communication, conventional and unconventional threats, network leadership, weapons of mass destruction, lessons learned from other nations, civil liberties and security, intelligence and information, homeland security technology, and analytics. The course is organized around an evolving narrative about what homeland security leaders need and how the CHDS program helps address those needs.

DA 3210: The Unconventional Threat to Homeland Security

The purpose of this course is to provide an introduction to the operational and organizational dynamics of terrorism. It considers those who act as individuals, in small groups or in large organizations; it considers indigenous actors as well as those who come to the United States to raise money, recruit or commit their acts of violence. In every instance, its focus is on violent clandestine activity that, whatever its motivation, has a political purpose or effect. The course addresses such specific topics as suicide terrorism, the role of the media, innovation and technology acquisition, the decline of terrorism and ways of measuring the effect of counterterrorism policies and strategies. The course also looks briefly at sabotage. By the end of the course, students should be able to design effective measures for countering and responding to terrorism based on an understanding of its organizational and operational dynamics.

IS 4010: Technology for Homeland Security

In today’s Information Age, Homeland Security (HLS) professionals and the agencies they lead are more dependent than ever on technology and information-sharing to strengthen national preparedness. The need to share information through the use of interoperable technologies and to collect and synthesize data in real time has become critical to our national security. This course provides HLS professionals with the requisite knowledge to be able to leverage technology to prevent, protect against, respond to, and recover from terrorist and natural-born incidents. It also provides an in-depth understanding of: inspection, detection, and surveillance technologies; information sharing and knowledge management systems; and communication systems. Students explore and analyze management challenges currently facing HLS professionals, such as: Information Assurance; voice, data and sensor interoperability; and technology implementation and acceptance. This knowledge will facilitate HLS professionals to become more effective technology consumers and help them to recognize opportunities where the application of technology solutions can provide a strategic
advantage. The ultimate objective of the course is to enable HLS professionals to effectively evaluate, select, and implement technology to better strengthen capability-specific national priorities.

**NS 4156: Intelligence for Homeland Security: Organizational and Policy Challenges**

The 11 September 2001 terrorist attacks on the World Trade Center and Pentagon and the ensuing War on Terror have focused the nation's attention on homeland security. This course examines key questions and issues facing the U.S. intelligence community and its role in homeland security and homeland defense. Students will have the opportunity to fully address policy, organizational and substantive issues regarding homeland intelligence support. Course reference materials will provide an overview of diverse intelligence disciplines and how the intelligence community operates. Course emphasis will be on issues affecting policy, oversight, and intelligence support to homeland defense/security and national decision-making. The 2004 *Intelligence Reform and Prevention of Terrorism Act* is addressed and the course is shaped to focus on homeland intelligence support issues at the State/Local/Tribal levels.

**NS 2013: Policy Analysis and Research Methodology**

This course provides an overview of the steps of the research process and methods used in social scientific inquiry. Students review various policy research designs, including hypothesis construction and comparative case studies. They also are introduced to literature review and the appropriate use of evidence and warrants.

**CS 3660: Critical Infrastructure: Vulnerability Analysis and Protection**

Critical Infrastructure protection (CIP) is one of the cornerstones of homeland security. HSPD-7 lists 17 critical infrastructure and key resource sectors: Agriculture and Food, Banking and Finance, Chemical, Commercial Facilities, Communications, Dams, Defense Industrial Base, Emergency Services, Energy, Government Facilities, Information Technology, National Monuments and Icons, Nuclear Reactors, Materials and Waste, Postal and Shipping, Public Health and Healthcare, Transportation Systems, and Water. The course begins with an overview of risk, its definition and application to critical infrastructures as it relates to the National Infrastructure Protection Plan (NIPP). We then investigate measures, tool, and techniques for CIP assessment. The course develops a network theory of vulnerability analysis and risk assessment called Model-Based Risk Assessment (MBRA) used to extract the critical nodes from each sector, model the nodes' vulnerabilities by representing them in the form of a fault-tree, and then applying fault and financial risk reduction techniques to derive the optimal strategy for protection of each sector. The sectors are studied in detail in order to learn how they are structured, how regulatory policy influences protection strategies, and how to identify specific vulnerabilities inherent to each sector and its components. At the completion of the course, students will be able to apply CIP techniques (MBRA and others) to any critical infrastructure within their multi-jurisdictional region, and derive optimal strategies and draft policies for prevention of future terrorist attacks or natural disasters.
NS 4239: Special Topics in American Government for Homeland Security

The purpose of this course is to provide participants with an insight into the structural, conceptual and intellectual underpinnings and implications of the homeland security project. Looking at a wide range of topics and problems, the course seeks to stimulate a comprehensive discussion of how homeland security professionals and the general public think about homeland security; whether/why there may be significant differences in professional and public perceptions of homeland security; and how those differences constrain/leverage various elements of the homeland security effort. By incorporating a selection of key texts in Western political and social thought alongside current topical writings, the course seeks to equip participants with a deeper understanding of the prevailing discourse and its impact on the homeland security project.

NS 4081: Research Colloquium

This course provides an overview of the steps of the research process and methods used in social scientific inquiry. Students review various research methods, including policy options analysis, modeling, qualitative data analysis, and case study. The primary deliverable of the course is the thesis proposal.

NS 4881: Multi-discipline Approaches to Homeland Security

Homeland security efforts in the United States constitute a project framed by the rule of law. Constitutional concerns, civil rights issues and the roles of the various disciplines engaged in the effort are driven and impacted by the various local, state and federal systems of law. Multi-discipline Approaches to Homeland Security allows students to explore the homeland security project in relation to the laws that support and constrains it. Both historical and contemporary references are used to unpack the various issues and answer related questions. The role of community policing in homeland security and defense, civil-military relations in prevention and response, the USA PATRIOT Act and the handling of US citizens detained for terrorist violations are just some of the subjects that dominate the discourse. While the military, law enforcement and judicial issues are a central concern of the class, students consider the range of issues in relation to many other disciplines engaged in homeland security and defense.

NS 3028: Comparative Government for Homeland Security

The objectives of the NS 3028 course are: (1) to understand the transnational nature of terrorism, organized crime, pandemics and other homeland security threats, (2) to assess homeland security strategies employed by liberal democracies around the world; (3) to distill and extrapolate policy implications from these examples; and (4) to apply these lessons to the organizational and functional challenges faced by homeland security leaders in the United States. The course will focus both on a discussion of shared threats such as the global Jihadi movement, Al-Qaeda activity in Afghanistan/Pakistan, Middle Eastern groups such as Hamas and Hizbollah as well as policies and strategies employed by a range of democratic countries to cope with terrorism and other homeland security-related threats.
In addition to looking at specific countries, the course will also look at issue areas such as bio-threats, health system preparedness, airport security and anti-radicalization policies across a number of countries. This course will provide students with a knowledge-base and methodology with which to learn from the practices of other countries and translate those practices into policies applicable in the United States. The course will also enable students to better understand the threats that other countries face (many of which are likely to affect the United States in the near term) and how they cope with those threats.

Finally, the course will enable students to be better prepared to engage with their international partners at the local, state or federal levels as Homeland Security becomes an increasingly global undertaking and all levels of government in the United States move towards conducting greater international outreach.

**NS 4755: Strategic Planning and Budgeting for Homeland Security**

Homeland security requires programs in such disparate areas as counter-terrorism, information security, border security, counter-drug activities, etc. It also requires programs at the federal, state and local levels, which must be coordinated. This raises a variety of issues. For example, how can decision makers at the various levels decide which of these programs should be funded? How large should approved programs be? How do they fit together? How are plans translated into budgets? How do those responsible for the various facets of homeland security justify their budget requests when competing for funds for alternatives uses such as education, etc? Answering these questions requires a resource management system that allows decision makers to see the long-term implications of the decisions they are making today. Choosing among alternatives to provide maximum security with limited budgets requires an analytic approach to allocating resources. This course is designed to address these issues. The course will provide students with an analytical framework useful for translating long-term plans into programs and budgets.

**NS 4133: The Psychology of Fear Management and Terrorism**

This course serves as an introduction for homeland security professionals to terrorism as a psychological phenomenon. Government agencies involved in homeland security need to understand the psychological consequences of mass-casualty terrorist attacks and other disasters. This course provides a broad overview of psychological effects of terrorism; the status of and fallacies related to the interventions applied to victims of terrorism and the generalized fear and anxiety experienced by the public at large; current government strategies used to disseminate information to terrorist groups; psychological phenomena related to media coverage of terrorism; misconceptions and inaccuracies about the socio-political and religious motivations of terrorist groups; "profiling" and the typical psychological and cultural makeup of modern terrorists; and the social and cultural psychology of public conceptions of terrorists and acts of terror.
NS 4232: Knowledge into Practice: A Homeland Security Capstone Course

This course is intended to provide participants the opportunity to expand their ability to enact the knowledge and technical learning acquired in the courses leading up to the capstone. The material in other CHDS courses and the capstone experience, taken together, will provide participants with the motivation and skills to perform their professional roles in new ways, ways that will initiate and sustain change even at the level of the broader institutional context of governance in which they must function.
APPENDIX D

Curricula Vitae of Faculty
Robert Bach, PhD  
Faculty / Journal Board / Thesis Advisor  
Center for Homeland Defense and Security

Dr. Robert Bach is currently on the faculty at the Center for Homeland Defense and Security, the Naval Postgraduate School, Monterey, CA. Dr. Bach served as a strategic consultant with the U.S. Department of Homeland Security in 2003-2005 on border and transportation security issues, including air passenger, cargo and other screening initiatives, and policy and privacy development and coordination. His current research focuses on community participation in homeland security and emergency preparedness, and strategic planning. Dr. Bach is a frequent facilitator and moderator for strategic meetings and consultations.

From 1994 to 2000, Bob served in the Immigration and Naturalization Service at the U.S. Department of Justice as Executive Associate Commissioner for Policy, Strategic Planning and Programs. He worked extensively on border and international issues, especially with Mexico and Canada, and chaired a National Security Council taskforce on anti-smuggling/trafficking issues. His work included efforts in Arizona and Sonora, and in San Diego and Baja California, to facilitate economic development while increasing security along the border.

Dr. Bach led the effort to develop new strategic plans for the INS, including border initiatives, interior enforcement, and international cooperation. He also worked closely with state and local officials and community to incorporate them into the federal strategies. In particular, Bob developed the Community Relations Initiative, which designed ways in which federal immigration duties could be enhanced through appropriate involvement and cooperation of local police, elected officials, and community-based organizations. After leaving public office, Dr. Bach was Director of the Global Inclusion Division of the Rockefeller Foundation, where he focused on poverty and social exclusion in transnational and global issues, including migration, trade, intellectual property rights, international labor, and democratic participation. He was also Deputy Director of the Foundation's Working Communities Division.


Dr. Bach received his Ph.D. from Duke University in sociology and demography (1978), and holds Bachelor and Master's degrees in education from the University of Pennsylvania. He held a tenured professorship at the State University of New York at Binghamton, and was as a Senior Associate of the Carnegie Endowment for International Peace and a Senior Fellow at the Inter-American Dialogue. He has also taught at Trinity University in Washington, D.C.
Christopher Bellavita  
Academics Program Director  
Center for Homeland Defense and Security

Before joining NPS, Christopher Bellavita was a senior fellow at the Oquirrh Institute in Utah. From 1998 through 2002, he was the planning coordinator for the Utah Olympic Public Safety Command. Prior to working on the 2002 Olympics, Dr. Bellavita was responsible for special event training for the Department of Defense’s Office of Special Events. In that capacity he helped to support DoD’s activities in the 1996 Atlanta Olympic and Paralympic Games, 1994 World Cup, 1992 Barcelona Olympics, and other major sporting and international security events.

Dr. Bellavita has held teaching appointments at the University of Southern California and the University of California, Berkeley. He has provided planning, training, management and organizational development services to a variety of organizations, including dozens of state, local and federal public safety agencies.


Dr. Bellavita received a Ph.D. from the Graduate School of Public Policy, University of California, Berkeley (1980). He has a Master’s degree in policy analysis from Berkeley, and a Bachelor degree in community development from the Pennsylvania State University. He served in the United States Air Force.

Richard Bergin  
NPS Faculty  
Center for Homeland Defense and Security

In addition to his instructional areas at CHDS, Richard Bergin teaches courses in Information Systems Strategy, E-Business for Defense, Management Information Systems, Networking and Information Security, Business Spreadsheet Modeling and Work Group Database Design and Implementation. He has been teaching for CHDS for 4 years. He also taught for 7 years as an Assistant Professor of Clinical for the Information and Operations Management Department at the Marshall School of Business, University of Southern California. He founded and acted as CEO of Internet Productions, a premier software applications development company that specializes in offering innovative e-commerce applications for the World Wide Web. The trademark of his enterprise was focusing on "unique custom application that required specialized database integration and end user interfaces." Richard played a major role in introducing the new technologies to the teaching environment at the Marshall School of Business School. He has an extensive background in operations and production areas. He worked as a System Analyst for International Transducer Corporation and as a Senior Planner for Sontech Inc. He was a production manager for Advanced Computer Communications and has implemented MRP and MPR II systems and TQM
programs.

His current areas of research interest include Exploring Trust, Group Satisfaction and Performance in Geographically Dispersed and Co-Located Technology Commercialization Teams; NEO (Network Enabled Organizations) Internet Strategies Study; Designing Virtual Communities for Innovation and Commercialization: A Conceptual Review and Exploratory Examination.


Richard received a Bachelor of Science degree in Business Administration and a Master of Science degree in Information and Operation Management from USC (1998). He is currently a doctoral candidate at Claremont Graduate School in the Management Information Sciences Department. His area of research focuses on both IT strategy execution and virtual communities.

David Brannan, Ph.D.
Faculty
Center for Homeland Defense and Security

Areas of Expertise: Theologically- motivated Terrorism, Insurgency, Terrorism Policy, HS Policy

CHDS Course(s): Asymmetric Conflict in Homeland Defense and Security; A Multi-Disciplinary Approach to Homeland Security

David W. Brannan is retired from a career in domestic law enforcement due to injuries sustained fighting in the line of duty. During his 12 years in law enforcement he served in a variety of positions including patrol, custody, field training officer, classification/intelligence, Academy staff/training, investigations, Special Enforcement Detail (SED), Special Weapons and Tactics team (SWAT) general assignment SWAT counter-sniper and SWAT counter-sniper team sergeant. In 1996 he served as an advisor to the Mongolian national police, Special Forces division lecturing and training on issues of small unit tactics, sniper initiated assaults and high risk building clearance in Ulaan Bator Outer Mongolia. David has published in academic journals, tactical journals, edited books and government reports on issues related to his education and experience.

David was a political scientist for the RAND Corporation for five years working on areas related to terrorism, insurgency and law enforcement with particular expertise related to theologically motivated political activism. David served for six months in Iraq at the request of the Department of Defense as the Director of Security Policy for the CPA/ MOI where he was wounded by insurgent mortar attacks during field operations related to his expertise. His position in Iraq provides a unique perspective on creating internal security forces specifically designed to deal with insurgency and terrorism in a lawless climate.

Currently David lectures on terrorism and homeland security issues for the Center for Homeland Security and Defense at the Naval Postgraduate School in Monterey CA. He
blends a rigorous analytical approach with his practical field experiences to lead students to an informed and highly useable understanding of the issues related to homeland security. David holds a Joint Honours MA in International Relations and Theology as well as a PhD in Theology from the University of St. Andrews, Scotland. His dissertation was entitled, *Violence, Terrorism and the role of Theology*. David is 48 years old and has been married forever to his wife Alison. They have two children, Ashley and Adrian.

James N. Breckenridge  
Faculty  
Center for Homeland Defense and Security

Dr. Breckenridge is the Associate Director of the Stanford Center for Interdisciplinary Policy, Research and Education on Terrorism (CIPERT). He retired recently from his positions as Chief of the Psychology Service and Deputy Associate Chief of Staff for Mental Health Services at the Veterans Affairs Palo Alto Health Care System (VAPAHCS). The VAPAHCS Psychology Service is the largest psychology service in the United States. Dr. Breckenridge holds three academic appointments. He is Professor of Psychology and Director of Training of the Stanford/Pacific Graduate School of Psychology (PGSP) Consortium and Consulting Professor of Psychiatry and Behavioral Sciences at Stanford University School of Medicine. He teaches graduate courses in the psychology of terrorism at PGSP/Stanford and the Center for Homeland Defense and Security at the Naval Post-Graduate School, where he is a Distinguished Senior Fellow. Dr. Breckenridge is a Fellow of the American Psychological Association and is chair-elect of the Veterans Affairs section of Division 18 (Public Service). He recently received the Division’s National Outstanding Researcher Award for his work in health economics, risk adjustment, and other statistical modeling approaches to healthcare utilization. The Department of Veterans Affairs Under Secretary for Health recognized Dr. Breckenridge in 2005 for his Robert Wood Johnson funded research on national patterns of intensive care and palliative care alternatives.

Sponsored by the Office of the Deputy Director of National Intelligence for Analysis, Dr. Breckenridge is one of thirty academics selected to participate in the Summer Hard Problem Program (SHARP), which joins academic and other experts with government analysts in a month-long classified content retreat to investigate factors that cause individuals and communities to coalesce into pro-social or into anti-social, terrorist movements. Dr. Breckenridge is the lead investigator on a variety of funded research projects investigating psychological aspects of terrorism and homeland security. He was the Principal Investigator on a grant from the National Science Foundation, in collaboration with the White House Office on Science and Technology Policy, to evaluate psychological measures for detecting deception and facilitating national security evaluations. This grant is part of a larger effort intended to guide Congressional priorities for the relevant future research agenda. Dr. Breckenridge is also the Principal Investigator on a Medical Response Corps grant funded by the Department of Health and Human Services to develop an evidenced-based psychological early response to acts of terror. In addition, he leads a national study of psychological criticality, exploring emotional responses to alternative terrorist targets and related aspects of risk communication among 2,500 American families. Dr. Breckenridge directs additional security-related psychological research projects in conjunction with various national security
agencies. This year he will co-chair with David Tucker of the NPS Center of Counterterrorism and Irregular Warfare an international conference funded by a national intelligence organization, which will focus on social network analysis of terrorist groups. Together with his colleague, Philip G. Zimbardo, Dr. Breckenridge is an author and editor of forthcoming texts on aspects of psychology and homeland security.

Seth G. Jones
Faculty
Center for Homeland Defense and Security

CHDS Course(s): Comparative Government for Homeland Security
Seth G. Jones is a Political Scientist for the RAND Corporation in Washington, D.C. He specializes in European security, counterinsurgency, and counterterrorism. He has focused recently on U.S. operations in Afghanistan, including the counterinsurgency campaign and efforts to rebuild the Afghan National Police and Afghan National Army. He lectures on related subjects at the Naval Postgraduate School and Georgetown University’s Edmund A. Walsh School of Foreign Service. His has done field research and deployed with U.S. forces in Europe, Afghanistan, Israel, India, Palestine, Africa, and several other locations. Seth publishes in both academic and popular press on issues related to his expertise. His most recent publication, *The Rise of European Security Cooperation* (Cambridge University Press, 2006), deals with issues directly related to his lecturing at the Naval Postgraduate School. He has published articles in *The National Interest, Security Studies, Chicago Journal of International Law, International Affairs,* and *Survival,* as well as such newspapers and magazines as *The New York Times, Newsweek, Financial Times, International Herald Tribune,* and *Chicago Tribune.* His RAND publications include *Counterinsurgency in Afghanistan* (forthcoming in 2007); *Establishing Law and Order after Conflict* (2005); *Building a Successful Palestinian State* (2005); *The UN’s Role in Nation-Building: From Congo to Iraq* (2005); and *America’s Role in Nation-Building: From Germany to Iraq* (2003).

Dr. Jones earned both his Master’s degree and Ph.D. in Political Science from the University of Chicago (2004).

Rudolph Darken
Associate Professor, Computer Science
Director, MOVES Institute
Naval Postgraduate School

Rudolph Darken is Professor of Computer Science at the Naval Postgraduate School in Monterey California. He served as the Director of the Modeling, Virtual Environments, and Simulation (MOVES) Institute from 2004 thru 2008 and as the Technical Director for Human Systems from 2001 through 2004. He joined the Naval Postgraduate School in July of 1996. He also serves on the faculty and as Director of Research for the Center for Homeland Defense and Security (CHDS), and he serves on the Human Systems Integration (HSI) Curriculum Committee.

Dr. Darken teaches courses in human systems, training and simulation, business practices in the modeling and simulation industry, and critical infrastructure protection for homeland
security. He has taught executive seminars on the role of disruptive technologies in defense acquisition. In 2002, he initiated a program to develop an open source game engine for use in developing training simulations. The engine, Delta3D, is now used in many Department of Defense projects and is used around the U.S. and the world.

His research has been focused on spatial cognition and more recently, on game development and agile software development techniques. He has worked extensively in how people learn and develop expertise and how computing media can best be used for learning and skill development. Recent research has been in the use of open source and standards in agile software development frameworks aimed at drastically reducing the cost of building games and simulations while enhancing their flexibility and expressiveness. His background includes experience in interface design, mobile computing, collaborative computing, computer augmented training systems, team training systems, real-time visual simulation, computer graphics, and computer animation.

Professor Darken co-founded the first virtual environment laboratory at the Naval Research Laboratory in Washington, D.C. in 1991. He has served on advisory panels for the NASA Ames Research Center, the National Science Foundation, and the Engineering and Physical Sciences Research Council (U.K.) as well as on the advisory boards of several small technology firms.

He is an Associate Editor of PRESENCE Journal, the MIT Press journal of teleoperators and virtual environments. He received his B.S. in Computer Science Engineering from the University of Illinois at Chicago in 1990 and his M.S. and D.Sc. degrees in Computer Science from The George Washington University in 1993 and 1995, respectively.

Lauren Fernandez
Faculty
Center for Homeland Defense and Security

Courses taught: NS4755 Strategic Planning and Budgeting for Homeland Security

Lauren Fernandez serves as an instructor for the Introduction to Homeland Security course for the Naval Postgraduate School's Center for Homeland Defense and Security. Prior to joining CHDS, she was a branch chief in the U.S. Department of Homeland Security National Preparedness Directorate, where she lead preparedness assessment and strategy programs, managed national information technology systems, and developed technical assistance for state and local governments. She has field experience an emergency medical technician and an incident commander for the Appalachian Search and Rescue Conference. She received her B.S. and M.S. in Systems Engineering in 1998 from the University of Virginia. In 2007 she received her D.Sc. with a concentration in Crisis, Risk, and Emergency Management from the George Washington University.

Expertise: Homeland Security, Systems Engineering
Ellen Gordon
Associate Director, CHDS Executive Education Program
Associate Faculty Master Degree Program

Ellen Gordon is involved in national policy development committees and commissions, currently serving as a member of the U.S. Department of Homeland Security's Homeland Security Advisory Council's Emergency Response Senior Advisory Committee. She previously served as the President of the National Emergency Management Association as well as the Chairperson of the National Emergency Management Association's Homeland Security Committee. From 1998 through 2003 she served as a member of the Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction, U.S. Dept. of Defense to Congress and President, (Gilmore Commission). In addition to her duties with the Naval Postgraduate School she serves as a homeland security and emergency management subject matter expert and advisor.

Prior to her position with the Naval Postgraduate School, she served as the Governor's Homeland Security Advisor as well as the Homeland Security and Emergency Management Administrator for the state of Iowa, with 20 years of distinguished service. In this position she was responsible for the development and management of homeland security and emergency management systems, to include all aspects of strategy, programs, organizational development, personnel and budgeting.

She is the recipient of the Curtis H. "Butch" Straub Award (2004), for exemplary academic achievement and leadership from the Naval Postgraduate School. She is a recipient of the U.S. Army Commanders Award for Public Service and U.S. Army Civilian Award for Humanitarian Service for her meritorious performance. Ms. Gordon was a recipient of the Iowa National Guard Distinguished Service Medal for her contribution and dedication to the State of Iowa. She also received a National Emergency Management Association Presidential Citation and a National Emergency Management Association Award for recognition of her dedication to and support of homeland security.

Ms. Gordon is a graduate of Truman State University, Kirksville, Missouri with a Bachelor of Science degree in Law Enforcement and Corrections (Criminal Justice) and holds a Master of Arts in Security Studies (Homeland Defense and Homeland Security) from the Naval Postgraduate School (2004).

Susan Page Hocevar, PhD
Graduate School of Business and Public Policy
Naval Postgraduate School

Susan Page Hocevar received her Ph.D. in Business Administration from the University of Southern California. She is currently an Associate Professor in the Graduate School of Business and Public Policy at the Naval Postgraduate School in Monterey, California where she teaches courses in organizational behavior; organizational power, politics and conflict management; and in consensus building in post-conflict environments. She is also the
Program Manager for an MS degree program in Leadership Education and Development (LEAD) for incoming Company Officers at the US Naval Academy.

Her research and publications are in the areas of organization design, interagency coordination, implications of OOTW to the “officer of the future, organization change, reward systems, team effectiveness, and organizational culture. She was involved for five years in varying action research projects related to organizational effectiveness and organizational change with the Naval Air Warfare Center, Aircraft Division in Indianapolis. She also worked with the senior leadership team of the Military Sealift Command during their year of planning and initial implementation of a major reorganization. This latter project included work on the culture and values of the organization as critical elements to successful change.

Professor Hocevar has two research efforts that are currently on-going. She is a participating investigator for an Office of Naval Research sponsored research effort in Adaptive Architectures for Command and Control (since 1999). This research involves the application of principles of organization theory to modeling alternative structures and the subsequent experimental comparison of alternatives in a simulation environment with NPS student officers. Her second on-going research activity is focused on the issue of diagnosing and improving inter-organizational collaboration in the context of homeland security. This work is being done by a research team that includes Professors Gail Thomas and Erik Jansen.

Other activities in support of DoN/DoD have included: research on the implications of Military Operations Other Than War (or SASO) to the development of military personnel; advising the senior members of Task Force Excel in the re-design of the Navy’s organization for education and training; designing and analyzing a survey used by USMC on exit and retention attitudes.

Robert Josefek
Faculty
Center for Homeland Defense and Security

Dr. Robert Josefek is an expert in information and decision sciences including social networking and knowledge management. His work includes business and information systems analysis and modeling, technology assessment and evaluation, and human capital management. He has served organizations in financial services, healthcare and high tech, manufacturing and distribution, government, education, and the non-profit sector. Dr. Josefek is an experienced project manager as well as an internationally known author, speaker, and advisor. His current research addresses social networking, knowledge management and information sharing, business systems modernization and innovation, and human capital management. His publications in these and related areas have appeared in leading academic journals, books, and conference proceedings around the world.

In addition to his work at the Naval Postgraduate School's Center for Homeland Defense and Security, he has served on the faculty at the University of Southern California (USC) Marshall School of Business and has taught at the University of Minnesota’s Carlson School of
Management. His executive education courses focus on helping senior managers understand the relevant strategic and organizational issues related to their information technology options, improving planning and investment decisions, and establishing organizational design and development strategies to prepare for future advances. His MBA courses and other teaching focus on organizational impact, investment and acquisition strategies, requirement determination, design, implementation strategies, and project and risk management.

Service to the professional community is an important aspect of Dr. Josefek’s career. He has been a reviewer and associate editor for leading journals and conference committees including Homeland Security Affairs, was a Ph.D. program coordinator at USC, served on numerous Ph.D. dissertation committees, and is a board member for private and public organizations.

Nola Joyce
President and Public Safety and Homeland Security Strategist
Center for Homeland Defense and Security

Nola Joyce worked over twenty-five years in the public sector, with extensive experience in the area of public safety. She recently joined the Philadelphia Police Department (PPD) and heads the Office of Strategic Initiatives and Innovation. Her charge at PPD is to help shape and shepherd change in fourth largest police department in the country.

She is also the president and owner of Strategic Innovations and is a public safety and homeland security strategist. She was a Visiting Fellow with the National Institute for Strategic Preparedness. Ms. Joyce is also on faculty at the Naval Postgraduate School’s Center for Homeland Defense and Security. Most recently she worked with the City of New Orleans doing organizational assessments, identifying strategic opportunities, and developing budget proposals for the police department, homeland security, fire, emergency medical services, district attorney, sheriff, and courts.

Over the past nine years she led the change management efforts for Chief Charles H. Ramsey as the Chief Administrative Officer for the Metropolitan Police Department, Washington, D.C. (MPDC). With her assistance the department reduced the crime rate by forty-nine percent and increased homicide closure rates from forty-nine percent to sixty-four percent. Among Ms Joyce duties was the direction of the expansion of MPDC’s community policing model, ensuring that the budget was aligned with strategic initiatives, and implementing significant changes in the department’s organizational structure. She restructured the department’s budget into a performance based budget. Most recently she helped in the establishment of the homeland security function within MPDC.

Prior to MPDC, Ms. Joyce spent six years as the Deputy Director of the Research and Development Division for the Chicago Police Department. She was instrumental in developing and implementing the Chicago Alternative Policing Strategy (CAPS), which is still being used in the Chicago Police Department. CAPS is one of the most studied community policing initiative in the country and is a nationally recognized community policing model.
She also directed the development and implementation of one of the first automated crime mapping system for police officers.

Ms. Joyce’s public service career began with the Illinois Department of Corrections (IDOC). There she managed the divisions of research, planning, and budget for IDOC for eleven years. She directed staff in the development of nearly a half-billion dollar operating budget and a capital budget and planning function that opened a new prison every year. Additionally she worked with the research staff to develop and use an extremely accurate prison population projection model used to build budgets, determine capital planning needs, and analyze the impact of new criminal laws on the prison population. She and her staff also developed classification systems for adult and juvenile custody and parole populations.

Throughout her career Ms. Joyce served as both staff and participant on interagency task forces, boards, and commissions. She was a member of Washington, D.C.’s Sentencing Commission and the Police Officer Standards and Testing Board. She staffed four Governor’s task forces including two on prison overcrowding, jail standards, and the parole system. She provided assistance and advice to the National Science Foundation research group on policing, the U.S. Sentencing Commission, the National Institute of Justice, the National Institute of Corrections, and the Department of Homeland Security.

Ms. Joyce just completed her third masters. Her most current MA degree is in Defense Security (Homeland Defense and Security) from the Naval Postgraduate School. She has two masters from Southern Illinois University were she earned a MS in Urban Affairs and Public Policy, with a specialization in public finance, and a MA in Sociology with a specialization in research methodology and statistics.

Her areas of study are organizational change, leadership, collaboration, community government, and public policy analysis.

David J. Kaufman  
Deputy Director, Preparedness Programs  

David Kaufman is the Deputy Director, Preparedness Programs within the Department of Homeland Security’s Office of Grants and Training (G&T). He has responsibility for overseeing and directing the day-to-day activities of many of G&T’s major preparedness programs, including the Homeland Security Grant Program, the Urban Area Security Initiative, G&T’s transportation infrastructure security programs, and its technical assistance program.

Mr. Kaufman has eight years’ experience developing and implementing homeland security preparedness programs for states and local jurisdictions. In particular, he has been responsible for developing and implementing the FY 2006 Homeland Security planning process, the Urban Area Security Initiative, initiating FEMA’s National Mutual Aid project, successfully transitioning the Nunn-Lugar-Domenici Domestic Preparedness Program from the Department of Defense to the Department of Justice, and for helping to establish a new
Division within the Office for Domestic Preparedness to work with States and territories in the development and implementation of their State Homeland Security Strategies.

Prior to assuming his current position, Mr. Kaufman was Chief of State and Local Coordination for FEMA's Office of National Preparedness, where he was responsible for developing planning guidance for the State and local emergency response community and for providing grant assistance to State and local governments and agencies to enhance their capability to respond to incidents of terrorism and other disasters.

Mr. Kaufman holds a Bachelor of Arts degree from the University of Wisconsin-Madison and a Master of Public Policy degree from the University of Michigan.

Ted Lewis
Executive Director
Center for Homeland Defense and Security

Ted Lewis is the Executive Director at CHDS and Professor of Computer Science at NPS. He has taught courses in Information Technology Management, Parallel and Distributed Computing, Software Engineering, Data Structures & Algorithms, Programming in Java at NPS. He currently teaches the course Critical Infrastructure: Vulnerability Analysis and Protection.

Dr. Lewis has extensive prior academic, industrial, and government experience as Senior Vice President of Eastman Kodak; President and CEO of DaimlerChrysler Research and Technology, North America, Inc., and Consultant for Technology Assessment Group, Monterey CA. He served formerly as the Chair of the Computer Science department at NPS, and as a Professor of Computer Science at Oregon State University, Corvallis, OR, where he was Director of OACIS - a University-Industry Research Center created to transfer technology from research into products. He has served on various boards and been an editor of various academic publications: Editor- in-Chief of IEEE Software Magazine, 1987-1990; Editor- in-Chief of COMPUTER, 1993-94; and Co-Founder of IEEE Internet Computing 1996.

Dr. Lewis has a 30- year publication record consisting of over 100 refereed and non-refereed publications including the recently published books The Friction-Free Economy (HarperCollins, 1997); Introduction to Parallel & Distributed Computing (with Hesham El-Rewini, Prentice-Hall, 1998); and Microsoft Rising and Other Tales of the Silicon Valley (IEEE Computer Society Press, 1999). He has published in the fields of software engineering, parallel processing, and network applications: “Parallax: A Tool for Parallel Program Scheduling” (with Hesham El-Rewini), IEEE Parallel & Distributed Technology (vol. 1., no. 2, May 1993); “Information Appliances: Gadget Netopia?”, Computer (vol. 31, no. 2, Feb 98); “Is Microsoft a Natural Monopoly?,” Scientific American (February 1998); “Cars, Phones, and Tamagotchi Tribes,” Computer (vol. 30, no. 11, Oct 97); “www.batmobile.car,” Scientific American (July 1997); and “VoIP: Killer App for the Internet?,” IEEE Internet Computing (vol. 1, no. 6, Nov-Dec 97).

Dr. Lewis’ book Critical Infrastructure Protection, Defending a Networked Nation (Wylie Press, 2006) was the nation’s first textbook on critical infrastructure protection. He also has a
forthcoming book, *Network Science: Theory and Applications*, that is expected to be released in early 2009. He holds M.S. and Ph.D. degrees in Computer Science from Washington State University (1970 and ‘71), and a B.S. in Mathematics from Oregon State University.

Thomas Mackin

**Areas of Expertise:** Critical Infrastructure, Blast Protection, Materials Science, Sensors/detectors, Risk Analysis/Vulnerability Assessment  
**CHDS Course(s):** Critical Infrastructure: Vulnerability Analysis and Protection  
Professor Mackin is the Chair of the Mechanical Engineering department at the California Polytechnic State University. Prior to his appointment there, he was an Associate Professor in the Department of Mechanical and Industrial Engineering at the University of Illinois.

He was appointed Executive Director of the Illinois Homeland Security Research Center in 2004. During 2002-2003 he served as a technology policy analyst in the White House Office of Science and Technology Policy (OSTP) under the supervision of the Science Advisor to the President. He served as White House Liaison to the National Nanotechnology Initiative, the Networking and Information Technology Initiative, and coordinated Federal Efforts in High End Computing. He also worked on transition planning for the Department of Homeland Security.

Mackin’s current research involves new methods for quantifying damage and predicting the service lifetime of aircraft composites as well as developing new imaging tools for measuring stresses in microelectronic packaging, MEMS, NEMS, and ferroelectrics. He has developed several new experimental methods, including: a micromechanical fiber push-out test, a thermoelastic method for assessing composite health and lifetime prediction, a thermal diffusion based method for measuring nano-scale thick membranes, an infrared grey-field-polariscope for measuring stresses in electronic materials as well as MEMS and NEMS, a finite contact membrane test, and a thermocaloric imaging method for mapping domain switching in ferroelectrics. He is the author of several book chapters, and a number of articles on the mechanics of materials.

Mackin received his Ph.D. in Engineering Science and Mechanics from Penn State (1991), where he utilized fractal geometry to develop new methods of analyzing the failure of ceramic materials.

Stan M. McKinney  
Director of Executive Education Programs  
Center for Homeland Defense and Security

Stan McKinney is the Director of Executive Education Programs for the Naval Postgraduate School’s Center for Homeland Defense and Security responsible for leading the Center’s extensive executive education initiatives serving the homeland security priorities of the U.S. Department of Homeland Security, as well as local, state, tribal and federal agencies. He
previously served as an Associate Director of Executive Education from 2003-2007 and was responsible for the development and delivery of executive education workshops, seminars and training for senior state, local and federal officials.

Mr. McKinney served as the Director of the Emergency Management Division for the State of South Carolina from 1993 through 2002. In this capacity, he was responsible for the development and implementation of a statewide comprehensive emergency management system. He served as the primary advisor to the Governor and Adjutant General regarding emergency preparedness and operations and was designated as State Coordinating Officer for four presidential major disaster declarations. He was responsible for direct interface with members of the state legislature, county and city councils, administrators and mayors, and members of the congressional delegation concerning emergency management issues.

In 2001 Mr. McKinney was assigned, on special detail, to the U.S. Department of Justice as a senior emergency management advisor for state and local domestic preparedness issues. He was responsible for supporting state and territorial emergency management agencies regarding preparedness for incidents involving weapons of mass destruction, including providing technical assistance and support for threat and needs assessments, emergency planning, training, and exercise development. He also provided extensive outreach to state executive, legislative, public safety, and academic organizations. Following the September 11th terrorist attacks in New York and Washington, DC he served as a key advisor on emergency management operational policy.

He was recalled to state service in 2003 and served as Assistant to the Chief of the South Carolina State Law Enforcement Division to support the development a statewide homeland security program to ensure statewide implementation of national preparedness programs, policies, goals and objectives. This assignment included oversight for the development of specialized response teams and a statewide intelligence fusion and information sharing network.

Mr. McKinney is a Past President (1997-1998) of the National Emergency Management Association (NEMA), which represents all state and territorial emergency management directors in the development and advocacy of national policy, strategic and operational issues. He has served on numerous state and national advisory councils, committees, and professional organizations impacting upon emergency management and homeland security, including the U.S. Department of Homeland Security’s State, Local, Tribal, and Territorial Government Coordinating Council.

Mr. McKinney holds a Bachelor of Arts Degree in Political Science-Public Administration (1980) and a Master of Criminal Justice (1988) from the University of South Carolina.

Patrick Miller
Police Chief
Ventura Police Department

Patrick Miller is the Police Chief in Ventura, California and has over 30 years of police experience in Ventura and Los Angeles. He has worked a variety of assignments, including
Patrol, SWAT and Narcotics, and one year in an undercover capacity. Pat has also worked for the Central Intelligence Agency developing counter-narcotics/terrorism programs in El Salvador, Honduras and Colombia. He currently sits on several advisory groups in Washington DC, including the National Counter Terrorism Center.

Pat earned a Bachelor of Science in Administration of Justice from Cal Lutheran College in 1975, a Masters Degree in Public Administration from Pepperdine University in 1980, a Masters Degree in Management Science from Cal Poly Pomona California Command College in 1996 and a Masters Degree from the Naval Postgraduate School, Center for Homeland Defense and Security, Cohort 0401 in 2005.

Pat lives in Ventura, California, with his wife, Donna. They have four grown daughters and four grandchildren. He enjoys physical activity, including running and martial arts.

Nadav Morag
Faculty
Center for Homeland Defense and Security

Nadav Morag is a faculty member at CHDS and currently co-teaches two courses in the program: Policy Analysis and Research Methods and Comparative Government for Homeland Security.

Dr. Morag also presently serves as Director of the Center for Israel Studies and Chair of the Department of Political Science at the University of Judaism in Los Angeles.

He has published articles focusing on the Arab-Israeli peace process, nationalist conflict and international terrorism. His primary research interests are in the areas of terrorism and homeland security.

Dr. Morag also serves as a member of the Homeland Security Advisory Council of the Los Angeles and Orange County Sheriffs' Departments and is involved with the Los Angeles County Terrorism Early Warning Group (TEW).

Dr. Morag previously served as Senior Director for Domestic Policy and then as Senior Director for Foreign Policy at Israel's National Security Council where he developed policy recommendations on matters of National Security for the Prime Minister.

He holds BA and MA degrees from UCLA and a PhD from Tel Aviv University in Political Science and served on the faculty of Tel Aviv University between 1994 and 2003.

John Rollins
Faculty
Center for Homeland Defense and Security
Mr. John Rollins is a member of the Library of Congress’ Congressional Research Service (CRS) and serves as a Specialist in Terrorism, International Crime, Intelligence, and Homeland Security. Prior to joining CRS, Mr. Rollins was the Chief of Staff of the Office of Intelligence for the Department of Homeland Security.

Mr. Rollins’ career includes a variety of analytic, legal, and management positions in the U.S. Army, FBI, CIA, DIA, U.S. Marine Corps, 1st SFOD-D (Delta Force), and the United Nations. Mr. Rollins is a licensed attorney and graduate of the Senior Executive Fellowship program, Harvard University.

Mr. Rollins teaches national security and homeland security courses at numerous Universities and routinely advises the state and local governments, the media, and the entertainment industry regarding national security issues.

Jake Shapiro

**Areas of Expertise:** Intelligence, Terrorist Organizations, Security Bureaucracy

**CHDS Course(s):** Financing Terrorism and State Response

Jacob N. Shapiro is an Assistant Professor of Politics and International Affairs at Princeton University. His primary research interests are the organizational aspects of terrorism, insurgency, and security policy. Shapiro’s ongoing projects study the balance between secrecy and openness in counterterrorism, the causes of militant recruitment in Islamic countries, and the relationship between public goods provision and insurgent violence in Iraq and Afghanistan. His research has been published in *International Security, International Studies Quarterly, Foreign Policy,* and a number of edited volumes. Shapiro is a Harmony Fellow at the Combating Terrorism Center at the United States Military Academy.

Mr. Shapiro has served tours as a Naval Reserve officer with the Office of Naval Intelligence and the Naval Warfare Development Command. On active duty he served at Special Boat Team 20 and onboard the USS Arthur W. Radford (DD-968). Ph.D. Political Science, M.A. Economics, Stanford University. B.A. Political Science, University of Michigan.

**ROBERT L. SIMERAL**

Executive Director for Intelligence Research

Naval Postgraduate School

Robert Simeral joined the NPS Center for Homeland Defense and Security faculty in April 2004. He was appointed NPS Executive Director for Intelligence Research in September 2004.

His areas of specialization and research include:

- Intelligence in support of Homeland Security and Homeland Defense
- Intelligence in support of the War on Terror
- Role of intelligence in the transformation of U.S. Navy and Defense
- Intelligence Community transformation in education and research
- Space operations in support of Intelligence
- Intelligence, Surveillance, Reconnaissance and Targeting (ISR-T)
- Intelligence in support of Joint and Naval warfare
- Intelligence fusion for non-traditional users of intelligence

As a career naval intelligence officer, Captain (ret.) Simeral served in command, fleet and joint service positions in the Pacific, Atlantic and Washington/National Capital Region which include:

- Commander, Joint Staff Intelligence Task Force, Pentagon, Operation Enduring Freedom, established September 11, 2001
- Commander, Office of Naval Intelligence (ONI), Washington DC
- Director of Intelligence (J2), U.S. Atlantic Command, Norfolk VA
- Commander, Atlantic Intelligence Command, Norfolk VA
- Director of Intelligence (N2), U.S. Pacific Fleet, Pearl Harbor HI
- Assistant Chief of Staff for Intelligence (N2), U.S. Third Fleet

Robert Simeral is a graduate of California Polytechnic State University, San Luis Obispo and holds masters degrees from Naval Postgraduate School and Naval War College. His publications include "A Space Strategy Imperative: Linking Policy, Force and Rules of Engagement" in the Naval Law Review and various graduate education articles on Homeland Security and Intelligence. He is currently collaborating with James Wirtz and writing a textbook on Intelligence for Homeland Security and Defense. His most recent academic recognition in Spring 2008 is the Lieutenant Commander David L. Williams Outstanding Faculty Award, presented at Naval Postgraduate School.

STAN SUPINSKI
Faculty, Naval Postgraduate School

Stan Supinski is a faculty member and the Director of Partnership Programs for the Center for Homeland Defense and Security. He is also a Visiting Professor to the Long Island University Homeland Security Management Institute, and has taught homeland security courses at the University of Denver and the University of Massachusetts.

In his most recent government position, he was the Deputy for Training and Education for the North American Aerospace Defense Command and US Northern Command, where he developed the organizations’ academic training and education programs. He also founded and directed the Homeland Security/Defense Education Consortium (HSDEC), a network of over 160 federal, military and civilian educational institutions.

He retired from the United States Air Force in 2003 following 27 years of active service. Dr. Supinski served in two capacities during his military career: as an educator with the United States Air Force Academy and as an intelligence officer in numerous locations and
capacities. At the Academy he held positions in the Department of Foreign Languages as an Associate Professor of Russian, Chair of the Strategic Languages Division, Director of Instructional Technology, Director of the Language Learning Center, and Director of Operations. For his last military assignment, he served as the Academy’s Faculty Squadron Commander, where he oversaw faculty personnel, administration, security, and facilities.

As an intelligence officer, Dr. Supinski served primarily in the human intelligence field, managing intelligence collection and conducting operations using the Polish and Russian languages. His assignments included Deputy Commander at Field Operating Base, Korea, Defense Intelligence Agency; Operations Officer for the European Special Activities Center in Munich Germany; and as Team Lead and Executive Officer at the Air Force Special Activities Center, Fort Belvoir, VA. From December 1999 to May 2000, Dr. Supinski deployed to Riyadh, Saudi Arabia, where he served as the Central Air Forces senior intelligence representative to Joint Task Force, Southwest Asia.

He has conducted research and authored numerous articles on homeland security and defense, technology support to education, and language acquisition. Dr. Supinski holds a Ph.D. in Instructional Systems Design from Florida State University (1996) and a Master’s degree in National Security Affairs from the Naval Postgraduate School.

Gail Fann Thomas, Ed.D.
Graduate School of Business and Public Policy
Naval Postgraduate School

Gail Fann Thomas received her doctorate in Business and Education from Arizona State University in Tempe, Arizona. She joined the faculty at the Naval Postgraduate School in 1989 after serving on the faculty at Arizona State University’s College of Business. While at Arizona State she taught communication and entrepreneurship.

Dr. Thomas conducts research on such topics as collaboration, communication competencies for managers at various levels of the organization, conflict management, and communication as it relates to strategy and organizational change efforts. One of her ongoing studies focuses on the development of interagency collaboration for homeland security. This project examines ways that collaboration contributes to inter-organizational performance.

Dr. Thomas has published in several academic journals and most recently co-authored a booklet on conflict and teams. This booklet builds on the Thomas-Kilmann Conflict Mode Instrument, which allows team members to identify their predominant modes for dealing with conflict and then use that information to maximize their team’s effectiveness.

Gail has also served in various administrative and leadership capacities. At NPS she served as Associate Chair for five years where she conducted operations for the Department of Systems Management (now, the Graduate School of Business and Public Policy). She currently serves on the Board of Directors for her professional organization and served as Associate Editor for her field’s primary journal. Before her academic career, she was co-
owner and manager of a computer firm that developed turn-key computer systems for hospitals, retail, and legal organizations.

In 2004, Dr. Thomas was awarded the Distinguished Member Award by the Association for Business Communication (ABC). In 2005 she received ABC’s Outstanding Research Award and NPS’s Richard W. Hamming Award for Excellence in Graduate Teaching.

David Tucker
Faculty
Center for Homeland Defense and Security

Areas of Expertise: Terrorism, USG Policymaking

CHDS Course(s): Asymmetric Conflict and Homeland Security

David Tucker is an Associate Professor in the Department of Defense Analysis and Co-Director of the Center on Terrorism and Irregular Warfare at the Naval Postgraduate School. Before coming to NPS, he served in the Office of the Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict as Acting Director for Policy Planning and the Deputy Director for Special Operations. He also served as a Foreign Service Officer in Africa and Europe.

Before entering government service, he was the Director of the International Seminar in American Studies at the Claremont Institute and taught at the University of Chicago as a William Rainey Harper Fellow.

His publications include "What’s New about the New Terrorism and How Dangerous Is It?" in Terrorism and Political Violence (Autumn 2001), "The RMA and the Interagency: Knowledge and Speed Vs. Ignorance and Sloth?" (Parameters, Fall 2000); Skirmishes at the Edge of Empire, the United States and International Terrorism (Praeger, 1997), "Fighting Barbarians," Parameters (Summer 1998) and "Responding to Terrorism," Washington Quarterly (Winter 1998).

In December 2005, David was awarded the NPS David L. Williams Outstanding Professor Award.

Dr. Tucker holds a Ph.D. from the Claremont Graduate School (1981) and is a member of the Board of Visitors of the Marine Corps University and the Board of Advisors of the Ashbrook Center.

N. Dawn Wilson
Public Policy Consultant
Public Works LLC

Dawn Wilson currently serves as a public policy consultant with Public Works LLC, a firm providing public policy research and analysis, organizational development, and management consulting to government agencies, think tanks, and non-profit agencies across the country. In this role, Dawn advises several governors’ and mayors’ offices as well as state and
municipal agencies in the areas of homeland security, public safety, workforce, and economic development.

Most recently, Ms. Wilson served as the National Policy Director for the presidential campaign of Iowa Governor Tom Vilsack. In the campaign, Dawn oversaw all aspects of the policy department including outreach to national opinion leaders, elected officials, issue advocacy groups, and members of the national media on a variety of public policy topics. Previously, Dawn served as Deputy Chief of Staff to Governor Vilsack in Iowa. During her eight years in the Governor’s Office, she was a senior advisor for policy, budget, and communications to Governor Vilsack and Lt. Governor Sally Pederson.

Ms. Wilson has served in a variety of roles in state and federal government, including work in the offices of US Senator Sam Nunn (D-GA), the Georgia Governor’s Office of Consumer Affairs, and the Assistant Chief Counsel’s Office of the Federal Aviation Administration. Wilson has also participated in international legal, governmental, and political exchanges throughout western and central Europe, Asia, and Africa.

Wilson has worked in the legal field in both the private and public sectors with experience in health care, elder, environmental, and criminal law. She practiced health care law in Washington, DC in affiliation with the firm of Latham and Watkins. She has also served as a prosecutor in the Western Judicial District of Georgia and has worked in a variety of areas of public interest law, including service as Project Director of the Elder Legal Assistance Program, as a legal organizer for environmental issues for the Georgia Center for Law in the Public Interest, and as an advocate for domestic violence victims with the Georgia Protective Order Project.

Wilson has written for several public policy publications and has been published on the topic of Gender and Authority in the Workplace in association with the Southeastern Sociological Symposium. She has served as a member of the American Bar Association and is currently a member of the Georgia Bar Association. She also served as an international press center liaison for the Atlanta Committee for the Olympic Games during the 1996 Olympics in Atlanta.

Dawn received her Juris Doctor from the University of Georgia School of Law and earned Bachelor of Arts degrees with high honors in both Political Science and Sociology from the University of Georgia. Ms. Wilson also studied British political systems at Oxford University in Oxford, England.

James J. Wirtz
Dean, School of International Graduate Studies
Naval Postgraduate School
Marshall College, Penn State University and the State University of New York, Binghamton. Between January 2000 and January 2005 he served as the Chair of NSA. He is a past president of the International Security and Arms Control Section of the American Political Science Association. In 2005, he was a Visiting Professor at the Center for International Security and Cooperation, Stanford University.


A native of New Jersey, Professor Wirtz earned his degrees in Political Science from Columbia University (MPhil 1987, PhD 1989), and the University of Delaware (MA 1983, BA 1980). In 1985-86 he was a John M. Olin Pre-Doctoral Fellow at the Center for International Affairs, Harvard University.
LAUREN F. WOLLMAN  
Managing Director  
Center for Homeland Defense and Security

Lauren Wollman is Managing Director of Academic Programs and Thesis Coordinator at the Center for Homeland Defense and Security at the Naval Postgraduate School. In this capacity, she manages the faculty, oversees student research, and is the lead instructor for the Policy Analysis and Research Methods coursework sequence. Other special projects in her portfolio have included developing the Homeland Security Digital Library taxonomy in collaboration with taxonomy specialists, developing the curriculum for the national Certificate program for Homeland Security Studies, and heading the Faculty Development initiative at CHDS. Finally, Dr. Wollman serves as Senior Editor for Homeland Security Affairs, the Journal of the Center for Homeland Defense and Security.

Prior to her assignment to NPS, Dr. Wollman worked for two agencies in the Israeli government.

She earned a Ph.D. in History from the University of Southern California.

Phil Zimbardo  
Faculty  
Center for Homeland Defense and Security

Areas of Expertise: Psychology of Terrorism, Crisis Communication

CHDS Course(s): Psychology of Fear Management and Terrorism

Dr. Zimbardo has been a Professor of Psychology at Stanford University since 1968 and is internationally recognized as an innovative researcher in many areas of psychology. He has won numerous awards for his distinguished teaching, writing, research, and media productions. Zimbardo has been called the "voice and image of modern psychology" because of his popular PBS-TV series, “Discovering Psychology” (shown nationally and internationally over the past decade), and his text, Psychology and Life, the oldest, continuously selling textbook in psychology (soon in its 17th edition). He has been President of the American Psychological Association (2002), and formerly of the Western Psychological Association. Zimbardo has more than 300 professional publications, including 50 scholarly, text and trade books. (See www.zimbardo.com). He considers himself a generalist within psychology although his major focus is in social psychology. His research spans a variety of diverse areas from social influence, persuasion, cults, hypnosis, vandalism, violence, time perspective, shyness, evil, madness, and most recently to the psychology of terrorism. In November 2005, he was awarded the Dagmar and Vaclav Havel Foundation Vision 97 Award in Prague. He was chosen for his efforts to enhance the human condition by countering evil, ignorance, and shyness through research, teaching, and social action. Dr. Zimbardo received his Ph.D. in Psychology from Yale in 1959.
APPENDIX E

Abstracts of Theses Recognized as Outstanding
Stephanie Blum  
Attorney Advisor  
Department of Homeland Security, Transportation Security Administration  

THE NECESSARY EVIL OF PREVENTIVE DETENTION: A PLAN FOR A MORE MODERATE AND SUSTAINABLE SOLUTION  

ABSTRACT  

After September 11, 2001, the Bush Administration decided to detain certain individuals suspected of being members or agents of al Qaeda or the Taliban as enemy combatants and hold them indefinitely and incommunicado for the duration of the war on terror. The rationale behind this system of preventive detention is to incapacitate suspected terrorists, facilitate interrogation, and hold them when traditional criminal charges are not feasible for a variety of reasons. While the rationale for preventive detention is legitimate and the need for preventive detention real, the current Administration's approach has been reactionary, illogical, and probably unconstitutional.  

This thesis explores the underlying rationales for preventive detention as a tool in this war on terror; analyzes the legal obstacles to creating a preventive detention regime; discusses how Israel and Britain have dealt with incapacitation and interrogation of terrorists; and compares several alternative ideas to the Administration's enemy combatant policy under a methodology that looks at questions of lawfulness, the balance between liberty and security, and institutional efficiency. In the end, this thesis recommends using the Foreign Intelligence Surveillance Court to monitor a narrow regime of preventive detention only to be used under certain prescribed circumstances where interrogation and/or incapacitation are the justifications.
INTRODUCING THE FUTURE NOW: USING MEMETICS AND POPULAR CULTURE TO IDENTIFY THE POST 9/11 HOMELAND SECURITY ZEITGEIST

Abstract

What effect did the terrorist attacks on September 11, 2001 have on American culture? One outcome was the emergence of “homeland security” as a new institution, concept, and method. But what does this mean as part of a broader historical narrative of cultural change following 9/11? This thesis uses a combination of both classic and contemporary theories to gain perspective on how the public perceives homeland security—Zeitgeist theory and memetics. By examining small clues found within American popular culture, called memes, the reader is able to see how ideas related to homeland security have been transmitted, varied, or faded away. What may appear to be random events found in American popular culture can be considered part of a larger dynamic at work called the “Zeitgeist” and may provide the first glimpse into a future that “currently exists, but is just not widely distributed yet.” The themes found within the homeland security Zeitgeist—patriotism, victimization, fear, and absurdity—provide insight into how Americans perceive homeland security and awareness of emerging cultural patterns that affect their lives. Opportunities for further research are suggested related to cultural evolution, memetics, popular culture analysis, strategic communications, and homeland security.
William L. Crobie  
Chief Operating Officer  
Amtrak

PUBLIC–PRIVATE SECTOR PASSENGER RAIL  
INTELLIGENCE AND TERRORISM INFORMATION SHARING

Abstract

What is an effective methodology for intelligence and terrorism information sharing within a private passenger rail organization and with their external public partners? This thesis uses three distinct research methodologies that collectively lead to an effective strategy for intelligence and terrorism information sharing within a private passenger railroad, and with its external public partners (Chapter III):

1. Key Amtrak personnel will be interviewed to establish and confirm how intelligence information currently flows within Amtrak and with its external intelligence community and law enforcement partners (Chapter II).
2. A survey of key Amtrak operations personnel to establish Amtrak’s intelligence priorities and requirements (Chapter IV).
3. Two case studies on potential models for intelligence and terrorism information sharing (Chapter V & VI).

There are two outcomes from this research: (1) by leveraging the power of informal networks in the context of the abstract mega-community framework, an effective strategy for intelligence and terrorism information sharing was developed; and (2) based on the needs of front line railroad operating personnel, an intelligence product that helps to protect the public and the nation’s critical railroad infrastructure was developed.
Charles S. Eanoff, Jr  
Deputy Chief  
Sunnyvale, California Department of Public Safety

THE IMPACT OF CONTEXTUAL BACKGROUND FUSION ON PERCEIVED VALUE AND QUALITY OF UNCLASSIFIED TERRORISM INTELLIGENCE

Abstract

There are millions of police, fire, public health, emergency medical, emergency management, and public sector homeland security professionals ready and willing to assist in the global war on terror (GWOT) and current strategies to strengthen homeland security include the provision of unclassified intelligence products to these non-traditional recipients (NTR). Simply pushing intelligence products to NTR is not enough. NTR must possess adequate contextual background in order to effectively utilize intelligence provided by the Intelligence Community (IC) in implementing strategies in information driven and risk based prevention and response. Given the diversity of NTR, distribution of “one size fits all” products ensures that the intelligence will fit no one’s needs.

This thesis researches the impact of intelligence contextual background fusion (CBF) through the use of hyperlink technology and evaluates the likelihood of hyperlink acceptance by NTR. By utilizing DHS and FBI customer satisfaction survey questions in “quality” and “value” factors along with previously validated Technology Acceptance Model (TAM) questions in “ease of use” and “usefulness” factors, this research finds that CBF significantly improves both perceived value and quality, and finds that NTR overwhelmingly prefer a CBF product. NTR broadly accepted hyperlink technology in this application.
Nola M. Joyce  
Senior Executive Director  
Metropolitan Police Department  

CAN YOU LEAD ME NOW?  
LEADING IN THE COMPLEX WORLD OF HOMELAND SECURITY

Abstract

This thesis focuses on a theory of leading and the activities and processes used to move a bureaucratic, public agency to a higher level of fitness in the contexts of dynamic equilibrium and the edge of chaos. The main claim is that leading and all of its components—thinking and sense-making, storytelling and demonstrating the right ideas, and organizing action and shaping collective movement—are required for an organization to address the complex, coordinating problems of homeland security.

This research is exploratory using the methodology of grounded theory. An in-depth analysis of a single case was used to test a theory of leading in complexity. Descriptive examples are provided of the activities identified in the process of leading.

The findings supported the theory of leading and offered some suggestions for leading the work of homeland security. The analysis demonstrated that leading is a process that weaves in a non-linear way from thinking to sense-making to demonstrating the “right ideas” and identities to organizing collective movement and back around to thinking. It is a process without ends and a process that shows how to accomplish organizational change in the realm of complexity and chaos.
Sinan Khan  
Epidemiology Analyst 
Department of Public Health Los Angeles County

MULTI ATTRIBUTE DECISION ANALYSIS IN PUBLIC HEALTH – ANALYZING EFFECTIVENESS OF ALTERNATE MODES OF DISPENSING

Abstract

Local emergency planners are creating mass prophylaxis plans to prophylax entire populations within forty eight hours in order to reduce mortality after a bioterrorist attack. The Points of Dispensing (PODs) used in prophylaxis are central to an area’s mass prophylaxis plans, but they are insufficient because of their staffing and security constraints. Several alternate modes of dispensing that have similar attributes and are considered best practices are presently being implemented in local health departments (LHDs). The purpose of this thesis is to develop models to evaluate alternate modes of dispensing using multi-attribute value function (MAVF), an approach that supports multi-attribute decision-making by taking into account the trade-offs a decision-maker is willing to make between attributes. Two models are created for Los Angeles County (LAC). The models showed that in LAC, the door-to-door option, pharmacy option, civil service option and Kaiser Permanente option work best. The study finds that alternate modes of dispensing can be useful in filling the gaps in the POD-based approach by increasing critical resources or lowering the pressure on existing resources.
THE EVOLUTION OF REGIONAL COUNTERTERRORISM CENTERS WITHIN A NATIONAL COUNTERTERRORISM NETWORK:
IS IT TIME TO FUSE MORE THAN INFORMATION?

Abstract

There is widespread consensus among both policymakers and intelligence professionals that domestic counterterrorism efforts remain hampered by the lack of an effective national intelligence network that fully integrates the Homeland’s entire intelligence assets and other related homeland security capabilities into one national counterterrorism system. The failure to unify our domestic counterterrorism efforts inhibits timely and complete information sharing and the evolution of a more robust homeland security prevention and response capacity.

To achieve counterterrorism synergy we need a holistic approach that removes the intelligence element from its vacuum and fuses it in the counterterrorism crucible, along with the investigations element and related homeland security prevention and response operational elements, in Regional All-Hazards, Disaster and Anti-Terrorism Resource (R.A.D.A.R.) centers. These regional and super-regional R.A.D.A.R. centers can then be united into a National Counterterrorism Network under the auspices of the National Counterterrorism Center and the National Operations Center. Fusing this multi-government level, multi-disciplinary collaboration of intelligence, investigative and operational assets, along with the resources of key private sector groups into one unified organism would eliminate information sharing barriers, and will ensure the most efficient and effective use of homeland security resources to prevent and respond to terrorist attacks and natural disasters.
Michael C. McDaniels  
Michigan Homeland Security Advisor  
Assistant Adjutant General for Homeland Security  

THE DEVELOPMENT AND RECOGNITION OF HOMELAND SECURITY LAW  

Abstract  

The thesis considers those laws created since September 11, 2001 in direct response to that terrorist attack and intended to protect the American Homeland from further attacks. The paper discusses whether a practice area of Homeland Security Law has arisen commensurate with the growth of Homeland Security as a separate professional discipline. Just as Congress passed thousands of pages of legislation in response to the events of September 11, 2001, the Department of Homeland Security, created by one of those new laws, is churning out thousands of pages of federal regulations, and thousands of federal workers now seek to regulate and to impose new legal standards, on U.S. citizens and businesses. After reviewing the Congressional, Executive, and legal profession’s responses to September 11, 2001, a survey was created and sent to those attorneys who hold themselves out as practicing or teaching “Homeland Security Law.” The intent was to determine whether the legal profession should now recognize Homeland Security Law as a separate practice area, and if not, what steps are necessary before a practice area is recognized. Interviews were also conducted with representative experts in private and public practice and the Academy.  

A substantial majority in each survey, and in the interviews, found that anti-terrorism laws, emergency management and critical infrastructure resiliency and protection are included within the area of “Homeland Security Law.” A working definition of Homeland Security Law then, is “those laws and regulations enacted or promulgated to ensure domestic security from man made or natural attack or disaster.”
Nitin Natarajan  
Bioterrorism Coordinator  
District of Columbia Department of Health

NATIONAL IMPERATIVE TO ESTABLISH A DOMESTIC MEDICAL INTELLIGENCE CENTER

Abstract

The United States does not have a centralized organization tasked with the oversight or implementation of a domestic medical intelligence program. Organizations throughout the nation have adopted a variety of definitions and operating procedures related to medical intelligence, however, they are inconsistent. Additionally, most jurisdictions limit medical intelligence to epidemiological surveillance.

This thesis will propose the structure, governmental organization, data sets, and reporting for a domestic medical intelligence center. This center will require close partnership with other federal agencies and state, local, tribal, and territorial (SLTT) governments. In addition, this thesis will analyze medical intelligence operations within the Armed Forces Medical Intelligence Center, the Department of Homeland Security Office of Health Affairs, the Metropolitan Washington Fusion Center, and the Los Angeles Terrorism Early Warning Group.

As this thesis shows, the development of a domestic medical intelligence center, covering a wide range of data sets, will allow for the effective collection, integration, analysis, and dissemination of both tactical and strategic actionable intelligence for federal and SLTT governments and private sector partners. These actions will assist in addressing this significant gap and increasing our nation's level of preparedness thereby improving our nation's response to large scale incidents, both naturally occurring and man-made.
John E. O’Brien
Security Systems Engineer
National Nuclear Security Administration, U.S. Department of Energy

ESSENTIAL ELEMENTS FOR PREPAREDNESS PLANNING

Abstract

The author of this thesis asserts that the unique nature of the modern threat environment removes all justifiable options for the providers and users of threat information to operate at arm’s length from one another. If the two communities are not integrated to the point that collaboration can proceed unhindered, the flow of information between them will likely be sluggish, unidirectional and largely irrelevant. Collaboration involves more than just the flow of new information, however. It requires the exchanging of ideas, the challenging of assumptions and biases, and leads to the formation of a networked environment that is needed to defeat our networked adversaries. An organization that fails to accomplish this level of integration and collaboration runs the risk of finding itself preparing for yesterday’s attack, and failing to prevent, prepare for or adequately respond to tomorrow’s threat. The 9/11 Commission’s synthesized protocol for scenario development and intelligence tasking is presented as a means of fixing this problem.
Phillip Osborn  
Supervisory Special Agent  
Department of Homeland Security, Immigrations and Customs Enforcement  

FINANCING TERRORISTS AND CRIMINALS: THE IMPACT OF NON-TRADITIONAL MONETARY SYSTEMS AND THE INTERNET ON HOMELAND SECURITY  

Abstract  

Non-traditional monetary systems present distinct challenges to traditional law enforcement interests and to homeland security efforts. Of particular concern is the utility that these systems can provide to money laundering and terrorist financing activities. Prepaid Stored Value Cards and Internet digital currencies are two such non-traditional systems of major concern for criminal and terrorist exploitation. The unregulated nature of these systems, coupled with traits which can take advantage of the anonymity inherent with the Internet, calls for the development of a policy solution that addresses the negative impacts these systems can have on traditional anti-money laundering and terrorist financing efforts. This thesis asks the questions: How and to what extent current policies and laws should be modified to address the criminal and homeland security threats posed by the exploitation of these non-traditional monetary systems; and what measures and strategies should be included when creating an effective policy solution? Using a policy analysis method, this thesis analyzes the issues surrounding the threats that Prepaid Stored Value Cards, digital currencies, and the Internet pose to homeland security. This analysis is followed by a discussion of several policy options for addressing these threats ultimately leading to a proposal for a National Stored Value Card Enforcement Strategy (NSVCS). The overall policy which is encapsulated within the NSVCS is one that pursues targeted legislative, technical, investigative, and partnership building measures for overall threat mitigation.
John P. Paczkowski  
Director, Office of Emergency Management  
Port Authority of New York and New Jersey

RISK MANAGEMENT AS STRATEGIC CHANGE IN NATIONAL HOMELAND SECURITY POLICY

Abstract

Secretary Michael Chertoff has said that the core principle that animates the Department of Homeland Security (DHS) is risk management. Risk management is a process of deciding trade-offs between available resources and the cost of minimizing the risk of unwanted consequences through an ongoing cycle of objective setting, risk assessment, alternatives evaluation, and implementation, in a way that buys-down risk over time. The statements of national leaders, Federal legislation, and the Department of Homeland Security’s own strategy documents, have set risk management as homeland security policy. Nonetheless, DHS has been challenged to implement a coordinated and integrated risk management program, to include compatible risk assessment methodologies among its component agencies. The National Infrastructure Protection Plan (NIPP) released in 2006, for the first time sets out a vision for a national risk management framework. That vision now extends the application of risk management to the Nation’s critical infrastructure owners and operators. This paper explores the challenges involved in implementing the risk management framework under the NIPP, examines how implementation has been managed as strategic change through the lens of change management theory, and offers recommendations for improvement. It is hoped this paper will motivate further study into homeland security strategic change.
Matthew J. Simeone, Jr.
Inspector
Nassau County Police Department

THE INTEGRATION OF VIRTUAL PUBLIC-PRIVATE PARTNERSHIPS INTO LOCAL LAW ENFORCEMENT TO ACHIEVE ENHANCED INTELLIGENCE-LED POLICING

Abstract

In light of the recent emergence of fusion centers and centralized intelligence units, and the move to develop intelligence capacity within local law enforcement agencies in the United States, intelligence-led policing (ILP) is well positioned to be on the nation's law enforcement agenda for the next decade. ILP relies on robust data collection from a wide range of sources to create intelligence products that can influence decision makers, and ultimately, impact the criminal environment.

Virtual public-private partnerships (VP3s) offer local law enforcement agencies an effective and efficient way to leverage a vast and resourceful private sector for the purpose of enhancing ILP. A VP3 can exponentially enhance data collection capacity, facilitate the utilization of the private sector as a force multiplier, and provide the means by which local policing agencies can begin to instill a culture of preparedness in the citizens they serve.

This thesis includes case studies of three VP3s - Citizen Observer, NYPD Shield, and the Nassau County Security Police Information Network (SPIN). In addition, virtual communities and social capital are examined with an eye towards the potential impact on crime, homeland security, and ILP. The findings of this thesis form the framework for a VP3-enhanced model of intelligence-led policing.
Thomas J. Sobocinski,
Supervisory Special Agent
Federal Bureau of Investigation, Washington, DC

THE TERRORIST THREAT: IMPLICATIONS FOR HOMELAND SECURITY

Abstract

Since 9/11, the United States implemented radical changes to its counterterrorism strategy and capabilities. Recently, critics have called into question the current strategy for fighting a war on terror. This thesis provides a summary of the two most common competing criticisms of the U.S. counterterrorism strategy. On the one hand, critics argue that the threat has been exaggerated. On the opposite side of the spectrum, critics argue that we are engaged in a war between Islam and the West. An examination of the evidence used by these competing criticisms, combined with a review of existing U.S. strategies, provides a foundation for the construction of an appropriate response to terrorism.

This review reveals evidence that the threat should be evaluated differently for domestic and international counterterrorist threats. Internationally, the U.S. engaged in a battle with a radical Islamic insurgency. Domestically, the terrorist threat is made up of terrorist operators who are engaged in a wide variety of criminal activity. Although the U.S. is unprepared for the external threat posed by radical Islamic insurgents, the post-9/11 enhancements to homeland security are appropriate to meet the current domestic threat.
John Sudnik
Deputy Chief
New York Fire Department

DIRTY BOMB™ ATTACK: ASSESSING NEW YORK CITY’S LEVEL OF PREPAREDNESS
FROM A FIRST RESPONDER’S PERSPECTIVE

Abstract
Past history and recent intelligence have shown that New York City (NYC), a critical node of the
U.S. economy, is clearly in the terrorist’s crosshairs. In order to reduce the probability, lessen the
risk, and minimize the consequences of a Radiological Dispersion Device (RDD), or “dirty
bomb,” attack, NYC’s first responders must be adequately prepared for its seemingly inevitable
occurrence. This particular type of attack on NYC has the potential to create immense panic and
confusion on behalf of the general public. Adding to the complexity of the problem is the notion
that, since 9/11, the expected actions taken by employees in NYC high-rise office buildings in
response to shelter-in-place instructions can be extremely difficult to predict. Therefore, a
proposed public awareness campaign and a shelter-in-place plan are two cost-effective and easily
implemented terrorism preparedness programs that would build the confidence and increase the
capability of the citizenry. Since an RDD incident would likely result in a major inter-agency
emergency operation, the unification of command, control, and coordination among NYC’s first
responder community is an essential element to its overall success. Hence, an informed and
collaborative response by both public and private sector entities could potentially reduce
casualties and save lives.
APPENDIX F

Sample Intelligence Fusion Center Alerts for

Nassau County, NY, SPIN Program
From: Atchison, Jesse on behalf of SPIN
Sent: Monday, September 24, 2007 10:53 AM
Subject: SPIN - US DEPARTMENT OF STATE TRAVEL ADVISORY

NASSAU COUNTY
SPIN
A Crime Prevention Partnership
SECURITY / POLICE INFORMATION NETWORK

THOMAS R. SUOZZI
County Executive

LAWRENCE W. MULVEY
Commissioner

TRAVEL Warning
United States Department of State
Bureau of Consular Affairs
Washington, DC 20520

This information is current as of today, Mon Sep 24 10:43:17 2007.

YEMEN

September 24, 2007

This Travel Warning updates information on security incidents in Yemen and reminds U.S. citizens of the high security threat level in Yemen due to terrorist activities. This supersedes the Travel Warning for Yemen issued April 30, 2007.

The Department of State continues to strongly urge U.S. citizens to consider carefully the risks of traveling to Yemen. The security threat level remains high due to terrorist activities in Yemen, and U.S. citizens in Yemen should exercise caution and take prudent measures to maintain their security: maintain a high level of vigilance, avoid crowds and demonstrations, keep a low profile, vary times and routes for all travel, and ensure travel documents are current. The U.S. Embassy in Sanaa advises American citizens in Yemen to exercise particular caution at locations frequented by foreigners countrywide and at restaurants and hotels frequented by expatriates. From time to time, the Embassy may restrict official Americans from restaurants, hotels, or shopping areas. The Department of State strongly encourages American citizens to consult the most recent Warden Messages (http://usembassy.state.gov/yemen/citizen_services.html) to get the most up-to-date information on security conditions. Americans who believe they are being followed or threatened while driving in urban centers should proceed as quickly as possible to the nearest police station or major intersection and request assistance from the officers in the blue-and-white police cars stationed there.

The Department remains concerned about possible attacks by extremist individuals or groups against U.S. citizens, facilities, businesses, and perceived interests. On July 2, 2007, suspected al-Qa'ida operatives carried out a vehicle-borne explosive device attack on tourists at the Belquis Temple in Marib, which resulted in the

3/27/2008
The deaths of eight Spanish tourists and two Yemenis. The targeting of tourist sites by al-Qa’ida may represent an escalation in terror tactics in Yemen.

On February 3, 2006, 23 convicts, including known affiliates of al-Qa’ida, escaped from a high-security prison in the capital city, Sanaa. Among the al-Qa’ida associates were individuals imprisoned for their roles in the 2000 bombing of the USS Cole and the 2002 attack on the French oil tanker Limburg. In the weeks following the escape, some prisoners voluntarily turned themselves in to authorities; to date however, some escapees remain at large. Two of the escapees were killed in vehicle-based suicide attacks on oil facilities near Mukalla and Marib on September 15, 2006. Those attacks were followed by the arrest the next day in Sanaa of four suspected Al Qa’ida operatives, who had stockpiled explosives and weapons. Additionally, on December 5, 2006, a lone gunman opened small arms fire outside of the U.S. Embassy compound during the early morning hours. The assailant, wounded by host-nation security personnel and subsequently arrested, was the sole casualty.

Since January 2007, the Government of Yemen has been battling al Houthi rebels in and around the northern governorate of Saada. While foreigners have not been targeted, hundreds of soldiers and civilians have been killed in the ongoing violence. U.S. citizens traveling in Yemen should be aware that local authorities occasionally place restrictions on the travel of foreigners to parts of the country experiencing unrest. In addition, the U.S. Embassy itself often restricts travel of official personnel to the tribal areas north and east of Sanaa, such as the governorates of Amran, Al Jawf, Hajja, Marib, Saada, and Shabwa. Travelers should be in contact with the Embassy for up-to-date information on such restrictions.

U.S. citizens who remain in or travel to Yemen despite this Travel Warning should register at the Consular Section of the U.S. Embassy in Sanaa and enroll in the warden system (emergency alert network) in order to obtain updated information on travel and security in Yemen. This can be done online prior to arrival in Yemen at https://travelregistration.state.gov/Ifbr.

The U.S. Embassy is located at Dhahr Himyar Zone, Sheraton Hotel District, P.O. Box 22347. The telephone number of the Consular Section is (967) (1) 755-2000, extension 2153 or 2266. The fax number is (967) (1) 303 175. The after hours emergency number is (967) (1) 755-2000 (press zero for extension) or (967) 733213509. From time to time the Embassy may temporarily close or suspend public services for security reasons. Emergency assistance to U.S. citizens during non-business hours (or when public access is restricted) is available through Embassy duty personnel.

Current information on travel and security in Yemen may be obtained from the Department of State by calling 1-888-407-4747 within the United States and Canada or, from overseas, 1-202-501-4444. U.S. citizens should consult the Consular Information Sheet for Yemen, the Middle East and North Africa Public Announcement, and the Worldwide Caution Public Announcement on the Department’s Internet site at http://travel.state.gov. (Up-to-date information on security conditions can also be accessed at http://usembassy.state.gov/yemen/citizen_services.html.)

P.O. JESSE ATCHISON

The information contained in this message is intended only for S.P.I.N. members. Please be aware that any unauthorized dissemination or copying of this communication is strictly prohibited. If you have received this message in error, please immediately notify us by replying to the message and deleting it from your computer. Thank you.
Picciano, Susan

From: Picciano, Susan on behalf of SPIN
Sent: Friday, March 30, 2007 11:26 AM
Subject: SPIN - WEEKEND EVENTS

FOR WIDE DISTRIBUTION

FRIDAY MARCH 30, 2007

North Fork Theatre
Lonestar, 8pm

Tilles Center for the Performing Arts
Andrea Marcovicci, 8pm & 10pm

SATURDAY MARCH 31, 2007

North Fork Theatre
Jackie Mason 7pm

Tilles Center for the Performing Arts
Academy of St. Martin in the Fields, 8pm

Nassau Coliseum
NY Islanders vs. Ottawa Senators, 7pm

Bellmore Village Merchants Parade, 12 - 1pm
Route: Petit Ave, in front of Fire Dept, Bedford Ave, Oak St.

Greater Long Island Running Club Road Race, Plainview/Old Bethpage, 9 - 10am
Route: Corner of Milford & Washington Ave, Plainview Rd, Haypath Rd, Fairway Dr, Round Swamp Rd, Old Country Rd, Bethpage Rd, Washington Ave.

SUNDAY APRIL 1, 2007

North Fork Theatre
Wayne Newton, 3pm

Tilles Center for the Performing Arts
Long Island Philharmonic, 7:30pm
Picciano, Susan

From: Atchison, Jesse on behalf of SPIN
Sent: Tuesday, December 05, 2006 4:07 PM
Subject: SPIN -INFORMATION WANTED: MISSING PERSON

FOR WIDE DISTRIBUTION

THE NCPD SPECIAL SERVICES SQUAD, MISSING PERSON SECTION, IS REQUESTING THE PUBLIC’S ASSISTANCE WITH LOCATING A FEMALE WHITE, 58 YEARS OLD MISSING FROM WANTAGH NY. (SEE ATTACHMENT)

P.O. JESSE ATCHISON
Phishing and Pharming are a rapidly growing class of identity theft scams on the Internet that defraud individuals and financial institutions. Estimated losses from phishing attacks are constantly growing and the public's trust in the Internet continues to be undermined. By making consumers uncertain about the integrity of the Internet phishing threatens to make us all less likely to use the Internet for secure transactions.

Fraud is opportunistic, and fraud perpetrators are always among the first to appreciate the potential of new technology.

Here is some helpful information we hope will assist you in preventing, coping, or fighting back from Phishing or Pharming attacks.

Feel free to share this information to all who may benefit from it.

Sue Picciano
Watch out for "phishy" emails. The most common form of phishing is emails pretending to be from a legitimate retailer, bank, organization, or government agency. The sender asks to "confirm" your personal information for some made-up reason: your account is about to be closed, an order for something has been placed in your name, or your information has been lost because of a computer problem. Another tactic phishers use is to say they're from the fraud departments of well-known companies and ask to verify your information because they suspect you may be a victim of identity theft! In one case, a phisher claimed to be from a state lottery commission and requested people's banking information to deposit their "winnings" in their accounts.

Don't click on links within emails that ask for your personal information. Frauds use these links to lure people to phony Web sites that looks just like the real sites of the company, organization, or agency they're impersonating. If you follow the instructions and enter your personal information on the Web site, you'll deliver it directly into the hands of identity thieves. To check whether the message is really from the company or agency, call it directly or go to its Web site (use a search engine to find it).

Beware of "pharming." In this latest version of online ID theft, a virus or malicious program is secretly planted in your computer and hijacks your Web browser. When you type in the address of a legitimate Web site, you're taken to a fake copy of the site without realizing it. Any personal information you provide at the phony site, such as your password or account number, can be stolen and fraudulently used.

Never enter your personal information in a pop-up screen. Sometimes a phisher will direct you to a real company's, organization's, or agency's Web site, but then an unauthorized pop-up screen created by the scammer will appear, with blanks in which to provide your personal information. If you fill it in, your information will go to the phisher. Legitimate companies, agencies and organizations don't ask for personal information via pop-up screens. Install pop-up blocking software to help prevent
APPENDIX G

Sample White Paper MMRS (Metropolitan Medical Response System)
METROPOLITAN MEDICAL RESPONSE SYSTEM

I. Introduction/Purpose

In August of 2007, a working group was convened at the request of the National Preparedness Directorate of the Federal Emergency Management Agency. It was comprised of alumni from the Center for Homeland Defense and Security at the United States Naval Postgraduate School and additional subject matter experts within the fields of emergency management, fire-fighting, emergency medical services and public health. This working group was asked to conduct an assessment of the state of the Metropolitan Medical Response System (MMRS), and then generate a series of recommendations to improve the program. The purpose of this paper is to provide an overview of the elements of the working group's assessment, followed by a series of recommendations.

Although great value would be derived from an extensive scientific analysis of the MMRS program nationwide, the working group was asked to undertake a process that relied primarily on the professional experience of the group members. The goal was to provide within three months professional programmatic recommendations that could be integrated in the MMRS grant guidance development process in the coming years. Realizing that the time limitation was elemental to the paper request, the work group asked the Department of Homeland Security to recommend four successful programs of different sizes and from different locations. Using only their professional experience with the MMRS program as a standard, the working group developed an interview questionnaire intended to elicit information on the factors contributing to the jurisdiction’s success. This model will never withstand the critical eye of social science interviewing and analysis processes necessary for journal publication. Alternately, this assessment process was steeped in hours of discussion and debate among the working group comprised of MMRS technical experts.

Since its inception in 1995, the Metropolitan Medical Response System (MMRS) Grant Program has enjoyed many successes. Twenty-five major jurisdictions were participating in the program within two years of its launch, developing metropolitan medical strike teams, task forces, or response systems to improve their jurisdictions’ ability to respond to Chemical, Biological, Radiation, Nuclear and Explosive (CBRNE) incidents. Today, there are Metropolitan Medical Response System in 124 jurisdictions, covering a majority of the nation’s population and all of its major population centers. Those jurisdictions have improved their emergency preparedness in a broad range of capability focus areas, based upon local needs. Leaders from jurisdictions where MMRS has been successfully implemented agree that capabilities built, networks formed, and plans generated thus far have provided tangible benefits and increased jurisdictional preparedness.

Conversely, there are many issues that must be addressed in order for the program to be successful in the long term. One such is the program’s failure to require MMRS jurisdictions to develop baseline life-saving capabilities fully before developing supporting capabilities, which has resulted in capability inconsistencies among MMRS jurisdictions. Other challenges and gaps include the program’s ever-expanding list of capability focus areas eligible for the
expenditure of grant funds diluting the impact of limited funds, the inability of some MMRS jurisdictions to utilize or maintain target capabilities developed in previous grant cycles, and the lack of a consistent and reliable method of verification that those same MMRS capability areas have been developed and maintained.

In short, the MMRS program is increasingly unfocused. It has become a catch-all program that lacks an articulation of consistent, achievable standards designed to ensure that critical, baseline life-saving capabilities are common to all MMRS jurisdictions. This omission is counterproductive for program constituents, including the US Department of Homeland Security, individual MMRS jurisdictions, and members of the public. The future value, viability, and sustainability of the MMRS program are predicated upon the program reestablishing its focus on the initial on-scene and pre-hospital activities most critical in the aftermath of any mass casualty event.

II. The Past: Best of Intentions

The MMRS program has existed as a national program for over ten years. Initially envisioned as medical response effort for special events in Washington, D.C. and Atlanta, Ga., MMRS soon morphed into a much different project, and was subsequently used as a medical planning and coordination mechanism for larger cities. Initial jurisdictions searched for strategies that would enable them to provide the required deliverables. In areas where strong collaborative partnerships already existed, response capabilities were already good and MMRS provided a valuable funding resource. In other jurisdictions, varied conceptual frameworks and differences in mission and culture between organizations was a frequent barrier to effective coordination efforts. In many cases, the MMRS was buried within, or otherwise indistinguishable from, an existing response agency, such as the fire department or emergency medical system. In fact, MMRS existed as a contractual arrangement with the individual municipalities until FY 2004.

Program requirements evolved as each new group of jurisdictions was selected. New recipients had to meet a longer list of deliverables. In 1999, twenty new jurisdictions were added to the list and statements of work addressed a new list of functions. By 2000, twenty-five more jurisdictions were added and, again, new tasks were required. At this point, the Department of Health and Human Services (DHHS) was funding other health and medical response programs through public health departments and hospitals, apparently without regard to what the MMRS program was designed to accomplish. Subsequent to 2001, an additional fifty jurisdictions were added to the MMRS program, often within the same Metropolitan Statistical Area (MSA.) To the surprise of participating jurisdictions, by 2002, the U.S. Office of Management and Budget suggested the termination of the program. Since 2002, the program has been plagued by consistent White House recommendations for zero-budgeting, and the National Disaster Medical System has grown in popularity as the federal medical response capability for major disasters. Generally, the program has faced increased competition for both funding and recognition.
III. The Present: A Lack of Focus

The MMRS program was initially designed to equip local jurisdictions to provide initial, onsite, emergency medical care after a terrorist incident involving chemical, biological, or radiological agents for the first 24 to 72 hours, until significant mutual aid could arrive. During the initial program years the mission was intended to:

- detect and identify chemical, biological and radiological agents
- decontaminate patients
- provide victim triage and medical treatment
- transport victims to local hospitals
- coordinate the transport of victims to more distant hospitals.

In subsequent years, the purpose of the MMRS expanded to facilitating the development of capabilities to respond to CBRNE incidents, natural disasters, and pandemic influenza. MMRS grant funds can currently be used for various and disparate activities: to organize, recruit, establish and train Medical Reserve Corps volunteers, train personnel to support pandemic influenza preparedness, stockpile influenza vaccine and anti-viral medications for emergency responders, strengthen interoperable communications or to strengthen information sharing and collaboration. The flexibility of the MMRS program is popular with some local jurisdictions and is deemed beneficial because it allows communities "to tailor the MMRS program to meet its specific needs."

Conversely, some MMRS jurisdictional representatives and participants express concern that the MMRS program is hindered by its flexibility. This flexibility, as evidenced by the ever-increasing number of Capability Focus Areas, results in the lack of a clearly-defined program focus, thereby muddling any attempt to analyze or assess outcomes along a consistent and predictable basis. The increasing flexibility of the MMRS program has also permitted individual MMRS jurisdictions to emphasize capabilities that do not support the primary scene and pre-hospital rescue and treatment capabilities initially considered fundamental and vital to the MMRS program.

The result is that the designation of an MMRS jurisdiction denotes few or no common specific capabilities or resources, with no predictable pattern of future maintenance and/or development. This is a critical “cart-before-the-horse” failure. In order to ensure the consistent availability of capabilities to service providers and the resulting flow of critical services to affected populations, MMRS jurisdictions must, first, fully develop essential life-saving capabilities before any ancillary capabilities.

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53 Institute of Medicine, Preparing for Terrorism, 23.
55 Titan Corporation, History, 3.
There are additional hurdles to developing consistent program components, applications and outcomes, including:

A. Redundant Mission and Goals among Department of Homeland Security and Department of Health and Human Services Preparedness Grants

The Centers for Disease Control and Prevention's (CDC) Bioterrorism Preparedness Grant, and the Department of Health and Human Services' (DHHS) Health Resources and Services Administration (HRSA) Hospital Preparedness Program Grant, and the MMRS grant share common or redundant Target Capabilities (TCs), Capability Focus Areas (CFAs) or deliverables. While inter-grant commonality and consistency allows funds from multiple grants to be spent in common areas, this redundancy has the unintended consequence of prioritizing those common projects or deliverables, even if that project or deliverable would not be a priority based upon creating life saving capacity. Redundant TCs, CFAs or deliverables have in some cases caused duplication of effort and resource expenditure.

B. Inability to Maintain Capabilities Developed in Previous Grant Cycles

The cost to develop and maintain the capabilities required in the MMRS Grant's Capability Focus Areas (CFAs) exceeds the grant-based funding contained in the MMRS grant-based awards. In fact, it exceeds the grant-based funding for all but a few jurisdictions that receive the largest State Homeland Security Grant Program (SHSGP), Urban Area Security Initiative (UASI), and MMRS grant allocations. Perhaps most troubling is the fact that the capabilities outlined in the MMRS CFAs cannot –at approximately $225,000 per year -be sustained with MMRS funding alone.

C. Inability to verify the Development and Maintenance of Capabilities

The current MMRS program does not have an adequate assessment methodology or metrics to measure or even verify that essential life-saving and other capabilities have been developed or are sustained by MMRS jurisdictions. Unfortunately, federal reports suggest that a significant portion of MMRS jurisdictions have under-performed in meeting the MMRS program deliverables. It is apparent, therefore, that the MMRS program must include a reliable and verifiable assessment methodology and metrics, along with a consistent reporting methodology in order to assure that MMRS jurisdictions consistently develop and maintain the most important lifesaving capabilities.

The inconsistent application of MMRS funding has resulted in vastly inconsistent baseline and enhanced capabilities among participant jurisdictions, thus, contrary to the fundamental intent of the original program design, designation as an MMRS jurisdiction denotes neither common nor consistent capabilities. As a result of this inconsistency, the future viability and the ultimate purpose of the MMRS program have been questioned, often by some of the program's historically enthusiastic supporters. To improve the value, viability, and sustainability of the MMRS program, the balance of this white paper argues that the MMRS
program should be programmatically refocused on initial on scene and pre-hospital activities that are critical in the aftermath of a mass casualty event.

IV. The Future: Recall, Refocus, Reconsider

The focus group conducted limited interviews (sixteen questions) of program managers in four successful MMRS jurisdictions in order to corroborate or refute some common perceptions/ideas held by the focus group members and listed below. The focus group determined that the interviews should occur prior to the generation of recommendations. The group assumed jurisdictions that were both MMRS and UASI Areas would be further along in MMRS program development due to the (assumed) availability of additional funds to accomplish program goals. Four successful MMRS jurisdictions were identified by DHS program staff, of which three were also MMRS/UASI Areas: Hampton Roads, Omaha, San Antonio, and Shreveport. Hampton Roads just attained UASI status in 2007.

As expected, the jurisdictions agreed on only a few issues. Participants indicated that the program has served successfully to enhance relationships among many multi-disciplined professionals. It also enabled them to obtain equipment, and has improved medical response capability. Respondents also identified common barriers (that involve multi-agency, multi-jurisdictional coordination), have redundant notification systems, and agree with implementation of program performance measures. Lastly, when asked about which grant funds are used to enhance the impact of MMRS funding, interview participants consistently cited DHHS Health Resources and Services Administration (HRSA) funds.

When questioned about specific recommendations generated by the focus group (though their origin was not disclosed), the response was split evenly. Questions included: Should MMRS develop fewer more focused and narrowly defined planning requirements; and, Should the future of MMRS include a dedicated national mission. When asked about a whether a tiered approach to funding should be constructed, with segmentation based on completing program performance benchmarks, the responses were two for and two against.

There was no notable consensus on any of the other questions, which reinforced an initial MMRS focus group assumption regarding jurisdictional diversity based on many factors including the year of program entry and varying program deliverables. For example, when asked about MMRS best practices, two jurisdictions mentioned strike team development in which they had different response capabilities. When asked about which capability focus areas have been targeted, responses addressed radiological detection, medical surge, mass prophylaxis, public information, mass care, and behavioral health. This result reinforced the groups assumption that the current MMRS likely has too wide a range of focus areas for any successful program.

V. Summary Observations:

The recognition of an uncertain MMRS future has prompted this in-depth review of the program. Certainly, those involved in program delivery on a daily basis understand the value
of MMRS, and are committed to ensuring the continued viability of this important program. Overall, the review panel unanimously agrees that federal funding for the MMRS program should be continued and that the program remains both viable and necessary to protect the citizens of this nation.

The diffuse structure of the MMRS program has had both benefits and drawbacks. Focus group members, along with the MMRS jurisdictional leaders interviewed, acknowledge that the flexibility to use MMRS grant funds to meet local needs identified through gap analysis has been desirable in the past. This flexibility generally surpasses that of other federal grants, more easily supports local planning efforts, and continues to be valuable to many jurisdictions. This same diffuse program focus, however, combined with jurisdictional variance in terms of size, tenure and level of active program participation has, in some instances, contributed to wavering program accountability and performance results.

Individual MMRS jurisdictions have used the program funds for a wide variety of purposes. Program guidance is typically written to allow flexibility and its interpretation has varied widely among representative jurisdictions. While reporting requirements are built into the grant, broad variance in reported results makes comprehensive assessment difficult, and thus also quantifying gains attributable to MMRS.

There is no national standard for MMRS. Tangible enhancements in capability are readily discernible in some jurisdictions and less so – or altogether absent – in others. This has resulted in a deterioration of program cohesion. Despite this, polled jurisdictions uniformly agree that MMRS has been a valuable tool for establishing and encouraging organizational relationships among health care, medical, and first responder communities.

VI. Recommendations:

As anticipated, there was little consensus in the program managers’ responses to the interview questions. Despite and due to these interview results, MMRS focus group members have drafted a series of recommendations drawn from both the interview process detailed above and from the collective professional experience of the focus group members, all of whom have direct experience with the MMRS program, coupled with literature review pertinent to the topic. In summary, the recommendations resulted from:

- vigorous debate and discussion among focus group members familiar with MMRS programs in different FEMA regions, of different sizes, and in different stages of program life-cycles.
- informal and loosely structured interviews with leaders of four successful (as identified by DHS) MMRS jurisdictions;

\[56\] MMRS jurisdictions reported that coordination of planning efforts, integration of communities, and the development and strengthening of networks resulted from program activity. It remains unclear to what degree these benefits would have been realized without MMRS program intervention.
interaction with subject matter experts and leadership from the national program office.

Above all, the focus group members and the leaders interviewed agree that relationships and response capabilities have improved across the nation as a result of the MMRS program. Furthermore, these leaders agree that for the program to continue with potentially reduced funding, program objectives must be clearly defined and measurable, and that funding accountability is paramount. Five key recommendations emerged from the work of the MMRS focus group:

1. **Limit the scope** of the program to focus on one primary and a very few secondary objectives. The focus group felt that having so many targets for activity is problematic. The program’s primary program focus area should be “pre-hospital care and emergency treatment of patients,” and the secondary areas should support the ability of the jurisdiction to respond to a mass casualty event regardless of the triggering event. This area has a minimal amount of overlap with other Department of Health and Human Services grant programs relative to administrative and grants funding, and is an area well-suited to the “localized” nature of the MMRS concept.

2. **Develop better metrics** to clearly define performance expectations for jurisdictions and enhance the ability of the national office to ensure accountability and the best use of the funds. The national office should regularly collect and analyze the jurisdictional data resulting from the new metrics, and use this information to support effective programs, assist struggling programs, and eliminate programs that do not meet the program measures.

3. **Subdivide the existing grantee jurisdictions into tiers** to “right size” expectations and provide ongoing funding commensurate with their rating on effective performance metrics. Existing MMRS jurisdictions vary greatly in terms of population, population density, experience, and response capability. It follows that the jurisdictions’ ability to build capability and perform at a desired level in the future will vary accordingly. Tiered jurisdictions could more effectively:

   - Set reasonable and attainable goals, measurable objectives, and verifiable benchmarks within tiers, which would be more consistent with a particular jurisdiction’s existing capability and resources. This would give all jurisdictions equal opportunities to be successful. Also, measure all

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57 Sampled jurisdictions reported activity and effort expended on eighteen separate Capability Focus Areas CFAs, within program guidelines. These ranged from behavioral health to patient tracking to medical surge projects. This wide variety in program activity has led to difficulty describing the programs “core line of business.”
jurisdictions against consistent outputs, and acknowledge variance in their current capability. In this manner, consistent pursuit of the overarching goal is not compromised and a degree of parity can be attained.

- Leverage the existing resources, experience, and related and supporting structures of larger jurisdictions, while maintaining sensitivity to the unique challenges of smaller or newer jurisdictions. MMRS/UASI jurisdictions derive an additional benefit from support provided by larger grant streams. Smaller jurisdictions rely more heavily on MMRS funding to build capability, while all jurisdictions are equally dependent on MMRS funds for sustainability.
- Allow the program to achieve greater results because viewed system-wide, jurisdictional resources, size, and experience would match more closely with expected jurisdictional performance.

4. **Revise the funding allocation** methodology to better align MMRS with similar grant programs and to reward strong performance, innovation, and enhanced capability. All jurisdictions would receive a base allocation, with a portion of program funds withheld initially, to be released based on a competitive performance basis.

5. **Shift the funding vehicle** from an open-ended grant to a direct contract between FEMA and participating jurisdictions in order to enhance accountability, remove intermediary and redundant layers of management, deliver more of a limited funding stream directly to the resource provider, and eliminate funding to jurisdictions that consistently do not meet outcomes. The unique nature of 124 different programs, combined with the flexibility required to develop locally recognized value and achieve the suggested benchmarks and metrics, gives further merit to the necessity of a contractual arrangement. The panel further recommends that the Department of Homeland Security study the area of measurable metrics based on the Target Capabilities List for a period of one year to identify those that could be applied to the MMRS program nationwide. This research could reinforce the recommendation for tiered funding of the program based on jurisdiction size, other sources of program funding, and local program goals. Additional all-inclusive survey assessments could further define the associated successes and limitations of this tiered approach.

VI. **Conclusion**

In order to ensure a successful future, the MMRS program will require increased and consistent support at both the local and federal levels. While some policy makers and program managers believe that MMRS has served its purpose and is no longer needed, the MMRS working group strongly believes that MMRS remains vital to both citizen and first
responder protection. In many instances, the flexibility that has been a hallmark of the program has now buckled somewhat under the burden of the need for consistent and focused methods of performance measurement, especially with regard the CFAs, and the objective need to rein in peripheral capability development. The future safety of our nation’s citizens and first responders will not be achieved by eliminating the MMRS program. Rather, this working group is convinced that through a refocus of the MMRS mission and by establishing program accountability, distinct and vital homeland security objectives will undoubtedly be realized. A revitalized MMRS program will make the nation safer through the measured and appropriate elimination of critical safety and response gaps and inconsistencies that continue to plague medical response capabilities throughout the entire nation.
APPENDIX H

Distribution of CHDS Alumni by State