Terra Incognita: Mapping American Intelligence Education Curriculum

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Abstract

For more than two decades, degree-granting intelligence programs have popped up around the U.S., representing the largest and perhaps most enduring investment in American intelligence education. Scholars have addressed issues in American intelligence education, but to date, there has been no focused study that has mapped and analyzed these programs. This article addresses this gap by answering the questions: What are the American intelligence programs and what content is being taught? We answered this question by systematically identifying all 17 American intelligence education programs (1992-2012). The picture that emerges is one of delayed, but rapid growth: most programs were founded after 2005. After collecting and analyzing hundreds of course descriptions using a widely-accepted qualitative data analysis method called constant comparison, we mapped the curricular structure of the intelligence programs in aggregate. The contribution of this research is to increase understanding of the structure of American intelligence curriculum for current and future intelligence educators as well as employers.

Introduction

During antiquity map makers designated unexplored areas *terra incognita*, Latin for "unknown land." U.S. civilian intelligence education programs represents a *terra incognita*. While other scholars have sketched out the outline of American intelligence education, generally, and others engaged with key issues but there has been no focused study of intelligence degree-granting programs.[1] Examining these programs is important because their stated purpose is to produce entry-level analysts for the U.S. Intelligence Community and other sectors, such as law enforcement and business. At the same time, these programs represent the largest, and perhaps, the longest-term institutional investment in civilian intelligence education.

Our study proves the point that the investment has been significant: we identified 17 intelligence programs offering 26 intelligence degrees founded over the last two decades with most new degrees being offered after 2005. This delayed growth is probably a result of a lack of qualified instructors and the need to generate intelligence curriculum. Regardless of the cause, since 2009 at least one program has begun offering a new intelligence degree each year. Few fields can boast such growth. Another trend is the reliance on the internet to reach students around the United States and the world. While a few programs are near Washington, D.C.—an advantage for those seeking employment in the national security sector—most are far from the Capital Beltway. Not surprisingly, nearly all intelligence programs are offer some or all of their content online.

To delve into the content of the programs we used the qualitative method "constant comparison" to code and sort hundreds of course descriptions. From this analysis we identified three knowledge areas that American intelligence programs are built upon: Procedural, core, and domain. Procedural knowledge teaches students *how* to accomplish intelligence tasks, such as using analytic methodologies and writing intelligence reports. Core knowledge addresses the organizational, historical and ethical content areas of intelligence; "the nuts and bolts" of how intelligence "works." Course content addresses theoretical issues general to intelligence, such as legal and

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[1] For general surveys of the field, see William Spracher, *National Security Intelligence Professional Education: A Map of U.S. Civilian University Programs and Competencies* (Washington, D.C.: National Defense Intelligence College, 2009), and; Michael Landon-Murray, "Social Science and Intelligence Analysis: The Role of Intelligence Education," *Journal of Applied Security Research* 6 (2011);

ethical issues as well as organizational topics. Domain knowledge focuses on topics specific to the three domains where intelligence is applied: national security, criminal, and competitive intelligence. For example, important topics in competitive domain would include how businesses formulate strategy and the protection of intellectual property, among others.

The paper proceeds as follows: We begin by identifying key terms and surveying the intelligence education literature, with an emphasis on the main debates and gaps in intelligence curriculum. The second section of the paper identifies the intelligence programs and important trends. In the third section, we present the methodology for building the curricular map of American intelligence programs and present the results: The three knowledge pillars along with examples from the programs. The final section takes looks to opportunities in curriculum design and avenues for future research.

Setting the Scope and Reviewing the Literature

A review of the literature suggests that the market for intelligence education is diverse and growing, but the civilian sector, specifically degree-granting programs, is an area of rapid expansion. Yet, the literature is mostly silent on the number of these programs and their curricular structure.

Defining Terms and the Rise of Degree-granting Intelligence Education Programs

Before addressing the literature on intelligence curriculum, two terms require clarification: Intelligence Studies and intelligence education. Intelligence *Studies* is the academic inquiry into the processes and topics related to intelligence.[2] Intelligence *education*, however, is an umbrella term for the process of educating intelligence practitioners and scholars.[3] The American intelligence education market is large and can be divided into four sectors professional-military, pre-professional-military, professional-civilian, and pre-professional-civilian.[4] The professional military sector serves armed forces personnel through the National Defense Intelligence College, while pre-professional military intelligence education are found in the five service

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[2] For the purposes of this research, intelligence is defined as the collection and use of secretive information to inform decision making in the national security, criminal, and competitive realms.

[3] Moore, Gregory, "What's It All About, IAFIE? Moving Forward with the Development of Intelligence as an Academic Discipline," *IAFIE Sixth Annual Conference*, Ottawa, Canada, May 26, 2010.

[4] Stephen Campbell, "A Survey of the US Market for Intelligence Education," *International Journal of Intelligence and CounterIntelligence* 24:2 (2011): 307-337.

academies, such as West Point and the Naval Academy. The professional-civilian sector provides intelligence education for IC employees, the most prominent example being the Sherman Kent School of Intelligence Analysis founded in 2000.

The last sector, pre-professional-civilian, is the focus of this research.[5] Unlike the other three sectors, the pre-professional-civilian programs are the only truly competitive sector and competition is steadily increasing with the rise of degree-granting programs, or "intelligence programs" as they are known.[6] The first calls for intelligence education came from Washington Platt and Peter Dorondo in the late 1950s and early 1960s.[7] Both authors argued that higher education has a role to play in teaching intelligence but, neither made the case for a standalone intelligence programs. Over the next several decades, the sector for civilian intelligence education grew at a modest rate with courses and concentrations added throughout the United States, mainly in liberal arts departments, such as Political Science and History. These programs that have concentrations, minors, or offer a small number of intelligence courses are termed "traditional intelligence education" in this study. An example of traditional intelligence education is the intelligence concentration in the Security Studies Program at Georgetown University's School of Foreign Service. Through the concentration, students learn about practical issues in intelligence along with theoretical issues, such as the intelligence cycle.

In 1992, a watershed event occurred when Mercyhurst College—renamed Mercyhurst University—founded the first intelligence program. The purpose of the program was to produce "analytic generalists, with process-oriented, mechanical knowledge sets."[8] The new Mercyhurst "generalists" are trained to be competent in multiple analytic methods that can be applied to a wide variety of tasks. This approach differs from the traditional model, such as Georgetown's concentration, that produces specialists in a substantive area (e.g. Russian Studies) often rooted in Political Science.[9]

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[5] The term "pre-professional" is somewhat of a misnomer because students with professional experience enroll in this sector

[6] Campbell, "A Survey of the US Market for Intelligence Education," p. 315

[7] Washington Platt, *Strategic Intelligence Production: Basic Principles* (Santa Barbara, CA: Praeger, 1957). Also see: Peter J. Dorondo, "For College Courses in Intelligence," *Studies in Intelligence*, 4:3 (Summer 1960): 15–19.

[8] Michael Landon-Murray, "Moving US Academic Intelligence Education Forward: A Literature Inventory and Agenda," *International Journal of Intelligence and CounterIntelligence* 26:4 (2013): 750.

[9] Ibid. p. 746.

48

In the years following the September 11 attacks, the public and policymakers recognized that intelligence plays a major role in national security, law enforcement, and even business decision making.[10] As a result, demand grew for intelligence professionals, and civilian intelligence programs stepped in to fill the void. The U.S. Government also supported a few programs through the Intelligence Centers for Academic Excellence program, a Congressionally mandated program designed to increase the number of diverse IC applicants.[11]

Curriculum in Intelligence Programs

The growth of intelligence programs raises the question of what curriculum should be taught. In an early effort to describe intelligence program's curriculum, Martin Rudner synthesized the content of five programs from Australia, the United States, United Kingdom, and Canada.[12] The resulting curriculum includes core, cognate, and optional courses. The core courses are focused on topics that provide a framework for understanding intelligence. These courses include comparative intelligence systems, intelligence and statecraft, intelligence strategies and operations, and national security law. The cognate courses are related to intelligence but address related areas, such as area studies, conflict analysis, and philosophy of the law. Rudner also provides a list of optional courses designed to address to specific interests. While this study provides a first attempt to mapping intelligence education curriculum, how he synthesized the courses is not apparent in the article and only five programs were analyzed.

Another notable omission from Rudner's analysis are courses dedicated to analytic methodology, a point made more important given the ongoing training versus education debate. Proponents of including training in intelligence education emphasize the need for procedural knowledge that translates into on-the-job competencies. It is worth noting that proponents of a training approach to intelligence education focus on analytical competencies, such as the use of specific methodologies, rather than

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[10] Jonathan Smith, "Amateur Hour? Experience and Faculty Qualifications in US Intelligence Courses," *Journal of Strategic Security* 6:3 (2013): 25-26, available at: *http://dx.doi.org/10.5038/1944-0472.6.3.3.*
[11] Defense Intelligence Agency, "IC Centers for Academic Excellence" accessed February 7, 2014, available at: *http://www.dia.mil/training/iccentersforacademicexcellence.aspx.*
[12] The programs include: Mercyhurst University, Georgetown University, Brunel University (UK), University of Wales-Aberystwyth, Carleton University (Canada), Macquarie (Australia). See: Martin Rudner, "Intelligence Studies in Higher Education: Capacity-Building to Meet Societal Demand," *International Journal of Intelligence and CounterIntelligence*, 22:1 (2008): 110-130.

operational skills used by intelligence field.[13] Since September 11, improving analytical competencies has been a priority of the U.S. government after the perceived failures surrounding analysis of the Iraq's WMD program.[14] Proponents of the "education" approach argue intelligence education should rely more on "conceptual and theoretical frameworks having less immediate effect on performance."[15]

Despite the differences of opinion, the general consensus is that intelligence programs should involve elements from both sides of the debate.[16] Given this consensus, Michael Collier frames the issue with an apt analogy:

> "Every profession has tools. For example, the carpenter uses hammers, saws, drills, and planes—all designed for well-defined functions. The actual contents of a carpenter's tool kit depend on his level of skill— with more experience and training the carpenter needs ever more sophisticated tools in his kit. Intelligence analysts who adopt the pragmatic approach are no different—they require a diverse tool kit of analytic methods to meet their intelligence production tasking."[17]

In Collier's framing, the question is not whether to include training, but to provide an appropriate toolkit for the students' future careers. For example, Collier explains that because political-military analysts study the decisions of individuals, they should be trained in public choice and methodology from game theory.[18] Consequently, intelligence programs should equip students with a variety of analytical methodologies and skills that build useful on-the-job competencies along with substantive, theoretical knowledge. A question that emerges then, is what types of procedural knowledge are intelligence degree programs are providing to students?

Two research studies capture a portion, but not all, of the curriculum of intelligence programs. William Spracher identified six intelligence programs (Mercyhurst University, American Military University, Johns Hopkins, Pennsylvania State University, and Point Park University) and many other traditional intelligence education programs and then compared the

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[13] Landon-Murray, "Moving US Academic Intelligence Education Forward," p. 746.

[14] Landon-Murray, "Social Science and Intelligence Analysis."

[15] Stephen Marrin, "Training and Educating US Intelligence Analysts," *International Journal of Intelligence and CounterIntelligence* 22:1 (2008): 131-146.

[16] Landon-Murray, "Moving US Academic Intelligence Education Forward," p. 752.

[17] Michael W. Collier, "A Pragmatic Approach to Developing Intelligence Analysts," *Defense Intelligence Journal* Vol. 14, No. 2 (2005): 23.

[18] Collier, "A Pragmatic Approach to Developing Intelligence Analysts," p. 24.

curriculum with the Office of the Director National Intelligence's Core Competencies.[19] The competencies include: include 'engagement and collaboration, critical thinking, personal leadership and integrity, accountability for results, technical expertise, and communication.[20] Across all of the programs, Spracher found engagement and collaboration and technical expertise to be the least addressed competencies. Notably, technical expertise includes "professional tradecraft" which, depending on the source, includes analytical competencies.

In another study, Landon-Murray examined 19 degrees in academic programs that offered traditional intelligence education, including one intelligence degree-granting program, Mercyhurst University.[21] He found the program addressed some advanced social science research methods, but that there was insufficient depth and specialized courses in these areas due to the program's position in a liberal arts school. While these two studies lay important groundwork for examining U.S. intelligence education, a transparent methodology and analysis needs to be implemented that identifies all programs and details the curriculum.

Identifying American Intelligence Programs and Trends

To identify American intelligence programs, we followed a two-step vetting process. First, we queried search engines with a search string to generate an initial list of 28 programs. We chose an open search string to minimize the chance that we excluded any programs. The collection window includes programs that began offering intelligence degrees 1992 to 2012.[22] To determine if each was an intelligence program, we followed a simple rule: The program had to offer at least one degree with the word "intelligence" in the title. For example, a program with a degree in "Intelligence Studies and Homeland Security" would be included, but not a degree in "National and Homeland Security." To supplement this screening criteria we checked each program's website to gauge the focus on intelligence education. Second, we focused our analysis on Bachelor's degree or higher programs (see the methodological appendix for a list of excluded programs). We excluded traditional intelligence education offerings that fit within a broader degree or

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[19] William Spracher, *National Security Intelligence Professional Education: A Map of U.S. Civilian University Programs and Competencies*.
[20] Office of the Director of National Intelligence, "Intelligence Community Directive 610: Competency Directories for the Intelligence Community Workforce" (2008).
[21] Landon-Murray, "Social Science and Intelligence Analysis."
[22] Our search string contained the concepts of our study, Intelligence Studies and degree programs ("intelligence studies" + degree)

course of study, such as the Eastern Kentucky University's certificate in Intelligence Studies. Instead, we focused on programs offering degrees at the undergraduate and graduate because this is where the greatest institutional investment had been made. From the initial search results, only one program, Cochise College, offered an Associates' degree while nine others offered concentrations and majors—all of these programs were excluded from our analysis.

After applying the exclusion criteria, the final list contains 17 intelligence programs offering 26 intelligence degrees (see figure 1, below).[23] There is almost an even split between undergraduate and graduate degrees: across the 26 degrees 14 degrees are undergraduate and 12 are graduate degrees, suggesting equal coverage at both levels of curriculum. Not surprisingly, the most common degree titles are "intelligence studies" and "intelligence analysis" with a clear emphasis on national security, rather than competitive and criminal intelligence. Even with the concentration in a few areas there are a few degrees that stand out. Mercyhurst University provides a B.A. in "Business and Competitive Intelligence" and Embry-Riddle provides a B.S. "Cyber Intelligence and Security." Another notable trait of the degrees is the differentiation between B.A./M.A. and B.S./M.S. In theory, the B.A./M.A degrees should be more expansive in scope and flexible in curriculum structure. In these degrees students are afforded the flexibility to build a more open program of study. The B.S./M.S degrees are typically more focused on skills with more emphasis on required core courses.

Figure 1: Intelligence Programs

Institution	Degree	Degree(s) Name
American Military University	B.A.	Intelligence Studies
	M.A.	Intelligence Studies
Angelo State University	B.S.S.	Intelligence, Security Studies, and Analysis
	M.S.S.	Intelligence, Security Studies, and Analysis
Bellevue University	B.S..	International Security and Intelligence Studies
	M.S.	International Security and Intelligence Studies

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[23] Brookline College previously offered a Bachelor of Science in Criminal Justice and Intelligence Analysis but the degree was discontinued in 2014, available at: *http://brooklinecollege.edu/wp-content/uploads/2014/09/Catalog-Supplement-9262014.pdf*.

California State University-Bakersfield	B.A.	Global Intelligence and National Security
Coastal Carolina University	B.A.	Intelligence and National Security Studies
Embry-Riddle University	B.S.	Cyber Intelligence and Security
	M.S.	Security and Intelligence Studies
Fayetteville State University	B.A.	Intelligence Studies
Henley Putnam University	B.S.	Intelligence Management
	M.S.	Intelligence Management
Institute for World Politics	M.A.	Strategic Intelligence Studies
James Madison University	B.S.	Intelligence Analysis
Johns Hopkins University	M.S.	Intelligence Analysis
Mercyhurst University	B.A.	Intelligence Studies
	B.A.	Business and Competitive Intelligence
	M.S.	Applied Intelligence
Notre Dame College	B.A.	National Security and Intelligence Studies
	M.A.	National Security and Intelligence Studies
Point Park University	B.S.	Intelligence and National Security
	M.A.	Intelligence and National Security
University of Arizona (South)	B.A.S.	Intelligence Studies
University of Detroit Mercy	M.S.	Intelligence Analysis
University of Texas – El Paso	M.S.	Intelligence and National Security Studies

Trend: Late, but Steady Growth

Rudner argues that the intelligence programs were late to be stood up after September 11 and his assertion holds true in our sample: most programs were founded several years after 2001 (see figure 2, below).[24] To determine the founding date, we examined press releases and contacted the programs (For a full listing of programs and founding dates, see the methodological appendix).[25] The delayed growth is not surprising because of the time needed to create intelligence curriculum and hire faculty. On the latter issue, finding qualified faculty was difficult because accreditation rules require job candidates have proper degrees, but in the case of intelligence these degrees do not exist. To prove their credentials, some candidates used their career experience to meet accreditation requirements. Although, to be fair, some of this is also a flaw in the way degree programs are created and positioned in the general education market: for accreditation bodies to strictly think

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[24] Rudner, "Intelligence Studies in Higher Education."
[25] We were unable to confirm the date of the first intelligence degree offered at American Military University.

53

intelligence degrees must spawn from 'Intelligence PhDs' or, worse, institutions themselves thinking in this manner is missing the essence of what Intelligence Studies truly is: A hybrid discipline that fascinatingly bridges history, political science, international relations, global studies, and comparative politics. All of these degrees should and can matter for Intelligence Studies. It just then becomes a question of how the terminally-degree faculty have engaged their research agendas and pursued the relevant peer-reviewed standing in the field.

From 2005 until 2011, there was almost consistent growth with one program added each year with the exception of 2009. After 2009 there has been a surge in the number of programs, with the founding of degree programs at Angelo State University, Coastal Carolina University, and Fayetteville State University, among others. Whether this growth trend will persist is beyond the scope of this paper, but if the past is any indication of the future, more programs will likely be added over the coming decade.

Figure 2: Cumulative Number of New Degree-Granting Intelligence Programs by Year
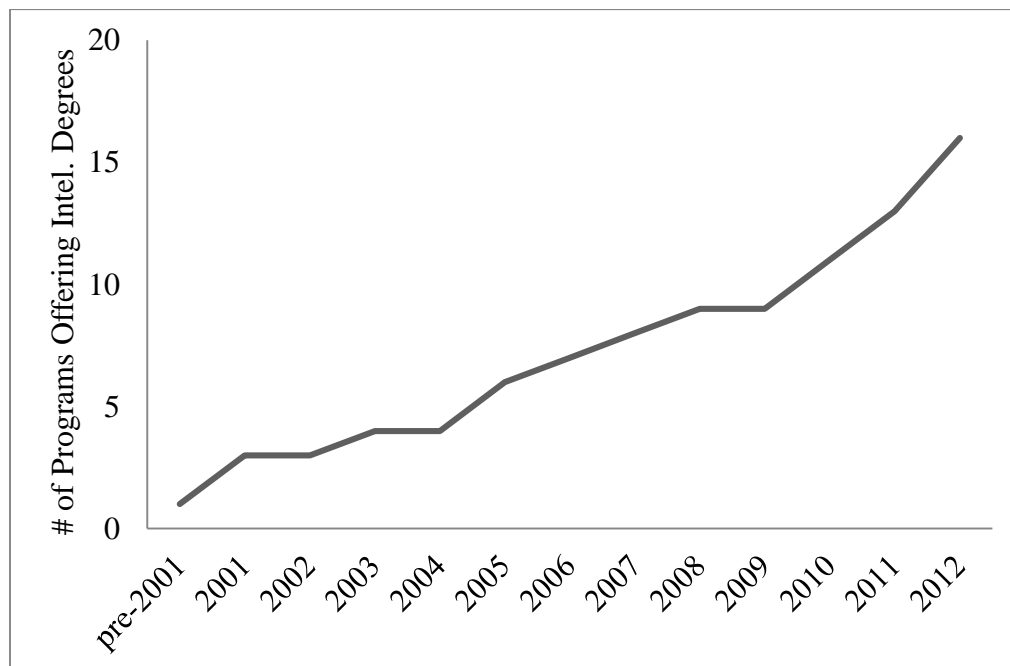
Trend: Extensive Use of Distance Learning

It is wholly understandable that people would consider any programs focusing on intelligence, national security, and global affairs be located in and around the beltway of Washington, D.C. Loosely called the 'James, Johns, and

54

Georges', these universities have expressly benefited from their close proximity to the capitol. Emphasizing to students the ability to be 'in the heart of the action' as it were and to have major political actors within easy commuter access for special guest lectures or even adjunct positions, programs around D.C. have just naturally assumed a place at the top of the intelligence education hierarchy. Four programs in our sample are located in or within driving distance of Washington, D.C. These programs include the Institute for World Politics (DC), Johns Hopkins University (MD), James Madison University (VA), and American Military University (WV). Notably, American Military University's degrees are offered entirely online.

Technology today is so versatile, diverse, powerful, and reliable, that an institution is undercutting its own success by not properly embracing the possibilities and investing in the infrastructure to support it. Perhaps most importantly, the natural audiences that would be interested in pursuing an intelligence education degree are spread far and wide, not just across America but across the globe. Gaining access to that important market, especially the American military market, is best accomplished by the structural advantages of online learning. As a result, the general student body pursuing an intelligence degree is steadily growing evidenced by the increase in courses and enrolments. Perhaps most rewardingly, that growth is not concentrated solely around the Beltway. Several programs are on the East Coast, but not near Washington, these include: Point Park University (PA), Notre Dame College (OH), and Mercyhurst University (PA). The remaining programs are even farther away, mainly in the Southwest: Angelo State University (TX), the University of Texas at El Paso (TX), Embry-Riddle (Prescott), and University of Arizona-South (AZ). Two programs are located in the California: California State University-Bakersfield and Henley-Putnam University. The only program in the Midwest is Bellevue University.

This study suggests that many programs have not shied away from at least experimenting with online technology when it comes to teaching intelligence. In our analysis, we see two broad types of institutions: those that are offer degrees entirely online and those that offer portions of their degrees online. Bellevue University, American Military University, and Henley-Putnam are pioneers in this area, offering their degrees entirely online. Most others deliver content in both traditional and online formats. The mere existence of the technology, however, does not guarantee the right results. That depends on the proper unity between administration and faculty: The former has to be willing to support the infrastructure technically and financially while the

55

latter needs to be willing to truly train and understand how to effectively work, teach, and mentor in the virtual format.

To map the curriculum of American intelligence programs, we applied a qualitative method called 'constant comparison' on hundreds of courses descriptions. The result is a comprehensive framework of all civilian American intelligence programs' curriculum, outlining the three knowledge pillars: Procedural, core, and domain.

Mapping the American Intelligence Program's Curriculum

With a final list of 17 programs, we collected dozens of documents containing course descriptions from each of the programs' websites. The analysis focused on courses offered directly by the intelligence program rather than supplemental ones provided by other departments. We are confident of the utility of the data, but it is necessary to confront some limitations. Course descriptions may not necessarily reflect the "ground truth" because of curriculum changes and the variety of emphases brought by individual instructors. Another weakness is that some programs have more content available than others, potentially biasing the results towards programs that provide more course information. Despite these weakness, the data are useful for achieving the primary research goal: To sketch the curricular structure. Future research should build on these findings to construct surveys and interview protocols to survey program stakeholders to supplement the analysis presented below and clarify the framework.

The course descriptions were uploaded into the qualitative data analysis program *NVivo* and analyzed using the constant comparison method.[26] Constant comparison is a widely-used qualitative methodology in a variety of disciplines, from education to nursing. It is most suitable when researchers have unstructured data and are conducting exploratory analysis. Since our data was unstructured and we were analyzing our data inductively, constant comparison was appropriate. To use the method, the researcher engages in a sorting process looking for keywords and concepts in the text which are termed "codes." Through an iterative process, researchers aggregate these codes to more general "content areas." For example, we found codes in the course descriptions related to report writing, leadership analysis, and threat analysis. Next, applying our reasoning to the data, we grouped leadership

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[26] See: Barney Glaser and Anselm L. Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Transaction Publishers, 2009); and, Y. S. Lincoln., & Guba, E. G. *Naturalistic Inquiry* (Beverly Hills, CA: Sage, 1985).

analysis and threat analysis into the content area "analysis" while report writing was put into "communication." At an even more abstract level, this content falls under "procedural knowledge." We repeated this process working iteratively between documents, codes, content areas, and higher levels of abstraction, adjusting the coding scheme to reflect what we believed was the most valid interpretation of the data.

The Three Pillars of American Intelligence Programs

The product of the analysis was three categories we describe as the "pillars" of American intelligence programs (see figure 3, below). The first pillar addresses knowledge on *how* to perform intelligence tasks, versus learning *about* intelligence tasks. For example, course content that provides students with an introduction to technical collection, but provides no guidance on how to *perform* technical collection, would not be included in this pillar. The "core knowledge" pillar addresses the organizational, historical and ethical content areas of intelligence. Similar to the content in Rudner's "core courses," this pillar provides an intellectual and theoretical framework for understanding the central issues surrounding intelligence.[27] It is worth noting that while most of the content in this pillar focuses on national security, much is also generalizable to criminal and business realms. F or example, one subject discussed frequently in this pillar, the intelligence cycle, can be readily applied to the private sector.[28] Domain knowledge covers topics related to different types of intelligence. These content areas include national security, criminal, and competitive intelligence. For example, course content that describes how criminal organizations function would be most applicable to the criminal domain. Similar to the core knowledge area, the most dominant and varied content in domain knowledge is national security.

We recognize that the pillars are not mutually exclusive, nor that each pillar is "airtight"; a pillar can contain content closely related to another, as is especially the case between criminal and national security domains. Further, when coding we found that courses may contain multiple content areas. This is particularly the case with survey courses that cover multiple content areas across potentially all three pillars. Still, the purpose of this curriculum map is to provide a general-framework for intelligence scholars, educators, and
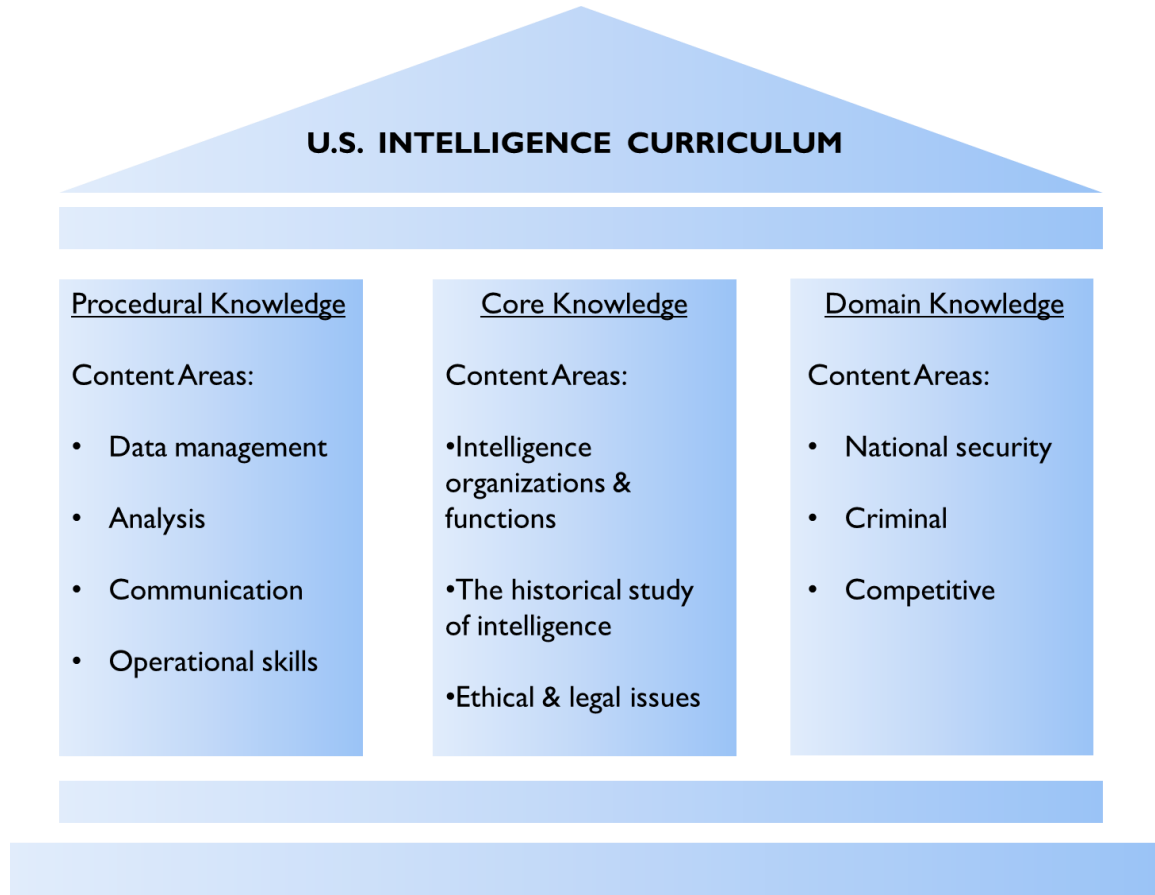
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[27] Martin Rudner, "Intelligence Studies in Higher Education."
[28] For example, see: Krizan, Lisa, *Intelligence essentials for everyone (Joint Military Intelligence College Occasional Paper Number Six) (*Washington, D.C.: U.S. Government Printing Office, 1999).

potential employers to provide a sense of how the thematic content of the field in aggregate.

Figure 3: The Curricular Structure of U.S. Intelligence Education Programs

U.S. INTELLIGENCE CURRICULUM

Procedural Knowledge

Content Areas:

- Data management
- Analysis
- Communication
- Operational skills

Core Knowledge

Content Areas:

•Intelligence organizations & functions

•The historical study of intelligence

•Ethical & legal issues

Domain Knowledge

Content Areas:

- National security
- Criminal
- Competitive

Procedural Knowledge

Within this pillar we identified four content areas of procedural knowledge taught by American intelligence programs: data management, analysis, communication, and operational skills. In the data management area, students learn specific skillsets on collecting and manipulating data. An area of increasing emphasis is open source intelligence (OSINT). Henley-Putnam's undergraduate course, "Open Source Research," is one of the few courses that explicitly teaches students how to identify and assess the credibility of OSINT. Beyond this course, we found little content on data management, especially content dealing with large datasets. The University of Detroit-Mercy and James Madison University offers some coursework in this underserved area. For example, the University of Detroit-Mercy's graduate course, "Data Mining and Reporting in Intelligence," teaches

58

students "techniques of data mining, case linkage, and definitive attribution, while understanding the concepts of data integrity, [and] open and closed sources…".[29] We expect that in following years there will be increased offerings dealing with large datasets as the need for employees with these skills is growing rapidly.[30]

The analysis area addresses the intellectual process by which raw information is translated into intelligence products. Coursework in this area teaches students how to use specific analytic methodologies and critical thinking skills. We found that, in general, the programs are covering a wide variety of methodologies (see figure 4, below). Across all of the programs there appears to be two broad types of courses on analysis. The first type, the "intelligence analysis" or sometimes termed "research methods in intelligence," introduces students to basic analytical and critical thinking skills. For example, Johns Hopkins' graduate course "Research Methods for Intelligence Analysis" teaches students how to use both qualitative and quantitative methods. Other skill areas in these courses include those designed to reduce cognitive biases and stimulate critical thinking skills.

The second type of analysis course is devoted to a particular methodology. Geographic Information Systems (GIS) courses appear to be popular and can be found in several programs. For example, American Military University offers several geospatial intelligence courses. In the "Geographic Information Systems 1" course students learn how to utilize basic GIS tools, such as manipulating and editing metadata. Another area of emphasis is on warning and forecasting methodologies. The Institute for World Politics offers graduate-level coursework focusing on these methodologies through its "Forecasting and Political Risk Analysis" course. In the course, students learn principles of forecasting and are introduced to forecasting and warning methodologies.

Figure 4: Sample Analytical Subjects

Forecasting Methodologies	Geographic Information
Threat Analysis	Systems
Systems and Simulation	Cyber Threat Analysis
Statistics	Critical Thinking (general)

[29] The University of Detroit Mercy, "Graduate Catalog 2011-2012," available at: *http://www.udmercy.edu/catalog/gcatalog/courseload?type=graduate&year=2011-2012&rubric=INT*.
[30] Clay Dillow, "The Big Data Employment Boom," *Fortune*, September 2013, available at: *http://fortune.com/2013/09/04/the-big-data-employment-boom/*.

59

Qualitative Analysis Political Analysis Leadership Analysis and Profiling	Criminal Intelligence Analysis Comparative Analysis Methods

The communication content area addresses procedural knowledge on how to communicate finished intelligence products to customers. Typically students learn about written and verbal communication in a single course, or sometimes, in the context of an analytical course suggesting some overlap with the previous content area. For example, Embry-Riddle's "Intelligence Analysis, Writing, and Briefing," blends communication skills with analytical skills, such as how to use link analysis and warning techniques. This blending between communication and analysis is reflected in the wider analytical culture of the IC, where analytic tradecraft is blended with writing skills and tips.[31] Other courses focus specifically on communication skills. Point Park University's "Communication and Writing for Intelligence" is representative of these courses offered at many intelligence programs and introduces students to briefing and report writing.

The final content area in procedural knowledge covered by intelligence programs is operational skills. These skills constitute the non-analytical skills of intelligence, such as interviewing and espionage tradecraft. As Landon-Murray notes, there are severe practical limitations of teaching these skills in higher education. Criminal justice programs have traditionally faced this limitation in teaching hands-on skills, such as finger printing and defensive tactics and, therefore, leave this instruction to the police academies.[32] Still, there is some course content covering operational skills in American intelligence programs. Henley-Putnam University's intelligence management undergraduate and graduate degrees provide a few courses that cover operational skills.[33] For example, the "Double Agents, Denial, and Deception" course teaches students basic deception techniques and an opportunity to practice on real world problems. Embry-Riddle also offers a "Security Fundamentals," a course that gives students the opportunity to learn how to conduct private and government investigations.

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[31] Rob Johnston, *Analytic Culture in the US Intelligence Community: An Ethnographic Study* (Central Intelligence Agency, Washington, D.C.: Center for the Study of Intelligence, 2005), p. 17.
[32] Landon-Murray, "Moving US Academic Intelligence Education Forward," p. 746.
[33] For a discussion of operational skills at Henley-Putnam University, see: Sheldon Greaves, "Strategic Security as a New Academic Discipline," *Journal of Strategic Security*, November 2008, available at: *http://dx.doi.org/10.5038/1944-0472.1.1.2.*

60

Core Knowledge

This pillar contains three content areas: intelligence organizations and processes, the historical study of intelligence, and ethical and legal issues. The intelligence organizations and functions area examines structures and outputs in the United States and, to a lesser extent, other countries. An example of the latter is Bellevue University's "Comparative Intelligence Cultures," a course that examines intelligence communities outside the Anglosphere. All of the programs have a course examining the structure of the IC. A representative example is Coastal Carolina's undergraduate course, "Introduction to National Security." The course covers the main organizations, roles, and processes at various levels of governance. In addition, this course covers another common content area: intelligence and policy. While most introductory courses only introduce the intelligence-consumer relationship, other programs have courses devoted entirely to the topic. Angelo State University's "The Intelligence Process: Consumer-Producer Relationship" is an overview examining how intelligence agencies interact with decision makers. Another common theme in courses exploring the policy-intelligence nexus is intelligence failure. A few programs offer content focused on intelligence failure, such as the University of Texas at El Paso's "Selected Problems in Intelligence and National Security."

Other content in this area addresses the outputs of intelligence organizations. All of the 17 programs addressed intelligence collection disciplines and most had an introductory courses on the five main intelligence disciplines: Human, open-source, signals, geographic, and measures and signatures. The content in these courses typically describes the background, strengths, and weaknesses, of intelligence disciplines. Other intelligence functions commonly covered include covert action and counterintelligence. Fayetteville University's "Intelligence Operations" introduces undergraduate students to each of these topics. Other programs devote courses to specific types of covert action or counterintelligence. For example, the Institute for World Politics' course, "Counterintelligence in a Democratic Society" addresses "the relationship between counterintelligence, intelligence, and internal security" while emphasizing the role of law enforcement.[34]

Intelligence Studies, and by extension intelligence education, have been heavily influenced by History Departments. As a result, a major content area

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[34] The Institute for World Politics, "Counterintelligence in a Democratic Society," available at: *http://www.iwp.edu/programs/course/counterintelligence-in-a-democratic-society-2&arubalp=c995fafb-f307-42f1-bd6c-9558815fea.*

61

in the core knowledge is the historical study of intelligence. Our analysis of the course descriptions suggests there are two types of historical courses: General and topical. General historical courses cover the broad history of intelligence rather than focusing on specific topic area. The University of Arizona-South's undergraduate course "History of U.S. Intelligence" is a broad survey of intelligence from the Revolutionary War to the present. Topical courses may cover specific areas of interest, such as covert action from a historical perspective. The "Spies, Subversion, Terrorism, and Influence Operations" course at the Institute for World Politics provides students with an understanding of how intelligence and counterintelligence were used during the Cold War.

Another content area within this pillar that nearly all programs offered is broadly defined as "intelligence ethics." An example of subject matter in this area is Fayetteville State University's course "Ethics and Intelligence" which examines the role of ethics in the context of national security, addressing such areas as civil rights and ethical dilemmas. Again, the focus on intelligence ethics could be a result of recent events, for example, the controversies surrounding domestic spying, forced interrogation, and covert operations overseas. Some coursework delves into these issues by covering the legal justification and debates. For example, the "Legal Issues in Intelligence and National Security" course at the University of Texas at El Paso covers the legal foundations of controversial topics, such as torture and mass surveillance.

Domain Knowledge

Domain knowledge covers topical issues related to fields where intelligence is applied: national security, criminal, and business. Similar to the core knowledge area, the most dominant content in domain knowledge is national security.[35] Nearly all programs emphasize national security threats, mainly asymmetric or what has been termed "non-traditional" threats. Not surprisingly, and in line with trends that shaped most of these programs in the post-September 11[t] era, the main threat addressed in these programs is terrorism. In fact, nearly every program had a course dedicated to the subject. A graduate level course from Angelo State University's program is representative: the course contains two substantive sections, one analyzing

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[35] Defining the national security domain, however, is difficult because the decreasing distinction between international and domestic threats since September 11th, a fact that is mirrored in wider ongoing debates in security studies. For example, see: Peter J., Katzenstein, ed. *The Culture of National Security: Norms and Identity in World Politics* (New York: Columbia University Press, 1996); and David A. Baldwin, "The Concept of Security," *Review of International Studies* 23:1 (1997): 5-26.

causes of terrorism (e.g. political, socioeconomic, and religious) and the other state counterterrorism responses. Along with terrorism, insurgency and civil wars were also commonly listed as national security threats often packaged as topics in other courses, rather than standalone subjects. Cyber-related issues were also included in the curriculum of many programs. Courses covering this content sought to clarify the types of cyber threats and tactics to deal with it. Bellevue University offers one of the only undergraduate courses on technological issues, "Security and Intelligence Concepts in Science and Technology." Another course at Bellevue University, "Cyberwar and Cyberdeterrence," examines how technology is affecting national security with an emphasis on blending political and technological trends in cyber security and warfare.

In addition to national security threats, most programs offer international politics content through cultural and economic lenses. Several programs include course material for understanding particular regions of the world. We found nearly every region of the world was covered but Middle East was the most popular region. Other coursework applies cultural lenses to understand international affairs, such as Coastal Carolina's course "Understanding Other Cultures." Another course that symbolizes the focus on culture is Angelo State University's "Context, Culture, and Intelligence: The International Dimension" that covers the role of norms and values, as well as historical and cultural factors in international affairs. The inclusion of these courses to understand other cultures reflects the prerogative of the IC's need to understand the culture and language of countries where the United States has vital national security interests.[36]

Content area in the criminal domain focuses on issues, theory, and background knowledge in law enforcement. Typical of this area is the University of Detroit-Mercy's "Intelligence Led Policing" course which covers the functions of law enforcement and specific topics, such as policing theory and police subcultures. Most programs have some content in their courses examining transnational crime. Mercyhurst University's "Law Enforcement Intelligence" course is similar, and is a survey course covering definitions, agencies, and methodologies of criminal analysis. The "Global Crime and International Justice Systems" course at Embry-Riddle University "explores the reciprocal interactive and contextual relationships between global crime and criminal justice systems." There are also more specialized courses in investigation (Embry-Riddle University), criminal finance (American Military

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[36] Defense Intelligence Agency, "IC Centers for Academic Excellence."

University), cybercrime (Henley-Putnam), and even the role of crime in literature (University of Detroit-Mercy).

The competitive domain is the least developed content area, which is in turn related to the fact that only Mercyhurst University offers a degree in competitive intelligence. Courses in the degree familiarize students with business terminology, functions, and strategic theories for building business strategies. Much of the competitive intelligence coursework also includes content that would fit better in the procedural knowledge pillar. Beyond Mercyhurst University's program, there are a handful of intelligence programs that offer at least one competitive intelligence course. Fayetteville University, James Madison University, and Notre Dame College all provide survey courses on competitive intelligence. Content in these courses examines how businesses use intelligence to make decisions and the protection of intellectual property, among other topics.

Opportunities: Curriculum Design and Future Research in Intelligence Education

One of the target audiences of this research are curriculum designers at current and emerging intelligence programs. While the curriculum map sketched out above provides a broad framework of the current state of the field, there are significant opportunities for both curriculum design and scholars to extend and apply the curriculum framework.

Making programmatic goals explicit and integrating skills into the wider curriculum

Institutions should strive to make sure that at the pre-development stage intelligence programs should have clearly defined program and course objectives, with an explicit mission statement guiding curriculum development overall. This strategy helps institutions avoid haphazard development or the temptation to just grab on to the 'hot topics' of the day and turn them into courses. The curriculum map suggests that some areas are perhaps overemphasized, terrorism, in particular, seems to make up a disproportionate amount of the national security domain knowledge.

This same strategy will also help institutions avoid the dreaded 'vocational tech' syndrome, where courses are basically crafted holistically from Intelligence Community training manuals or programs are developed merely by trying to mirror basic introductory training for new IC recruits. Pre-development clarity and explicitness in terms of educational objectives,

64

learning outcomes, and mission goals help an institution create curriculum that is a testimony to a particular uniqueness of intelligence education: at its core, it is both an intellectual and professional, academic and applied, able to be rigorous in terms of scholarship while relevant to real careers in the market. Institutions are best positioned trying to develop programs that embrace these dual aspects, rather than trying to choose one side and just hope for the best. Fortunately, the analysis suggests that at least in aggregate, American intelligence education is embracing both discrete training skills and more abstract theoretical knowledge.

A separate issue is designing curriculum to foster competency in these discrete skills. At the undergraduate level in particular, it is extremely difficult to produce students with powerful quantitative research skills if a program literally has a single course devoted to the subject matter. In such cases, students will take the course and then move on, quite often forgetting their newly learned skills before exiting the program with their degrees. The reason for this is not because the initial course was deficient or the instruction poor, but rather because high-level research skills of any kind (quantitative or qualitative for that matter) are best developed through repetitive reinforcement. Therefore, a single individual course that is then not reinforced through all of the remaining courses can be a pedagogical philosophy that underserves students. A fairly new trend is emerging to counter this tradition, however, that sees an investment in skill development structured throughout an entire program. This would mean that the program strives to inculcate its essential learning/skill objectives within the content of every course, reinforced through the assignments given in each. By employing this method a program is hoping to expose students, for example, to as many as 144 weeks of research practice as opposed to one single intensive 12 week period.

The fundamental philosophical premise behind this approach is an acceptance of the fact that intelligence education employs various research techniques and analytics as Collier argued.[37] The best long-term programs will be striving to utilize both in a structurally efficient manner: Embedding the techniques and analytics over and over throughout thematically and theoretically-oriented substantive content courses. In so doing, students are exposed not just to the maximum number of weeks to work with and perfect analytical skills, they get to apply those skills within courses that allow them to engage hot-button topics of direct and primal relevance to the IC today. As

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[37] Michael W. Collier, "A Pragmatic Approach to Developing Intelligence Analysts."

such, they become formally trained in academic analytical skills while understanding how to apply them rigorously to real-world problems. This approach is still fairly new and not yet widespread within the community of intelligence studies programs, so it is still too early to estimate its success in comparison to the more rigidly compartmentalized pedagogical method. Regardless, it should be considered a sign of health and vibrancy when the discipline is able to engage and experiment in such a manner.

Conclusion

Future Research

A future research project could focus on validating this framework, creating a typology of intelligence programs, and surveying employers for the intelligence sector. As noted above, the course descriptions used to construct the three pillars are limited. Future research should validate the framework by surveying program stakeholders, such as program directors, and make any needed adjustments. In addition, the study could be used to formulate a typology of intelligence programs. For example, programs could be classified based on their curricular focus. Using the validated framework and typology, scholars could survey intelligence employers to determine which programs or curricula they are seeking in graduates. As Landon-Murray notes, no attempt has been made to survey intelligence employers.[38]

Additionally, the graduates of these programs could be surveyed. Relevant questions include: what is the placement rate in the IC versus other sectors, such as law enforcement and business? What skills did these graduates learn that were helpful in their career? How are new programs emerging into this group and advancing curriculum and analytical skills? At this point we have almost no information on any of these questions. To our knowledge, the only data is a survey of 77 new Intelligence Community analysts which found only a single analyst trained at an intelligence program.[39] This finding, however, might not still hold true as the number intelligence programs has since increased, and potentially, the number of IC recruits.

Hopefully, this project is but the first step in a series of additional efforts to chart the terra incognita of intelligence programs. Embracing the problems discussed here and their potential off-shoots, rather than avoiding them, will go a long way in giving cause for hope about the future of intelligence

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[38] Michael Landon-Murray, "Moving US Academic Intelligence Education Forward."
[39] William Spracher, *National Security Intelligence Professional Education: A Map of U.S. Civilian University Programs and Competencies*.

66

education and Intelligence Studies. Through developing an understanding where intelligence education is heading, it is possible to think about guiding it in directions useful to students, educators, and employers. After all, this future is important not just for the newly-minted graduates but for American national security.

Appendix: Methodology

Excluded Programs for analysis period 2002-2012

Institution	Exclusion Reason
Cochise College	Not Bachelors or Higher: Associates Degree
Eastern Kentucky University	Not Bachelors or Higher: Certificate
Farleigh Dickinson	Not Bachelors or Higher: Certificate
Georgetown University	Not Bachelors or Higher: Concentration
King University	Not Bachelors or Higher: Minor
Ohio State University	Not Bachelors or Higher: Specialization
Salve Regina	Not Bachelors or Higher: Certificate
University of South Florida	Not Bachelors or Higher: Certificate
University of Utah- Salt Lake City	Not Bachelors or Higher: Certificate
Utica College	Not Bachelors or Higher: Minor

First Year Intelligence Programs Offered an Intelligence Degree

Institution	First Degree Offered
American Military University	N/A
Angelo State University	2012
Bellevue University	2010
California State University-Bakersfield	2011
Coastal Carolina University	2012
Embry-Riddle University	2003
Fayetteville State University	2012
Henley Putnam University	2001
Institute for World Politics	2001
James Madison University	2007
Johns Hopkins University	2005
Mercyhurst University	1992
Notre Dame College	2010
Point Park University	2005
University of Arizona (South)	2011
University of Detroit Mercy	2006
University of Texas – El Paso	2008