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New Directions in Intelligence Education

Robert J. VandenBerg, Mark W. Perry, and Aleia F. Manning

Abstract: Although several colleges and universities have established academic programs in intelligence studies and there is an extensive literature on intelligence education, the field remains constrained by an overly narrow understanding of what intelligence is and the range of problems to which it should be applied. We argue that intelligence should be understood as a flexible profession that supports decision-making through forecasting, and that intelligence educators should accordingly prepare students for a wide variety of roles that fall outside the traditional intelligence domain. In doing so, we review the intelligence education literature, identifying several key areas that remain undefined or where a clear consensus has yet to emerge; for example, the extent to which academic intelligence programs should seek to replicate the technical training provided by intelligence services. Furthermore, we identify criminal intelligence, medical intelligence, commercial intelligence, and—especially—information operations as areas in which intelligence educators should invest going forward.

Keywords: Intelligence Education; Intelligence Studies; Intelligence Training; Information Operations; Information Science; Information Warfare.

Introduction

The U.S. military defines intelligence primarily as “the product resulting from the collection, processing, integration, evaluation, analysis, and interpretation of available information concerning foreign nations, hostile or potentially hostile forces or elements, or areas of actual or potential operations.”¹

This definition is conservative, in that it associates the practice of intelligence mainly with warfare and with foreign countries. In and of itself, this is understandable, given that intelligence has historically evolved as an extension of statecraft and military operations. Nevertheless, this common understanding of intelligence is increasingly outdated, and it fails to account for how much more diverse the intelligence field has become in response to advances in information technology. Therefore, we argue that effectively preparing students to excel in the intelligence field in the twenty-first century requires a significantly broader perspective on what intelligence is and what functions it serves.

As the world evolves toward a globally integrated information society, the practice of intelligence is becoming central to a wide variety of governmental and extra-governmental functions that fall outside the scope of the traditional Intelligence Community (IC). As numerous scholars attest, the emergence of networked computer technology, in conjunction with rapid globalization, has given rise to a world order characterized by cross-national economic, political, and social integration, near-instantaneous communication, global supply chains, and rapid evolution of both cultural and technological forms. This in

turn transforms the distribution of power on the world stage, with nation-states yielding authority to supranational institutions, multinational corporations, and individuals and social movements empowered by new technologies.²

This pivot away from the primacy of the nation-state toward a globally-connected information civilization requires, we believe, a more encompassing definition of intelligence. Fortunately, the Canadian intelligence scholar Alan Breakspear provides a well-thought-out definition that affords intelligence educators a suitable foundation for preparing students to meet these challenges:

“Intelligence is a corporate capability to forecast change in time to do something about it. The capability involves foresight and insight, and is intended to identify impending change, which may be positive, representing opportunity, or negative, representing threat.”³

The advantage of this definition is that it can be applied across a variety of disciplines and settings and is flexible enough to accommodate both governmental and non-governmental intelligence activities. The urgency of adopting a more comprehensive approach to educating intelligence professionals becomes apparent when we consider that the U.S. and other high-technology democracies are increasingly subject to sustained campaigns of asymmetric and information warfare by multiple actors,⁴ in particular the Russian Federation, which possesses what is arguably the most refined information warfare doctrine currently in existence. For Russia, information warfare is inherently holistic, making no delineation between cyber, psychological, and traditional kinetic domains.⁵ Furthermore, adversaries around the world are adopting this blended approach based on the success of Russian operations.⁶

This novel state of conflict is characterized by hybrid threats, defined by NATO as those threats combining “military and non-military as well as covert and overt means, including disinformation, cyber-attacks, economic pressure, deployment of irregular armed groups and use of regular forces.”⁷ Since it is not information technology itself that determines the patterns and outcomes of its own adoption, but rather the underlying institutional and political-cultural fabric of a society,⁸ the places where that fabric is frayed (i.e., around divisive or emergent issues) become targets of adversarial information warfare, and therefore necessary subjects of intelligence analysis. Furthermore, if information defense is to reflect the holistic nature of information warfare, then it should be as Waltzmann suggests, “whole-of-nation in character,” involving coordination across “national government organizations, military, intelligence community, industry, media, research organizations, academia and citizen organized groups.”⁹ Expanding the already interdisciplinary purview of intelligence education to reflect this represents one of the most urgent tasks facing the field.

The novel threat environment requires a reorientation in how we understand the context in which intelligence should be practiced and the range of problems to which it should be applied. On the governmental side, there is a growing awareness that such

non-traditional security issues as global public health, transnational migration, and environmental degradation—as well as information warfare—pose very real threats to the national interest, and therefore qualify as legitimate foci of intelligence.¹⁰ At the same time, intelligence methodologies are increasingly being adapted to the needs of private sector actors. In light of these developments, we argue that intelligence education is at present too strongly geared toward the U.S. Intelligence Community and should seek out broader opportunities to apply intelligence skills in the context of a knowledge society. We begin with a brief survey of current literature that explores how intelligence is taught at colleges and universities. We then identify some key areas that we believe require greater attention from intelligence educators. Finally, we conclude by arguing that intelligence should reconceptualize itself as a versatile field that prepares graduates to serve in a variety of roles and sectors. Whether employed in the armed forces, government agencies, or the private sector, this broad approach to intelligence should draw on social science, computer science, and security studies to anticipate trends that threaten the integrity and stability of democratic societies along the widest possible front.

Intelligence Education and Training

Although espionage has been a component of statecraft since ancient times,¹¹ the emergence of intelligence as a dedicated occupation is a comparatively recent phenomenon, and its development as a formalized profession on par with medicine, law, and architecture remains incomplete.¹² Throughout history, the collection and analysis of strategically valuable intelligence has existed as an extension of a society's overall capacity for managing information.¹³ Initially conducted on an ad hoc basis, intelligence has assumed an increasingly specialized character, particularly since World War II.¹⁴ With numerous large and well-funded institutions now employing intelligence specialists working across a variety of subdisciplines, there is a trend toward regarding intelligence as a vocation deserving of its own professional schools. And yet, despite the logical inference that intelligence studies programs should focus on turning out intelligence practitioners in much the same way that engineering schools graduate qualified engineers,¹⁵ realizing this vision has proved complicated, in that the still-provisional status of intelligence as a recognized profession also implies uncertainty about whether intelligence studies should be understood as an academic discipline in its own right or as an interdisciplinary field. Richards argues that there are pros and cons on both sides of this debate, pointing out that it remains unclear whether intelligence studies exists primarily to train intelligence professionals or to act as detached and occasionally critical commentators on intelligence affairs.¹⁶ This in turn has implications for practical questions such as the value of employing veteran intelligence professionals as intelligence educators—a practice which is necessary if the main focus of the discipline is vocational training,¹⁷ but which may introduce issues of bias if the field is seen as requiring distance from the national security organs.

Part of the basis for intelligence studies' failure to emerge as a fully-fledged discipline in its own right can be found in the relationship between intelligence education programs and security studies, with the former generally being treated as an adjunct to the latter.¹⁸ Crosston underscores the price paid when intelligence studies follows too closely in the footsteps of security studies, namely in its propensity to prioritize grand strategic narratives over the cultivation of tools needed to accurately predict the emergence of new threats.¹⁹ Marrin examines intelligence studies from the standpoint of its research output, arguing that the discipline has very little sense of its own history, resulting in a situation where "intelligence scholars seem to be re-inventing the conceptual wheel every 15 years or so without really making advances in terms of disciplinary knowledge."²⁰ In parallel with the disagreement over fundamental questions of disciplinary identity, a lively debate has emerged over whether intelligence studies programs should focus on imparting theoretical knowledge (intelligence education) or whether they should also provide training in technical competencies such as tradecraft and analysis (intelligence training). The dominant perspective among intelligence scholars tends to be that the discipline should focus on the who, what, and why of intelligence (education), while leaving the how (training) to the agencies that end up hiring their graduates.²¹ Coulthart and Crosston take this view, defining intelligence education as an "umbrella term for the process of educating intelligence practitioners and scholars"²²—a perspective which leaves the door open for technical training, but generally emphasizes conceptual knowledge over operational skills. A key rationale for this education-oriented perspective is the idea that the most important tool that academic institutions can impart to future intelligence professionals is a solid foundation in reasoning and epistemology, and that a focus on tradecraft would detract from that.²³ Furthermore, Landon-Murray points out that whatever position one takes on what precisely an intelligence studies program should look like, it absolutely requires a rigorous grounding in empirical social science methodology.²⁴

The voices on the intelligence training side of the debate are fewer in number, but their contributions to intelligence pedagogy are nevertheless substantial. The case for intelligence training in higher education rests in part on research showing that skills like tradecraft and subject matter expertise are precisely the areas in which new IC employees feel the least prepared.²⁵ Furthermore, there is a compelling argument to be made that experiential learning enhances student comprehension,²⁶ and that an intelligence curriculum based on a "skills and qualifications framework" lends itself to preparing graduates to rapidly integrate into their professional roles.²⁷ Naturally, there are also those whose perspective falls between these categories, notably Coulthart and Crosston, who advocate for a blended approach that incorporates elements of technical training into academic instruction.²⁸ This is complemented by a growing emphasis on developing partnerships between intelligence education programs and intelligence agencies that bridge the education-employment divide.²⁹ For example, a study of the Intelligence Community Centers of Academic Excellent initiative found that affiliated colleges sent a significant portion of their graduates into professional intelligence work.³⁰ Furthermore, a proposed Intelligence Officer Training

Corps modelled on ROTC would arguably be in a position to develop candidates that meet desired entry-level knowledge and skill requirements, while preserving the flexibility to major in a wide variety of disciplines relevant to intelligence work.³¹ Overall, the proponents of an education-and-training compromise insist that intelligence studies programs must create a smooth transition between academia and professional training by producing graduates who can not only think critically, but also have “the skills to actually produce intel.”³²

New Directions in Intelligence Education

The U.S. Intelligence Community as it emerged in the aftermath of World War II was geared primarily toward strategic challenges posed by foreign governments, and it was only after the end of the Cold War that it came to prioritize a wider array of threats arising from newly empowered nonstate actors, with the shock of the 9/11 attacks driving home the need to take seriously the problem of transnational terrorism.³³ Indeed, this lesson may have been learned a bit too well, giving rise to a situation where the topic of terrorism is arguably overemphasized in intelligence curricula.³⁴ This focus on terrorism in turn highlighted the need for greater integration between intelligence and law enforcement to combat asymmetric threats, creating an opening for developing the parallel field of criminal intelligence. Bringing crime to the fore is important, because not only are terrorism and insurgency crimes, but highly organized forms of crime can also rise to a level that approximates insurgency,³⁵ and the lines separating violent extremism from organized crime and organized crime from regular crime can be blurry. At the same time, improvements in how police use information technology are gradually bringing law enforcement closer to the kind of systematic data collection and predictive analysis traditionally associated with strategic intelligence.³⁶ This trend is reflected in the increasing professionalization of criminal intelligence and its gradual integration into the intelligence mainstream.³⁷ This in turn should lay the foundation for applying intelligence methodologies to threats that—like most forms of crime—lack the centralized and goal-directed character of nation-states or hierarchical terrorist organizations.

The COVID-19 pandemic has also brought the formerly peripheral field of medical intelligence to the center of conversations on national security, highlighting the need to consider threats posed by natural phenomena such as pathogens, as well as the contributions of such previously obscure agencies such as the National Center for Medical Intelligence.³⁸ This newfound focus on epidemiology is becoming institutionalized in the IC,³⁹ and the field of intelligence education should broaden its course offerings accordingly. The same can be said for the growing salience of issues involving environmental degradation, transnational migration, and international civil society.⁴⁰

Much like how the diversification of the intelligence field requires focusing on a wider range of problem sets, it also entails grappling with how intelligence is now being employed by a greater variety of actors than in the past. There is a need for intelligence educators

to devote more attention to the adoption of intelligence methodologies by corporations and other nongovernmental actors. With the preponderance of infrastructure essential to American security resting in private hands,⁴¹ and with multinational corporations emerging on the world stage as highly influential actors in their own right,⁴² the question of the extent to which private actors are able to leverage intelligence capabilities to inform their decision-making is far from trivial. Indeed, the growing need in this area has given rise to a corporate intelligence sector composed of companies such as Everbridge,⁴³ Strategic Forecasting (“Stratfor”),⁴⁴ and the Economist Intelligence Unit.⁴⁵ There exist several areas where the interests of these private-sector intelligence actors overlap with the traditional IC, such as pharmaceutical production, threats to public health, and cybersecurity concerns, making the education of qualified intelligence professionals prepared to serve in the private sector a question of national security. Nevertheless, existing curricula in this area are significantly underdeveloped.⁴⁶

Our final area for growth in the intelligence education field is information operations (IO), which is increasingly emerging as a discipline separate from, yet adjacent to and intertwined with, intelligence. While both intelligence and IO concern themselves with the role of information in situations characterized by conflict or crisis, they differ in that intelligence concerns itself with the passive understanding of the operational environment, while IO seeks to leverage information as an offensive weapon to alter the information environment for strategic advantage.⁴⁷ As indicated earlier, grappling with the threats posed by asymmetric and information warfare promises to be one of the defining security issues of our time. The burgeoning importance of the information domain and the importance of prevailing in future information conflicts is reflected in developments ranging from the decision on the part of the U.S. Air Force to create a career field for information operations officers (“14F”) alongside the long-established intelligence officer specialty (“14N”)⁴⁸ to the establishment of the Global Engagement Center within the Department of State to counteract foreign disinformation.⁴⁹ Nevertheless, the vast majority of academic intelligence programs are almost wholly unprepared to meet the emerging need. In the course of doing research for this article, we were struck by the rarity with which the IO problem set is referenced in the intelligence education literature, as well as the sparseness of high-quality academic courses addressing the topic. For this reason, we are convinced that expanding course offerings dealing with IO is one of the greatest contributions that intelligence educators could make in the coming years.

A discussion of the scope and structure of an academic program naturally raises questions about cost and revenue. For good or ill, any faculty member proposing a new field of study can certainly expect to have to justify it to their dean, and it is legitimate to ask about the career prospects of intelligence graduates. For this purpose, it would be beneficial to know how many graduates the IC is capable of absorbing into its ranks, but we have found it surprisingly difficult to get hard figures on this point.⁵⁰ However, given the breadth of intelligence studies programs already in existence,⁵¹ it seems reasonable to infer that the market for government intelligence jobs is probably close to saturation.

Furthermore, although the IC is receptive to hiring intelligence studies minors, it has shown scant interest in majors.⁵² Nevertheless, as we have sought to demonstrate throughout this article, there is ample need for intelligence skills in society at large. For this reason, intelligence studies programs should aim for flexibility and versatility in what they teach, imparting analysis and information management skills that are of value to the IC, but which can also be readily transferred to non-governmental employers, particularly those commercial actors who are increasingly being drawn into intelligence-adjacent realms thanks to the broadening scope of contemporary information warfare. In most cases, this can be accomplished without unusual institutional outlays, although there are some exceptions. For example, IBM i2 Analyst's Notebook certification is a highly sought-after credential both in the IC and elsewhere,⁵³ but it is very expensive to make the software available to students for training purposes. At our own university, we have found that this cost can be economized if i2 is taught intensively in one designated course specializing in computer-assisted analysis. Furthermore, training on i2 can be supplemented by familiarizing students with other, more affordable suites of intelligence-relevant software, such as ArcGIS.⁵⁴ Overall, the ideal approach to intelligence education would be a methodologically intensive minor that introduces students to the intelligence field while complementing majors in other disciplines that are of inherent interest to the IC and similar employers, such as engineering and foreign languages.

Conclusion

Having outlined some areas for intelligence studies to expand its offerings, we conclude with a modest proposal for how to think about educating intelligence professionals and intelligence scholars. In the past, there has been a tendency to conceptualize the intelligence profession narrowly as those competencies required to work for a government intelligence agency, but as we have sought to demonstrate, this definition is overly restrictive for an era characterized by the ubiquity of information. However, reconceptualizing intelligence as an applied form of information science offers us a way forward. In a society awash in data, the information collection, analysis, and forecasting methodologies inherent to intelligence are finding significantly broader application than in the past. At the same time, the volume and speed of information poses unique challenges to producing intelligence, and educators should adjust accordingly. These challenges occur at two levels. First, the weaponization of information by hostile actors requires an understanding of information security in order to “characterize, understand, and forecast cyber-mediated changes in human behavior, social, cultural, and political outcomes.”⁵⁵ Second, the sheer volume of information, alongside the constant erosion of trust across the cognitive environment, has made the collection, analysis, and forecasting of salient information much more difficult.⁵⁶ Intelligence educators must prepare their students to produce intelligence in what is an increasingly complex, dynamic, and contested information environment.

One model for what this might look like in practice can be derived from the growth of “information schools” at various universities.⁵⁷ Usually born out of preexisting library science programs where leaders came to see the need to train information professionals able to think outside the confines of the library, information schools take a comprehensive

approach to training students both to utilize information management techniques, as well as to conduct research on the role information plays in society. A particularly relevant concept within this field is information behavior—the totality of human behavior in relation to sources and channels of information,⁵⁸ or the process of information seeking, needs and uses (INSU).⁵⁹ An understanding of information behavior empowers intelligence analysts to make sense of data relative to their social context, the intentions and biases of information diffusers and receivers, and the cues upon which information is judged and acted upon.⁶⁰ Considering that the practice of intelligence is itself an information behavior, this framework is relevant both for overcoming the methodological challenges of the current information environment, as well as detecting and forecasting emerging threats and vulnerabilities related to the social diffusion of information.⁶¹ A model grounded in information sciences provides a natural fit for intelligence studies, since intelligence is fundamentally about leveraging information for strategic advantage.⁶²

The value of this approach lies in its acknowledgement that information is central to every function that seeks to safeguard society against emerging threats, and in its implicit recognition that the intelligence profession needs to be understood in the broadest possible terms.

Furthermore, by foregrounding the unique requirements for securing information societies, this approach lays a much needed foundation for training professionals capable of comprehending and innovating in the emerging field of information warfare. It is no longer sufficient simply to identify the skills needed to succeed as an analyst for the CIA or FBI; if it is to secure a place for itself as a recognized discipline, intelligence studies must train its graduates for the challenges of tomorrow rather than those of yesterday.

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The length of a research article should be between 7,000 and 9,000 words (student papers: 5,000-7,000 words), including endnotes and references. Each article must include an abstract of less than 200 words and 5-6 keywords. All manuscripts should be submitted in Microsoft Word format, and text should be double-spaced, Times New Roman font point 12 (including references) and left justified.

SPELLING AND STYLE: Note that we conform to *Webster's Collegiate Dictionary* and *The Chicago Manual of Style* in matters of spelling, abbreviation, punctuation, etc. On first use of an acronym or abbreviation in the manuscript, please spell it out in full.

FIGURES AND TABLES: All figures and tables should be professional in appearance. Provide figures as separate data files instead of as pictures embedded within the Word document. Location of illustrations should be indicated by a note in the text (e.g., "Table 1 about here").

BIOGRAPHICAL SKETCH: authors must include a brief biographical sketch, including institutional affiliation, primary publications, and relevant experience. Length should be 200 words or less.

REFERENCES: JPWS uses *The Chicago Manual of Style's* notes and bibliography system with endnotes. For further information on references, please consult *The Chicago Manual of Style*, 17th edition.

Books: Feldman, Lily Gardner, *Germany's Foreign Policy of Reconciliation: From Enmity to Amity* (Lanham, MD: Rowman and Littlefield Publishers, 2012), 20-33

Book chapters: Terence Roehrig, "Stability or Instability? The US Response to North Korean Weapons," in *North Korea and Nuclear Weapons: Entering the New Era of Deterrence*, eds., Sung Chull Kim and Michael Cohen (Washington DC: Georgetown University Press, 2017), 129-56.

Journal articles: Friedberg, Aaron, "The Future U.S.-China Relations: Is Conflict Inevitable?" *International Security* 32, no. 2 (2005): 7-35.

Online sources: Bonenberger, Adrian, "The War No One Notices in Ukraine," *New York Times*, June 20, 2017, <https://www.nytimes.com/2017/06/20/opinion/ukraine-russia.html>.

For multiple notes referencing the same work, please use the following shortened note form after the first reference.

Feldman, *Germany's Foreign Policy of Reconciliation*, 73-78.

Roehrig, "Stability or Instability?," 131.

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