Analytic Standards in the Context of Military Intelligence

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Scholarship of analytic standards generally focuses on their application in strategic intelligence assessments. Yet analytic standards are underexplored in other environments, particularly tactical and operational military intelligence analyses. These environments challenge many assumptions that generally underpin the implementation of analytic standards, including multi-analyst quality control chains and a focus on rigor as the primary measure of quality. The US Air Force's implementation of analytic standards offers an illustration of how such standards can be applied in military intelligence environments. To successfully employ analytic standards in tactical and operational intelligence environments, emphasis must be placed on accrediting analysts themselves as well as their output. The rigor-led model of analytic standards must also be broadened to give greater weight to other attributes of quality intelligence analysis.

Analytic standards for intelligence analysis gained prominence in the revelations of the structural intelligence failures preceding 9/11 and the flawed assessment of the presence of weapons of mass destruction (WMD) in Iraq. These two high-profile intelligence failures prompted much soul-searching in Western intelligence organizations.[1] A consensus emerged that a long-term decline in the quality of intelligence analysis and assessment had occurred, which could only be reversed by implementing new processes and principles.[2]

This course of events resulted in the development of standards for intelligence analysis, particularly in the United States and United Kingdom.[3] The Office of the Director of National Intelligence's (ODNI) Intelligence Community Directive (ICD) 203, for example, calls for intelligence products to be objective, independent of political consideration, timely, based on all available sources of information, and in line with further specific

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1. John A. Gentry, "Has the ODNI Improved U.S. Intelligence Analysis?," *International Journal of Intelligence and CounterIntelligence* 28, no. 4 (2015), https://doi.org/.

2. Alexandru Marcoci et al., "Better Together: Reliable Application of the Post-9/11 and Post-Iraq US Intelligence Tradecraft Standards Requires Collective Analysis," *Frontiers in Psychology* 9 (2018): 1, https://doi.org/.

3. David R. Mandel, Tonya L. Hendriks, and Daniel Irwin, "Policy for Promoting Analytic Rigor in Intelligence: Professionals' Views and Their Psychological Correlates," *Intelligence and National Security* 37, no. 2 (2022), https://doi.org/.

standards including common terminology for uncertainty and confidence levels.[4] Such standards are designed to improve the quality and effectiveness of intelligence analysis across the US Intelligence Community (IC). Yet these standards—still in place today—focus heavily on intelligence analysis at the strategic level. This is unsurprising, given that they were developed in response to strategic intelligence failures; however, this focus brings into question their relevance for intelligence analysis outside of this context.

Strategic intelligence has an intuitive meaning: it generally describes intelligence activities that are of interest to political leaders at an international level.[5] It is in this context that the term strategic is generally used by scholars of intelligence studies. This reflects military terminology, where the strategic level incorporates government-wide priorities and international concerns, and intelligence analysis influences the highest level of decision-making.[6]

Military doctrine defines two other levels of activity below this—operational and tactical—where military campaigns are organized and where individual missions are planned and executed, respectively.[7] Military intelligence analysts are expected to work across all three levels of activity. Yet in addition to a general lack of scholarship on military intelligence, there is a notable academic bias in favor of the strategic level of intelligence analysis. This makes studying analytic standards for military intelligence particularly challenging.[8] This article aims to address this gap in the understanding of analytic standards by exploring their application in operational- and tactical-level intelligence environments.

Because of the relative lack of scholarship on military intelligence in intelligence studies, this article takes a comprehensive approach to this exploration, deconstructing the concept of analytic standards and exploring its core characteristics, thus determining their applicability beyond the strategic level. These characteristics demonstrate that the rigor-led approach to analytic standards does not apply sufficiently to tactical and operational intelligence environments, and alternative means of enforcing standards, such as those used by the US Air Force, are necessary to overcome this limitation.

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4. *Analytic Standards,* Intelligence Community Directive (ICD) 203 and Technical Amendment (McClean, VA: Office of the Director of National Intelligence [ODNI], 2015, 2022), 2–3, https://www.odni.gov/.

5. Loch K. Johnson, *Handbook of Intelligence Studies* (London: Routledge, 2007), 1.

6. UK Ministry of Defence (MOD), *Allied Joint Doctrine*, NATO Allied Joint Publication-01, F ed., v. 1 (Bristol, UK: MOD and NATO Standardization Office, 2017), 1–9, https://assets.publishing.service.gov.uk/; and *UK Defence Doctrine,* Joint Doctrine Publication (JDP) 0-01, 6th ed. (Bristol, UK: MOD, November 2022), 43, https://assets.publishing.service.gov.uk/.

7. JDP 0-01, 43.

8. Gareth Evans, "Rethinking Military Intelligence Failure: Putting the Wheels Back on the Intelligence Cycle," *Defence Studies* 9, no. 1 (2009): 23; and John A. Gentry, "The 'Professionalization' of Intelligence Analysis: A Skeptical Perspective," *International Journal of Intelligence and CounterIntelligence* 29, no. 4 (2016): 659, https://doi.org/.

Rigor and Standards in Intelligence Analysis

The nature of analytic standards and the related concept of analytical rigor is still a matter of some debate. While analytical rigor generally refers to the thoroughness of intelligence tools and techniques employed in analysis and assessment, analytic standards refer to the broader attributes of an intelligence product that make it effective, one of which is rigor. Resolving the debate about the connection between the two is key to understanding how analytic standards apply beyond the strategic level. The first step in applying analytic standards to tactical and operational military intelligence is therefore understanding the relationship between rigor and standards in intelligence analysis.

Analytical Rigor

The general perception of analytical rigor is that it indicates reliability and thoroughness, as opposed to demonstrating inflexibility or reflecting an analyst's inability to change their point of view.[9] Such rigor is a desirable outcome for intelligence, and it is therefore no surprise that key analytic standards documents such as ODNI's Intelligence Community Directive 203 and the UK's Professional Head of Intelligence Assessment's (PHIA) "Common Analytic Standards" consider rigor central to sound intelligence analysis.[10] Beyond this fundamental concept, however, there is some disagreement on how to further characterize analytical rigor.

By one definition, analytical rigor is input-focused, that is, contained within the processes by which intelligence analysis is conducted. These processes, referred to within the United States' IC as analytical tradecraft, are designed to eliminate biases and assumptions and in turn encourage quality analysis.[11] Analytical tradecraft ranges from basic processes for interpreting intelligence collection to structured analytical techniques. These techniques, such as backcasting and analysis of competing hypotheses, increase rigor by breaking down intelligence problems, highlighting both assumptions and the basis for assessments. For some, structured analytical techniques are the bedrock of process rigor, although criticism of this approach has persisted over the years.[12]

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9. Daniel J. Zelik, Emily S. Patterson, and David D. Woods, "Understanding Rigor in Information Analysis," in *Proceedings of the Eighth International NDM* [Naturalistic Decision Making] *Conference*, ed. K. Mosier and U. Fischer (Pacific Grove, CA: NDM, June 2007): 1.

10. ICD 203, 2–4; and Professional Head of Intelligence Assessment (PHIA), *Professional Development Framework for All-Source Intelligence Assessment* (London: Joint Intelligence Organisation, January 2019), 26, https://assets.publishing.service.gov.uk/.

11. Gentry, "ODNI," 641.

12. Stephen Marrin, "Intelligence Analysis: Structured Methods or Intuition?," *American Intelligence Journal* 25, no. 1 (2007): 14, https://www.jstor.org/; Robert D. Folker Jr., "Intelligence Analysis in Theater Joint Intelligence Centers: An Experiment in Applying Structured Methods," *Occasional Paper* 7 (Washington, DC: Joint Military Intelligence College, January 2000), 8, https://irp.fas.org/; and Welton Chang et al., "Restructuring Structured Analytic Techniques in Intelligence," *Intelligence and National Security* 33, no. 3 (2018), https://doi.org/.

Even outside the realm of highly structured techniques, some believe analytic standards should be evaluated in terms of the quality of the analytical processes that contributed to an assessment, adopting the viewpoint that procedural rigor creates good intelligence analysis.[13] According to this approach, analytic standards are intrinsically linked to procedural rigor.

The other approach to characterizing analytical rigor is output-focused. This alternative viewpoint considers a wider range of attributes that contribute to rigor. Rather than focusing on the quality of the processes, it instead focuses on the quality of the finished intelligence product. For example, one 2007 study of analytical rigor introduces the concept of sufficient rigor, where analytic standards are evaluated in terms of sufficiency across multiple attributes visible in an intelligence product.[14] This approach characterizes analytical rigor primarily in terms of what is delivered to customers rather than what process is employed in analysis: this notion of sufficient product rigor ensures that intelligence analysis is translated into useful outputs.

Both approaches—process- and product-focused—differ primarily in where they place the emphasis when judging the quality of intelligence analysis. Some scholars argue these approaches are not mutually exclusive and instead describe analytic standards at two different stages of intelligence analysis. They posit that process rigor is required for effective analytic work, while product rigor is required for quality intelligence outputs.[15]

It appears that the use of the term rigor to describe the overall standard of an intelligence product creates unnecessary confusion. Studies that aim to investigate rigor frequently incorporate other attributes beyond thoroughness of analytic reasoning, suggesting rigor is not the sole measure of quality. Examples of this might include clarity of communication, auditability, and effective sourcing, or the degree to which intelligence requirements are met. This is reflected in ICD 203. In addition to defining a different relationship between standards and rigor and alongside the characteristics of process rigor, ICD 203 also includes broader attributes of an intelligence product—such as timeliness and use of visual information—as analytic standards.[16]

The separation between process rigor and wider analytic standards is more evident in the PHIA analytic standards for the UK, where rigor is identified as one of the eight components of analytic standards and is characterized by "processes, tools and techniques appropriate to the intelligence requirement in order to be able to show logical and coherent

13. Patrick F. Walsh, "Improving Strategic Intelligence Analytical Practice through Qualitative Social Research," *Intelligence and National Security* 32, no. 5 (2017): 560, https://doi.org/.

14. Daniel J. Zelik, Emily S. Patterson, and David D. Woods, "Judging Sufficiency: How Professional Intelligence Analysts Assess Analytic Rigor," in *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* 51, no. 4 (October 2007): 318; and Zelik, Patterson, and Woods, "Understanding Rigor," 1.

15. Ashley Barnett et al., *Analytic Rigour in Intelligence* (Melbourne, Australia: University of Melbourne, April 2021), 14, https://cpb-ap-se2.wpmucdn.com/.

16. ICD 203, 2–4.

reasoning."[17] More recent scholarship of intelligence analysis is also beginning to conform to this viewpoint, where rigor is one part of a broader set of analytic standards.[18] Though rigor is important to sound intelligence analysis, it is but one attribute of an effective intelligence product.

The scholarly focus on analytic rigor has two causes. One is that the high-profile shocks that kickstarted modern interest in analytic standards were both failures of analytical rigor specifically. In the case of the National Intelligence Estimate for WMD in Iraq, poor rigor in strategic intelligence assessment was identified as a primary issue, which paved the way for subsequent shortfalls in independence, objectivity, and auditability.[19] The US commission report on WMDs noted an absence of common standards for analysis led to a shortfall in rigor, and pointed out that this had been identified in various earlier reports on the IC, but before the early 2000s, it had largely been ignored.[20] This criticism is echoed for the UK in the Chilcot Report, which singles out a poor standard of analytical rigor as the key contributor to intelligence failures preceding the 2003 invasion of Iraq.[21]

For 9/11, poor analytical rigor again played a defining role in the Intelligence Community's failure to predict al-Qaeda's large-scale terrorist attack in the United States.[22] The *9/11 Commission Report* stated that while techniques and processes were available for improving analytical rigor, they had not been iterated upon or applied effectively across the IC.[23] Because of the particular focus given to analytical rigor rather than other attributes of intelligence analysis in these reports, the subsequent significant academic and policy emphasis on it is perhaps unsurprising.

Yet this masks a second, more fundamental cause for the academic focus on analytical rigor. Analytical rigor received such attention in the study of strategic intelligence analysis because it is a priority for strategic-level intelligence itself. This characteristic emerges from the nature of strategic intelligence, which is to tackle the largest and most complex intelligence problems.[24] In support of strategic decision-making, such as the invasion of another country, the thoroughness of an assessment becomes the primary focus. Further, in order to be concise—to be consumable by senior decisionmakers—strategic intelligence

17. PHIA, *Professional Development Framework*, 26.

18. Barnett et al., *Analytic Rigour*, 21.

19. "The October 02 National Intelligence Estimate (NIE)," PBS Frontline, posted June 20, 2006, https://www.pbs.org/.

20. Laurence H. Silberman et al., *The Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction (WMD): Report to the President of the United States* (Washington, DC: Commission on Intelligence Capabilities Regarding WMD, 2005), 389, https://georgewbush-whitehouse.archives.gov/.

21. Iraq Inquiry, *The Report of the Iraq Inquiry: Executive Summary* (London: Her Majesty's Stationary Office, 2017), 114, https://assets.publishing.service.gov.uk/.

22. Douglas Porch and James J. Wirtz, "Surprise and Intelligence Failure," *Strategic Insights* 1, no. 7 (2002): 3–4, https://apps.dtic.mil/.

23. Thomas Kean and Lee Hamilton, *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks upon the United States*, vol. 1 (Washington, DC: Government Printing Office, 2004), 346–48.

24. Walsh, "Strategic Intelligence," 551.

products must effectively distill these broad problems, requiring structured rigor. At the most fundamental level, the focus on analytical rigor in scholarship of intelligence analysis, as well as in key analytic standards documents, is caused by the primacy of rigor above other attributes of timely, relevant, and meaningful strategic intelligence analysis.

Deconstructing analytic standards and analytical rigor has revealed several important implications for these standards in operational and tactical military intelligence. First, it recognizes the applicability of analytic standards for improving intelligence analysis. Second, it separates analytical rigor—the thoroughness of intelligence tradecraft employed in analysis and assessment—from analytic standards, or the broader attributes of an intelligence product that make it effective. Third, it demonstrates that the specific characteristics of strategic intelligence analysis mean that some analytic standards—in this case, rigor—are of greater importance in strategic analysis.

This suggests that at the tactical and operational levels of warfare there may also be different characteristics that lead to different priorities for analytic standards. To identify how analytic standards apply beyond the strategic level, a greater understanding of military intelligence analyses in these environments is required.

Tactical and Operational Intelligence Analysis

Military intelligence draws from procedural and disciplinary elements of both intelligence organizations and armed services.[25] In common with civilian intelligence agencies, military intelligence performs a range of functions which are often represented in an intelligence cycle. The debate regarding the merits and utility of the intelligence cycle would fill an entire article of its own; however, for the purpose of this article the broad categories it defines—direction, collection, processing, analysis, and dissemination—are useful in thinking about core intelligence activities.[26] Though intelligence activities in the United States and the United Kingdom encompass all of these stages, analytic standards chiefly concern the analysis stage. Examining this part of military intelligence work will identify how the assumptions of mainly strategic analytic standards may change in tactical and operational environments.

Tactical Intelligence

At the tactical level, military intelligence analysis has several distinguishing characteristics. For one, intelligence analysis teams are often much smaller than they are in

25. Jack Duffield, "Military Intelligence as a Dual Professional Identity: A Response to 'Military–Intelligence Relations: Explaining the Oxymoron,'" letter to the editor, *International Journal of Intelligence and CounterIntelligence*, published online January 3, 2024, 2, https://doi.org/.

26. Michael Warner, "The Past and Future of the Intelligence Cycle," in *Understanding the Intelligence Cycle*, 1st ed., ed. Mark Phythian (London: Routledge, 2013), 17–19, https://doi.org/.

strategic environments.[27] This is not only an inevitable consequence of deployed operations, where the number of personnel placed in harm's way must be as small as possible, but it is also a fact of scale. Across multiple units, each potentially with taxing deployment schedules and shift patterns, even a large number of analysts are quickly spread thin. Intelligence analysts below the strategic level are also often reporting to a small customer base, such as operational commanders and other units with overlapping areas of intelligence interest.[28] In many cases, tactical intelligence analysts will be directly subordinate to their principal customer, who strongly influences priorities for intelligence output.

Moreover, in this environment, intelligence analysis must be highly focused. Operational relevance becomes vital, and intelligence assessments are often tailored to the unit being supported.[29] Analysts are further required to be familiar with the capabilities they are supporting. To triage incoming reporting and make useful assessments, intelligence analysts must understand operating environments, friendly defensive capabilities, likely missions and potential operating areas, as well as the assumptions underpinning risk decisions.

A final distinguishing characteristic of tactical intelligence analysis is the short timescales involved. A full cycle of planning and execution can occur in fewer than 24 hours, and military capabilities are consistently held at the shortest possible readiness level, measured in hours or even minutes.[30] Providing intelligence analysis inside these narrow time frames is atypical for strategic intelligence analysts, who are not usually expected to deliver finished products in response to near real-time requirements outside of crisis scenarios.[31] Even beyond the deployed environment, large-scale deep dives into intelligence problems are rarely the most effective use of a tactical analyst's time. A broad understanding of the strategic picture is generally sufficient to contextualize tactical intelligence work.

Operational Intelligence

For operational-level intelligence analysis, many of the same principles apply, but to a lesser extent. This is understandable, given that the operational level of warfare is doctrinally a midpoint between tactical and strategic levels of warfare. Intriguingly, a recent study has questioned the very existence of the operational level of warfare; however, as it remains an accepted and central component of current Western military doctrine and organizations, the operational level of warfare certainly merits exploration in its own right.[32]

27. Phillip Surrey, "Air Mobility Intelligence: Survivability in the Contested Environment," *Air and Space Operations Review* 1, no. 3 (2022): 39, https://www.airuniversity.af.edu/.

28. Evans, "Rethinking," 30; and MOD, *Intelligence, Counter-Intelligence and Security Support to Joint Operations,* JDP 2-00 (Bristol, UK: MOD, August 2023), 172, https://assets.publishing.service.gov.uk/.

29. Surrey, "Air Mobility Intelligence," 44.

30. Defence Select Committee, Memorandum by the Ministry of Defence, The Defence White Paper, Readiness Assumptions, www.parliament.uk, April 2004, https://publications.parliament.uk/.

31. Evans, "Rethinking," 28–29.

32. Brett Friedman, *On Operations: Operational Art and Military Disciplines* (Annapolis, MD: Naval Institute Press, 2021).

The operational intelligence environment also introduces unique further considerations beyond those expected of the conceptual midpoint between the tactical and strategic levels where operations traditionally are understood to occur. First, supported capabilities are less important, as operational-level headquarters become more platform-agnostic to command multi-asset and multidomain operations.[33] In the place of capability knowledge, a comprehensive understanding of the area of operations and the adversaries working within it become paramount. Tactical analysts, narrowly focused on producing intelligence to shape execution in their specific area, are expected to collaborate with their operational-level counterparts to resolve gaps in their wider understanding.[34] Operational-level analysts therefore also become vital for communicating key information across intelligence chains with absolute clarity, as well as tracking the sources of this information.

Given their role directly supporting operational commanders, intelligence teams at the operational level often form a red cell, which challenges assumptions and bias in operational plans and seeks to understand how adversary and other forces might think and behave differently.[35] Operational-level intelligence analysts are frequently both a focal point and a regional authority in military intelligence analyses, creating a bottleneck in intelligence chains, which makes impartiality a priority. Operational-level analysts must stand apart from the collective mindset and perspective of their unit when performing their duties, to preserve the capability to challenge groupthink and thus insure against intelligence failure. Accordingly, the operational intelligence environment has its own unique considerations—belying the understanding of operations as a midpoint between strategy and tactics—which challenge the assumptions of analytic standards applied at the strategic level.

Differences from Strategic Intelligence

These two subdisciplines of intelligence analysis contrast starkly with strategic analysis. Military intelligence analysts who work at the strategic level often bring their specific military expertise to broader strategic problems, both military strategic and grand strategic in nature. The characteristics of military strategic intelligence are perhaps the least distinctive from civilian intelligence analysis: analytical teams in both settings focus on longer-term analyses, and the more generalized areas of concentration make deep thematic specialization practical.

As discussed above, systematic approaches such as structured analytical techniques also become more relevant, and less dynamic requirements mean that a greater level of process rigor can be applied.[36] More generally, the less time-sensitive intelligence questions posed to strategic analysts result in longer and more comprehensive products for national-level

33. JDP 0-01, 23.

34. Secretary of the Air Force (SecAF), *Intelligence Analysis*, Air Force Instruction (AFI) 14-33 (Washington, DC: Department of the Air Force, March 29, 2016), 13, https://irp.fas.org/.

35. JDP 2-00, 163.

36. Walsh, "Strategic Intelligence," 560.

decisionmakers, who typically do not demand highly specific reporting with only days or hours of intelligence value.

Intelligence questions at the strategic level are also broader and more nebulous. Whereas a tactical analyst often deals with a bounded problem set with a single capability in a defined geographic area, strategic military intelligence analysts may be responsible for countries or even whole continents. Given these broad remits, larger parts of the Intelligence Community can become more relevant; for the United States alone, the full IC is estimated to employ more than 800,000 people.[37] Importantly, the wider range of reporting available for strategic intelligence analysis at this level and increased use of fused intelligence products greatly heighten the risk of circular reporting if sourcing chains are not clear, reinforcing the need for a level of rigor that is not applicable at the tactical and operational levels.

Finally, for the UK, some characteristics of tactical intelligence analysis, such as knowledge of friendly capabilities, become effectively irrelevant for strategic military intelligence, shaping operational priorities but making little impact on analytical output.

Analytic Standards

Analytic standards are applied differently in each of these environments. Far from being environments with less rigorous analytic standards, the tactical and operational levels instead value different attributes of intelligence analysis more strongly, as in the case of strategic intelligence where rigor is key. As noted in a University of Melbourne study, good analysts will generally seek to meet the highest standard feasible in their circumstances.[38] Nonetheless, the different levels of intelligence analyses introduce differences in focus for analytic standards. Figure 1 represents this varied prioritization of analytic standards at the tactical, operational, and strategic levels, conveying visually the relevant importance of each standard based on the analysis above.

37. J. Tucker Rojas, *Masters of Analytical Tradecraft: Certifying the Standards and Analytic Rigor of Intelligence Products*, Wright Flyer Papers (Maxwell AFB, AL: Air University Press, May 2019), 2, https://media.defense.gov/.

38. Barnett et al., *Analytic Rigour*, 14.

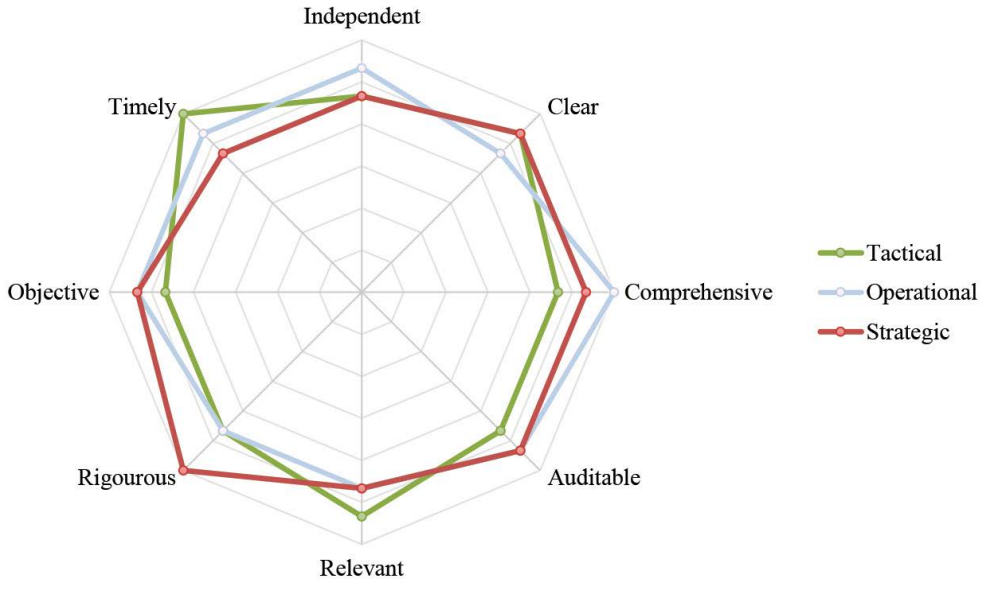

Figure 1. Visual illustration of the relative importance of analytic standards in different military intelligence environments, based upon the PHIA analytic standards framework

Though the figure is illustrative and does not offer a quantitative breakdown of the relative importance of each standard, it does recognize that analytic standards in general are of significant importance to intelligence output at every level. It also highlights that a one-size-fits-all approach to analytic standards is insufficient for the full range of military intelligence environments. In particular, the focus on rigor in key intelligence standards documents largely favors the strategic intelligence environment, at the expense of applicability to the tactical and operational levels. With an understanding of both analytic standards in general and the nature of intelligence analysis in the military, it is now possible to determine fully how analytic standards apply differently in the context of military intelligence.

Applying Analytic Standards Appropriately

There are many variations in the application of analytic standards in different military intelligence environments. For example, while thorough sourcing chains are considered essential at the strategic level, they can be omitted at the tactical level, providing the analyst has a sound understanding of where their key information has come from.[39] Both written sourcing chains and individual analysts' subject matter expertise are appropriate

39. Timothy Haugh and Douglas Leonard, "Improving Outcomes: Intelligence, Surveillance, and Reconnaissance Assessment," *Air & Space Power Journal* 31, no. 4 (2017): 10, https://www.airuniversity.af.edu/.

in the context of the activity that they support, but neither would be a good fit for the other environment. This is only one example of how the characteristics of intelligence analysis at different levels of war manifest in differing requirements to meet the same analytic standard. Military intelligence outputs therefore require analytic standards tailored to and appropriate for each military intelligence environment.

For example, the US Air Force has published supplemental analytic standards for intelligence in Air Force Instruction (AFI) 14-133, *Intelligence Analysis*. This document recognizes the primacy of ICD 203 in Air Force intelligence analyses, but it tailors analytic standards and tradecraft standards to US Air Force operations. Importantly, AFI 14-133 adjusts the IC tradecraft standards, which are referred to as Air Force intelligence analysis standards. While ICD 203 refers to timeliness in a general sense of "useful analysis at the right time," AFI 14-133 specifies that it must be achieved with respect to mission planning cycles, recognizing that timeliness may be constrained to just a few hours in some environments. Similarly, while ICD 203 insists intelligence products must be "based on all available sources," AFI 14-133 qualifies this by noting that sources should be cited "when feasible" and by dropping the requirement for comprehensive coverage in all cases.[40]

The US Air Force analytic standards more closely resemble the UK's analytic standards, fused with other elements to create a practical checklist for effective analysis.[41] Amendments such as these in the Air Force analytic standards take better account of how intelligence is practically employed in military operations, adapting to the idiosyncrasies of military intelligence environments.

AFI 14-133 also introduces intelligence analysis tenets—more akin to principles than standards—that "cover the most important beliefs about [US Air Force] intelligence analysis" and how ICD 203 should be applied in support of these beliefs.[42]

Environment-specific standards for military intelligence such as those in AFI 14-133—further subdivided into specific guidance for product types such as premission briefs, intelligence scenarios, and update briefs, or presented as more general principles—offer a valuable resource for measuring the quality of intelligence products. As one scholar argues, analytic standards are primarily useful to "raise the floor" of acceptable intelligence output and have less utility for judging high-quality products.[43] It is therefore acceptable for analytic standards in military intelligence to be prescriptive, stating specifically whether certain features such as sourcing, structured analytical techniques, and probabilistic language are required, recommended, or suggested in each environment.

The most interesting feature of US Air Force analytic standards is the recognition of differing modes of intelligence analysis in different situations. The Air Force identifies a continuum of intelligence analysis. At one end, traditional "all-source analysis" prioritizes thorough analysis of a wide range of sources, applying analytical techniques and deep

40. ICD 203, 3; and SecAF, AFI 14-133, 14.
41. SecAF, 14–17.
42. SecAF, 13.
43. Gentry, "ODNI," 645.

expertise to produce detailed and broad products.[44] At the other end is an alternative approach referred to as "fusion analysis," which is described as "quickly melding new information with baseline knowledge to meet specific operational needs."[45] This concept of fusion analysis describes tactical intelligence analysis in several key ways, such as emphasizing rapidity and the use of a smaller number of focused intelligence sources to answer intelligence requirements for an operational customer. It also suggests that in these time-sensitive situations, an analyst's baseline knowledge is an acceptable substitute for fully audited and referenced products.

Although UK analytic standards do not formally recognize fusion analysis, it is an everyday reality of working in any Western intelligence organization, where phone calls to regional analysts or teams to corroborate or request information—or even to develop an ad hoc assessment—are commonplace. In some cases, such calls are used to focus analytical efforts or generate alternative hypotheses in support of intelligence products. In other cases, a rapid succession of calls, emails, or chats may be the only way to deliver effective intelligence updates in an acceptable timescale should the threat to operations change rapidly, perhaps even during the course of a mission. Fusion analysis in intelligence is thus a valuable doctrinal concept that demonstrates a successful application of the principles of analytic standards in a tactical military intelligence environment.

Interestingly, AFI 14-133, as noted above, offers the construct of a continuum to recognize that analytic standards do not apply uniformly to all analyses. Yet it does not delineate the difference between all-source and fusion analysis within a tactical-strategic paradigm. Instead, AFI 14-133 acknowledges analysts will operate somewhere between fusion analysis and all-source analysis at different times, often depending on time, the availability of information sources, and customer requirements. In fact, the primary delineation between these techniques is the extent to which the analyst may rely upon their own current knowledge of intelligence reporting and general atmospherics in their area of responsibility. In this way, this analytic continuum distinguishes between analysis conducted with a high degree of preexisting subject knowledge and analysis conducted without it, irrespective of the analytic standards applied.

One study on the Central Intelligence Agency's (CIA) analyst training program distinguishes three types of expertise in intelligence: regional expertise in a specific area, disciplinary expertise in the general skills of analysis, and procedural expertise in the methods and processes of intelligence delivery, especially review processes.[46] Using this model, regional expertise—analogous to subject matter expertise in intelligence disciplines that are not geographically constrained—is the type of expertise recognized by the Air Force as suitable in some intelligence applications across all levels of operations. The analyst as a source is a reality of intelligence analysis, particularly in intelligence environments where analytical

44. SecAF, AFI 14-133, 4.

45. SecAF, 4.

46. Stephen Marrin, "CIA's Kent School: Improving Training for New Analysts," *International Journal of Intelligence and CounterIntelligence* 16, no. 4 (October 2003): 613, https://doi.org/.

power is constrained by size. Reconciling subject matter expertise with analytic standards is the final step in understanding how such standards apply to military intelligence.

Accrediting the Analyst

The huge number of potential tactical- and operational-level operating environments means military intelligence analysts may be thinly spread across multiple theaters and deployments. As well as the simple matter of size, there are other factors that might constrain the number of intelligence analysts working on a given intelligence problem. These factors are especially relevant beyond the strategic level, where deployments and shifts are the norm.

In deployed operations, there is an incentive to put the minimum number of people in harm's way where there is a greater risk of injury or death as a result of enemy action. Adding to this is what the UK government refers to as the "burden" of operational deployments. These deployments disrupt the lives of service personnel and are therefore minimized where practical.[47] When the operations tempo is high, personnel also require periods of rest, leave, and training before returning to deployed operations—or periods of intense operational activity at home—meaning that large proportions of personnel cannot be deployed simultaneously without compromising the long-term ability to replace them.

Though these constraints may not apply all at once in every scenario, they must be considered to ensure military intelligence capabilities are sufficiently agile and resilient. These constraints increase the importance of individual analysts with a high degree of subject knowledge who can dramatically reduce the time required to deliver intelligence output. In some cases, this could be a single analyst on shift in a tactical environment, with limited communications capability and little ability to reach back to experts who can answer ad hoc questions posed by those deployed forward.[48]

The delivery of intelligence products by a small team of analysts, perhaps even a single analyst, conflicts with the guidance of scholars of strategic intelligence analysis. Scholars refer to the effective use of teams of analysts as "team cognition," which improves the ability of analysts to develop solutions to complex intelligence problems.[49] Multiple analysts can refine hypotheses, widen the research base for a product, and propose alternative analytical approaches and product presentations to improve the overall standard of a product.

Senior analysts in particular play a pivotal role in enforcing analytic standards. Through quality control chains, more senior personnel review their subordinates' work to identify logical shortfalls or gaps in reasoning before a product is disseminated. One study observed

47. MOD and Rt Hon Philip Hammond, "Afghanistan Tour Lengths for Deployed UK Personnel," GOV.UK, May 14, 2023, https://www.gov.uk/.

48. Surrey, "Air Mobility Intelligence," 39.

49. Stoney Trent, Martin Voshell, and Emily Patterson, "Team Cognition in Intelligence Analysis," *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* 51, no. 4 (October 2007): 308, https://doi.org/.

that a reliable standard of analytical quality control required at least three different analysts to "rate" the quality of an intelligence product, meaning that optimized intelligence products require at least four analysts in total to deliver.[50] For the reasons discussed above, this is sometimes impractical in intelligence environments other than the strategic level. In short, an alternative to multi-analyst quality control is required for tactical and operational military intelligence environments.

The concept of analytical tradecraft is defined in ICD 203 and revisited in AFI 14-133 as a core feature of intelligence analysis, emphasizing the role of the individual analyst in implementing analytic standards.[51] As mentioned, analytical tradecraft refers to the individual skills of an analyst—the disciplinary expertise in the general skills of analysis and the procedural expertise in the methods and processes of intelligence delivery as defined by the CIA training study.[52] Accreditation of these core analytical skills is an essential component of analytic standards, although for states such as the UK, this is measured in terms of an ability to deliver products which meet standards rather than as attributes in their own right.

A viable approach is to accredit the analytic tradecraft of analysts themselves. This is the approach proposed by one researcher who argues the United States needs analysts accredited to a high standard of disciplinary and procedural intelligence expertise who could take leading roles in improving the quality of intelligence products.[53] This approach has echoes of the Qualified Weapons Instructor program in the UK—similar to the US Air Force's Weapons School program or the US Naval Aviation Warfighting Development Center program—which emphasizes extensive training of selected personnel to reach a high standard of individual output, and in turn accredits them to teach these skills to others.

These programs align with the intent of AFI 14-133 and the general direction of ICD 203, where analyst training is recognized as a means of improving the overall standard of intelligence products. While capstone training, such as Qualified Weapons Instructor courses, develops a small number of already capable analysts, current analytic standards for all levels of military intelligence also apply much more broadly, serving a complementary function in enhancing the quality of all military intelligence analysts.

Furthermore, the requirement for military intelligence analysts to be prepared to work in very small teams means that accreditation cannot be limited to products alone. Instead, analytic standards tailored to the different military intelligence environments must be applied to accredit the analyst and their expertise in their role. The AFI 14-133 tradecraft standards offer an example of how this can be achieved, bridging the gap between capstone accreditation of a small number of expert analysts and the demands of intelligence environments beyond the strategic level.

50. Marcoci et al., "Better Together," 1.
51. ICD 203, 2–4; and SecAF, AFI 14-133, 14–17.
52. Marrin, "CIA's Kent School," 613.
53. Rojas, *Masters*, 11.

Conclusions

Analytic standards are essential to high-quality military intelligence output across all levels of war. Yet scholarship of analytic standards is currently based on the strategic intelligence environment, with a high emphasis on rigor. Meanwhile, tactical intelligence environments value other attributes of analytic standards, such as timeliness, to a far greater extent than in strategic environments, and must apply these standards in different ways. The operational environment, far from being a midpoint between the tactical and strategic environments, has attributes all its own, prioritizing comprehensiveness and independence over other attributes.

Military intelligence environments therefore require analytic standards to be adapted differently, to resolve the rigor-led, strategic bias inherent to traditional analytic standards. The US Air Force's AFI 14-133 demonstrates how analytic standards can be applied to separate military intelligence environments, particularly in how it shifts focus toward the analyst and their output as emblematic of an ideal product. Recognizing the importance of accrediting the analyst is key to implementing effective analytic standards in military intelligence environments. Exploring how analytic standards are used in military intelligence lays the foundation for further progress in a vital but understudied area of intelligence scholarship. ✈