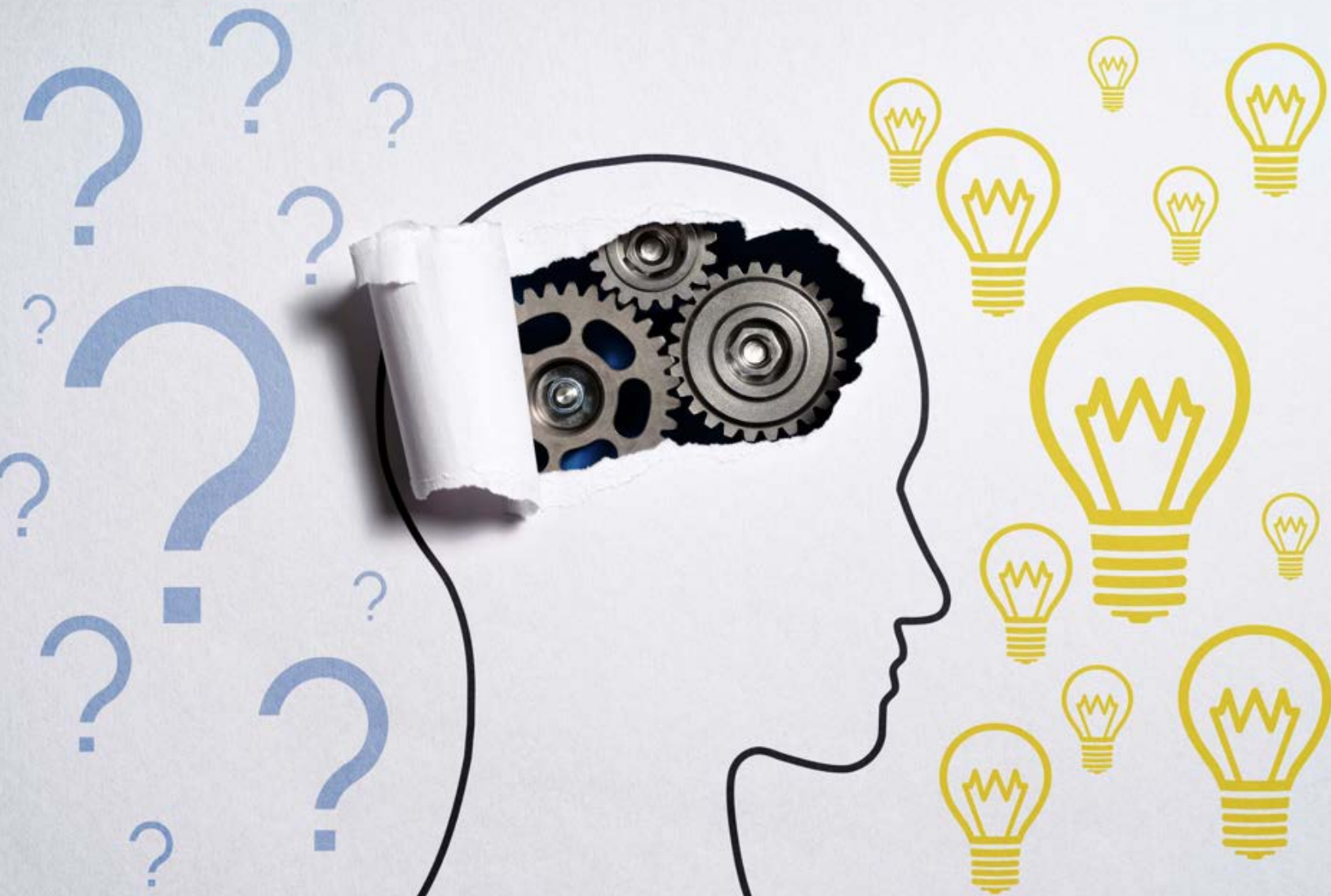




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RED TEAMING: A TOOL TO CONDUCT RISK ASSESSMENT, DEVELOP CRITICAL THINKING, AND CHALLENGE SOF STRATEGIC PLANNING ASSUMPTIONS

BY LUKE BELLOCCHI, JD, LL.M., M.S.S.I., M.B.A. AND ILARIA DE SANTIS, PH.D.



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Introduction

Development of critical thinking is often touted as an important part of joint professional military education (JPME)-II education¹ and risk assessment an essential part of strategy development. Both are major components of most JPME-II senior staff college programs. However, experience demonstrates that risk assessment (including challenging assumptions) is often the tacked-on portion of strategy development, which means it is given short-shrift in the simplified ends-ways-means strategy construct that is core curriculum. In other words, after spending enormous amounts of time and effort building a strategy, planners naturally feel defensive about any process that attacks their hard work. As a result, the assessment becomes at most about what risks are inherent in the environment rather than a deep critique of whether the strategy itself contains flaws. SOF planners should take note of how best to counteract this potentially fatal flaw.

“

Military officers are not inclined to criticize work that has senior officer support and may be trained to be more doctrinal rather than critical in thinking.

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Moreover, military officers are not inclined to criticize work that has senior officer support and may be trained to be more *doctrinal* rather than *critical* in thinking. Consequently, methodologies for assessing risk and suitability such as red teaming can easily be given check-the-box treatment. Red teaming, a process that involves critical thinking and the ability to challenge authority, must involve vastly varied cognitive and cultural perspectives and is indispensable in challenging the underlying types of assumptions pervading every level of strategy (See Figure 1). Planners should take the process seriously to reduce risk to and from a strategy through expansion of formal planning guidance.

The Importance of Challenging Bias and Understanding Types of Assumptions

Experienced and senior strategists such as Major General William Mullen have long recognized that “assumptions are key to getting strategy right, but they are oftentimes flawed, unrealistic, and difficult to change because strategists tend to view the world based on what is familiar to them.”² Other scholars have written that strategies are “necessarily built on assumptions about opponent capabilities and intent, the dynamics of the international situation, and important aspects of one’s domestic situation...and the most dangerous assumptions are the ones made unwittingly.”³

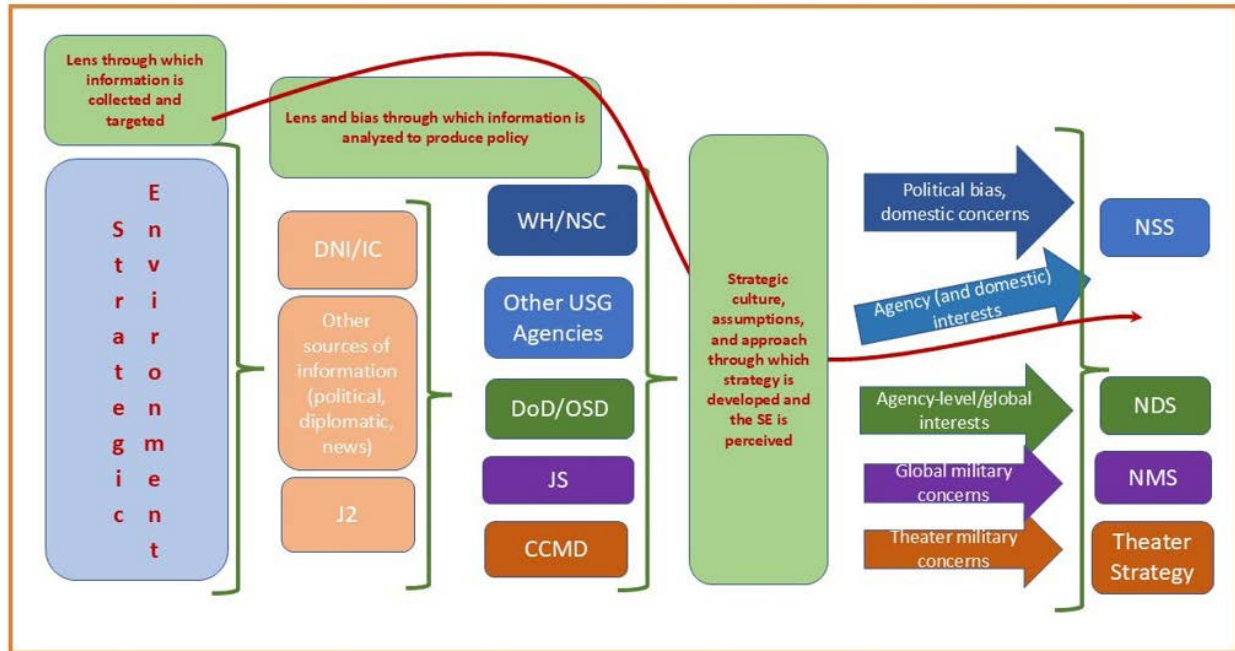


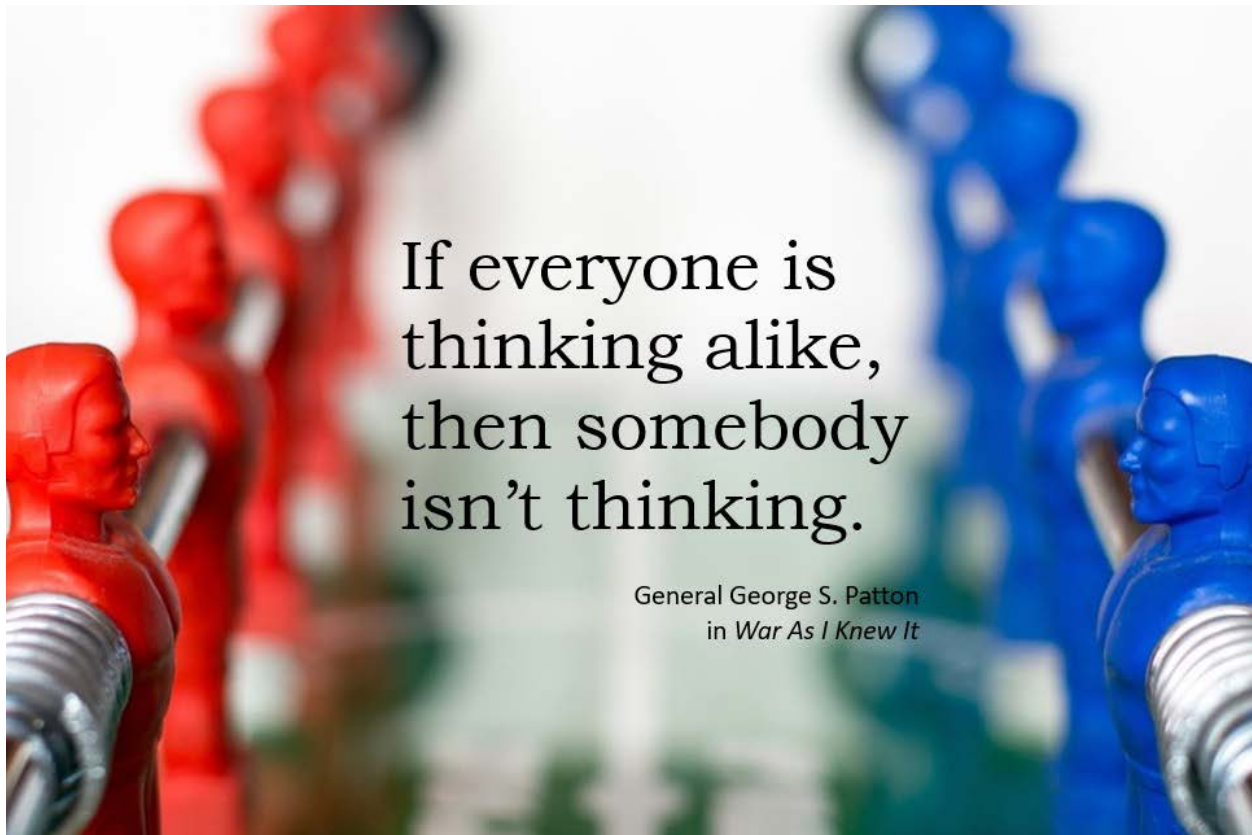
Figure 1. Development of how bias unwittingly pervades assumptions and strategy. Source: Author.

There are plenty of examples from history in which assumptions and bias led to near-catastrophic results—most recently, that the Ukrainians would capitulate to war with Russia. Looking further back in history, in 1944 allied officers assumed the Germans would not splurge the last of their Panzer units on the Battle of Bulge offensive, and biased assumptions led the U.S. to believe the Pearl Harbor attack in 1941 would never happen because biased intelligence led officers to believe the Japanese were not innovative enough to produce a shallow-water torpedo or mount an effective surprise attack of that scale and complexity.⁴

Planners must consider and challenge at least two types of assumptions: (A) those made unwittingly and (B) those made purposefully to further strategy or planning development. The first assumption comes about through an unconscious stream of

logic based on one's worldview. For example, in February 2022, the French government could not fathom that Russians would control 40 million Ukrainians with about 90,000 invasion troops; therefore, France assumed they wouldn't invade.⁵ The second assumption is produced through conscious thought and is required in planning doctrine

Both assumptions are based on individual bias that must be challenged through critical thought. Yet, while a review of formal doctrine usually reveals thought put into other aspects of risk assessment, there is typically scant discussion about how to develop and utilize the critical thinking required to combat underlying bias and assumptions, which may lead plans astray, increase risk to force and mission, and are an inherent risk from and to the strategy itself.



Source: Shutterstock. Graphic element added.

Risk, Assumptions, and Critical Thinking in Joint Doctrine

Joint Publication (JP) 5-0, *Joint Planning*,⁶ is often used as the go-to guide for planning strategy within military establishments, but the following review of its requirements demonstrates a de-emphasis on red teaming, critical thinking, and even risk assessment in general.

Risk Assessment

Risk assessment is first covered in Chapter 1, section 4d, which defines risk and the importance of unvalidated assumptions to “become[s] a risk to either the mission, force, or both.” However, the given definition

of assumption, “suppositions taken as true in the *absence of proof*” (emphasis added), means that assumptions are always unvalidated (i.e., once validated or proven, a supposition is no longer considered an assumption). Perhaps the issue is how much proof is required: probable (more than 50 percent chance) or just with a high degree of (vague) certainty? However, the definition then suffers, since even a shred of proof means there is no longer just a simple assumption. Maybe it is better to accept that since intelligence is never omniscient, assumptions always exist and, by extension, risk always exists. How then to best define and address this critical aspect of risk?

Identifying and Mitigating Risk

Chapter 1, section 7 (Risk Identification and Mitigation) of JP 5-0 instructs planners to identify risk, which may “result from enemy action, incorrect assumptions,” and a non-exhaustive list of factors. It then states that “assumptions that are logical, realistic, and essential for planning are used ... [but should be] reviewed continuously to determine continued validity.” However, nowhere in the section does it describe how these assumptions are to be reviewed. If reviewed by the original planner, the same biases and critical worldview simply follows the same logic. Thus, that mental framework is likely simply revalidated and even reenforced. Ultimately, the assumptions that led to the examples above might still be considered “logical and realistic.”

Developing Risk Assessment

Chapter 3 of JP 5-0 contains a subsection (Develop Risk Assessment) within the Joint Planning Process that advises the planner to use a probability-to-consequence continuum (“based on judgement, military risk assessment is an integration of probability and consequences of an identified impediment”), but it also advises “determining military risk is more art than science.” Further, it explains that “military risk is often a matter of perspective and personal experience.” This methodology might be aimed at a more specific operational aspect of a plan but urges the planner to use instinct and experience rather than methodology. Thus, risk analysis here is admittedly dependent on the personal (and lifetime-limited) experience of the analyst.

The Chairman of the Joint Chiefs of Staff Manual⁷ 3105.01B, recently updated and otherwise known as the Joint Risk Analysis Methodology (JRAM)—considered the “authoritative Joint Staff risk reference”—also discusses the risk-consequences-probability continuum as risk methodology but only includes bias under “other considerations.” The new version, while recognizing the importance of enlisting stakeholders and alternatively employing a red team, does not otherwise tackle the issue. If the JRAM construct is to be fully and properly utilized, it must expand the discussion regarding how to challenge bias as part of risk assessment methodology.

“If the JRAM construct is to be fully and properly utilized, it must expand the discussion regarding how to challenge bias as part of risk assessment methodology.”

Identifying Assumptions

JP 5-0, Chapter 4 (Operational Design) section 3e (Identify Assumptions), envisions situations in which a commander identifies assumptions to fill gaps in information or guidance. In this framework, the assumption is an active creation rather than a passive underlying foundation for operational planning. This is, in a sense, more manageable than the latter, simply because it is more recognizable. The problem with the latter is that it is often difficult to recognize

that an assumption has been made because it is so ingrained into the planner's own logic. Both constructs of assumptions should be challenged to avoid a catastrophic mistake in strategy or operations.

“The composition of red teams is extraordinarily important to effective strategy and planning.”

Finally, JP 5-0 does devote a short appendix (J) to red teams, recommending the “routine use of red teams,” and defining them as “an organizational element [composed of] trained and educated members that provide an independent capability to fully explore alternatives in plans and operations in the context of the operational environment and from the perspective of adversaries, and others.” The “implicit tasks of a red team include countering the influence of institutional and individual bias and error; providing insight into the mindsets, perspectives, and cultural

traits of adversaries ... [and reducing] risk by helping organizations anticipate, understand, prepare, and adapt to change.” It can serve as a devil's advocate, “but it [is] normally focused on supporting plans, operations, and intelligence.” These are good points, although the emphasis on supporting plans is misplaced or misstated—and nowhere in these documents is the composition or the adequate nature of a proper red team described. See Figure 2.

Proper Composition and Effectiveness of Red Teams – Suggested Update to Joint Doctrine

Cultural Expertise

The composition of red teams is extraordinarily important to effective strategy and planning.⁸ A check-the-box type of red team is more likely to be composed of members who are like-minded with the authors of the original strategy or

plan to be reviewed. This type of team composition—e.g., all Army infantry officers of a like age, experience, geographic experience, socioeconomic background, and gender—is likely to reinforce assumptions



Figure 2. Assumptions, beliefs, perceptions, and concepts. Source: Author

and bias already extant in the planning, simply because they likely possess the same worldview mindset. Further, they may not realize that their planning, based on the intelligence provided to them—in the way that intelligence is targeted, collected, and disseminated—also contains bias and assumptions the intelligence professional may not understand exists in their own products.

“The guidance on red teaming should robustly spell out the need for a cognitively and culturally diverse membership, including at least one member who is especially familiar with the cultural logic of the adversary and, ideally, additional members familiar with the cultural norms of allies and partners involved in the plan.”

Instead, the guidance on red teaming should robustly spell out the need for a cognitively and culturally diverse membership, including at least one member who is especially familiar with the cultural logic of the adversary and, ideally, additional members familiar with the cultural norms of allies and partners involved in the plan. Worldview and logic-frameworks from different parts of Asia, for example, vary widely from European and American thought patterns. Thus, a plan and strategy may be interpreted in a completely different light

from which it was intended. For example, there was a biased U.S. expectation that the Japanese would capitulate in reaction to the July 1941 oil embargo, but their reaction was inevitable war; conversely, the Japanese expected that the U.S. would settle out of war after a Pearl Harbor attack because of their biased belief that Americans preferred a life of pleasure to conflict. Therefore, one must be careful in selecting true experts. Take China, for example. It does not suffice to find someone who read a book or can quote Sun Tzu to serve as a cultural expert. Rather, one who has lived there and acculturated into the Chinese way of thinking should be included. Even someone who has “gone native” can be helpful. As former U.S. Secretary of Defense Robert McNamara recalled, U.S. Ambassador to the Soviet Union Llewellyn Thompson knew the Soviet leadership well enough to advise President John F. Kennedy wisely, contrary to other advisers in responding to the Cuban Missile Crisis; however, “in the case of Vietnam, we didn’t know them well enough to empathize with them,” which led to unnecessary loss of national blood and treasure.⁹

Interagency Representation

It should go without saying that joint and combined arms planning should include red team members from various services, especially if they have expertise regarding the adversary’s capabilities. In addition, as the world’s dimensions of warfare continue to expand, representatives from non-geographic commands and the interagency



Source: AI-generated image created by author

One may argue that finding red team members from such diverse backgrounds is difficult, whether drawing from DoD ranks or from contractors. However, this country possesses practical application of its great advantages--its wealth and wide array of people from different cognitive backgrounds--to provide high-quality red team members.¹³

are essential to getting strategy right. Historically, in this vein, the U.S. State Department's George Ball was able to present alternative views during cabinet debates on Vietnam war policy,¹⁰ advisors who propagated the economic blockade on the Central Powers during World War I led to its collapse,¹¹ and U.S. Department of Treasury's current financial sanctions to cripple terrorists and Russian oligarch networks have had a weakening effect on adversaries.¹² The interagency should therefore be read expansively—not just to include a representative from the State Department, which is often seen as the most related agency to DoD and representative of the interagency—but should also include representatives from Treasury, Commerce, Transportation, Homeland Security, Energy and others to ensure an array of expert perspectives—and even input and buy-in toward a whole-of-government approach to strategy. This should occur not just at the top levels but at working levels as well.

Promote Open Discussion

Beyond expanding requirements for red team composition, doctrinal scholars should consider adjusting the environment of red teaming to allow all participants to freely challenge assumptions and authority without repercussion. Further, doctrine should encapsulate a procedure to address those challenges—that is, divergent opinions should not be easily put aside but formally addressed. To a degree, this could be accomplished through anonymous input and challenges to a plan and requirements of written justification to override these concerns. Commanders' guidance should encapsulate these challenges and justification as part of the final report for a planned strategy so senior leadership can have easy access. Finally, there should be a safe back channel,¹⁴ informal method for participants to quietly reach leadership with any serious concerns regarding potential pushback.



Within a red team, members must employ critical thinking when examining and challenging planned strategies and constantly ask questions about power dynamics in the wider geopolitical milieu.



Use of Critical Thinking in Challenging Assumptions and Viewpoints

Within a red team, members must employ critical thinking when examining and challenging planned strategies and constantly ask questions about power dynamics in the wider geopolitical milieu. In critical theory, a critical thinker questions who decides what counts as legitimate knowledge—and frequently challenges the authority of experts in the field. Similarly, pragmatist theory supports the belief that critical thinkers are always rethinking positions, considering new knowledge, and open to all perspectives based on their experience of the world.¹⁵ In professional military education (PME), assumption is described in JP 5-0 as a specific supposition of the operational environment that is assumed to be true in the absence of positive proof and essential for the continuation of planning.¹⁶ This definition, nevertheless, needs to take variables into account that may impact the interpretation of assumptions: A) individual beliefs affect the evaluation, conclusion, and prediction

of surrounding events, and B) perceptions as the individual selection, organization, and interpretation of specific aspects of events are filtered through an individual's experiences. As a result, concepts as general ideas used to identify and organize events and generated as a baseline for assumptions must be analyzed and questioned for validity and reliability.

As one scholar writes: “But much of our thinking, left to itself, is biased, distorted, partial, uninformed or down-right prejudiced. Yet the quality of our life and that of what we produce, make, or build depends precisely on the quality of our thought. Shoddy thinking is costly, both in money and in quality of life. Excellence in thought, however, must be systematically cultivated.”¹⁷ The same bias applies to thinking in national security, as shoddy analysis may easily lead to loss of national blood and treasure; just as sophisticated products brought to market are tested and retested, so must national security products.

Critical Thinking

Education for planning positions should include deep learning to gain deep critical-thinking skills to allow for the aforementioned critical discussions to take place. To achieve this, PME curricula need to identify lessons where subset elements of critical thinking take place, such as:

- Operations where risk threat analysis is warranted to mitigate and prevent losses
- Analysis of assumptions to resolve conflicts or avoid violence in military operations

- Cultural and gender bias awareness for inclusion and consideration of multiple perspectives, and
- Acknowledgment of group thinking dynamics as potential hindrance for the full development of critical thinking abilities from the early planning phases.

Types of Assumptions

Because assumptions are usually contextually appropriate, rather than right or wrong, it is useful to define specific categories of assumptions to identify and reflect on actions, beliefs, and perceptions under which groups operate. See Figure 3.



Figure 3. Examining critical thinking. Source: Author

Once an occurrence is contextualized under one or more of these categories, a well-cultivated critical thinker observes the overall scenarios and raises the right questions (i.e., clear and precise) to a problem; gathers and evaluates relevant information; arrives to well-reasoned conclusions and solutions after testing assumptions against relevant criteria; and is open-minded when alternative solutions are presented, willing to embrace different

categories of assumptions, and calibrate any practical consequences.¹⁸

Causal assumptions are retroactive, that is, based on observed past events. Under this category, an individual has set expectations for an event, challenge, or situation to occur under certain conditions. A predictive assumption is, instead, what should happen in particular events, challenges, or situations; as such, individuals hold expectations on how circumstances should unfold and how people should act in response to those events, challenges, or situations. A paradigmatic assumption frames the

individual's interpretation of the events, challenges, or situations through beliefs of how the world should be structured.¹⁹ See Table 1.

This process must be verified for accuracy and reliability through checking assumptions. Thus, prior to making an informed action, identify assumptions shaped by personal beliefs and individual or societal perceptions. One way assumptions are verifiable as contextually appropriate is to look at events through multiple viewpoints, which should be identified and addressed fairly, acknowledging competing viewpoints for an unbiased plan of action.

TABLE 1. ASSUMPTION TYPES		
Causal	Predictive	Paradigmatic
Observed past events	If, then hypothesis	Belief of how world works

Source: Author

Overall, an interpretation of critical thinking as applied to red team requirements for effective operations includes analyzing the characteristics and assumptions that are contained within a problem; determining the nature of the characteristics and accuracy and validity of the assumptions; and examining all aspects of the problem from varying viewpoints with a goal of challenging one's beliefs, making decisions, or taking actions. See Figure 4.

Conclusion

If methodologies exist to reduce risk, including assessing probabilities and

consequences and the unmeasurable risk to life involved, then it behooves planners to reduce risk by whatever means available. In the business and financial world, actors take extreme pains to reduce risk, yet in national security, this sometimes seems almost an afterthought. One of the tools available to reduce risk is to robustly red team assumptions on which strategies are based. Examining assumptions requires the ability to think critically and look at situations and challenges under multiple viewpoints, embracing intellectual openness (i.e., metacognition), with the overall purpose of examining an issue for acting or deciding. This is a far more difficult task to accomplish

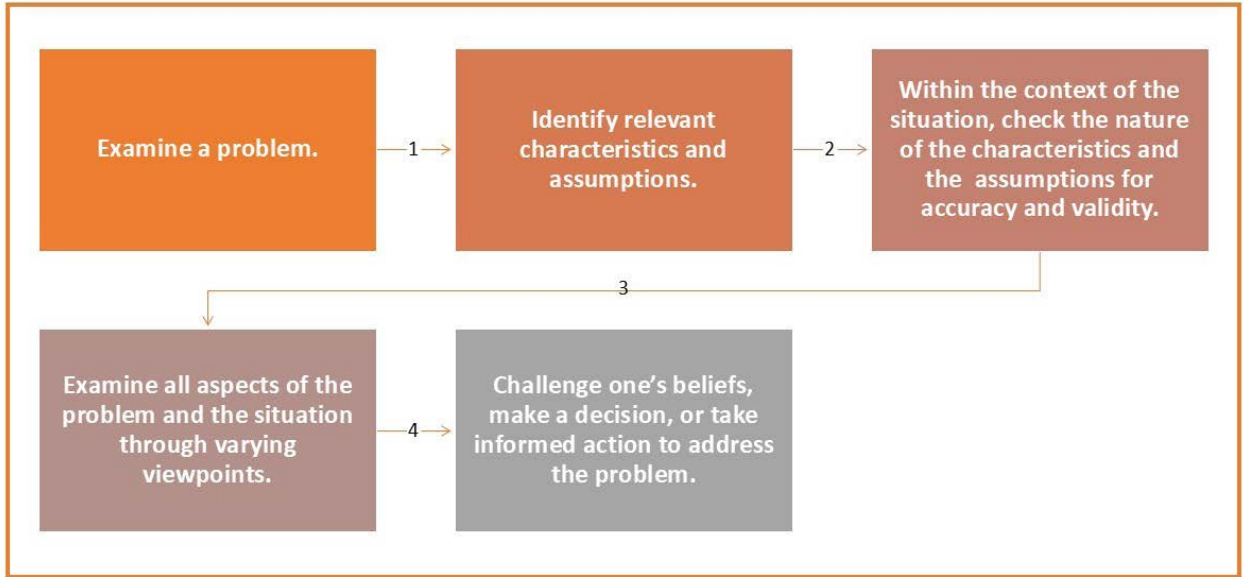


Figure 4. Steps to examine critical thinking. Source: Author

than it might seem, since most planners have ingrained bias that led to these assumptions, and they may not realize assumption and bias even exists. Part of the solution lies in solidifying the need for red teaming at all levels of planning. Moreover, for SOF planning and for general planning, teams should be composed of cognitively and culturally diverse members, and red team challenges to assumptions and bias should be adequately acknowledged and addressed.♠

About the Authors

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Notes

- 1 Joint Chiefs of Staff, “Developing Today’s Joint Officers for Tomorrow’s Ways of War,” *The Joint Chiefs of Staff Visions and Guidance for Professional Military Education and Talent Management* (2020); *National Defense University Policy*, CJCSI 1801.01E, NDU Mission, “NDU educates joint warfighter in critical thinking,” (2019); *Officer Professional Military Education Policy*, CJCSI 1800.01F, Vision, “intent is the development of strategically minded joint warfighters who think critically,” <https://www.jcs.mil/Doctrine/Joint-Education/>.
- 2 William F. Mullen, III, Mie Augier, and Sean F.X. Barrett, “Assumptionitis in Strategy,” *The Strategy Bridge*, June 21, 2021, <https://thestrategybridge.org/the-bridge/2021/6/21/assumptionitis-in-strategy>
- 3 Steven Heffington, Adam Oler, and David Tretler, eds., *A National Security Strategy Primer* (National Defense University Press, 2019), 7, https://nwc.ndu.edu/Portals/71/Documents/Publications/NWC-Primer-FINAL_for%20Web.pdf?ver=HOH30gam-KOdUOM2RFoHRA%3d%3d.
- 4 Rebecca Vogel. 2012. “The Intelligence Failures involved in Pearl Harbor.” *Journal of the Australian Institute of Professional Intelligence Officers* 20, no 2: 44-51. https://www.academia.edu/26205515/The_Intelligence_Failures_involved_in_Pearl_Harbor.
- 5 Shane Harris et al., “Road to War: U.S. Struggled to Convince Allies, and Zelensky, of Risk of Invasion,” *The Washington Post*, August 16, 2022, <https://www.washingtonpost.com/national-security/interactive/2022/ukraine-road-to-war/>.
- 6 Joint Planning, Joint Publication 5-0 (Washington, D.C.: Department of Defense, 2020).
- 7 Chairman of the Joint Chiefs Staff (CJCSM 3105.01B). *Joint Risk Analysis Methodology* (Washington, D.C., 2023).
- 8 The authors are aware that some services have published documents advancing Red Teams, and Joint Doctrine should incorporate these ideas into joint doctrine. See Army G-2, *The Red Team Handbook*, for example.
- 9 *The Fog of War: Eleven Lessons from the Life of Robert S. McNamara*, (2003) video. Erroll Morris director.
- 10 Bart Barnes, “George Ball Dies,” *The Washington Post*, May 28, 1994, <https://www.washingtonpost.com/archive/local/1994/05/28/george-ball-dies/e358afd0-bfd0-4c4e-aed8-dfc00c67697c/>
- 11 Nicholas Mulder, *The Economic Weapon: The Rise of Sanctions as a Tool of Modern War*. (Yale University Press, 2022).
- 12 Juan Zarate, *Treasury’s War: The Unleashing of a New Era of Financial Warfare* (Perseus Books, 2013).; White House, *President Biden’s Comprehensive Proposal to Hold Russian Oligarchs and Elites Accountable*, April 28, 2022. <https://www.whitehouse.gov/briefing-room/statements-releases/2022/04/28/fact-sheet-president-bidens-comprehensive-proposal-to-hold-russian-oligarchs-accountable/>
- 13 While studies such as U.S. Army TRADOC’s *The Red Team Handbook* provide good guidance on “groupthink mitigation” and addressing cultural frameworks, this article argues to take a step further in refining methodology.
- 14 The State Department has a tradition of “Dissent Channel” to provide leadership official/informal advice, for example. See History News Network, “Department of State’s Dissent Channel Revealed.” <https://www.historynewsnetwork.org/article/department-of-states-dissent-channel-revealed>
- 15 Stephen Brookfield, *Teaching for Critical Thinking: Tools and Techniques to Help Students Question Their Assumptions* (Jossey-Bass, 2012).
- 16 See JP 5-0, III-17, et seq, and IV-13, et seq.
- 17 Richard Paul and Linda Elder, *The Miniature Guide to Critical Thinking Concepts and Tools* (The Foundation for Critical Thinking, 2016), https://www.criticalthinking.org/files/Concepts_Tools.pdf
- 18 Paul and Elder, *The Miniature Guide*.
- 19 Brookfield, *Teaching for Critical Thinking*.

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