

U.S. Strategic Command Academic Alliance 2018-2019 Academic Year Research Topics

Threat-based/capability-centric research agendas dominant during the Cold War era are unamenable to 21st Century deterrence and assurance challenges. Nevertheless, Cold War narratives tend to still hold sway over much of deterrence thinking today. While the body of legacy deterrence scholarship and debates of the 1950s through 1980s remains an important backdrop, current deterrence challenges require new research to advance analysis beyond familiar Cold War era themes.

As both a political-military concept and multifaceted defense strategy, contemporary deterrence analytics demand stimulating new energy into “strategic thought” as a research discipline. This goal calls for a rigorous crosscutting study agenda of political, military, and social science questions examined in both foreign and domestic contexts to inform 21st Century deterrence and assurance exigencies and attendant decision-making.

Topics presented here seek to open the aperture of deterrence analytic inquiry. To aid research, a list of categories and associated resources are available on the U.S. Strategic Command Academic Alliance “Selected Research Sources” webpage, <http://www.stratcom.mil/Academic-Alliance/Selected-Research-Sources/>.

Research Submission Opportunities: The 2019 Deterrence and Assurance Academic Alliance Conference, and the 2019 General Larry D. Welch Deterrence Writing Award contest. **(Submission details for both are forthcoming.)**

Technical Requirements: Research should impart the following: 1.) Applicability to Current Deterrence & Assurance Issues; 2.) Implications for Future Deterrence & Assurance Analysis, Planning, and Operations; and 3.) Historical Accuracy.

General Format Requirements: Chicago Manual of Style; 12 pt./Times New Roman font; double spaced; abstract/footnotes/bibliography. (Specific institutional standards are acceptable).

Enduring Topics:

- **Historical Case Study:** Choose a case involving a deterrence success or failure, or an instance of conflict escalation/de-escalation. Examine the national interests and decision-making dynamics of both sides of your case. What were the key decision-making challenges of the conflict given the national interests stakes of the conflicting parties? What role did these considerations play in their respective decision-making and what were the deterrence and/or conflict escalation implications?
- **Considering Sun Tzu’s advice to “know yourself” as a key feature of achieving success in conflict, how might self-examination (i.e., a review of U.S. national interests & strategic culture) inform better approaches to achieving deterrence and assurance goals?**

- *How do nations understand each other's interests, goals, values, and regularities in past behavior, as a first step towards being able to predict each other's behavior? To what degree can human behavior be predicted, if at all? How does/should such information inform deterrence and assurance political-military policy/decision-making?
- *What is rationality and how do different kinds of rationality (i.e., culture centric behavior) relate to/impact deterrence and assurance decision-making?
- *What are the promises and limitations of game theoretic approaches to rationality and decision-making? What is the value/risk of referring to such models as deterrence and assurance analytic and decision-making tools?
- *What is the difference between a deterrent effective during times of low tension and one effective during crisis, given that emotions, goals, and perceptions change during crisis? What is a 'crisis,' and how do decisions made during crisis differ from those made during non-crisis?
- *How do nations perceive one another's interests, goals, intentions, and means (capabilities)? Can the bases for, and nature of, these perceptions be better understood to benefit deterrence and assurance objectives? How?
- *What can be learned from communications and bargaining studies? Are there aspects to deterrence apart from threats – say, promises of reward for desired behavior?
- *Is a deterrent which is effective against major nuclear aggression also effective for the control of so-called limited wars? How can a nation deal with escalation, catalytic strikes, non-military aggression, or probes so ambiguous or so small that a nuclear retaliatory response is not a credible threat?
- *What is the relationship between weapons characteristics on the one hand, and deterrence, conflict, and the nature of the international system (i.e., established norms, taboos, etc.) on the other?
- *How is the organization of the international system changing? What is the impact of evolving international political, military, social, technological, and economic dynamics on U.S. national interests? What challenges do such an environment pose to Washington's deterrence and assurance objectives? What might be done to mitigate such challenges?
- Threat assessment has traditionally focused on adversary *intentions* and *capabilities* (i.e., Threat = Intent + Capability), reliant more on the latter to determine the former. In addition to these factors, how does introduction of adversary *will* into the threat equation change the

focus of strategic threat assessment, and consequently understanding adversaries from a deterrence perspective?

- How might stress, emotions, and other features characteristic of human frailty be mitigated to lessen their impact on crisis decision-making situations? Conversely, how might they be leveraged to benefit deterrence and assurance objectives?
- Can better understanding of both the theoretical and mechanical aspects of strategy be leveraged to advance deterrence and assurance goals? How?
- How might the historical record be harnessed to better inform deterrence and assurance decision-making and policy efforts? What are the potential benefits and risks of seeking such guidance from the historical record?
- How do emotions associated with revenge and retribution impact deterrence success and/or failure? To the degree decision makers are conscious of the influence such emotions have over their thinking, should such emotions be allowed into/leveraged by the decision-making cycle?
- Examine the tangible and intangible political-military considerations associated with deterrence strategy development and execution. How do such considerations enhance and/or complicate achievement of deterrence and assurance objectives within in a rapidly changing, multi-domain global threat environment?
- Reference is often made to Herman Kahn's "escalation ladder." Is this and similar metaphors (e.g., vortexes, lattices, cubes, etc.) germane to 21st Century deterrence thinking, or an irrelevant relic of the Cold War? What is the value/risk of referring to such metaphors as deterrence and assurance analytic and decision-making tools?
- What is the relationship between national interests, strategic goals, and national behavior? How do each inform national security decision-making processes?

(Questions labeled with an asterisk* were extracted either whole or in part from, Raser, John R. "Deterrence Research: Past Progress and Future Needs." *Journal of Peace Research*, Vol. 3, No. 4 (1966), pp. 297-327, <http://www.jstor.org/stable/422737>).

USSTRATCOM specific Topics/Queries:

- Per an examination of China's national interests and four-decade long modernization trajectory, does Beijing as a global super power in 2049 look and act differently than today?
- Will advancements in genetic science evolve in the next decade to have military applicability enhancing the efficacy of CBW weapons? How?

- What is the future of the Intermediate-Range Nuclear Forces (INF) Treaty and what should be the U.S. course if it is dissolved? What challenges will dissolution pose to deterrence and assurance priorities?
- Nuclear states India and Pakistan have twice come close to war in the past couple of decades. Per an examination of their mutual fears, cultural perceptions of honor/prestige, and desires to defend and advance respective national interests, what are the conditions or tripwires that might precipitate a nuclear conflict between Islamabad and New Delhi?
- Per an examination of Russian national interests, is there a relationship between economic prosperity and Moscow's propensity to use nuclear weapons?
- The "Libya Model" describes how that country was convinced to disband its WMD program, only to see its leader killed 11 years later. Likewise, a signatory of the 1994 Budapest Memorandum, Ukraine agreed to abandon its nuclear capabilities in the aftermath of the dissolution of Soviet Union, only to see Russia annex Crimea and oversee hostilities in eastern Ukraine. Going forward, how could a nuclear state be induced to voluntarily give up WMD, knowing what happened in Libya?
- The President, Secretary of Defense, and Commander of USSTRATCOM have each been quoted as stating "space is a warfighting domain." What does this imply for national security strategy? What changes in national- and Department of Defense-level organization, policy & guidance, and doctrine should follow from these statements?
- What political, economic, and social conditions are necessary to deter terrorist activity using non-kinetic methods? Case studies should discuss environmental conditions that were conducive to terrorist activity and describe paradigm changing measures that altered the environment.
- How does the U.S. implement a multilateral strategic approach in the Asia-Pacific region vice a "hub and spoke" (i.e., bilateral) security alliance construct as it exists today?
- What are true "Grey Zones?" How should the U.S. employ operations, activities, and investments to achieve strategic deterrence objectives in and through "Grey Zones?"
- The strategic environment is a "multi-polar, all-domain environment that requires globally-integrated approaches to each problem set." How can U.S. deterrence and assurance policies optimally shape the strategic environment to meet National Security Strategy aims in and through a "multi-polar, all-domain environment?"
- Do improvements in U.S. and allied missile defenses *actually* drive modernization of Russian and Chinese strategic forces, or are they a convenient excuse? Explain.

- Given such huge disparities in nuclear weapon and delivery system numbers, is there actually a viable mechanism for multilateral strategic arms control agreements that could be acceptable to all parties? What would actually motivate states other than Russia and the U.S. from joining such an agreement?
- The 2018 National Security Strategy identifies China’s expanding technological prowess as a threat to the U.S. both economically and militarily. As a result of Xi Jinping’s push to become a “science and technology superpower,” some observers believe China will soon be the next technology global leader, rivaling and then surpassing the U.S. notably in the dual-use fields of quantum technologies, hypersonics, and artificial intelligence. (Two examples of game-changing military technological applications are: 1.) the use of quantum cryptography to safeguard China’s military communications from foreign collections and exploitation; 2.) quantum radar employment, which would theoretically defeat known military stealth technologies.) What are the impacts of this unfolding paradigm to U.S. strategic military deterrence?
- What are potential sources of risk and how could they affect the ability to protect national interests and achieve military objectives? What should be considered when determining the capability, intent, readiness, and opportunity of an adversary? How do those sources of risk affect the consequences of strategic events or the ability to meet military objectives? **(Researchers interested in examining this question should contact Academic Alliance staff for additional context).**
- What methods could be used to gather data on potential sources of risk? How could those methods be blended into an analytical framework to take advantage of the wealth of available information and provide a more comprehensive picture of the risk environment? **(Researchers interested in examining this question should contact Academic Alliance staff for additional context).**
- All mechanical systems – including weapons systems – have reliability issues. Is there a potential academic (or commercial) approach that will evaluate historic reliability trends, etc. to predict future reliability as a system approaches end of life? Such prediction is useful for determining when it is more cost effective to replace a system versus continuing to maintain it. **(Researchers interested in examining this question should contact Academic Alliance staff for additional context).**
- How might short-term assertiveness to deter a rival state be leveraged to defuse long-term strategic rivalry?
- In both real world deterrence planning and wargame scenarios, the concept of de-escalatory “off ramps” is often regarded as a means to resolve international crises. Frequently however, proposed off ramps offer terms and/or concessions (i.e., carrots & sticks) meant to reestablish the status quo ante, yet do little to address original political, economic, security, and other conditions anti-status quo complainants deem unacceptable to their interests.

Examined through the lens of either a hypothetical or real world case study, how can these conflict dynamics be addressed to achieve mutually feasible “win-win” off ramps and compromises? Research should focus on how “off ramps” can both defend and advance status quo interests yet still assuage anti-status quo grievances.

- Defined as “conflicts that fall outside of the traditional peace-or-war construct,” so-called “gray zone” warfare challenges “traditional views of war,” and thus how such aggression can be traditionally addressed. Are there deterrence solutions to “gray zone” challenges? Explain. What are the most effective ways the U.S. can offer partners/allies to build deterrence capacity and resilience against “gray zone” aggression – especially in situations where traditional U.S. military intervention is not perceived as credible?
- How might familiarity with adversary “master narratives” optimize kinetic targeting and/or non-kinetic deterrent options/courses of action (COA)? Moreover, how can such familiarity inform options/COAs to avoid strategic blowback?

2018 USSTRATCOM Deterrence Symposium Panel Questions:

PANEL #1: Nature of Strategic Conflict in the 21st Century?

This panel is broad in nature and to some degree adversary agnostic. The intent is to explore existing and possible future deterrence challenges.

- What are the broad *political* threats today (e.g., Great Power competition, opportunistic aggression, strategic attacks, and adversary risk-tolerance) and how are they different from Cold War and Post-Cold War threats?
- Are there new adversary strategic approaches (e.g., hybrid warfare, *fait accompli*, strategic attacks below the threshold of armed conflict) that present new/evolved strategic risks?
- What are the possible (or plausible) future *military* threats of most significance to U.S. and Allied interests (e.g., hypersonic glide vehicles, offensive cyber, counter-space, non-traditional nuclear threats)? [NOTE: this will be explored in more detail in PANEL #2]
- How might the geopolitical environment evolve (e.g., shifting alliances and partnerships, new security structures, technological breakthroughs, ideological or economic shifts) and how might these undermine U.S. and Allied security?
- Where/what are the most concerning issues over which conflict might emerge?

PANEL #2: Who is Shifting Competitive Strategic Advantage in Favor of Themselves?

To some degree, this panel builds on Panel 1 with the primary difference being this panel focus on specific, near-term adversary activities that present deterrence challenges.

- What are our competitors/potential adversaries doing in order to gain a competitive advantage (e.g., A2AD, exploiting vulnerabilities, coercion below the threshold of armed conflict, speed in technological development and deployment)?
- What capabilities are they pursuing that undermine deterrence (e.g., hypersonic glide vehicles, offensive cyber, counter-space, non-traditional nuclear threats)? Are these threats evolutionary or revolutionary?
- What evolution/revolution changes in application of national power are they pursuing?
- How might they merge new capabilities with employment concepts to advance competitive advantage (e.g., blitzkrieg at the onset of WWII)?

PANEL #3: How to Integrate/Develop Offensive and Defensive Strategy?

With this panel, the discussion transitions from an examination to the potential challenges (Panel 1 and Panel 2) and initiates the discussion of what could be done to address the challenges.

- What does it mean to have an “integrated” strategy and how do we achieve it?
- What existing structural features (e.g., organizations, planning, processes, and procedures) hinder and/or enhance integration?
- What is the appropriate organizing framework? Are there useful examples of non-defense integration elsewhere in the government?
- Is “offensive-defensive” integration a useful organizing construct? Or, is it better to conceptualize integration at the objective level (e.g., minimize an adversary’s ability to conduct missile attacks)?
- Are their “Best Practices” and “Worst Practices” that should be implemented and avoided – what are the lessons from history?

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PANEL #4: How to Integrate U.S. & Allied Approaches for Deterrence and Assurance?

This panel expands the integration discussion to integration across Allies and Coalitions.

- Are the approaches the same/consistent or different? What processes are necessary to explore this issue collaboratively?
- Given the integration challenge within any single organization, department, branch, or country, how do we address integration challenges across multiple countries?
- What might we do today to improve integration needed to deter a future crisis/conflict (e.g., bilateral agreements, processes, operations, communications, combined exercises, war games, etc.)?

- How do we integrate all elements of national power across multiple countries (i.e., it is not just integration of military force issue)?
- Are their “Best Practices” and “Worst Practices” that should be implemented and avoided – what are the lessons from history?

PANEL #7: Speed of Change? How do we accelerate change?

This panel focuses on how we can become more agile in order to address the rapidly changing geopolitical environment.

- How can we be more agile and responsive during capability development and acquisition?
- How can we be more agile in the development and testing of new strategic approaches to address emerging challenges? How do we attain/stay ahead in all areas of strategic advantage/counter-competition?
- Is fundamental, departmental cultural change necessary or can we be more agile within existing processes?
- Some will argue we were more agile in the past (e.g., development of ICBM force in the U.S.); if so, why were we more agile in the past and are those practices applicable today?
- How might approaches for agility in the business world translate to resolving national security problems?