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Interorganizational wargaming can bring together future civilian and military senior leaders and provide them with an opportunity to build collaborative partnerships and gain a greater understanding of each other's critical thinking and decision-making processes. Twenty-first century senior level civil-military relations have been characterized by the sometimes-clashing perspectives of subject matter expertise and operational experience. Military and civilian leaders should reject fractious relations at the senior levels as a foregone conclusion but waiting until military officers and USG personnel reach senior leadership positions to build cooperative partnerships is too late. Analytical political-military wargaming could be utilized as an avenue to build interorganizational understanding at the field-grade officer and mid-career levels. This paper provides recommendations for planning and the selection of participants, topics, and location.

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MASTER OF MILITARY STUDIES

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and Improving Future Senior Level Civil-Military Relations**

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

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Executive Summary

Title: Interorganizational Wargaming as a Tool for Building Collaborative Partnerships and Improving Future Senior Level Civil-Military Relations

Author: Kelly E. Pecotte, Department of Defense

Thesis: Interorganizational wargaming can bring together future civilian and military senior leaders and provide them with an opportunity to build collaborative partnerships and gain a greater understanding of each other's critical thinking and decision-making processes.

Discussion: Twenty-first century senior level civil-military relations have been characterized by the sometimes-clashing perspectives of subject matter expertise and operational experience. The rapid shift in security and defense priorities and policies in late 2001 and again in 2018 exacerbated this clash. During the Cold War era, senior military leaders, USG personnel, corporations and think tanks engaged in wargaming focused on nuclear deterrence. This use of wargaming can offer insights for implementation today for officers and civilians at the field-grade officer and equivalent grade government personnel level. This paper provides recommendations for planning and the selection of participants, topics, and location. This paper also provides recommendations for follow-on study.

Conclusion: Military and civilian leaders should reject fractious civil-military relations at the senior levels as a foregone conclusion but waiting until military officers and USG personnel reach senior leadership positions to build collaborative partnerships is too late. Analytical political-military wargaming could be utilized as an avenue to build interorganizational understanding at the field-grade officer and mid-career levels.

Keywords: Civil-Military Relations, Wargame, Interorganizational, Civilian, Field-Grade.

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Introduction

This research paper examines the historically often-fractionious relationship between senior civilian leaders in the United States Government (USG) and senior military leaders and proposes a means to build collaborative partnerships between future senior leaders. This paper focuses specifically on increasing cooperation between future military and USG leaders. This paper recommends civilian and military professionals use interorganizational wargaming as an avenue to build cooperative partnerships between field-grade military officers and the equivalent grade federal government civilians. The USG and private industry used wargaming during the Cold War to successfully engage critical thinking and decision-making methodologies. Civilian and military leaders could benefit from exploring the insight from this era when designing interorganizational wargames today.

Interorganizational wargaming can enlighten and expose military officers and appropriate USG professionals to analytical processes and methodologies employed by the other in developing course of action recommendations. This would allow participants an opportunity to analyze risk from interagency perspectives. The proposed wargames would promote greater intergovernmental understanding and cohesion. They would also provide opportunities for organic red teaming and creative thinking. **Interorganizational wargaming has the potential to bring together future civilian and military leaders and provide them with an opportunity to build collaborative partnerships and gain an in-depth understanding of the other's critical thinking and decision-making processes.** Insights gained and lessons learned from Cold War era USG and private industry wargaming can contribute significantly to designing wargames of relevance and value to both military officers and USG professionals in the twenty-first century.

The methodology used for this paper was to first examine recent civil-military relations as context, then to analyze a variety of types of wargames which could be applicable for interagency use. Key topic areas considered were decision-making, strategic objectives, deterrence, and risk assessments. The research draws from military history, political science, security studies, and government. The research included analysis of current applications of military training through wargaming, examination of possible inclusion of government civilian personnel, critical thinking, and improved relationships. This paper also explored wargaming during the Cold War era as a case study on the utility of gaming against USG strategic priority objectives and planning, and the benefits of incorporating non-military governmental analysis into the process.

Civil-Military Relations

Modern United States (US) civil-military relations, between senior level government officials and military leadership, has a reputation for being fractious. The reasons for this divide are many and can vary to an extent by specific leadership position.¹ However, there are three main reasons which are the most prevalent across positions. First, there is a divergence in backgrounds between civilian government leadership and military leadership at the senior levels. The credentials contributing to a civilian's rise to the senior ranks in government are often rooted in subject matter expertise. They may develop this expertise from a combination of academic or scholarly pursuits, governmental training or internships, analytical acumen, previous positions which provided an opportunity to study a subject or issue at length, or prior governmental positions which allowed the individual to represent an issue, work on policy, or otherwise gain exposure to a problem-set of interest to the USG. On the other hand, leaders in the military select officers for promotion or appointment to more senior positions based on

their record of performance, and potential for success in positions of greater responsibility and trust. Positions of greater responsibility and trust typically take the form of command slating, assignments of increasing scope and authority, participation in overseas campaigns and combat, or familiarity with and experience in operational design and planning.² This is not to suggest that there cannot be significant overlap or parallels in the backgrounds of civilian and military leaders, however a civilian is unlikely to experience the prerequisites for a military officer to reach senior positions. Nor would a senior military officer have the professional credentials of a senior government official.

The second reason for the historically fractious interactions between civilian and military senior leaders comes down to their unique perspectives on how to achieve operational and strategic objectives.³ Final authority over strategic decision-making further complicates the issue. These different perspectives make sense given the backgrounds and experiences of the leaders themselves and the entities and interests they represent and lead. A well-versed senior leader is likely to seek a more holistic understanding of issues, but their experience and prior exposure to working on the opposite side of the civil-military partnership, or lack thereof, can influence and inform their decision making.

The third reason for the historically fractious interactions between civilian and military senior leaders is, the founding fathers determined that the final authority in government decision-making would rest in the hands of civilian leadership. Senior civilian leaders must represent and consider the full array of diplomatic, economic, information and intelligence instruments of national power available to a state's government.⁴ Senior military leaders primarily represent the military instrument of national power and recommend well thought out plans to civilian officials for consideration. When operating effectively in tandem, USG leaders

must consider the whole of government and make decisions in the best interest of US national security interests.

Twenty-first Century Civil-Military Relations

The aftermath of September 2001 served as a transition point in United States Government (USG) policy and defense priorities. Focus turned fully to an emphasis on counterterrorism and counterinsurgency (COIN) operations. The Intelligence Community (IC) also adapted and expanded to meet these threats and sections of the USG reorganized to address shifting priorities.⁵ In turn, this impacted civil-military relations at the senior levels and the application of the national instruments of power. With the expanding size and scope of some government agencies, departments and fields of study, civil-military relations adapted as well. For both the administrations of President George W. Bush and President Barack Obama, these new policy and defense priorities remained dominant and impacted allocations of resources and manpower for the duration of their administrations.⁶

During the administration of President Donald Trump, USG policy and priorities, reflected in the 2018 National Defense Strategy (NDS) and the 2017 National Security Strategy (NSS), began to pivot.⁷ Focus began to move away from counterterrorism as the top national defense threat and increasing emphasis aligned to a new era of great power competition. In this new era, the USG identified China as the primary competitor and potential adversary of the US. In another shift from previous administrations, President Trump appointed individuals with no established foreign policy, government, intelligence, or diplomacy expertise to some of the civilian advisory, Cabinet-level advisory, and aide positions.⁸ Appointing individuals to such positions without the normally expected prerequisite experience or credentials resulted in negative impacts on senior level civil-military relations. The credibility of senior civilian leaders

depends in part upon their expertise or backgrounds, and similarly, those lacking that expertise can suffer a loss of credibility. During the Trump Administration, senior level military officers had the normally expected levels of extensive experience. It is worthwhile to examine the changes in national priorities and background credentials of senior USG leadership as both can provide insights into policy decisions. Beyond the domestic civil-military relationship, this can have far-reaching impact on USG legitimacy abroad, the perceptions of allies and adversaries, and the status of international partnerships and alliances.

In the twenty-first century, US servicemembers at the tactical and operational levels have the potential to significantly impact civil-military relations at the strategic level.⁹ This is largely due to expanding technology, social media, communications, access, and the rapid proliferation of information both domestically and internationally. Globally, cellphone use is increasingly widespread as well as a variety of social media applications which simplify sharing, exchanging, and disseminating information real-time. From the time a servicemember sets foot in a populated location, he or she can assume that the enemy or nefarious actors will take photos or record videos to document any activities ripe for sharing. In this way, public opinion can affect strategic decisions and operations, following dissemination. This can be especially pronounced if activities can be (mis)interpreted or (mis)directed to be negative or reflect negatively on the US or allied missions or personnel. As a result, it is increasingly important senior civilian and military leaders work together closely to ensure appropriate strategic messaging reaches international partners and host countries before or by the outset of any military engagements. Likewise, it remains essential that each servicemember act with honor as a representative of the US, both at home and abroad.

A European Counterpoint

To briefly consider a civil-military relations counterpoint separate from the United States model, the North Atlantic Treaty Organization (NATO) is an excellent example of a cohesive international organization with robust and continuous civil-military relations. NATO is an especially relevant example as the US historically provided key leadership, funding, and initiative-direction to the organization since its inception following World War II. While the organization maintains civilian leadership, NATO leadership made the decision to participate in a variety of military operations. NATO leadership deployed troops on numerous occasions in response to crises or actions which threatened the global or regional security of its member states and their interests.¹⁰ The balance between civilian diplomatic and economic efforts, and military protection or enforcement of laws or decisions, remains important to NATO's continued legitimacy as an international organization.¹¹ Although not without its own problems, an area where NATO's civil-military relations achieved success was in deployments in support of humanitarian crises. Part of the reason for its success was in its unified approach, supporting narratives and nuanced actions. This is not just indicative of civilian-military unity of effort but also of unity amongst member states. Another reason why NATO is a useful counterpoint to analyze in comparison with the United States is due to its diverse membership, which includes new democracies. There is also significant overlap in some areas with efforts by the European Union (EU).

The EU is another example of an international organization that combines both military and civilian elements of power with tremendous success. The EU, which began primarily as an economic and political union, focused on democracy and state integration, in 1993, also made commitments to the mutual defense of member states.¹² Founded in the post-Cold War era, the

EU brought together states in Europe for the pursuit of common strategic objectives. Within the EU, member states must contend with external authority, which they contribute to and participate within. This structure is similar to the United States federal government's jurisdiction, alongside individual states' rights. With 27 member states, the EU relies on collaboration to include whenever EU leadership decides to deploy EU military forces. Agencies within the EU oversee military initiatives, development, cooperation, and interoperability to include the European Defence Agency, led by a senior civilian official.¹³ Due to the organizational structure and founding purpose of the EU, its civil-military relations must remain deeply cooperative and flexible to account for its diverse member states, individual state goals, and economic, political and defense objectives. The researcher also examined European wargaming later in this paper.

Examining civil-military relations within NATO and the EU can provide insights into effective communication and cooperation. Both organizations include dozens of independent nation-states which voluntarily work together to achieve joint strategic, economic and defense goals. The balancing of political objectives with appropriate military action is an arduous process when one considers receiving input from many actors. Similarly, senior USG leadership must represent all 50 states and common national priorities. Two strengths of EU civil-military relations are its efforts at unified communication and cooperative training and education.¹⁴ Collaborative emphasis is critical and in practice it is probably best exemplified in European humanitarian response operations. The emphasis on civil-military training and education is an avenue which the US should consider more closely to improve upon its own civil-military relations. This also aligns with this paper's proposal that interorganizational wargames is an appropriate means to facilitate learning and cohesion. Further, the US historically cooperated,

supported and partnered with both NATO and the EU on a multitude of initiatives, and developed senior USG leaders' familiarity with their organization and processes.

Types of Wargames

One analytic tool available to the USG, researchers and the military is the practice of wargaming. In examining wargaming, there are numerous types of wargames which leaders can use as cognitive instruments to analyze an area of conflict, to evaluate an adversary and their capabilities, make decisions, react to challenges and variables, and to develop strategy. These modern wargames, particularly those of benefit to the USG and military, trace their roots back to eighteenth century Prussia.¹⁵ Their initial development began in Europe primarily for military use. Practitioners employed a variety of games to include symmetrical wargames, situational wargames and case studies on historical battles and campaigns. The use of wargaming became more widespread over time and gradually modern usage developed. The US military today often uses wargames in training environments or to research a variety of military issues or tactics. Specific types of military-use wargames include analytical wargames, seminar discussion-based, computer-based simulations, and table-top wargames to name a few. In turn, there are advantages and disadvantages to using each of the various wargames. Today, political-military analytical wargames are most applicable for the USG and military.¹⁶ Varieties of political-military wargames can include participant role-playing wargames, realistic scenario-based wargames and wargames that incorporate robust post-game analysis. Finally, in addition to both military and commercial use, wargames often focus specifically on the strategic, operational, or tactical levels of warfare.

The use of political-military wargaming has geopolitical relevance and planners can use it to develop or examine USG strategy. Specifically, the use of participant role-playing in political-

military analytical wargames has high value for USG leaders and military officers. These wargames enable participants to immerse themselves cognitively in the role and positions of adversaries. This can also encourage critical examination of assumptions and biases. Wargamers hone and test their decision-making skills through the wargames and the process itself of thinking as an adversary or competitor stimulates greater understanding of a conflict or scenario. It is also important for maximum intellectual output that the scenarios used for the wargames are as realistic as possible, multi-layered, and where applicable include geopolitical factors and variables.¹⁷ This directly affects the efficacy of the exercise and the participants' engagement in the problem-set. As such, the courses of action developed by participants will have greater real-world application and impact. Equally important is the time dedicated afterwards to post-game analysis. This is especially valuable when the players do not all share a common background or similar type of education. During the post-game analysis, participants should provide further insight into their critical thinking used to reach decision-points and to articulate how they analyzed and prioritized operational variables. Political-military wargames that make thorough use of this step will be most effective in building greater understanding amongst participants, particularly if they do not share background knowledge, positions, or expertise.

When using political-military analytical wargames, if wargamers evaluate strategic competition, cooperation, and the varying levels of conflict they can garner additional value. Well-designed wargaming can contribute to these assessments and inform decision-making up to the highest levels of government.¹⁸ Wargaming further presents opportunities to analyze emerging national security threats, vulnerable regions, competition below the level of armed conflict, and opportunities to assess levels of associated risk within a moderately controlled environment. Planners in the Department of Defense (DoD) organized many political-military

and scenario-based wargames for this express purpose. In most cases, planners design the games around a ‘blue’ team and an adversary team. Additionally, participants bring different educations, career experiences, and cognitive biases with them and this can lead to enhanced rigor when members have experience in a variety of civilian and military fields.¹⁹ When planning for the wargame, it is essential to clearly define objectives and allow enough time for dialogue at the beginning of the exercise to minimize any confusion resulting from these differences. Clarity regarding all terminology and the wargame process itself is also vital. Planners must inform participants of limitations and assumptions from the start, to assist players in overcoming inherent biases and perceptions. Another consideration for wargame designers is whether to include a red team in game organization and practice (Appendix A).

Within the DoD, the United States Naval War College in Newport, Rhode Island is one of the lead entities in wargaming. Since 1887 the college routinely utilized wargaming as part of its curriculum to instruct senior military officers and government civilian leaders, with an emphasis on naval strategies and decision-making.²⁰ Today, the college is also home to a state-of-the-art wargaming facility and hosts various wargaming events and conferences annually. When analyzing government, specifically DoD, wargaming in the twentieth and twenty-first centuries, the contributions of the US Naval War College will undoubtedly come up in discussion.

Cold War Case Study

A valuable case study in modern political-military wargaming is its usage during the Cold War. From the beginning of the Cold War until its conclusion, the USG, military, and private industry conducted a variety of wargames and explored most likely and worst-case scenario courses of action. Much of the wargaming and exercises focused on the Soviet Union, the

potential use of nuclear weapons and methods of deterrence. In the post-World War II era, Soviet Union-led communism and the development of new and increasingly devastating nuclear weapons emerged as the main threats to the US and its allies. As a result, a preponderance of the wargaming during the Cold War focused on strategic decision-making and courses of action centered around nuclear-weapon usage as focal points.²¹ For example, the US Naval War College conducted and examined the ‘Blue versus Purple’ exercise.²² ‘Purple’ represented the Soviet Union, as ‘orange’ had been used to represent Japan in similar previous exercises, and ‘blue’ was the USG or friendly forces. One of the objectives was to analyze senior decision-making in the early days of the Cold War, and how the efficacy of deterrence affected this calculus. This also was an opportunity for participants to think critically about the operational risks facing the US military in potentially engaging with the Soviet Union. Perhaps unsurprisingly, Cold War wargaming and the conclusions military, civilian government leadership, and private industry reached varied - in large part based on the participants themselves.

In some instances, during the Cold War, civilian government leaders and military leaders participated in joint wargames. These wargames often involved senior level leadership or senior level subject matter experts.²³ Planners believed senior level leaders had the experience to expertly assess scenarios, plan realistic courses of action and make complex decisions in the best interest of the United States. In this scenario, the civil-military balance between incorporating the experience of senior military officers with the expertise of civilian technical skill became an issue. Ultimately however, senior USG leadership aimed to plan strategically with an emphasis toward long-term effects.²⁴ In other cases, civilian researchers, analysts and think tanks spent significant effort wargaming various nuclear scenarios. Companies such as RAND conducted

many political-military wargames, wrote reports on their findings, and shared them with government, IC, and military officials for consideration.²⁵ While the end objectives driving their wargaming was at times focused differently, the USG benefited significantly from wargaming analysis from a variety of sources during the Cold War.

An area of focus during many of the Cold War era wargaming efforts, was on nuclear deterrence. The USG and analysts considered the actual use of many of the nuclear weapons developed during this time to be an option only of last resort, one which would most likely lead to a lose-lose outcome for all states involved, or mutually assured destruction. As a result, organizers emphasized the central importance of deterrence as a key variable in Cold War wargaming and planning.²⁶ Additionally, due to a lack in quantitative data to study the effects of nuclear escalation and international security, experts looked to wargaming as an option to instead study the issues theoretically. During the Cold War, the United States focused on one primary nuclear adversary, the Soviet Union. Today there are multiple states with nuclear weapons, or actively in pursuit of nuclear programs, and they have vastly differing strategic objectives and relations with the US and its allies. Nevertheless, the significance of nuclear deterrence remains one of the most important elements in the study of nuclear weapons, their proliferation, arms control, and any possibility of their use – either by an ally or adversary. Similarly, analysts and researcher still study the role and use of nuclear weapons theoretically through wargaming.

During the Cold War, the USG also utilized wargames to inform decision making and aide planners in examining strategy and crisis scenarios. Insight from these efforts, undertaken during a prior period of great power competition, may enlighten and inform wargaming efforts in the twenty-first century during a new form of geostrategic great power competition. In many instances during the Cold War, the USG and military representatives who participated in

wargaming were senior level leaders. In other cases, participants were the leading senior experts in relevant fields – particularly deterrence and nuclear issues.²⁷ Both participant selection methods still have merit to engage in analytical and political-military wargames for USG consideration today. However, going forward, this research paper will recommend also prioritizing the selection of field-grade military officers and the equivalent grade USG personnel for conducting wargaming. In addition to the perspectives that mid-grade personnel can offer to an analytical exercise, this would also serve to strengthen understanding and potential collaboration between future senior civilian and military leaders, beginning at an earlier stage in their careers.

Additionally, it is worthwhile to note that while the focus of this paper is on unclassified wargaming, significant classified wargaming – involving the IC, also occurred during the Cold War era. There is much utility in unclassified wargames on key priority issues and two of the main reasons are access and inclusion. By conducting wargames at the unclassified level, representatives from think tanks, academia, and commercial organizations can participate. Incorporating contributors from these fields can allow for greater creativity, unique perspectives and a variety of civilian expertise not normally included. Organizers can also disseminate unclassified wargame results and insights to a much wider audience. Planners should consider the type of results or outcomes they hope to achieve when planning a wargame and distinguish classification and participants accordingly.

Insights and Current Applications

Organizers of Cold War era wargaming understood the importance of incorporating intelligence as a significant aspect of exercises to best inform realistic recommended courses of action. When studying Soviet Union capabilities and intentions, intelligence analysts both

military and civilian participated in many exercises and the US Naval War College even employed intelligence representatives full-time to represent the adversary, or ‘red cell’.²⁸ This effort was extremely successful and provided valuable input especially in performing a role that necessitated a level of expertise and subject matter familiarity that takes time to develop. The inclusion of intelligence professionals and dedicated adversary teams also helped avoid cognitive bias and mirror imaging of the Soviet Union.²⁹ The use of intelligence in wargaming during this era also set a precedent and offers insight into opportunities for use in current and future wargaming.

An area of critique for wargaming during the Cold War is a failure to fully invest mid-level IC civilian analysts in participation jointly with military counterparts in unclassified wargaming. Additional wargaming occurred within the IC and at different classification levels but is outside the scope of this study. Future researchers may find value in examining classified wargames separately. Like red teaming, leadership in the IC and the military typically utilize wargaming differently. This is one reason why organizers considering inclusion of appropriate USG personnel ought to consider including IC analysts in future wargaming along with military officers. This would enrich both the civilian and military participants. One limiting factor might be security clearances amongst participating parties; however, this is something that organizers could mitigate with enough prior notification and planning, or maintaining an unclassified wargame. Planners must consider the intent of the wargame and whether it is to instruct, develop tactics, or assess strategy.³⁰ Similarly, with the passage of time and declassification of materials, access to further insights into later Cold War era wargaming may inform understanding of previous wargaming courses of action and results. Even unclassified wargaming could be of

value to IC analysts, depending on the subject matter and scope, and particularly when paired with insight from military officer participants.

Considering this insight from wargaming during the Cold War period, there are certain issues which remain pertinent today and which organizers should evaluate before planning an effective wargame involving members of the DoD. One long-standing challenge is ensuring relevant and creative scenarios, that are both well-researched and applicable to the NDS and National Intelligence Priority Framework (NIPF) priorities. Another issue noteworthy to senior leadership and which planners grappled with during the Cold War was the means of adjudicating DoD wargames.³¹ This remains an issue today. There are significant arguments in favor of the use of computer simulations and programs for calculating effects. There is also an equally strong case for the use of subject matter experts, both military and civilian, to evaluate strategy and operational art and design. Much of the discussion comes down to the specifics of the game itself, the type of scenarios employed, and the desired outcomes. The use of subject matter experts to form the basis of the ‘white cell’ to adjudicate results will lend more holistic and nuanced outputs and likely enable more robust decision-making conception. It could also necessitate more time. Finally, with decades of Cold War era wargaming to consider, there are some clear best practices – such as the incorporation of intelligence resources and red teams, and the utilization of academics and think tanks. There are also some gaps or opportunities to explore further – such as a focus on mid-grade USG personnel and officers, particularly in an unclassified environment.

Looking again briefly at a European example, over the last ten years the Norwegian Defence Research Establishment (FFI) regularly plans and facilitates military wargames.³² These are analytical and simulation-based wargames primarily designed to test the capabilities of the

Norwegian Army. While contemporary planners often fully incorporate artificial intelligence (AI) in wargames, the FFI recognizes and emphasizes the importance of human cognitive abilities and leadership, which cannot be duplicated through machine-learning or programming.³³ The FFI conducted wargames for decades, but over the last ten years began its close working relationship with the Norwegian Army, with a focus on training, research, and testing. When planning a wargame event, the FFI advocates for the use of scenario-based gameplay with subject matter experts, supported by a computer-based simulation and observers as part of a ‘white cell’, followed by detailed after action analysis (Appendix B and Figure 1). This ongoing working relationship between the military and FFI enables continued support and expert wargame preparation.

Building Collaborative Partnerships

Taking into consideration the challenges facing civil-military relations at the senior levels of government, the variety of wargames adapted for interorganizational political-military use, the insight gained from wargaming during the Cold War, and the potential exposure and understanding potentially available from collaboration, wargaming represents an area of opportunity. Looking ahead, the use of wargaming through mid-level officers and appropriate USG personnel would provide a means to develop cooperative partnerships, greater understanding, and the opportunity to examine risk from a different organizational perspective. Political-military, strategy-based analytical wargames would provide the most benefit for both civilian USG representatives and military officers and could incorporate integrated red teaming.³⁴ Post-game analysis would also be an important aspect of the wargames as well as the dissemination of the results. Finally, at the conclusion of the exercise(s) there would be opportunities for networking and future collaboration.

Why recommend field-grade military officers as wargame participants? Historically during the Cold War, some of the military officers selected to participate in USG-organized wargaming, particularly with civilian participants, were senior officers.³⁵ This is not true in all instances. During conferences and exercises designed to prepare participants for a deployment or maneuver, or to simulate a specific job function or event involved officers below the senior level. In some cases, planners executed reoccurring unit-specific wargames, and certain civilian government participants took part. The recommendation that field-grade officers specifically be selected for interorganizational analytical wargaming with civilian counterparts is based on several reasons. First, by this point in an officer's career he or she has had approximately a decade of career experience, or more. Second, he or she has had an opportunity to either hold a command position at the company level or served as a staff officer. These billets require leadership, in-depth knowledge, and a certain degree of training both in the field and through Professional Military Education (PME).³⁶ A field-grade officer has the professional acumen and experience to excel in this role. Third, it is likely that a field-grade officer has experience in joint forces training events, operational deployments, or exercises. These experiences are indispensable in the development of an accomplished officer capable of excelling in a wargame. Additionally, at the field-grade level, an officer is likely still focused on learning, developing a long-term career path, and establishing contacts and networks.

Why recommend civilian USG personnel as wargame participants? Like their military counterparts, the USG personnel participating should be at the civilian equivalent grade to military officer participants. While civilian participants from a variety of USG backgrounds could bring valuable insights and expertise to a wargame, intelligence professionals are essential due to their unique background working for the USG from the field of intelligence.³⁷ There are

several additional reasons to select IC analysts as participants. First, based on the issues being gamed, organizers could select IC analyst participants based upon their subject matter expertise on the relevant topic(s). To become an IC subject matter expert an analyst must have research experience and written on the issue extensively after analyzing classified materials and capabilities to further bolster their knowledge and understanding. Second, after ten years of experience in the IC, an analyst would have a significant familiarity with their own home agency as well as at least a working understanding of the IC as a whole. This means as a wargame participant the analyst could provide input as a representative not only of their agency but for the IC, lending an important perspective for consideration in decision-making. Third, intelligence analysts at this grade would likely have prior experience in an IC wargame, contribute to IC assessments, participate in decision-making processes, or take part in IC red teaming.³⁸ Selectees should be open to participating in wargames that incorporate participants outside of the IC and should have the expertise to represent an intelligence perspective to military officers.

Who should develop the wargames? To ensure the inclusion of wargame material relevant, realistic, and challenging to all participants, both military and civilians must contribute to the wargame design. In the process of organizing the exercise, representatives must commit to preparation – the amount of time needed depends upon the length and scope of the wargame itself. The wargame organizers must include subject matter experts in the development to design material of value to the senior leadership in both the USG and military.

What type of wargames should be used? The type of wargame selected should be analytically based, strategy focused, and incorporate political-military variables. The games should be interdisciplinary in that they should not focus efforts on only one instrument of national power but represent a multi-faceted and multi-layered problem-set that encourages deep understanding

of an issue with a focus on strategic objectives. The wargame should incorporate military decision-points, and intelligence updates throughout.³⁹ If possible, it should also facilitate strategy development and implementation through gameplay. Organizers should ask some participants to role-play to represent a certain entity relevant to the scenario, or act as an adversary. Additionally, organizers should also consider the inclusion of a red team. For maximum learning and diverse perspectives, red team members should include both military and civilian participants and may be from units or offices separate from those participating as the primary wargame participants. Simply through their representation of their home agencies, IC analysts may find themselves acting as organic red team members challenging assumptions and institutional biases held by other participants. Finally, participants should conduct post-game analysis as the final step of the wargame itself. More than simply an after-action report (AAR), this analysis should involve an in-depth dialogue between participants, adjudicators, and wargame organizers. Participants should explain key decision-making impetuses and planning considerations evaluated throughout the wargame as well.

Who should adjudicate the wargames? While the use of simulations and computer-based adjudication can be worthwhile to tabulate effects, subject matter experts should conduct the final analysis and tabulation of political-military results. The use of computer programs and AI cannot fully capture adversary intentions and the psychological or political impacts of military actions. If possible, the white cell should participate throughout the wargame planning process. This would ensure the objectives are well understood and allow for adjudicators to provide tailored, specific feedback to participants and in turn increase the overall utility of the wargame(s).

How would wargame participants disseminate analysis and network? An important part of the wargaming process would be the post-game analysis. The final step would then be the dissemination of that analysis. For dissemination, participants should capture the analysis and insights in written forms appropriate both for a military audience and for a civilian USG customer. For the specific style of memo, participants should dictate the final form based upon their home units, agencies or departments and their corresponding standard products. In some cases, and depending upon the material examined and outcomes reached, both an unclassified and classified product may be appropriate. Participants should coordinate this with the game organizers. To accompany the written post-game analysis, organizers should encourage participants to provide their leadership with a brief and written trip report that summarizes their involvement and key events when they return to their home offices or duty stations. Depending upon interest in the subject matter, organizers may consider or request additional presentations.

How would wargame participants network and remain in-touch? In addition to the analytic objectives of the wargaming and the insights gained from the results, the collaborative benefit and networking opportunities are also key. Wargame organizers should maintain a repository of contact information of participants and make the information discoverable to participants past and present. This may take the form of an email, or restricted access webpage – or section of an already existing webpage with added access restriction. The purpose would be to enable participants to reach back to get in touch with other participants in the future, as needed or desired. Organizers should collect secondary contact information from participants. This may include more than one type of contact information for inclusion, for example both an unclassified and classified email addresses.

Recommendations and Guidance for Collaborative Wargame Planning

After this analysis, some recommendations for collaborative wargaming will follow for use by the military, United States Marine Corps (USMC) in particular, and USG civilian professionals. Organizers of such a wargame should include representatives from both the military and USG in the planning process to coordinate planning efforts most effectively, for scheduling and identification of participants and to facilitate other aspects of the wargames. This paper will also recommend a pool of participants to draw from to ensure participation of individuals with appropriate knowledge and expertise. Ideas for the selection of wargame topics based on an assessment of the most beneficial wargame design for the intended customers will also follow. Subject areas in the NDS and NIPF will serve as primary sources for designing the wargame.⁴⁰ Further, a location for the wargames themselves and recommendations for how to communicate the exercise objectives also follows in the next section. This framework will enable a straight-forward planning effort and implementation of a productive collaborative wargaming exercise.

Participants

There are two main pools of participants to consider when setting up a collaborative wargame, military officers and USG civilian personnel. When considering participants from both groups, wargame organizers should first try where appropriate to utilize the alumni from in-person PME programs at the field-grade level which includes civilian interagency participants. An example of a PME program which meets these requirements is the Marine Corps Command and Staff College (MCCSC).⁴¹ Alumni from these programs represent a significant institutional resource. By completing a competitive field-grade PME program with civilian government participants, alumni are part of and have access to a network of professionals who already

received training or exposure to joint forces issues, policy issues, strategy, and the role of the interagency system. Civilians who previously participated in one of these PME programs would be individuals competitively selected by their home agencies to participate and after completion of the program would have a greater understanding of military and defense issues, military planning processes, and various security topics. Civilian alumni include IC analysts, who could potentially serve as points of contact for their home agencies. For the most relevant application across services and agencies, recommend prioritizing inclusion of DoD personnel, to include IC analysts. Wargame organizers could reach out to alumni, both military and civilian, to promote the exercise, gauge interest in wargame topic selection, and to coordinate appropriate participation.

In addition to the selection of the participants themselves, the selection of the white cell or adjudicators for the wargames is also significant. This choice is an essential aspect of creating a quality exercise, to ensure the evaluation of actions realistically, that participant assessments are sound, and the development of courses of action which offer rigorous insight for leadership.⁴² For some operationally focused games, computer-based adjudication is likely appropriate particularly to measure effects. In some cases, PME warfighting labs or departments may be more appropriate in assessing larger-scale operations or more strategically focused scenarios. For in-depth political-military analytical wargames with a decision-making focus, the inclusion of subject matter experts would provide tremendous benefit. Finally, wargame organizers when coordinating with DoD alumni should emphasize the intended wargame topics and encourage selection of subject matter experts at the mid-grade level for participation. This will greatly improve the quality of the exercise, bolster planning and decision-making, and help to provide results of greater value for USG and military leadership.

Topics

Topics selected for the collaborative wargames should reflect the current NDS and NIPF.⁴³ More operationally focused topics could also be of value to participants, however NDS and NIPF-derived options should be the priority as they provide opportunities for more strategic-level critical analysis and multilayered decision-making. NDS and NIPF-derived subject matter is also more likely to garner interest from USG leadership and more readily facilitate analyst participation. Significant current events with broader implications for US security which occurred after the publications of the most recent NDS and NIPF offer additional topics to draw from. Examples of recommended overall topic areas to consider include strategic, economic, and military great power competition with China; twenty-first century Russia issues; Iran and nuclear issues; North Korea and nuclear issues; cyber warfare; various migration issues; and the Corona Virus Disease 19 (Covid-19) pandemic-associated security issues. Organizers should familiarize themselves with existing applicable commercially produced wargames which may cover these same topics. Organizers could adapt aspects of each of these topics to produce a political-military realistic, scenario-based wargame with strategic decision-making and analysis and make the game distinguishable from commercially available wargames.

Location

When selecting a location to hold the collaborative wargames, the two biggest factors are prerequisite facilities and clearance-accesses. Considering both factors, this paper recommends the selection of an in-person PME campus. While many USG facilities and DoD IC agencies have available conference areas, building access and in some cases required clearances could present a challenge for some participants or otherwise limit the scheduling of the exercise. The service of the PME campus hosting the wargames could also provide the bulk of the military

officer participants as well. However, this would depend on the PME institution and grade of officers attending. For example, at a Command and Staff College students are field-grade officers at the rank of major, whereas War College students are senior field-grade officers at the rank of lieutenant colonel or colonel. Organizers must coordinate the location well in advance with the home service of the PME to receive permission and approvals. Three possible locations and their advantages and disadvantages follow.

1. One recommended location is the Marine Corps University (MCU) campus at Quantico, Virginia.⁴⁴ This recommendation is twofold. The MCU campus has the facilities needed to successfully host a wargame and elements of the university, to include specific MCU schools, have experience in wargaming design and execution. This campus includes the MCCSC. Second, the MCU's proximity to the Washington DC metro area is convenient for many DoD IC analysts who work in the area. This location selection could also negate costs for the rental of a conference center and per diem for travelers. Finally, PME campuses or areas on base typically have additional classified facilities as well, if wargame participants should choose to incorporate a classified portion(s) of the exercise, or in some cases conduct the entirety in a classified setting. This location would be primarily dependent upon the topics selected for wargaming.
2. Another recommended location is the US Naval War College campus at Newport, Rhode Island.⁴⁵ As previously discussed, this campus houses pre-eminent DoD wargaming facilities and the staff has significant expertise in planning for and executing a wide variety of wargames and conferences. Although selection of this facility would incur travel and lodging costs for Washington DC metro area-based participants, it would allow

participants to fully immerse themselves in the experience away from their home agencies or duty locations. Like the MCU, the US Naval War College would also have a repository of alumni to potentially draw from for inclusion. However, if drawing from alumni, a trade-off is that students at the US Naval War College are senior field-grade officers, rather than the field-grade officers (majors) recommended for the interorganizational wargames.

3. A third recommended location is the US Army War College in Carlisle, Pennsylvania.⁴⁶ As with the US Naval War College, this option would allow for military officers and USG personnel based in the Washington DC area an opportunity to participate in a wargame removed from their normal duty locations. It would also have a repository of alumni to draw from to supplement participation, however like the US Naval War College those alumni would be senior field-grade officers. Further, the US Army War College has a Department of Strategic Wargaming (DSW) which could potentially help facilitate the exercise.

These recommendations are not exhaustive, but merely selected examples, and other PME campuses could also be considered to host the wargames. One note regarding the use of these PME facilities is that their wargaming facilities are prioritized for senior officer and civilian training and have numerous existing scheduled training exercises throughout the year.⁴⁷ This would require additional coordination and planning efforts with the individual institution. Further, planners should evaluate whether the intent is to hold a one-off event, or a series of wargames as this will impact selection of facilities and location.

An additional issue related to the selection of an appropriate wargame location is the desired classification of the wargame itself and how important this aspect is to the purpose and intent of the exercise. PME institutions will have both unclassified and classified facilities in or near their campuses for possible use. While the topics and type of scenario selected will most likely dictate the classification, the decision to select an unclassified game may lend itself to wider dissemination and potentially more creative inputs. Ultimately, the organizers will need to make this determination in conjunction with participating leadership.

Wargame Insights and Planning

Another important aspect of planning a collaborative wargame is communicating the ‘why’ to participants. By coordinating through PME alumni, the alumni can act as representatives or points of contact for their home agencies or units. The importance of the topic(s) organizers want to wargame is central to the selection of the participants themselves and for their interest in the exercise. The other more long-term focus is the collaborative impact of the wargaming. This is an opportunity for officers, government personnel and analysts to learn about the other’s fields and processes. Organizers need to communicate that clearly to prospective participants and it should be a factor in the selection process. Those who are open to a joint experience are more likely to engage fully.

Following the collaborative wargaming, as emphasized previously, post-game analysis will serve as an important part of the exercise not only to examine the results, but to engage in dialogue and work through the decision-making used during the scenarios. Organizers should encourage civilian USG personnel to capture the findings in written form, in a format appropriate to their home agency or department. This could include a written memo, a report or joint report with their military officer co-participants, or as part of a contribution to a greater USG or IC

project or assessment on the same topic.⁴⁸ Results dependent, it could also be appropriate to share findings in briefing form at a USG or IC working group, or conference on the topic area. This could present an opportunity for the military officer participants to attend and engage in further collaborative environments that they may normally not have access to, presenting further opportunities to network and learn about various USG and interagency processes. On the military side, military leaders may request officers provide findings similarly in written form or through briefing(s) and where appropriate they could include input from the USG personnel. Facilitation of this effort could necessitate use of a classified facility if participants wish to work on this effort in-person.

Areas for Future or Follow-on Study

Areas identified for associated follow-on research and study include: the identification of issues or specific scenarios for interdisciplinary wargame; the incorporation of non-DoD IC agency intelligence professionals in interorganizational wargaming to improve future senior leader relations; the use of collaborative wargaming as a means to improve relations between current senior military and civilian leadership; civil-military relations within the United Nations as a comparative study contrasted with the USG; and possible applications of interorganizational wargaming with the inclusion of international military officers. Each of these topics share commonality with this study and could warrant the focus of a separate individual paper. Brief ideas for consideration are as follows.

The selection of issues for wargaming should focus on priorities outlined in the most recent NDS and NSS.⁴⁹ An example wargame scenario would include a narrative outlining the necessary background information and associated recent historical policy to provide the context for the wargame scenario. The narrative would also include a short explanation of recent policy

updates, military actions, or other relevant considerations for the topic. This would preclude any confusion amongst participants or the need for extensive personal research prior to the start of the game. Using a political-military typology and a scenario-based wargame design, contextual information, germane policy, and considerations for the team playing the adversary role or ‘red cell’ is crucial. Planners should place equal preparation and emphasis on the adversary team to maximize the relevancy of the results.

This paper recommended pairing USG personnel, possibly DoD IC analysts, with field-grade military officers for wargaming. Part of the impetus for the selection of DoD IC analysts is the shared DoD background that this would provide participants as well as the combat-support function that DoD IC agencies provide.⁵⁰ For a follow-on examination, this paper recommends the inclusion of non-DoD IC analysts. This would likely necessitate a few changes in the organization of the wargames as well as the post-game analysis considerations. Additionally, planners would need to amend the networking process for post-wargame as well. There is potential great value in wargaming between military officers and a variety of USG and IC participants to include the selection of civilians from other departments of the USG outside the DoD. Due to the reasons explored in this paper, USG personnel are the primary recommendation for civilian participation.

A third area recommended for future study is the use of political-military analytical wargaming to improve relations amongst current senior USG and military leaders. During the Cold War era, senior military officers and USG representatives participated, in a certain capacity, in various types of wargaming and in most cases these wargames centered around the issue of nuclear deterrence.⁵¹ While the focus and results were beneficial, the intended purpose to examine outcomes and courses of action. Planners could arrange collaborative wargaming

specifically and in a limited capacity, due to significant time constraints and scheduling inherent to senior leadership, in such a way as to potentially lend positive benefit to the working relationship of participants. It would be especially important that the topics selected be pertinent to the highest priorities of senior government, at the strategic level.

Finally, although the scope of this paper focused on the bolstering of future senior civil-military relations within the USG and military leadership, organizers could consider similarly designed wargames with the incorporation of international military officers. Military officers representing NATO ally countries could provide particularly relevant value-added contributions. If international military officers participated however, then the topics selected should reflect the priorities of both the US and the countries represented.

Conclusions

In 2021, the USG faces new symmetric and asymmetric defense challenges, levels of competition below the level of armed conflict, and shifting security priorities. It is now more important to begin making a greater effort to prepare future civilian and military senior leaders to work together more cohesively and effectively. Interorganizational and interagency wargaming represents an opportunity to build collaborative networks and examine national defense and intelligence issues from diverse perspectives. By beginning cooperative efforts at the field-grade military officer level and equivalent grade USG civilian level, leaders could forge greater understanding before individuals enter the senior ranks or take on national-level positions. This would also provide participants an opportunity to further develop their creative critical thinking skills and practice strategically minded decision-making. Putting off gaining experience working together cannot wait until leaders reach senior positions. Four concluding points follow.

The USG senior decision-making apparatus facilitates cooperation amongst senior leadership; therefore, leaders should not accept modern often fractious civil-military relations in the future. Waiting to initiate civil-military collaboration until civilian representatives and military officers reach the senior ranks is too late. By beginning earlier, at the field-grade and civilian equivalent level, future senior leaders could benefit through exposure to different critical thinking and decision-making processes, as well as a variety of options to assess risk, earlier in their careers. Future leaders could also begin familiarizing themselves with how their counterparts assess strategic priorities across a range of instruments of national power. Each instrument functions in concert with the others across the interagency system and understanding the intersections therein is extremely valuable.

Interorganizational wargaming would be an excellent avenue to build collaborative partnerships between future USG civilian and military senior leaders. Historically, during the Cold War, wargaming conducted by the USG focused in many instances on participation by senior government officials and senior military officers. While senior participation can be beneficial and provide significant insight, participation from field-grade officers and equivalent-grade civilian personnel would prove invaluable in building cohesion and interagency understanding. This could provide collaborative opportunities for the future, beyond the results of the wargaming itself. Additionally, personnel at the field-grade level, military or civilian, bring a developing and less institutionalized or rigid perspective than senior leadership and this would be an opportunity for participants to think creatively and learn from team members.

The purpose of DoD wargaming has historically been outcome oriented. This paper recommends executing wargames which include an equal emphasis on experience and familiarization with the interagency system and whole of government decision-making

processes. While the outcomes and insights drawn would certainly be important, the learning involved would serve an equally significant role.

Military PME campuses with colleges that include both field-grade level officers, or higher, and interagency students have a host of alumni who organizers could draw from to facilitate this wargaming effort. Alumni could serve as the points of contact to identify and recruit potential participants, particularly the civilian personnel from USG agencies. Additionally, these campuses typically have the resources and facilities necessary to host this effort. Three examples of institutions which would be ideal to host are the US Marine Corps University in Quantico, Virginia; the US Naval War College in Newport, Rhode Island; and the US Army War College in Carlisle, Pennsylvania. These recommendations are partly due to the PME programs offered, facilities, and either their proximity to Washington DC and a variety of USG agencies, or their wargaming departments. Planners would need to consider whether to prioritize the convenience of proximity to the Washington DC metro area, or the opportunity to allow participants to immerse themselves in the wargames away from their home agencies or primary duty stations. Any efforts would need the approval and support of the hosting military service.

Appendix A: Red Teaming

Whenever possible, planners should consider the use of a red team and incorporate one when planning a political-military wargame. The role of a red team is to critically examine assumptions and alternative analyses and provide more careful vetting of courses of action and assessments⁵². Of note, organizers apply red teaming differently in military planning processes – sometimes even differently between specific services, versus civilian IC contexts, so its use and the role it will play in the wargame should be carefully explained to participants prior to the onset of a wargame. In the military, red teaming typically focuses on assumptions that planners may automatically calculate into their decision-making processes. The formation of assumptions happens naturally based on an individual’s experiences, knowledge of a situation and the available resources and capabilities, and the level of understanding of an adversary and that adversary’s intentions. A red team can serve to challenge those assumptions and encourage creative or original thought and solutions. How a red team is incorporated in a wargame can vary and a separate team should be designated to participate as a unique role within a given exercise. Red team members may work for a planning leader or report directly to a commander depending upon the scenario. Ultimately, the participation of a red team in a military planning process or wargame can greatly enhance critical thinking and improve decision-making if it is employed appropriately and with sufficient explanation to participants.

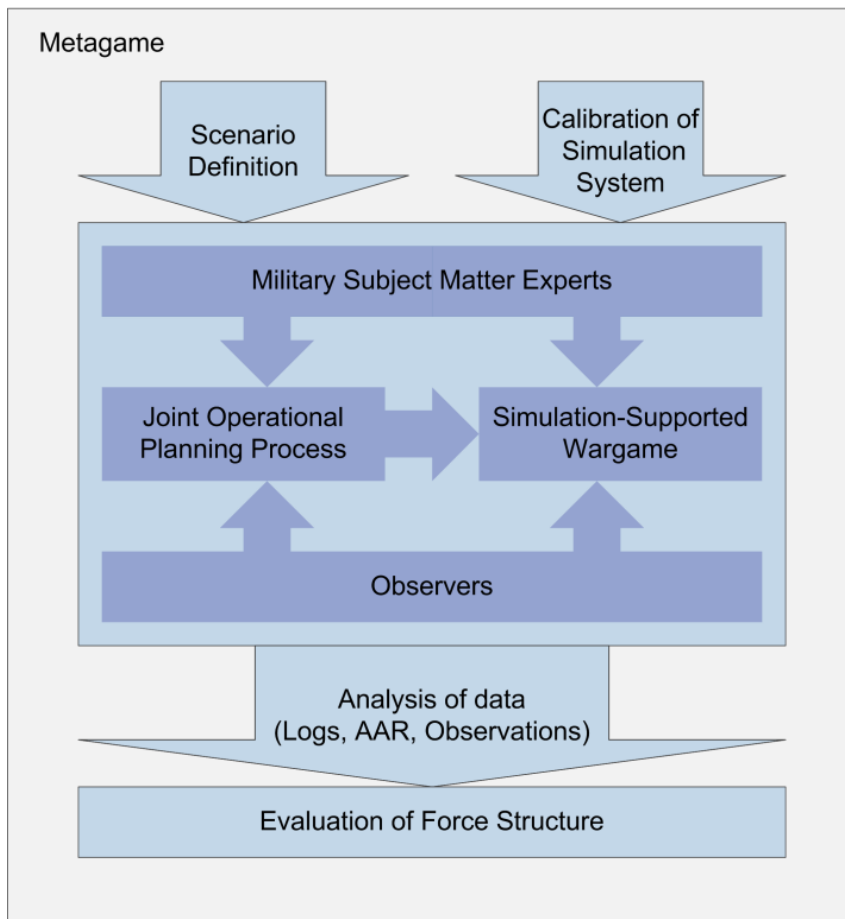
Conversely in the IC, red teaming is often utilized to critically examine an assessment and consider alternative analyses. In both military and civilian settings, a red team member would ask ‘what if’ questions to encourage critical and creative thinking. Red team members can also provide input critical in insuring participants accurately account for and assess risk, consider security issues, and analyze potential weaknesses in strategy or planning⁵³. Ideally the red team

members should be brought in by the game organizers from outside the home planning organization(s) or participants' offices, or commands in the military context. Whether providing an alternative assessment, contributing to a security or risk assessment, or challenging accepted assumptions, a red team can help wargame participants to consider additional courses of action, be more nuanced in their planning and judicious in their decision-making. To what extent one is utilized is at the discretion of the wargame organizers and should match with the objectives and intent of the wargames.

Appendix B: Norwegian Defence Research Establishment Methodology

The Norwegian Defence Research Establishment (FFI) views the process of preparing for a wargame as a type of metagame during which it starts by first considering the game objective. The scenario to be wargamed is fed into the operational planning process with inputs from subject matter experts and observers. At the conclusion of the wargame, after action analysis is conducted to evaluate results and outputs. The following FFI Figure 1 illustrates this cognitive process. A similar methodology process could be utilized by US wargame planners.⁵⁴

Figure 1:⁵⁵



Endnotes

- ¹ Risa Brooks, *Shaping Strategy: The Civil-Military Politics of Strategic Assessment*, (Princeton: Princeton University Press, 2008), Chapter 1.
- ² Thomas Sheppard, Bryan Groves, “Post-9/11 Civil-Military Relations: Room for Improvement.” *Strategic Studies Quarterly* 9, no.3 (Fall 2015), 62-87.
- ³ Burak Kadercan., “Strong Armies, Slow Adaptation: Civil-Military Relations and the Diffusion of Military Power.” *International Security* 38, no.3 (Winter 2013/2014), 117-152.
- ⁴ Jim Golby, “Beyond the Resignation Debate: A New Framework for Civil-Military Dialogue.” *Strategic Studies Quarterly* 9, no.3 (Fall 2015), 18-46.
- ⁵ Chiara Ruffa, Christopher Dandeker, Pascal Vennesson, “Soldiers drawn into politics? The influence of tactics in civil-military relations.” *Small Wars and Insurgencies* 24, no.2 (May 2013), 322-334.
- ⁶ The White House, *The National Security Strategy of the United States of America*. Washington, DC, 2008. <https://archive.defense.gov/pubs/2008NationalDefenseStrategy.pdf>
- ⁷ The White House, *The National Defense Strategy of the United States of America*. Washington, DC, 2018. <https://www.defense.gov/Explore/Spotlight/National-Defense-Strategy/>
- ⁸ Ian Williams, “Just like the President-Elect, Trump Cabinet Appointments Send Mixed Messages.” *Washington Report on Middle East Affairs* 36, no. 1 (January/February 2017), 32-33.
- ⁹ Ruffa, Dandeker, Vennesson, “Soldiers drawn into politics? The influence of tactics in civil-military relations,” 322-334.
- ¹⁰ Mazurkiewicz, “Between NATO and UN: EU Strategic Culture and its Approach to Civil-Military Cooperation,” 3-11.
- ¹¹ Mazurkiewicz, “Between NATO and UN: EU Strategic Culture and its Approach to Civil-Military Cooperation,” 3-11.
- ¹² Mazurkiewicz, “Between NATO and UN: EU Strategic Culture and its Approach to Civil-Military Cooperation,” 3-11.
- ¹³ European Defence Agency, 2021. <https://eda.europa.eu/>
- ¹⁴ European Union, European Commission, “European Civil Protection and Humanitarian Aid operations”, November 2020, https://ec.europa.eu/echo/partnerships/relations/civil-military-cooperation-emergencies_en
- ¹⁵ Paul Schuurman, “Models of War 1770-1830: The Birth of Wargames and the Trade-Off Between Realism and Simplicity.” *History of European Ideas* 43, no.5 (July 2017), 442-455
- ¹⁶ Peter P.Perla and E D. McGrady, “Why Wargaming Works.” *Naval War College Review* 64, no.3 (Summer 2011), 111-130.
- ¹⁷ R. McCreight, “Scenario Development: Using Geopolitical Wargames and Strategic Simulations.” *Environment Systems & Decisions* 33, no.1 (March 2013), 21-32.
- ¹⁸ Joint Doctrine Note 1-18. *Strategy*. Washington, DC: Headquarters Joint Chiefs of Staff, April 25, 2018, Chapter IV.
- ¹⁹ Shay Hershkovitz, “Wargame Business: Wargaming in Military and Corporate Settings.” *Naval War College Review* 72, no.2 (Spring 2019), 67-82.
- ²⁰ United States Naval War College, “Research and Wargaming,” accessed February 20, 2021, <https://usnwc.edu/Research-and-Wargaming>
- ²¹ Robert Ayson, *Thomas Schelling and the Nuclear Age: Strategy As Social Science*. London: Frank Cass, 2004, Introduction.

- ²² John T. Kuehn, Review of “Blue versus Purple: The U.S. Naval War College, the Soviet Union, and the New Enemy in the Pacific” by Hal M. Friedman. *Naval War College Review* 71, no.4 (Autumn 2018), 137-140.
- ²³ Maurice Suckling, “Board with Meaning: Reflections on Game Design and Histiography.” *College English Association CEA Critic* 79, no.1 (March 2017), 110-119.
- ²⁴ Sharon Ghamari-Tabrizi, “Simulating the Unthinkable: Gaming Future War in the 1950s and 1960s.” *Social Studies of Science* 30, no.2 (April 2000), 163-223.
- ²⁵ Maurice T. Price, “Applying Wargaming to the Cold War.” *Political Research, Organization and Design* 3, no.3 (November 1959), 3-6.
- ²⁶ Janani Mohan, “Gaming Nuclear Deterrence.” *Harvard International Review* 40, no.3 (Summer 2019), 33-35.
- ²⁷ Sharon Ghamari-Tabrizi, *The Worlds of Herman Kahn: The Intuitive Science of Thermonuclear War*, (Harvard University Press: 2005), 160.
- ²⁸ David Alan Rosenberg, “Being ‘Red’: The Challenge of Taking the Soviet Side in War Games at the Naval War College.” *Naval War College Review* 41, no. 1 (Winter 1988), 85.
- ²⁹ Rosenberg, “Being ‘Red’: The Challenge of Taking the Soviet Side in War Games at the Naval War College,” 86.
- ³⁰ Rosenberg, “Being ‘Red’: The Challenge of Taking the Soviet Side in War Games at the Naval War College,” 82.
- ³¹ Yuna Huh Wong, Garrett Heath. “Is the Department of Defense Making Enough Progress in Wargaming?” *War on the Rocks* (February 17, 2021) <https://warontherocks.com/2021/02/is-the-department-of-defense-making-enough-progress-in-wargaming/>
- ³² Per-Idar Evensen, Svein Erlend Martinussen, Marius Halsor, Dan Helge Bentson. “Wargaming Evolved: Methodology and Best Practices for Simulation-Supported Wargaming.” Interservice/Industry Training, Simulation, and Education Conference I/ITSEC, no.19182 (Norway, 2019), 1.
- ³³ Evensen, Martinussen, Halsor, Bentson. “Wargaming Evolved: Methodology and Best Practices for Simulation-Supported Wargaming,” 2-3.
- ³⁴ Nicholas R. Marsella, “Red Teaming and the Intelligence Professional: The Environment and the Challenge”. *Military Intelligence Professional Bulletin* 34, no.3 (Summer 2018), 28-32.
- ³⁵ Sharon Ghamari-Tabrizi, “Simulating the Unthinkable: Gaming Future War in the 1950s and 1960s.” *Social Studies of Science* 30, no.2 (April 2000), 163-223.
- ³⁶ United States Marine Corps University, “Professional Military Education (PME) Continuum, ‘Marine Corps University,” accessed February 20, 2021, <https://www.usmcu.edu/Academic-Programs/Professional-Military-Education-Continuum/>
- ³⁷ United States Naval War College, “Wargaming Department,” accessed February 20, 2021, <https://usnwc.edu/Student-Information/Resident-Domestic-Students>
- ³⁸ Office of the Director of National Intelligence, “Who we are,” accessed February 20, 2021, <https://www.dni.gov/index.php/who-we-are> “Members of the Intelligence Community,” accessed February 20, 2021, <https://www.dni.gov/index.php/what-we-do/members-of-the-ic>
- ³⁹ David Alan Rosenberg, “Being ‘Red’: The Challenge of Taking the Soviet Side in War Games at the Naval War College.” *Naval War College Review* 41, no. 1 (Winter 1988), 83.
- ⁴⁰ United States Department of Defense, “National Defense Strategy,” <https://www.defense.gov/Explore/Spotlight/National-Defense-Strategy/>

- ⁴¹ Marine Corps University, “Command and Staff College,” accessed February 20, 2021, <https://www.usmcu.edu/CSC/>
- ⁴² Yuna Huh Wong, Garrett Heath. “Is the Department of Defense Making Enough Progress in Wargaming?” *War on the Rocks* (February 17, 2021) <https://warontherocks.com/2021/02/is-the-department-of-defense-making-enough-progress-in-wargaming/>
- ⁴³ National Intelligence Priorities Framework: <https://fas.org/irp/dni/icd/icd-204.pdf>
- ⁴⁴ United States Marine Corps University, accessed March 7, 2021, <https://www.usmcu.edu/>
- ⁴⁵ United States Naval War College, accessed March 7, 2021, <https://usnwc.edu/>
- ⁴⁶ United States Army War College, accessed March 7, 2021, <https://www.armywarcollege.edu/>
- ⁴⁷ <https://usnwc.edu/Student-Information/Resident-Domestic-Students>
- ⁴⁸ Office of the Director of National Intelligence, “How We Work: Collaboration,” accessed February 20, 2021, <https://www.dni.gov/index.php/how-we-work/collaboration>
- ⁴⁹ The White House, *The National Defense Strategy of the United States of America*. Washington, DC, 2018. <https://www.defense.gov/Explore/Spotlight/National-Defense-Strategy/>
- ⁵⁰ United States Department of Defense, “Defense Agencies and DoD Field Activities,” accessed January 30, 2021, <https://cmo.defense.gov/Portals/47/Documents/OSD%20DAFA%20Organization.pdf>
- ⁵¹ Janani Mohan, “Gaming Nuclear Deterrence.” *Harvard International Review* 40, no.3 (Summer 2019), 33-35.
- ⁵² Timothy G. Malone, Reagan E. Schaupp. “The ‘Red Team’: Forging a Well-Conceived Contingency Plan”. *Air & Space Power Journal* 16, no.2 (Summer 2002), 22-33.
- ⁵³ Reid B.C. Pauly, “Would U.S. Leaders Push the Button? Wargames and the Sources of Nuclear Restraint.” *International Security* 43, no.2 (Fall 2018), 151-192.
- ⁵⁴ Evensen, Martinussen, Halsor, Bentson. “Wargaming Evolved: Methodology and Best Practices for Simulation-Supported Wargaming,” 7.
- ⁵⁵ Evensen, Martinussen, Halsor, Bentson. “Wargaming Evolved: Methodology and Best Practices for Simulation-Supported Wargaming,” 7.

Bibliography

- Ayson, Robert. *Thomas Schelling and the Nuclear Age: Strategy As Social Science*. London: Frank Cass, 2004.
- Brooks, Risa. *Shaping Strategy: The Civil-Military Politics of Strategic Assessment*. Princeton: Princeton University Press, 2008.
- Evensen, Per-Idar, Svein Erlend Martinussen, Marius Halsor, Dan Helge Bentson. “Wargaming Evolved: Methodology and Best Practices for Simulation-Supported Wargaming.” Interservice/Industry Training, Simulation, and Education Conference I/ITSEC, no.19182 (Norway, 2019).
- Ghamari-Tabrizi, Sharon. “Simulating the Unthinkable: Gaming Future War in the 1950s and 1960s.” *Social Studies of Science* 30, no.2 (April 2000), 163-223.
- Ghamari-Tabrizi, Sharon. *The Worlds of Herman Kahn: The Intuitive Science of Thermonuclear War*. Harvard University Press: 2005.
- Golby, Jim. “Beyond the Resignation Debate: A New Framework for Civil-Military Dialogue.” *Strategic Studies Quarterly* 9, no.3 (Fall 2015), 18-46.
- Hershkovitz, Shay. “Wargame Business: Wargaming in Military and Corporate Settings.” *Naval War College Review* 72, no.2 (Spring 2019), 67-82.
- Joint Doctrine Note 1-18. *Strategy*. Washington, DC: Headquarters Joint Chiefs of Staff, April 25, 2018.
- Kadercan, Burak. “Strong Armies, Slow Adaptation: Civil-Military Relations and the Diffusion of Military Power.” *International Security* 38, no.3 (Winter 2013/2014), 117-152.
- Kuehn, John T. Review of “Blue versus Purple: The U.S. Naval War College, the Soviet Union, and the New Enemy in the Pacific” by Hal M. Friedman. *Naval War College Review* 71, no.4 (Autumn 2018), 137-140.
- Malone, Timothy G, Reagan E. Schaupp. “The ‘Red Team’: Forging a Well-Conceived Contingency Plan”. *Air & Space Power Journal* 16, no.2 (Summer 2002), 22-33.
- Marsella, Nicholas R. “Red Teaming and the Intelligence Professional: The Environment and the

- Challenge”. *Military Intelligence Professional Bulletin* 34, no.3 (Summer 2018), 28-32.
- Mazurkiewicz, Agata. “Between NATO and UN: EU Strategic Culture and its Approach to Civil-Military Cooperation.” *Defense & Strategy* 18, no.1 (2018), 3-11.
- McCreight, R. “Scenario Development: Using Geopolitical Wargames and Strategic Simulations.” *Environment Systems & Decisions* 33, no.1 (March 2013), 21-32.
- Mohan, Janani. “Gaming Nuclear Deterrence.” *Harvard International Review* 40, no.3 (Summer 2019), 33-35.
- Pauly, Reid B.C. “Would U.S. Leaders Push the Button? Wargames and the Sources of Nuclear Restraint.” *International Security* 43, no.2 (Fall 2018), 151-192.
- Perla, Peter P. and E D. McGrady. “Why Wargaming Works.” *Naval War College Review* 64, no.3 (Summer 2011), 111-130.
- Price, Maurice T. “Applying Wargaming to the Cold War.” Political Research, *Organization and Design* 3, no.3 (November 1959), 3-6.
- Rosenberg, David Alan. “Being ‘Red’: The Challenge of Taking the Soviet Side in War Games at the Naval War College.” *Naval War College Review* 41, no. 1 (Winter 1988), 81-93.
- Ruffa, Chiara, Christopher Dandeker, Pascal Vennesson. “Soldiers drawn into politics? The influence of tactics in civil-military relations.” *Small Wars and Insurgencies* 24, no.2 (May 2013), 322-334.
- Schuurman, Paul. “Models of War 1770-1830: The Birth of Wargames and the Trade-Off Between Realism and Simplicity.” *History of European Ideas* 43, no.5 (July 2017), 442-455.
- Sheppard, Thomas, Bryan Groves. “Post-9/11 Civil-Military Relations: Room for Improvement.” *Strategic Studies Quarterly* 9, no.3 (Fall 2015), 62-87.
- Suckling, Maurice. “Board with Meaning: Reflections on Game Design and Histiography.” *College English Association CEA Critic* 79, no.1 (March 2017), 110-119.
- The White House. *The National Defense Strategy of the United States of America*. Washington, DC, 2018. <https://www.defense.gov/Explore/Spotlight/National-Defense-Strategy/>
- The White House. *The National Security Strategy of the United States of America*. Washington, DC, 2008. <https://archive.defense.gov/pubs/2008NationalDefenseStrategy.pdf>

Williams, Ian. “Just like the President-Elect, Trump Cabinet Appointments Send Mixed Messages.” *Washington Report on Middle East Affairs* 36, no. 1 (January/February 2017), 32-33.

Wong, Yuna Huh, Garrett Heath. “Is the Department of Defense Making Enough Progress in Wargaming?” *War on the Rocks* (February 17, 2021)
<https://warontherocks.com/2021/02/is-the-department-of-defense-making-enough-progress-in-wargaming/>