

Service Parochialism and the Defense Planning Process: A Case Study of the Title 10 Wargames

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ABSTRACT

This thesis examines the impact of service parochialism on one of the largest and longest running series of professional military wargames in the United States, the Title 10 wargames. By examining this important feature of modern American defense planning, the research identifies the effect that service parochialism can have on all aspects of the defense planning process, from capabilities acquisition to the formation of doctrine to force structuring. The time period of the analysis begins in 1979 with the predecessor to the modern Title 10 wargames, the Global War Game, and continues to the wargame events played in 2014. The conclusions of this research have been derived from a content analysis of official published documents pertaining to the Title 10 wargames and supplemented by data obtained through expert interviews. The research shows there is a trend in the modern Title 10 wargames to move away from the wide-scope, competitive wargames played during the original Global War Game series. As a consequence, the strategic implications of the wargame events are limited. These design changes render the Title 10 wargames susceptible to continued parochial influences by their organizing service.

Ce mémoire examine les répercussions de l'esprit de clocher qui imprègne le service militaire sur l'une des plus grandes et des plus longues séries de jeux de guerre (« wargames ») militaires professionnels aux États-Unis, les « Title 10 wargames ». En examinant cette importante caractéristique des plans de défense modernes américains, cette étude permet d'identifier l'effet que l'esprit de clocher qui prévaut dans le service militaire peut avoir sur différents aspects du processus de planification de la défense, notamment en ce qui concerne tant l'acquisition de capacités militaires que l'élaboration de la doctrine et la structure des forces armées. L'analyse survole une période débutant en 1979 avec la création du prédécesseur des « Title 10 wargames » modernes, le « Global War Game », et se terminant avec les événements reliés aux jeux de guerre de 2014. Ce mémoire tire ses conclusions d'une analyse du contenu de nombreux documents officiels concernant les « Title 10 wargames » enrichie par des données obtenues lors d'entrevues avec des experts. La recherche décèle une tendance dans les « Title 10 wargames » à s'éloigner des jeux de guerre compétitifs et au vaste champ d'application de la série originale du « Global War Game ». Par conséquent, les implications stratégiques des événements de jeux de guerre sont limitées. Ces changements dans leur conception font en sorte que les « Title 10 wargames » restent vulnérables face à l'influence empreinte d'esprit de clocher du service qui les organise.

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CHAPTER 1: INTRODUCTION

In 2004 Secretary of Defense Donald Rumsfeld said “You go to war with the army you have, not the army you might want or wish to have at a later time.”¹ Rumsfeld was articulating an important point about military decision-making, that is, the decisions in acquisitions, training and doctrine that are made in the present affect the future capabilities and capacities of the force and on the other hand, once decisions have been made, certain strategic avenues become closed. Defense planners in the present must consider what type of military the United States will need in the future.

In the defense planner’s toolkit, one of the most utilized tools is the wargame. Wargames are a very general term for a large collection of simulations, exercises, conceptual two-sided games, analytical brainstorming sessions and seminars. Every year the national security establishment in the United States—and, indeed, in almost every other major power in the world—dedicates significant time and money to wargaming. Recently, in February of 2015 Deputy Secretary of Defense Bob Work released a memorandum to the service chiefs, Joints Chiefs of Staff, Undersecretary of Defense, Combatant Commanders, and other leaders of the defense establishment emphasizing the importance of wargaming in emergent defense planning strategies. Believing that wargaming had been underutilized by defense planners in recent years, Work writes with the clear intention to encourage a greater use of wargames as an analytical tool, “To most effectively pursue an innovative third offset strategy, avoid operational and technological surprise, and make the best use of our limited resources, we need to reinvigorate, institutionalize, and systematize wargaming across the Department.”² The utility of wargames is two-fold. In part, wargames are used as an educational tool to train military personnel. On the other hand, wargames can be used as a platform to develop appropriate responses to existing and

¹ In response to Army Specialist Thomas Wilson’s question, “Why do we soldiers have to dig through local landfills for pieces of scrap metal and compromised ballistic glass to up armor our vehicles?” Camp Buehring, Kuwait, December 2004.

² Deputy Secretary of Defense Bob Work to Secretaries of the Military Departments, Chairmen of the Joint Chiefs of Staff, Under Secretaries of Defense, Vice Chairman of the Joint Chiefs of Staff, Chiefs of the Military Services, Chief of the National Guard Bureau, Commanders of the Combatant Commands, Director of Cost Assessment and Program Evaluation, Director of the Defense Intelligence Agency, Director of Net Assessment, February 9, 2015, Office of the Secretary of Defense, Pentagon, OSD013411-14.

emerging threats; to explore the impact of new weapons and technologies; to troubleshoot and refine strategy; to develop new operational and tactical doctrine; to develop force structures; and, especially in the modern case, to investigate issues of defense acquisition and budgetary concerns.³ Such gaming is also broadly recognized as an important instrument of training and analysis in the intelligence community,⁴ and for the development and evaluation of interagency cooperation across multiple branches of government.⁵

But how does the military determine what to wargame and, more broadly speaking, how are defense priorities determined? Historically, the defense establishment has been driven by dual impulses. One is built on a rationalist understanding of defense planning where analysts identify problems and then investigate their solutions, using analytical tools like wargaming to determine gaps in doctrine and capability, and to prepare responses to current and potential threats. The other arises from the bureaucratic structure of the Defense Department where institutional imperatives and service interests can and often do heavily influence decisions. In the past century, the two impulses have been at odds on numerous occasions, prompting multiple reforms of the DoD in an attempt to reconcile them. This thesis began as an exploratory study into military thinking about future threats and defense planning through the lens of the most prominent series of professional military future-looking wargames, the Title 10 wargames. However, as my research progressed, the central question became *do analytical defense planning processes like the Title 10 wargames act to further rationalist defense planning as they intend or are they instead susceptible to the influence of institutional interests and service parochialism?*

³ Peter P. Perla, *The Art of Wargaming: A Guide for Professionals and Hobbyists* (Annapolis, MD: Naval Institute Press, 1990), 295-299.

⁴ Central Intelligence Agency, *A Tradecraft Primer: Structured Analytic Techniques for Improving Intelligence Analysis* (2009), at <https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/books-and-monographs/Tradecraft%20Primer-apr09.pdf>. See also William J. Lahneman and Rubén Arcos, *The Art of Intelligence: Simulations, Exercises, and Games* (Lanham, MD: Rowman & Littlefield, 2014).

⁵ See, for example, the work of the Center for Applied Strategic Learning, National Defense University. <http://casl.ndu.edu/Home.aspx>

Methodology

To address this central research question, I will first unpack the term “service parochialism” and explore the reasons why it is such an enduring feature of American defense planning. Then I will turn to an analysis of the wargaming literature to explain the building blocks of a professional wargame as well as the uses of wargaming in the defense planning process. Finally, I will present the analysis of my case study of the Title 10 wargames.

The Title 10 games are series of wargames organized by the wargaming departments of each of the services (Army, Navy, Air Force, Marine Corps) as a means to fulfill the services’ responsibility under Title 10 of the US Code to organize, train, and equip forces for the purposes of national defense.⁶ Beginning in 1979 with the first Global War Game series, the Title 10 wargames have become an annual feature of professional military wargaming as well as a key element in the defense planning process.

The data I have collected for the case study spans from 1979 to 2015 and has been derived through a content analysis of executive summaries, game reports, and final reports of the Title 10 wargames published by the organizing institutions within the services. In addition, this data was supplemented by expert interviews I conducted between 2014 and 2015. To gain access to published material, I submitted Freedom of Information Act Requests along with traditional requests through correspondence. Unfortunately, the FOIA process has not yielded a full data set as both the Army and the Air Force have heretofore failed to release any reports to me from the past fifteen years. Consequently, my analysis will be circumscribed to three of the four services, Army, Navy and Marine Corps. The Army data is incomplete but is supplemented by unclassified material collected from RAND reports. A full detailed table describing the year, objectives, and scenario of all collected data will appear in the Appendix. My analysis begins with the origins of Title 10 wargaming, the Navy Global War Game Series that ran from 1979 to

⁶ *Title 10 of the U.S. Code, § 3062. Policy; composition; organized peace establishment; § 5062. United States Navy: composition; functions; § 8062. Policy; composition; aircraft authorization.*

1983. From there I will trace the changes that have occurred in the game design and organization of the wargame events and assess how these changes may impact the ability of service parochialism to influence defense planning decisions.

CHAPTER 2: SERVICE PAROCHIALISM IN THE MODERN AMERICAN MILITARY

Introduction

Before the most recent defense reform passed in 1986, legislators insisted that “[for] more than 40 years after World War II, service parochialism and independence denied the Department of Defense the unity of effort required to wage modern warfare.”¹ Service parochialism is a term often used as a characterization of military decision-making as fundamentally self-interested and sometimes even contrary to larger national objectives and interests. The services have been tasked with the responsibility to organize, train, and, equip forces to be used for the purposes of national security.² Because of this, discussions of service parochialism revolve around how bias in this responsibility leads the services to prioritize their own interests over a joint vision. In general, reformists have attempted to alter the decision-making authority of the services when it comes to the budgetary process as a means of controlling the effects of parochialism. However, in this chapter I argue that the emphasis that policy makers have placed on limiting the services’ ability to pursue their own preferences in budgetary and acquisitions matters fails to address the deeper drivers of service parochialism and at times can actually contribute to parochial tendencies. As an alternative, I apply social theories of bureaucratic behavior and institutional identity to explain service parochialism as a behavior rooted in an institutional drive for autonomy such that a service can curate its preferred institutional identity.

¹ Paul J. Bolt, Damon V. Coletta, and Collins G. Shackelford, *American Defense Policy* (Baltimore, MD: Johns Hopkins University Press, 2005), 154.

² *Title 10 of the U.S. Code*, § 3062. *Policy; composition; organized peace establishment*; § 5062. *United States Navy: composition; functions*; § 8062. *Policy; composition; aircraft authorization*.

Parochialism in the Planning and Budgeting Process

The American military is an organization that is viewed as being incredibly powerful, technologically advanced, and vast. However, in recent years it has also been equated with a lumbering and wasteful goliath which struggles to achieve victory even after driving up government debt. While this characterization may be justified in light of recent wars in Iraq and Afghanistan, it is not new. Policy makers in Congress have held this view routinely since the end of World War II and have designed and passed legislation on a number of occasions to reform the Department of Defense planning and budgeting processes.

One of the main areas targeted in such reforms has been the power of the individual services vis-a-vis the Office of the Secretary of Defense in relation to programming and acquisitions decisions. This is due to the long-held belief that much of the financial waste and poor performance of the American military writ large can be attributed to the tendency for the services to assert their own preferences in capabilities and force structures that are divorced from the larger national interest. Resource rivalry between services and the associated process of vying and bargaining for congressional support for a services' programs creates challenges to the joint identity that the civilian areas of the defense establishment have been pushing for decades. This is epitomized by the findings of the Joint Defense Capabilities Team 2004 report in which they asserted that, "Historically, the services have defined the needs, developed the alternatives, and selected and resourced the solutions. These actions are typically accomplished in a stovepiped fashion, with little consideration of cross-Service trades or multi-Service efficiencies..."³ As the different services also have different priorities, they participate in direct competition over resources that once again may not consider larger defense objectives.

The current process of developing a budget for the Department of Defense is known as the Planning Programming Budgeting & Execution (PPBE) process. Originally designed by Robert McNamara in the 1960s, this system was actually meant to curb parochial influences by

³ *Joint Defense Capabilities Study: Improving DoD Strategic Planning, Resourcing and Execution to Satisfy Joint Capabilities Final Report*, report (U.S. Department of Defense, 2004), 2-4.

tying the services' force structuring and capabilities requests to a larger national defense policy.⁴ In this process, the services fulfill their duties mandated under Title 10 of the US Code to organize, train, and equip forces by submitting Program Objective Memoranda which display the resource allocation decisions of the military departments.⁵ While the services must conform to the guidance issued by various joint organizations like the President's Defense Strategic Guidance, the Joint Chiefs' of Staff Strategic Planning Guidance and the Office of the Secretary of Defense's Joint Planning Guidance the services are able to interpret recommendations based on their perceived areas of responsibility.⁶

The process of acquiring funding for programs can be highly competitive as the services vie for a percentage of the overall defense budget.⁷ This competition and the surrounding political process of appealing to the Office of the Secretary of Defense and to decision makers in congress can be considered to be an expression of the services' parochial and self-interested view of defense planning wherein they attempt to procure as many of their own priorities without regard for the needs of the other services or at times, larger national security

⁴ Richard A. Stubbing and Richard A. Mendel, *The Defense Game: An Insider Explores the Astonishing Realities of America's Defense Establishment* (New York: Harper & Row, 1986), 267.

⁵ "Program Objective Memorandum (POM) / Budget Formulation." ACQuipedia. April 5, 2010. Accessed March 1, 2016. <https://dap.dau.mil/acquipedia/Pages/ArticleDetails.aspx?aid=79420a26-7a89-4e94-aad2-6d5d61bb7511>.

⁶ *Ibid.*

⁷ In the 2015 DoD fiscal year budget request for example, the Army receives 23.1%, 29.3% for the Navy, and 28% for the Air Force. Todd Harrison, *Analysis of the FY 2015 Defense Budget*, report (Center for Strategic Budgetary Assessments, 2015), 18.

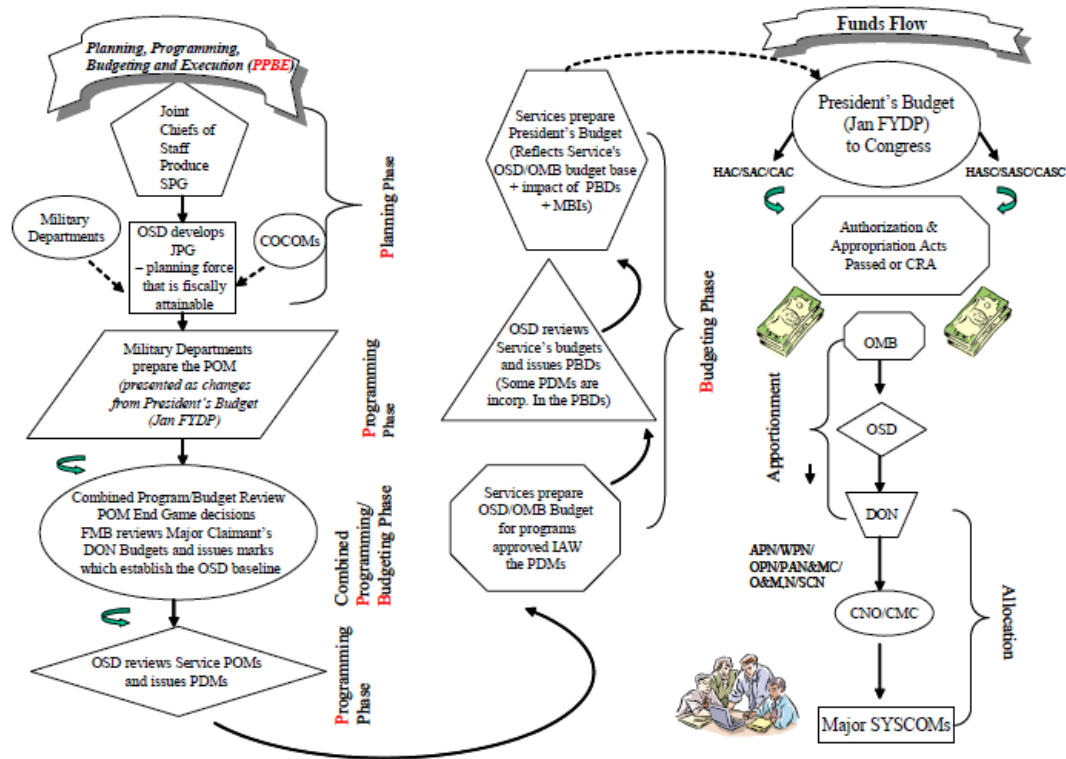


FIGURE 1. PLANNING, PROGRAMMING, BUDGETING AND EXECUTION PROCESS⁸

While acquisitions are the most obvious area within which parochialism can be observed, reforms to the budgetary process do little to counteract deeper drivers of parochial behavior. As a consequence, over half a century of defense reforms have done little to reduce parochialism and improve jointness within the services. A deeper investigation into the factors that actually drive institutional self-interest is required if service parochialism is to be addressed in the future. The sociological literature on bureaucratic behavior offers some insight into such factors.

⁸ "Program Objective Memorandum (POM) / Budget Formulation," ACQuipedia, April 5, 2010, accessed March 1, 2016, <https://dap.dau.mil/acquipedia/Pages/ArticleDetails.aspx?aid=79420a26-7a89-4e94-aad2-6d5d61bb7511>.

Institutional Drivers of Service Parochialism

Military historian and retired Air Force major general Perry McCoy Smith defines service parochialism as “the narrow view whereby a military branch or service is intolerant of criticism from other services, is extremely protective of the missions its spokesmen feel are exclusively those of their service, and is unwilling to compromise with other services on roles and missions.”⁹ In other words, parochialism is a condition where the services tend to jealously guard their preferred identity while distancing themselves from the identity of others. In this definition, the services seem remarkably anthropomorphic. Indeed, in the literature on service identity, service parochialism, and interservice rivalry, the Army, Navy, Marine Corps, and Air Force are often described as having their own personalities, values, interests, and areas of expertise, as if they were individuals. Describing the services as a people is a heuristic that simplifies the concept of institutional identity into familiar terms. Despite its inaccuracy, the term “service personality”¹⁰ conveys the depth and complexity of each service as an individual institution distinct from other services due to its unique experiences and perspectives.

Like most literature concerning identity, we run into a chicken-and-the-egg problem: do preferences influence identity or does identity influence preferences? Admittedly, this is a conundrum that cannot be fully parsed in this thesis. However, it can be observed that since their initial formation, US military service identities have remained relatively fixed, despite technological advancements and shifts in the geopolitical operating environment. As the cases will show in the sections following, challenges to the expression of service identity have been met with staunch opposition, jealousy, and entrenchment. Therefore, we can understand service parochialism to be most observable in instances where the expression of service identity is challenged by an outside force. There are a variety of different places from which challenges can originate as each institution within the larger Department of Defense, including the Office of the

⁹ Perry M. Smith, *The Air Force Plans for Peace, 1943-1945* (Baltimore: Johns Hopkins Press, 1970), 8.

¹⁰ Carl H. Builder, *The Masks of War: American Military Styles in Strategy and Analysis* (Baltimore: Johns Hopkins University Press, 1989), 7.

Secretary of Defense, seeks to fulfill its own institutional interests in a system of resource scarcity.

Institutional Preferences

Unpacking how institutions derive preferences at various levels of analysis has been a topic of debate in IR theory for decades. The paradigms of Rationalism and Constructivism hold different understandings of how institutions make choices, described by James March and Herbert Simon as different “logics of action.” Organizational theorists in the Constructivist paradigm utilize Simon and March’s second logic of action, the logic appropriateness, to explain institutional choices more than those in the Rationalist paradigm who explain decision as having a logic of consequences.

The first, an analytic rationality, is a logic of consequences. Actions are chosen by evaluating their probable consequences for the preferences of the actor. The logic of consequences is linked to conceptions of anticipations, analysis, and calculation. It operates principally through selective, heuristic search among alternatives, evaluating them for their satisfactoriness as they are found.

The second logic of action, a matching of rules to situations, rests on a logic of appropriateness. Actions are chosen by recognizing a situation as being of a familiar, frequently encountered, type, and matching the recognized situation to a set of rules...The logic of appropriateness is linked to conceptions of experience, roles, intuition, and expert knowledge. It deals with calculation mainly as a means of retrieving experience preserved in the organization’s files or individual memories.”¹¹

Social theories of organizational behavior rely on the notion that organizational culture, norms, and beliefs of the institution play an important role in development of institutional preferences.¹² Institutions will have a shared set of preferences derived from structural imperatives¹³ however,

¹¹ James G. March and Herbert A. Simon, *Organizations*, 2nd ed. (Cambridge: Blackwell Publishers, 1993), 8.

¹² See Model II: Organizational Behavior, Graham T. Allison and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis*, 2nd ed. (New York: Addison-Wesley Educational Publishers, 1999), 143-196.

¹³ “The organizations must adapt to [new] problems, acting in an environment surrounded by other organizations, private as well as public. This adaptation is another reason why, as they evolve, ‘policy preferences of organizations reflect mainly nonideological organizations imperatives.’ These imperatives are one (but only one) of the reasons

will also have preferences determined by their experience as an organization. The following discussion on autonomy of decision and identity can be considered a structural imperative that drives all institutions within bureaucracies. However while all institutions have identities, they do not all have the same identity. As such, the preferences of each institution will also vary.

Autonomy of Decision

During his investigation of bureaucracy, prominent sociologist Morton Halperin concluded that bureaucracies “are often prepared to accept less money with greater control than more money with less control.”¹⁴ This conclusion ran against conventional wisdom at the time that characterized bureaucracies as greedy, imperialistic organizations that sought boundless expansion. Discussions of service self-interest are often built on the assumption Halperin was trying to dispel about bureaucratic agencies, an assumption only worsened in the case of the military by the public’s fears of the military-industrial complex that Eisenhower spoke of in 1961.¹⁵ Instead of attributing bureaucratic actions solely to an inherent desire for growth (fiscal or otherwise) Halperin believed that institutional control over decisions was a key driving factor in bureaucratic behavior. James Q. Wilson refers to this prioritization of control as a bureaucracy’s drive for autonomy.¹⁶ Wilson suggests that autonomy of decision is especially important to bureaus and agencies when defining “critical tasks,” the types of operations the organization sees as integral to its mission.¹⁷ While perfect autonomy is impossible due to a reliance on funding, a bureaucracy would like to have as few limitations on its decisions as

why organizations tend to look alike, tend to experiences what some theorists call ‘isomorphism,’ even if they are operating in very different fields of activity.” *Ibid.*, 149.

¹⁴ Quoted in James Q. Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It* (New York: Basic Books, 1989), 179.

¹⁵ Eisenhower’s famously warns, “In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. The potential for the disastrous rise of misplaced power exists, and will persist.” “Ike’s Warning of Military Expansion, 50 Years Later,” National Public Radio, January 17, 2011, section goes here, <http://www.npr.org/2011/01/17/132942244/ikes-warning-of-military-expansion-50-years-later>.

¹⁶ Wilson, *op. cit.*, 180.

¹⁷ *Ibid.*, 25.

possible, “Ideally, a government bureau would like to be the only organization in town curing cancer and would like to have no limitations on how it goes about achieving that cure.”¹⁸

Autonomy of decision is fundamentally linked to institutional identity. Sociologist Philip Selznick defines autonomy directly in terms of identity as “a condition of independence sufficient to permit a group to work out and maintain a distinctive identity.”¹⁹ According to Selznick, autonomy is a necessary condition for an institution that hopes to protect its preferences, values, and sense of mission that comprise an institutional identity or organizational culture. It follows that institutions interested in preserving their identity would also seek to preserve conditions of autonomy of decision.

Identity Determined Preferences

The literature on organizational culture as it concerns the military and formation of preferences is limited but we can look to the works of Alastair Johnson on strategic culture²⁰, Elizabeth Kier on organizational culture and its effects on military doctrine,²¹ and Graham Allison and Philip Zeliko’s discussion of decision-making in organizations to inform a theory of service preferences.²² The work of Elizabeth Kier in particular examines how military doctrine in Britain and France during the interwar period experienced doctrinal shifts from an offensive to a defensive orientation that were unrelated to the external operating environment at the time. Kier argues that cultural and ideational factors within the historical background of a state and its military can have causal weight in doctrinal decision-making, claiming that, “Independent exigencies such as technology, geography, and the distribution of power are important, but

¹⁸ *Ibid.*, 181.

¹⁹ Philip Selznick, *Leadership in Administration; A Sociological Interpretation* (Evanston, IL: Row, Peterson, 1957), 121.

²⁰ Alastair Iain Johnson, “Cultural Realism and Strategy in Maoist China,” in *The Cultural of National Security: Norms and Identity in World Politics*, ed. Peter J. Katzenstein (New York: Columbia University Press, 1996).

²¹ Elizabeth Kier, *Imagining War: French and British Military Doctrine Between the Wars* (Princeton, NJ: Princeton University Press, 1997).

²² Graham T. Allison and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis*, 2nd ed. (New York: Addison-Wesley Educational Publishers, 1999).

culture is not simply derivative of functional demands or structural imperatives. Culture has an independent causal role in the formation of preferences.”²³

In this case, Kier described culture as “the set of basic assumptions, values, norms, beliefs, and formal knowledge that shape collective understandings.”²⁴ The collective in this case refers specifically to the military as an organization and thus takes the culture to be the organizational culture of the military as an institution. Organizational culture is a prism through which events are experienced, and is fundamentally interrelated with the formation of organizational identity.

While much of the literature on organizational culture has focused on the private sector, Kier argues that militaries in particular develop strong organizational cultures because of their duties to perform selfless tasks and act with internal cohesion.²⁵ Military sociologists Joseph Soeters, Donna Winslow, and Alise Weibull point to the “communal” character of life in uniform, the rigid hierarchy of the military bureaucracy, and the emphasis on discipline to be foundational tools for developing internal cohesion among members of a military organization.²⁶ A high degree of internal cohesion, or what Karl Weick and Karlene Roberts refer to as the “collective mind” is necessary for groups of individuals to carry out complex missions and tasks especially those that endanger the lives of the servicemen.²⁷ They illustrate this with an example from the deck of an air craft carrier,

Every individual plays his or her own role, but in doing so each person (in the tower, on the deck, the pilot) has to interrelate heedfully with the others. For instance, a pilot does not land his aircraft, he is “recovered” by the people on board. On a flight deck there are no solitary acts. Hence solitarily acting “strong” individuals or commanders are not welcome here.²⁸

²³ Kier, *op. cit.*, 5.

²⁴ *Ibid.*, 28.

²⁵ *Ibid.*, 4.

²⁶ Joseph L. Soeters, Donna J. Winslow, and Alise Weibull, "Military Culture," ed. Giuseppe Caforio, in *Handbook of the Sociology of the Military* (New York: Kluwer Academic/Plenum Publishers, 2003), 240.

²⁷ Karl E. Weick and Karlene H. Roberts, "Collective Mind in Organizations: Heedful Interrelating on Flight Decks," *Administrative Science Quarterly* 38, no. 3 (1993): 357-381.

²⁸ Soeters, et al, *op. cit.*, 248.

This type of cooperation is engendered through socialization and indoctrination into the organizational culture of the military and can begin even before recruitment. Historically this has been done by the services individually and as such each produces its own methods for socialization. Besides the intense socialization process that occurs at military academies and boot camps, there are also unique “initiation rites” that a recruit must endure before becoming a full-fledged member of the organization like the Marine Corps “warrior week.”²⁹ The result of these activities is that recruits “display commitment to the new organization” and a “total value transfusion” from that of civilian to that of Marine, soldier, seaman, or airman.³⁰ Carl Builder’s notion of “service personalities” can then be understood at both an organizational and individual level.

The degree of autonomy and independence the services have experienced in decision-making historically has allowed them each ample time to develop their own distinct identities and culture, which are then perpetuated by individuals who are brought into the fold with each passing generation. The structure of the Department of Defense that necessitates interservice rivalry over a finite set of resources and a finite set of missions and areas of responsibility has contributed to the services developing highly independent and highly offensive doctrines in order to capture a greater degree of autonomy in decision-making authority. As such, these types of preferences that initially derived out of structural imperatives are perpetuated in the mythology of the services as they socialize members of their organization. As time goes on, the desire for autonomy and service identity reinforce one another forming what Perry McCoy Smith refers to as a “gyroscopic effect” or a path dependency for service identity.³¹

Because service-based socialization strives to engender commitment and a mission-specific collective mind, it also creates as a byproduct the exact conditions for stove-piped, parochial thinking that the DoD hopes to avoid. In an era of jointness, interoperability problems (outside of technical interoperability) can be attributed in part to the fact that servicemen from different branches lack such an ability to think in a communal fashion. We see this in

²⁹ *Ibid.*, 250.

³⁰ *Ibid.*

³¹ Perry M. Smith, *op. cit.*, 30.

multiservice wargames as well, as in the 2012 Navy Service wargames where it became clear that the Marines and the Navy had large gaps in organizational understanding. The game report made a point to emphasize this gap saying, “The lack of common understanding of the service specific capabilities, terminology, tasks, organization and missions [made] coordination a challenge.”³² In the Title 10 wargames, one interviewee noted that breaking from stove-piped thought patterns proved difficult for the wargame participants, demonstrating further the difficulties with planning for the joint interest as opposed to the deeply ingrained service interest.

Challenges to Service Identity Expression

If we understand the military services to be bureaucratic institutions that possess both structurally determined and identity determined preferences, we can see how institutional self-interest and parochialism manifest in a competitive environment in which the ability to realize these preferences is challenged. Autonomy of decision is meaningful here because, in general, the greater degree of autonomy a service has, the greater its ability to pursue its own identity-based interests. The current structure of the defense establishment provides two ways for service autonomy to be challenged. The first way is through turf wars in which each service tries to capture areas of responsibility that they consider part of their identity as an institution. The Army lays claim to all land warfare, the Navy to sea warfare, the Marine Corps to amphibious operations and to a lesser extent expeditionary ops, and the Air Force lays claim to the air - but then, does the Air Force have responsibility over the air just above land or at sea as well? Do the Army and Navy control operations in the air above their respective domains? Whose turf is whose is determined in large part by the preferences of the services, which are historically derived and relatively slow to change. The missions the different services value play a large role in the determination of turf as well as where turf disputes will occur.

The second way service autonomy can be challenged is from above. Beginning with the first reforms in the 1950's, challenges to service decision-making autonomy have come from

³² Hunter R. Kellogg et al., *2012 Naval Service Game Report*, report (United States Naval War College, 2012), 26.

offices higher in the bureaucratic chain of command than the services, like the Office of the Secretary of Defense. In some cases, intervention from above has backfired and resulted in a greater opportunity for parochialism despite the opposite intention. This is best illustrated by Secretary of Defense McNamara's controversial TFX decision that chilled the relationship between the services and the Office of the Secretary of Defense in the 1960's.

The following sections will detail the historical precedent for service parochialism that is still observable in the present day. The first major period of service parochialism began with the advent of airpower as a military technology in the early 20th century.

Challenges to Army and Navy Service Autonomy by the Rise of Airpower

Scholars of military history such as Carl Builder and Perry McCoy Smith point to the rise of airpower as a crucial event that acted to entrench service identities and create the rivalrous conditions associated with service parochialism. By the beginning of World War I, both the Army and Navy had developed doctrines of decisive victory and an offensive role in combat. The modern American naval identity developed out of the doctrinal vision of seapower developed by Alfred Thayer Mahan in the late nineteenth century which defined the Navy's primary doctrinal goal to be achieving and maintaining "command of the sea."³³ This doctrine turned the Navy's eye seaward instead of landward in support of land forces. The Army continued to take strategy and tactics from the grand masters of military strategy, especially the works of Carl Von Clausewitz, with its primary identity firmly rooted in the power of the soldier to win wars.³⁴

In the 19th century, the two different departments, the War Department and the Department of the Navy, had to compete over financial resources, but their preferred areas of responsibility were largely separate from one another. The distinction between services began to fall apart as soon as airpower arrived as a military capability. Not only could airpower change both land and sea warfare, but its uniqueness and novelty exerted a gravitational pull on its

³³ Builder, *The Masks of War*, *op. cit.*, 74.

³⁴ *Ibid.*, 33.

operators so strong that airmen came to see themselves as having a separate group identity from all other military men. As the Air Force identity solidified, it challenged the identity and autonomy of both Army and Navy, with different results.

Airpower in the Army

In his theory of bureaucratic behavior, James Q. Wilson notes that institutional autonomy within a bureaucracy has both an internal and an external aspect.³⁵ To have internal autonomy, an institution must have a relative consensus about its critical tasks and sense of mission. External autonomy is expressed by organizational independence. The rise of airpower is a story of a loss of internal autonomy on the part of the Army as well as the eventual gain of external autonomy by the Air Force.

It is hard to overstate the impact that the airplane had on warfighting in the 20th century. Offensive and defensive doctrines alike had to be adapted to include a third dimension of space, something thousands of years of military theory had never considered. The technological advancement was shockingly rapid. The Wright brothers first flew a fixed-wing aircraft in 1903 and by 1910 the technology was being used by the Italian Army in its war against Turkey.³⁶ In the United States, the first stirrings of an independent Aeronautics Department began shortly after the conclusion of World War I.³⁷ In the years following, veteran airman Billy Mitchell would strongly advocate for an independent Air Service, fundamentally on the grounds of self-determination,

Already we have an entirely new class of people that we may call ‘the air-going people’ as distinguished from the ‘land-going people’ and the ‘sea-going people.’ The air-going people have a spirit, language, and customs all their own. These are just as different from those on the ground as those of seamen are from those of land men. In fact, they are much more so...³⁸

³⁵ Wilson, *op. cit.*, 182.

³⁶ Carl H. Builder, *The Icarus Syndrome: The Role of Air Power Theory in the Evolution and Fate of the U.S. Air Force* (New Brunswick, NJ, U.S.A.: Transaction Publishers, 1994), 50.

³⁷ *Ibid.*, 70.

³⁸ William Mitchell quoted in *Icarus*, 55.

Like Mahan did for the Navy, Mitchell advocated for the Air Force's unique ability to a) capture decisive victory in war and b) to be an offensive and independent institution. Over the course of the next decade, the identity of the Air Service and subsequently, the Air Corps began to solidify around a theory of offensive airpower which could end wars before land or naval forces were even required: strategic bombardment. This doctrine allowed pilots to conduct precision bombing against strategic military targets behind enemy lines which could cripple an enemy's access to supplies or even obliterate large numbers of land forces.³⁹ In the aftermath of the devastation of trench warfare, airpower, especially the doctrine of strategic bombing, came to be seen by some as a possible means to achieve victory without the horrific cost in casualties that land and sea warfare often incurred.⁴⁰ The simultaneous push for service independence and the adoption of an offensive strategy illustrated the first example of the "gyroscopic effect" that autonomy and service identity have on one another.⁴¹ Once Mitchell's ideas took root in the organization, they became harder and harder to reverse.

Before the Air Force leadership fully adopted the decision to seek full independence from the Army, there was a degree of intra-institutional debate. Doctrinal divisions between fighter pilots and bomber pilots polarized officers within the Air Force because each took the Air Force to have a different sense of mission.⁴² Fighter pilots understand the role of the Air Corps as a support role to ground forces and Army doctrine, and pushed for doctrines and strategies that would reflect that role such as air support, pursuit, and liaison.⁴³ However, strategic bombardment was the only strategy that justified service independence from the Army.⁴⁴ It was a highly offensive, independent doctrine, and it also fundamentally challenged the utility of land and sea forces in war. Where strategic bombing was a decisive strategy, support operations only guaranteed that airpower would be secondary to other forms of warfighting. Undoubtedly, the beliefs of Billy Mitchell and his cohort that airmen were a different kind of warrior factored into

³⁹ *Ibid.*, 62.

⁴⁰ *Ibid.*, 30.

⁴¹ Smith, *op. cit.*, 30

⁴² *Ibid.*, 25

⁴³ *Ibid.*, 34

⁴⁴ *Ibid.*

the support of the doctrine of strategic bombardment and its winning out over the fighter pilots'. In World War II, the detonation of the nuclear bombs in Hiroshima and Nagasaki only strengthened the Air Force's argument that airpower could lead to decisive victory.⁴⁵ In fact, the power of nuclear weapons allowed the Air Force to make the claim that it could end all wars and bring world peace; Perry McCoy Smith, explains,

The great joy and overstatement in the period immediately following the successful explosion of the two atomic bombs was well recorded in the press and in the congressional hearings of 1945 and 1946. Airpower would defend this nation; airpower would guarantee the success of a new international security organization; airpower would punish aggression where it might manifest itself; airpower would save the world. Salvation had come; all America needed to do was to maintain and support a strong United States Air Force - a simple, reliable formula. The airplane was not considered just another weapon; it was the ultimate weapon for universal peacekeeping.⁴⁶

After the war concluded, the Air Force achieved its goal of independence and officially separated from the Army under the National Security Act of 1947. Smith states that Air Force defense planners spent the majority of the following decade programming the force in ways that justified independence from the Army. As a consequence, many of the most important support functions that aircraft played were neglected to devastating effect during the Korean War.⁴⁷ These failures are one of the main reasons that defense reforms were initiated as policy makers in Washington felt that service interests, like the quest to justify independence, were overshadowing larger concerns like the efficacy of the force. Even nearly 70 years post-independence, there is a constant push and pull between the Army and the Air Force about the level of support the Air Force is willing to give to the Army vis-a-vis strategic air campaigns that remain at the center of the Air Force identity. On the other hand, naval aeronautics have developed in quite the opposite way to land-based airpower. Instead of seeking independence, the air arm of the Navy was content to remain a part of its service of origin. This is in part due to the Navy's transition from a

⁴⁵ Phillip S. Meilinger, *The Paths of Heaven the Evolution of Airpower Theory* (Maxwell Air Force Base, Ala.: Air University Press, 1997), 79.

⁴⁶ Smith, *op. cit.*, 18.

⁴⁷ Builder, *Icarus, op. cit.*, 143.

battleship fleet to an aircraft carrier fleet post-World War II which will be described in the following sections.

Adoption of Airpower into “Command of the Sea”

Billy Mitchell’s quest to carve out a place for airpower in military strategy did not only affect the Army. In fact, beginning in 20th with his sinking of old German dreadnought *Ostfriesland*, Mitchell ignited an embittered feud with the Navy that lasted until his death in 1936.⁴⁸ Mitchell not only antagonized his contemporaries with his methods but also stoked the theoretical debate over strategy, “[his] fight with the Navy over the battleships was not just a simple fight between the Army, the Navy, and the little Air Force- it was really a battle of ideas, involving air-minded people and non-air-minded people in both services.”⁴⁹

While Mahan’s vision of seapower lasted through the beginning of World War II, the future of two particular technologies threatened the doctrine of battle-fleet supremacy: the submarine and the airplane.⁵⁰ In 1915, the German U-boat had demonstrated that it could act as a new vehicle to conduct a *guerre de course*.⁵¹ The airplane proved to be an even greater challenge to seapower and the dominance of the new American Navy in the years that followed.⁵² The rise of air power gave way to an institutional debate within the Navy of the time about the merits of conservatism versus innovation. The role of airplanes in warfare continued to expand in the interwar years and proponents of new technologies challenged the relevance of old doctrines and strategies both on land and at sea.

Airpower and submarine warfare developed fast enough to doom the battleship to obsolescence. This was only furthered by the Japanese attack on Pearl Harbor in December of 1941 when all eight of the naval battleships were damaged.⁵³ World War II, not just Pearl

⁴⁸ Builder, *Icarus*, *op. cit.*, 53.

⁴⁹ Henry Harley Arnold, *Global Mission* (New York, NY: Harper, 1949), 100.

⁵⁰ Harold Sprout and Margaret Sprout, *Toward a New Order of Sea Power: American Naval Policy and the World Scene, 1918-1922* (Princeton, NJ: Princeton University Press, 1940), 45.

⁵¹ *Ibid.*, 43.

⁵² *Ibid.*, 44.

⁵³ *Remembering Pearl Harbor: A Pearl Harbor Fact Sheet*, report, December 7, 2001, <http://www.nationalww2museum.org/assets/pdfs/pearl-harbor-fact-sheet-1.pdf>.

Harbor, would continue to disadvantage the old guard of naval strategists who were committed to Mahan's theories of seapower. Buoyed by the success of land-based airpower, naval aeronautics continued to gain ground both in terms of budget and as a core part of naval doctrine.⁵⁴

The shift from battleships to aircraft carriers represented the arrival of airpower into the maintenance of the Navy's mission to have "command of the sea" and pro-airpower advocates within the naval command structure were given an opportunity to shape doctrine for the first time. This shift also served another function - to halt the growing Army Air Force's quest to bring the domain of the air, both on land and at sea, under its own jurisdiction. This was no accident. Even as the airmen were making the case for independence in the War Department, the Navy saw the rise of airpower as a challenge to its very survival as a service.⁵⁵ Scholars assert that the rapid doctrinal shift away from battleships and toward naval aeronautics in the post-war period was largely motivated by the fear of losing power to the Air Force,

The forthcoming dominance of aviation forces in the postwar Navy was not decided in response to a new strategic concept or to an analysis of the international political situation but rather in response to an institutional threat [by the Air Force] to the Navy which originated within the domestic political arena.⁵⁶

In the end, placated by its privileged position within the new naval identity, naval aeronautics felt little desire to secede from the Navy and form its own service. Instead, the air arm of the Navy would prefer to drive institutional decision-making and doctrine while maintaining commitment to the missions of the Navy. Had the Navy not allowed airpower to influence future naval doctrine, and had stayed committed to the doctrine of decisive victory at sea, it may have been unable to maintain parity with the other services in World War II and into the Cold War.

⁵⁴ Thomas C. Hone, "Replacing Battleships with Aircraft Carriers in the Pacific in World War II," *Naval War College Review* 66, no. 1 (Winter 2013): 70.

⁵⁵ "The political fight with the war department and, more particularly with the Air Force soon dominated the Navy men's every consideration. Their responses to this political struggle - which they sincerely believed to be a fight for the very survival of their service - thus provided the context for all remaining decisions about the postwar Navy." Builder, *Icarus*, *op. cit.*, 78.

⁵⁶ *Ibid.*, 77.

Solidification of the New Status Quo

In 1947, President Harry S. Truman signed the National Security Act which officially granted the Air Force independence from the Army. The act also reformed the structure of the defense establishment and created an umbrella organization, the Department of Defense, which would balance service decisions against national security interests, at least in theory.⁵⁷ Before the reforms, there had been serious consideration of total unification of the armed forces under a single military commander, this plan was supported by both the Air Force and the Army.⁵⁸ At first glance, their participation in a unification plan seems to run contrary to the bureaucratic theories presented by Wilson, but that is not the case. In fact, it is one of the first demonstrable examples of the new status quo of service parochialism. Both the Army and the Air Force thought that their organizational interest would be best protected from being undermined by the other services if a higher authority had discretion over programming decisions. One of the challenges the Army has faced in the years since World War II is the rise and fall of budgets based on maintenance costs. In war, the Army is granted funds to train and equip large numbers of personnel who are then discharged during peace time, on the other hand both Air Force and Navy require large sums to finance maintenance on their expensive capabilities. Moreover, the Cold War changed the national defense strategy to nuclear deterrence, and the capabilities required for such a strategy lay in the hands of the Air Force and the Navy.⁵⁹ The Army and Air Force at the time believed a unified Department of Defense would balance their interests against the Navy, thus allowing them greater freedom of decision than their perceived alternative.⁶⁰ Recognizing that it had a comparative advantage over the Army in the post-war operating environment, the Navy rejected the agreement. Not only would strategic deterrence keep the Navy relevant, but the Army might find itself consumed with infighting between ground and air forces. Under the National Security Act of 1947, a compromise between the two departments was reached: a single Department of Defense was created but the Secretary would have little

⁵⁷ Richard A. Stubbing and Richard A. Mendel, *The Defense Game: An Insider Explores the Astonishing Realities of America's Defense Establishment* (New York: Harper & Row, 1986), 135.

⁵⁸ Wilson, *op. cit.*, 186.

⁵⁹ *Ibid.*, 186.

⁶⁰ *Ibid.*, 185.

power compared to the services, the Joint Chiefs of Staff were created to offer input to the civilian side of defense, and lastly the Air Force became an independent service.⁶¹

The National Security Act ushered in a new era of the American military. Interservice rivalries were common as each service attempted to further delineate their critical tasks from those of the other services and similarly, what their responsibilities to the other services would be. The areas of responsibilities had first been disrupted by airpower and continued to be as nuclear weapons and missiles became available capabilities. Only a decade had passed since the National Security Act when the first set of reforms aimed at curbing the influence of service parochialism were introduced in Congress.

The TFX Controversy: Challenging Autonomy from Above

One of the consequences of the constant battle to maintain autonomy of decision is the perception of parochialism. In the 1950s, turf wars between Army, Navy, and the newly independent Air Force continued despite the fact that they had been unified under a single department. The services jockeyed to get their programs funded, regardless of the advantage these programs may have had on warfighting. Alain C. Enthoven and K.V. Smith of RAND describe this period grimly, elucidating the perception that service parochialism sabotages national security objectives.

The Services remained essentially independent entities. Each Service based its planning and force structures on a unilateral view of priorities and how a future war might be fought. Each had its own intelligence net (and intelligence estimates), its own supply system, its own ballistic missile programs. Each Service emphasized its own missions at the expense of joint missions. Each Service attempted to lay the groundwork for an increased share of the budget in future years. Each Service tried to protect the overall size of its own force structure, sometimes at the cost of readiness and real combat capability. All decisions on these matters were made by dedicated military and civilian leaders, who

⁶¹ *Ibid.*, 186.

were convinced that by acting in the best interests of their own Service they were acting in the best interests of the nation as well.⁶²

During the Korean War, a lack of coordination across the services lead to mismanagement of funds and poor warfighting tactics.⁶³ President Eisenhower favored the notion of a more centralized Defense Department and began to push for reforms in the mid 50's.⁶⁴ In 1958, Eisenhower argued that "separate ground, sea, and air warfare [was] gone forever" and hoped that further centralizing the DoD would dampen interservice rivalry and cut spending.⁶⁵ The outcome, the Defense Reorganization Act of 1958, substantially shifted decision-making authority into the hands of the Secretary of Defense by giving him the "power to transfer, reassign, abolish, and consolidate service functions."⁶⁶ The Act also specifically limited the autonomy of the services while it clarified the role of the Secretary of Defense.

Eisenhower's reforms viewed service parochialism as a pathological behavior, a problem that could be solved with more oversight from a higher authority. It also was based on the same assumption that Morton Halperin challenges in his work, that bureaucracies are only concerned about money. This misunderstanding of the reasons for parochialism led Eisenhower to reforms that would not alter the root causes of parochialism. Instead the reforms would further challenge the services' ability to curate their identities by introducing another avenue for outside forces to influence the responsibilities of the services. The negative effects the reforms had on parochialism were not apparent until 1961 when newly appointed Secretary of Defense Robert McNamara exercised the power granted by the 1958 reforms to launch the TFX aircraft program.

When McNamara became Secretary of Defense under Kennedy in 1961, he was determined to reorganize and streamline the Department of Defense's acquisitions process and continue the trend of "unification" set by Eisenhower.⁶⁷ McNamara noted that while there were

⁶² Alain C. Enthoven and K. Wayne Smith, *How Much Is Enough?: Shaping the Defense Program, 1961-1969* (Santa Monica: RAND Corporation, 1971), 10.

⁶³ Richard Holmes et al., *The Oxford Companion to Military History* (Oxford: Oxford University Press, 2001), 205.

⁶⁴ *Ibid.*

⁶⁵ *Ibid.*

⁶⁶ *Ibid.*, 206.

⁶⁷ Stubbing and Mendel, *op. cit.*, 265.

many redundant programs among the different services, there was also a tendency to prioritize capabilities associated with nuclear deterrence. He pushed for a doctrinal change in national security policy away from simple deterrence and toward “flexible response” which would allow the military to respond to hostility with non-nuclear options.⁶⁸ In addition, he instituted a number of reforms to the defense acquisition process that he believed would be the key to lowering costs while creating a more effective force. McNamara envisioned the role of the Secretary of Defense as one that held much more decision-making power than previous secretaries. Unfortunately for McNamara, his decisions directly challenged the autonomy of the services and resulted in stalemates and mistrust instead of a doctrinally unified Department of Defense.

The design for the TFX airplane had origins in an intraservice rivalry between the fighter pilots and the bomber pilots in the Air Force.⁶⁹ These rivalries were embodied by two competing command groups, the fighters’ Tactical Air Command (TAC) and the bombers’ Strategic Air Command (SAC). Post World War II, the Strategic Air Command’s doctrine of strategic bombardment had come to define the identity of the whole Air Force, as it was the doctrine that had allowed the service to gain independence from the Army. The influence of SAC continued to grow in comparison to its counterpart the Tactical Air Command (TAC), which was responsible for operations conducted by fighters, namely ground support, interdiction and pursuit.⁷⁰ In 1959, ambitious TAC General F. F. Everest endeavored to design a new aircraft that could improve TAC’s ability to participate in nuclear operations. The plane, eventually deemed the Tactical Fighter, Experimental (TFX), would act as TACs own “junior SAC nuclear bomber” while simultaneously maintaining the ability to perform the classic missions of the Tactical Air Command.⁷¹

⁶⁸ Robert J. Art, *The TFX Decision: McNamara and the Military* (Boston: Little, Brown, 1968), 30.

⁶⁹ See “The First Phase: Origins, 1959-1960” in *The TFX Decision* for a detailed discussion.

⁷⁰ *Ibid.*, 15.

⁷¹ *Ibid.*, 16. In order to maintain the identity of the TAC as well as guarantee the aircraft would go to TAC, Everest insisted that the plane have features that would allow it to be deployed from secret and backwater airfields. Alternatively, if the fighter could fly long distances, perhaps the plane wouldn’t have to be deployed near a theater at all and could be based in the US and fly to its target. Therefore, the early TFX could already fly long distances

The TFX represented everything McNamara was after: it could perform a number of different missions, making it a strong addition to the doctrine of flexible defense, and because of that, it could also be used by all four services as their next generation aircraft (Marine Corps, Army, Navy, Air Force). While potential use by the Army was later dropped, by February of 1961 McNamara was steadfast in his desire for the TFX to be a multiservice capability.⁷² At the time the Navy was developing its own fighter, the F-6D Missileer, for the purpose of fleet air defense. This aircraft was designed to circle the fleet for many hours at a time (called “loitering on station”) and could detect and defend the fleet from the air. While the TFX had the potential to operate in a similar capacity, there were some irreconcilable differences in design that made the aircraft ill-suited to perform the difference missions of TAC, SAC and Navy Aeronautics.⁷³ In an unprecedented display of the authority of the Secretary of Defense, McNamara cancelled the Navy’s Missileer program, leading military brass to become concerned that McNamara’s actions signified an emergent trend in defense planning where decision-making occurred from the top down.⁷⁴ Moreover, this indicated a “blurring of service lines” that could dismantle service identity and autonomy in favor of a unified DoD, a process they believed to have started with the National Security Act of 1947.⁷⁵ In the end, the TFX plans yielded two different aircraft, the F-111 Aardvark used by the Air Force and the F-111B for Naval fleet defense. While the F-111 Aardvark achieved relative success after it entered service in 1967, the F-111B was never able to meet requirements for weight, size and performance and the program was officially cancelled by NAVAIR in July, 1968.⁷⁶

In this case, it would seem that the Navy’s rejection of the Secretary’s proposal was

carrying nuclear weapons and fly at tree-top levels to avoid radar detection. These features allowed it to also perform interdiction and group-support operations.

⁷² *Ibid.*, 26.

⁷³ *Ibid.*, 16.

⁷⁴ *Ibid.*, 45.

⁷⁵ “Each service wanted to retain the privilege of autonomously developing its own weapon systems and consequently of tailoring them as much as possible to its respective needs. Both considered that it would be unwise to base the entire performance needs of both services for the next generation of tactical aircraft on one development effort. Each could not help but view this joint program as one further step in the integration or blurring of service lines that had been progressing since the enactment of the National Security Act of 1947.” *Ibid.*, 40.

⁷⁶ Donald M. Pattillo, *Pushing the Envelope: The American Aircraft Industry* (Ann Arbor: University of Michigan Press, 1998), 269.

based largely on practical concerns about the utility of the aircraft, but the implications of ceding control over capabilities to the Secretary of Defense was likely of equal concern to naval leadership. The battle with the TFX was only one of many instances of “naval obstructionism” against McNamara’s intervention in defense planning decisions.⁷⁷ The Secretary of Defense pushed forward with his preferred multiservice capabilities while cancelling other service programs. This only served to further sour the relationship between the Office of the Secretary of Defense and the military.⁷⁸

While most of McNamara’s methods for planning and budgeting have remained in use, the extremity of the centralization of authority during his time in the OSD caused a backlash after his departure. In 1970, a Blue Ribbon Defense Panel appointed by President Nixon published a report criticizing McNamara’s choice to centralize and urged the implementation of reforms that would return decision-making authority to the services.⁷⁹ Few Secretaries of Defense have intervened as significantly as McNamara in the following decades.

The TFX decision provides us with an example of a challenge to service autonomy of decision that comes from a higher authority instead of a sister service. While all the services are ultimately committed to national security they are highly resistant to any decision that removes their ability to act autonomously and safeguard their own programs. Because of this, service parochialism and its influence in defense planning was not abated by McNamara’s decisions, instead the services and the Office of the Secretary of Defense became more distrustful of each other in the following period.

Onward to Goldwater-Nichols

The Goldwater-Nichols reforms in the 1980s represent another attempt by Congress to reform the roles and responsibilities of the services to curb perceived service parochialism. Despite the

⁷⁷ Shannon A. Brown, *Providing the Means of War: Historical Perspectives on Defense Acquisition, 1945-2000* (Washington, D.C.: Center of Military History and National Defense University, U.S. Army, 2005), 88.

⁷⁸ *Ibid.*

⁷⁹ Holmes et al, *op. cit.*, 206.

various reforms enacted since the original National Defense Act of 1947, none appeared to diminish the presence of service parochialism nor its ability to influence defense planning processes. The introduction of the Goldwater-Nichols Act and other related reforms in the latter half of the 1980s developed out of a confluence of operational, organizational, and fiscal concerns that had been brewing since the end of major US military involvement in Vietnam in 1972.⁸⁰ Vietnam itself resulted in a loss of public trust in the military establishment which in turn affected the vision the services had of themselves. In the decades following the war, doctrine was often unfocused or at odds with the missions of the other services and joint operations. In a few occasions, such as the SS Mayaguez rescue attempt in 1975, the peacekeeping operation in Lebanon in the early 1980s, Grenada in 1983, and the Iran Hostage Crisis and Operation Eagle Claw in 1980, a lack of coordination and interoperability between services lead to failures of joint ops and the deaths of servicemen⁸¹. Budget cuts that disproportionately affected the Department of Defense also served to exacerbate the tension between the different military branches and made coordination more challenging still.

Public outrage attributed the failures of these operations directly to structural problems within the DoD acquisitions and organization process that allowed the service parochialism to be a dominant force in defense planning.⁸² In 1985, Senators Barry Goldwater and Sam Nunn introduced the legislation as a way to force the DoD to fix internal problems that had been steadily worsening for decades.⁸³ While the legislation itself wasn't ideationally prescriptive, it was heavily motivated by the present culture of interservice rivalry and parochialism. Senator Sam Nunn related this when describing his motivations for bringing the issue to the attention of congress, "First, there was the lack of true unity of command, and second, there was inadequate cooperation among U.S. military service when called upon to perform joint operations....The

⁸⁰ Charles Nemfakos, *The Perfect Storm: The Goldwater-Nichols Act and Its Effect on Navy Acquisition* (Santa Monica, CA: RAND, 2010), 6.

⁸¹ *Ibid.*, 7-9.

⁸² *Ibid.*, 9.

⁸³ *Ibid.*

preferred advice [from the Joint Staff] is generally irrelevant, normally unread and almost always disregarded.”⁸⁴

There are four main provisions of the Act, firstly it streamlined the process of delivering military advice to civilian authorities by making the Chairman of the Joint Chiefs of Staff the key person responsible for communicating with the President, the National Security Council and the Secretary of Defense.⁸⁵ Another provision affected the interaction among the services by 1) diminishing the role of the service chiefs and 2) restricting how much operational control the services had, instead emphasizing their role to organize, train and equip military forces under Title 10 for use by the Commanders-in-Chief (the regional Combatant Commanders).⁸⁶ Instead of warfighting, the services were to act as “force providers” to the unified commanders.⁸⁷ This provision was not technically a new addition to defense policy, as it had initially been part of the National Defense Reorganization Act of 1958, with the goal to empower the Combatant Commands to be “singly led and prepared to fight as one, regardless of service.”⁸⁸ However, this provision had not been fully embraced and a 1970 Blue Ribbon Defense panel found that unification was rather more “cosmetic than substantive.”⁸⁹ Thirdly, a key provision of the Act stipulated that officers could not receive promotion to flag rank without completing a joint duty assignment.⁹⁰ Previously, there was a sense that the services were keeping their best officers in their ranks while sending less skilled officers to perform joint duty tasks, lowering their potential for success. This provision was meant to reverse this.⁹¹ Lastly, the Act addressed the acquisition process, delegating sole responsibility for acquisitions to the Secretary of each military department.⁹²

⁸⁴ Nunn, quoted in Nemfakos, 13.

⁸⁵ *Ibid.*, 14.

⁸⁶ *Ibid.*

⁸⁷ *Ibid.*

⁸⁸ Derek S. Reveron, Nikolas K. Gvosdev, and Mackubin Thomas Owens, *US Foreign Policy and Defense Strategy: The Evolution of an Incidental Superpower* (Washington, D.C.: Georgetown University Press, 2014), 70.

⁸⁹ *Ibid.*

⁹⁰ Nemfakos, *op. cit.*, 14. Flag rank refers to the high level ranks of general, lieutenant general, major general, or brigadier general in the Army, Air Force and Marine Corps and admiral, vice admiral, or real admiral in the Navy.

⁹¹ *Ibid.*, 15.

⁹² *Ibid.*

The first two provisions, the empowerment of the Office of the Secretary of Defense vis-a-vis the service chiefs and the empowerment of the Combatant Commands, have had a profound effect on defense planning processes, although perhaps not in the way it was intended. The first provision is a continuation of the type of reforms we see in 1958, which did little to quell service parochialism and instead weakened the relationship between the OSD and the services. The second provision is crucial to the upcoming discussion of the Title 10 wargames because it reoriented the services' mission regarding warfighting. The Combatant Commands do conduct many joint operations and are more sensitive to regional strategies that transcend service identity or any sense of preferred critical tasks. However, the services, which have historically created a unique sense of identity and sought to preserve that, are entirely responsible for training, equipping, and organizing the forces that will be sent to the Combatant Commanders. As such, the joint military identity only comes to exist after forces are already fully formed. In terms of capabilities, the needs of the Combatant Commands are taken into consideration through the various stages of defense planning from the National Security Strategy, to the National Defense Strategy but in the end, they are effectively choosing from a menu of available resources curated by the services.

Given the conclusion that service parochialism is a result of structural conditions within the Department of Defense that challenge sub-bureaus' autonomy of decision and ability to maintain a preferred institutional identity, it follows that Goldwater-Nichols has not been successful in ameliorating service parochialism. This is apparent in recent defense acquisitions like the decision to pursue another multiservice airplane, the F-35.

The F-35 and Army Air Support

The F-35 case differs from the TFX in that the services involved and the Office of the Secretary of Defense are in agreement about the procurement of new multiservice aircraft. It is currently the largest of the DoD procurement programs, costing an estimated \$400 billion.⁹³ The F-35 was developed as an affordable fifth-generation fighter that could be customized to fill a variety of

⁹³Christian Davenport, "The F-35 vs. the A-10 Warthog, Head-to-head in Close-air Support. It's On.," *Washington Post*, August 27, 2015.

needs for the Navy, Marine Corps, and Air Force.⁹⁴ The rationale behind the F-35 program closely resembles the blunders of McNamara's decisions with the TFX, with proponents believing that a single customizable aircraft would be less costly than the design and development of three individual fifth generation planes. However, even in the absence of Navy obstructionism, such a technically advanced piece of machinery had required significantly more time and money to achieve functionality than was originally anticipated. The Department of Defense has stated that the F-35 was a new type of program, one that "was structured from the beginning to be a model of acquisition reform, with an emphasis on jointness, technology maturation and concept demonstrations, and early cost and performance trades integral to the weapon system requirements definition process."⁹⁵ However, a recent RAND report suggests that joint fighter programs may not necessarily save money and that total Life Cycle Costs of a joint strike fighter would exceed those of the three notional single-service aircraft.⁹⁶

In order to afford the fifth generation plane, other older models of aircraft will be retired and their maintenance and replacement costs transferred to the F-35 program. In the case of the Air Force, F-16 fighters and A-10 "Warthog" attack aircraft will be replaced. The decision to retire the A-10 has been at the center of the F-35 controversy because it signals the Air Force's disinterest in close air-support missions. While the Air Force insists that the F-35 will be able to fill the role of the A-10, critics believe the A-10's design as a low-flying, heavy warplane is superior to the F-35 for close air support.⁹⁷ The Air Force's disinterest in support operations has been apparent in their doctrinal decisions since their initial quest for independence from the Army. As discussed above, the legacy of Billy Mitchell lives on in the Air Force's preference to pursue programming for offensive, decisive missions. Recently, in January of 2016, reports that the Air Force has halted the retirement of the A-10 have surfaced following the August, 2015 announcement that the A-10 and F-35 would be pitted against each other in a close air support

⁹⁴ Jeremiah Gertler, *F-35 Joint Strike Fighter (JSF) Program: Background and Issues for Congress*, report (Congressional Research Service, 2009), 1.

⁹⁵ *Ibid.*

⁹⁶ Mark A. Lorell et al., *Do Joint Fighter Programs Save Money?* (Santa Monica: RAND Corporation, 2013), xvii.

⁹⁷ Benjamin Fernandes, "The Air Force's Argument for Retiring the A-10 Makes No Sense," *War On the Rocks*, March 5, 2015, <http://www.defenseone.com/ideas/2015/03/air-forces-argument-retiring-10-makes-no-sense/106845/>.

weapons test.⁹⁸ Based on the tendency of the services to insist on their own preferences, as well as the huge cost developing the F-35 has already incurred thus far, it seems unlikely that the Air Force will back down from its decision to retire the A-10 unless it can gain enough funding (funding likely to come from somebody else's budget) to keep both planes.

Conclusion

By examining deeper drivers of service parochialism, we can see how the competitive structure of the Department of Defense creates an almost inevitable clash amongst the services. The services' quest for autonomy of decision is constantly challenged by their counterparts as they battle over critical tasks, resources, and funding in a quasi-zero-sum system. It is also that case that the competitive nature of this system has played a role in the development of doctrines of independent and decisive operations that we see from the Navy and Air Force. By rejecting support roles in favor of offensive strategies, the Navy and Air Force were able to make the case that they were equally important fighting forces and deserved a greater share of the DoD's resources. The Army's existence as a service has always been validated by the need for land forces in war, but since the Navy and especially the Air Force have continually demonstrated their lack of enthusiasm in aiding Army mission objectives, the Army has had to fight to either gain the resources to provide its own support or convince the others to cede decision making authority to them through bargaining as we see with the failed unification plan in the post-war period or political pressure as we see with the A-10.

Reforms aimed at curbing service parochialism since the Defense Reorganization Act of 1958 have achieved little in this regard. This makes sense if we consider that service parochialism is born out of the institutional imperatives that a bureaucratic system creates. Even the most recent reforms under the Goldwater-Nichols Act have not addressed this. Instead, they have attempted to reduce the services' ability to make parochial decisions by redistributing the power of decision to the Secretary of Defense and the Combatant Commanders. Not only is this

⁹⁸ Kellan Howell, "Air Force Delays Mothballing A-10 Thunderbolt to Combat Islamic State," *Washington Times*, January 13, 2016.

likely to create more tension between the services and the OSD, as we see in the TFX decision, but it also removes the services from actual warfighting and the realities of the operating environment.

Furthermore, the socialization of service identity into individual members of the institution is particularly important in the chapters that follow when we consider the influence of service parochialism on the Title 10 wargames. Because the wargames are organized by the services, the sponsor, game designers and directors, and participants are all members of either the organizing institution or a sister service. As such, they come to the game table with an ingrained service-based perspective that can be hard to step outside of for the sake of rational defense analysis. Mitigating this kind of bias in wargaming requires a thoughtful understanding of the purposes of wargaming as well their limitations. This will be the goal of the Chapter 3.

CHAPTER 3: WARGAMES

Introduction

In recent years, the importance of wargaming in the defense planning process has been a topic of discussion within the establishment as high-level people like Deputy Secretary of Defense Bob Work have demonstrated in the aforementioned February 2015 memo to defense planning leadership.¹ Especially in a time of fiscal pressure and budgetary constraints, says Work, wargames provide a powerful avenue for investigation and analysis of the sorts of challenges the United States will face in the short, medium, and long term.

Military-relevant systems and technologies are changing quickly and new tactical and operational challenges are intensifying and proliferating, all during a period of fiscal pressure. During similar periods of technological and geostrategic flux, wargaming proved to be a useful tool both for improving our understanding of complex, uncertain environments and the changing character of warfare. When done right, wargames spur innovation and provide a mechanism for addressing emerging challenges, exploiting new technologies, and shaping the future security environment. They can potentially make the difference between wise and unwise investment trajectories and make our forces more successful in future conflicts.

In May 2015, Secretary of the Navy Ray Mabus issued another memorandum directed to the Chief of Naval Operations and the Commandant of the Marine Corps outlining the value of wargames and future steps to be taken to maximize the benefits of further institutionalizing the practice of wargaming in defense planning.² Both Work and Mabus explain that wargames of various types can be further integrated into the defense planning process, “Wargaming, in concert with operational analysis, and experimentation, cannot stand apart from the budget

¹ Deputy Secretary of Defense Bob Work to Secretaries of the Military Departments, Chairmen of the Joint Chiefs of Staff, Under Secretaries of Defense, Vice Chairman of the Joint Chiefs of Staff, Chiefs of the Military Services, Chief of the National Guard Bureau, Commanders of the Combatant Commands, Director of Cost Assessment and Program Evaluation, Director of the Defense Intelligence Agency, Director of Net Assessment, February 9, 2015, Office of the Secretary of Defense, Pentagon, OSD013411-14, 1.

² Navy Secretary Ray Mabus, to Chief of Naval Operations and Commandant of the Marine Corps, May 5, 2015 Department of the Navy, 1.

process; rather, it should feed into other dimensions of strategy development as well as our Planning Programming, Budgeting and Execution (PPBE) process.”³ In this chapter, I will expand on the development of the wargame and follow with a discussion of the strengths and weaknesses of serious analytical wargaming.

A Brief History of Wargames

Preeminent wargamer Peter Perla succinctly identifies a wargame as “a model or simulation whose operation does not involve the activities of actual military forces, and whose sequence of events affects and is, in turn, affected by the decision made by players representing the opposing sides.”⁴ This definition allows for a wide range of military activities to be considered “wargames.” Wargames have been played across the world for thousands of years. Beginning around 3000 B.C. with the creation of the ancient game of Wei Hai, credited to Sun Tzu; and the predecessor to modern chess Chaturanga in India, wargames have been a popular way for military leaders to refine their skills in strategic thinking.⁵ These types of games were abstract and conceptual, relying on fixed rules for movement and player actions. In contrast, the first modern wargames endeavored to simulate capabilities and probabilities existent in actual warfare: terrain was added, the pieces began to resemble real military units and perhaps most importantly, an umpire was introduced to adjudicate player actions.⁶ These changes did not occur until the development of the wargame *Kriegsspiel* by Baron von Reisswitz at the beginning of the 19th century in Prussia.⁷

From this point to well into the 20th century, wargames were primarily played at the tactical level, simulating a battle. As with chess, Chaturanga and *Kriegsspiel*, the objective behind the use of the wargame was to raise the tactical acumen of the players. Even now, according to Perla, “wargames are best used to investigate processes,” by reenacting or

³ Work, *op. cit.*, 2.

⁴ Perla, *The Art of Wargaming*, *op. cit.*, 164.

⁵ *Ibid.*, 16.

⁶ *Ibid.*, 18. Today, the umpire or adjudication cell is usually called the White cell or the control cell.

⁷ *Ibid.*, 25. *Kriegsspiel* literally means wargame.

simulating a battle action by action. This allows commanders to, in a sense, experience decision making in battle-like conditions without the high cost of real casualties.⁸

By the 20th century, the Germans in particular utilized wargames in their strategic planning of operations. They were an integral part of strategic thinking during both the first and second World Wars.⁹ The American military also began to integrate wargaming into war planning when the Naval War College created its professional wargames project in the early 20th century.¹⁰ Tactical wargaming became a major feature of American military planning during World War II.¹¹ The games of this era were run to uncover enemy tactics and strategies and in-turn test the American tactical response. Famous Navy Admiral Chester Nimitz would claim in the aftermath of the Pacific War that, “The war with Japan had been re-enacted in the game rooms [at the Naval War College] by so many people and in so many different ways that nothing that happened during the war was a surprise- absolutely nothing except the Kamikaze tactics toward the end of the war.”¹²

In the post-war period, computer technology came to be used to facilitate computation in wargame simulations starting with the Naval Electronic Warfare Simulator, NEWS, in 1958.¹³ The invention of the simulator helped to elevate wargaming in the minds of military tacticians and strategists throughout the Navy, in part due to the addition of the quantitative elements computer technology made available during play.¹⁴ NEWS altered the purpose of wargames as it

⁸ *Ibid.*, 9.

⁹ *Ibid.*, 40. See also Terence Zuber, *Inventing the Schlieffen Plan: German War Planning, 1871-1914* (Oxford: Oxford University Press, 2002)

¹⁰ *Ibid.*

¹¹ Based on Carl von Clausewitz’ conception of the three levels of war: strategic, operational, and tactical. The United States military sees the strategic level as it relates it to the implementation of national security policy. The operational level concerns the employment of forces within a theater of war. Major campaigns and operations are usually considered to occur at the operational level. The tactical level concerns the actual maneuvers and battles that make up a larger campaign. Wargames can be designed to simulate any of these levels of war or even more than one at once. One of the criticisms I discuss in Chapter 4 is that the Title 10 series, so-called strategic level wargames, tend to focus more heavily on the operational level than the strategic. See *Air and Space Power Mentoring Guide*, vol. 1 (Maxwell Air Force Base, Ala.: Air University Press, 1997) for a more in-depth discussion of the levels of war.

¹² Sabin, *op. cit.*, 58.

¹³ Perla, *Art of Wargaming*, *op. cit.*, 58.

¹⁴ *Ibid.*, 84.

was primarily designed for educational rather than analytical purposes.¹⁵ Additionally fleet officers began to utilize wargames as testing grounds for new tactics and maneuvers.¹⁶ Educational wargames were very prominent in naval wargaming during the 1960's and early 1970's. By the end of the decade however, naval leadership had become increasingly concerned with the development of global naval strategy and many such as Rear Admiral Edward F. Welch believed wargaming should be included in future naval strategic studies.¹⁷ In 1979, the Naval War College played the first iteration of the Navy Global War Game, a five year series dedicated to investigating global naval strategy if war were to break out between the United States and the Soviet Union. The Global War Game is considered, in retrospect, to be the rebirth of strategic analytical wargaming in the Navy and by the 1990's other services and institutions were utilizing strategic level wargames in their research and analysis. The Title 10 series of wargames grew out of the Global War Game series and continue to be played annually by every service today.

Purposes of Wargaming

Professional wargames can pursue a number of different broad objectives, most often, they are either designed for educational purposes or analytical purposes. While educational games seek to prepare players for roles they may take on in the real world, analytic wargames examine a problem set that the wargame's sponsor is interested in. Both types strive to create what Perla and McGrady call "synthetic experience" for the players.¹⁸ War is a messy business - imperfect information, time pressure, and potential for loss of life make decisions difficult and stressful. A good wargame is designed to simulate these emotional aspects of warfare. In the case of educational games, these elements help to train players to cope when faced with similar

¹⁵ See Andrew Wilson, *The Bomb and the Computer; Wargaming from Ancient Chinese Mapboard to Atomic Computer* (New York: Delacorte Press, 1969) and Thomas B. Allen, *War Games: The Secret World of the Creators, Players, and Policy Makers Rehearsing World War III Today* (New York: McGraw-Hill, 1987).

¹⁶ *Ibid.*, 98.

¹⁷ *Ibid.*

¹⁸ Perla and McGrady, "Why Wargaming Works," *op. cit.*, 113.

situations in life, while in analytic games, the stress improves the realism of the simulation. In theory, if a simulation were designed and developed very carefully, and players acted to fulfill their roles as realistically as possible, it would also be able to produce a synthetic experience without the fallout and repercussions of real world action. Therefore, people and organizations are able to learn without the pain.

As a tool, a wargame's success or failure often relies on the game design, the designer, and the participants. Many examples of failures in wargaming arise from a misunderstanding of the utility of wargames themselves, "In the end," says Perla, "the role of wargames of all types, sizes, and levels is to help human beings investigate the processes of combat, not to assist them in calculating the outcomes of those processes."¹⁹ Thomas Schelling famously touts wargaming as having dual purposes that other types of organized research simply cannot achieve; the first being that wargames alone provide the opportunity for participants to discover what they hadn't thought of,

Games...have one quality that separates them qualitatively from straightforward analysis and permits them to generate insights that could not be acquired through analysis, reflection, and discussion. That quality can be illustrated by an impossibility theorem: one thing a person cannot do, no matter how rigorous his analysis or heroic his imagination, is to draw up a list of the things that would never occur to him!"²⁰

The second is an expansion of the first, as it concerns how we determine what is an "obvious" strategy to ourselves and our opponents, or what he refers to as "the hidden face in the picture."²¹

If I draw a face with a hidden picture there is no way for me to tell how hard it is to see the face except to show the picture to somebody. I can't not see the face because I put it there, and the hidden face has the quality that once you've seen it is awfully hard to recapture your innocence and not see it...It is the peculiar element of collaboration, communication, and bargaining, that is involved in any crisis game, that cannot be captured by "straightforward" unilateral analysis. I may think that if I attack PT boats in four harbors of North Vietnam a few hours after PT boats have attacked some of my own ships the pattern or gestalt of my action is unmistakable... But we know what we're

¹⁹ Perla, *Art of Wargaming*, *op. cit.*, 179.

²⁰ Thomas C. Schelling, "The Role of War Games and Exercises," in *Managing Nuclear Operations*, ed. Ashton B. Carter, John D. Steinbruner, and Charles A. Zraket (Washington, D.C.: Brookings Institution, 1987), 436.

²¹ Robert Levine, Thomas Schelling, and William Jones, *Crisis Games 27 Years Later: Plus C'est Deja Vu*, publication (Santa Monica: RAND Corporation, 1991), 32.

doing because we designed it; we designed it because it looked “obvious” to us that there was a clear message contained in the pattern.²²

Schelling, as the father of game theory, is ultimately concerned with how the limitations of our own thinking lead us to false conclusions about what our opponents are thinking. In some cases we miss strategies and tactics thought up by our opponents while in others we erroneously believe our actions to be perfectly expressed and understood. Wargames, then, are a process of red teaming our own intersubjective biases that we bring to all discussions of strategy and planning.

A term developed from the design mechanic in wargames to designate enemy forces the Red Team, “red teaming” has come to refer to a larger process of critical analysis that seeks to illuminate gaps in understanding or areas of oversight in an institution that it is unable to self-diagnose. Wargames are one of the methods a red teaming process would employ along with other types of simulations, vulnerability probes, and alternative analyses.²³ Schelling’s anecdote about the hidden face in the picture is describing the ability of a wargame, as a process of non-cooperative communications between opponents, to “red team” the organizers’ and players’ assumptions about warfighting and shine light on areas that hadn’t been considered.

The Components of a Wargame

Most wargames have certain elements in common: an objective, a scenario, a data base that will be utilized to flesh out the physical reality of the game, models that simplify complex elements of the real world, rules, players, an adjudicator, and analysis.²⁴ How these components are organized though is highly dependent on the purposes of the wargame. Listed below are some of the most common ways in which the components are organized.

²² *Ibid.*, 33.

²³ Micah Zenko, *Red Team: How to Succeed by Thinking Like the Enemy* (New York: Basic Books, 2015), xi.

²⁴ Perla, *Art of Wargaming*, *op. cit.*, 165.

Cells: Cells represent different groups of wargame participants and are coded by color. In the United States, the Blue cell represents the American forces (BLUFOR), while the Red cell represents the opposition forces (OPFOR).²⁵ In addition to these two player cells, there is typically a third White cell that oversees play and acts as an umpire, also known as the control cell or adjudication cell.²⁶ In certain games, allies of either the Blue forces or Red forces can also be present and are represented by cells of other colors. Green usually represents civilians, the environment, neutral third parties, an ally of Blue or the host nation. Orange is usually an ally of Red. Yellow represents Non-governmental organizations (NGOs) and Private Volunteer Organizations (PVOs). At times other colors can be designated.

Sides: *A Compendium of Wargaming Terms* states that “The number of sides in a game is determined by the nature of the conflict and the nature of the opposition being gamed and the number of independent entities who can make decisions and take independent action that influence the direction of the game.”²⁷ Wargames can have one, 1 ½, two, or more sides. It is common in professional military wargames to utilize a “1½ sided wargame” design where Blue forces face off against an opposition whose activities are determined by the control group (White cell).²⁸ This type of game is increasingly common in the Title 10 wargames and will be the subject of discussion in Chapter 4. It is also important to note that the number of sides does not necessarily correspond to the number of cells in a wargame.

Adjudication: The act of determining a game move. A wargame adjudicator is meant to be an impartial judge, and is also known as an umpire, control, or White cell. There are a number of different adjudication techniques, each has its own strengths and weaknesses. This will be expanded upon in the following sections.

Free Adjudication: The results of interactions are determined by the adjudicators in accordance with their professional judgment and experience.

Rigid Adjudication: The results of interactions are determined according to predetermined rules, data, and procedures.

²⁵ William L. Simpson, Jr., comp., *A Compendium of Wargaming Terms*, report (U.S. Naval War College, 2015), 12. Enemy cell can also be represented by Gray.

²⁵ *Ibid.*, 36.

²⁶ *Ibid.*, 36.

²⁷ *Ibid.*, 25.

²⁸ *Ibid.*, 9.

Semi-free Adjudication: Interactions are evaluated by the rigid method, but the outcomes can be modified or overruled by the lead adjudicator.²⁹

Game Sponsor: All professional military wargames will have a game sponsor who requests that the wargame be designed and played to investigate a particular problem. The sponsor is either the senior officer who is requesting the wargame or a senior official in the organization or command that is requesting the wargame.³⁰

Game Designer: All wargames will have a game designer or game design team that is responsible for translating the sponsor's request into a playable wargame.

Game Director: Wargames also typically have a game director who is responsible for supervising and executing the wargame.³¹

Objective: All wargames will have an objective for analysis. It is the Game Designer's job to determine the wargame's objective based on the sponsor's initial area of interest.

Scenario: Every wargame will have a background (year, geographical area, political situation) that usually culminates in some kind of outbreak of conflict that then drives player actions in the wargame. A scenario can be very similar to real world circumstances, especially if the wargame focuses on a past event, or it can be highly fictionalized. How closely a scenario relates to the real world operating environment is tied to the objectives of the wargame.

Style of Play: To those outside of the wargaming community, one of the most difficult to understand aspects of a wargame is the style of play. Not all wargames are played in the same manner.

Turn-Based: Traditional wargames like chess and *kriegsspiel* can be considered turn-based games. In this style, opposing sides can only progress in the wargame at discreet times. One player moves, then the other.

Seminar style: Seminar style wargaming is common in modern professional military wargames. It is a less rigid style than a turn-based game. *The Compendium of Wargaming*

²⁹ *Ibid.*

³⁰ *Ibid.*, 31.

³¹ *Ibid.*, 18.

Terms characterizes a seminar wargame as one where in “opposing players discuss the sequence of moves and countermoves likely to be made in a given situation and agree on interactions likely to occur. The control team adjudicates the results of those interactions and reports back to the players. The process is repeated for each of the ‘moves’ in the game. Seminar games often use moves of various lengths of periods of the war at different levels of detail.”³²

Move-step: Sometimes designers will utilize the move-step design consideration to more fully explore objectives that require a long time horizon. Each move will correspond to a particular number of days after the conflict began (T+). Instead of playing through each day in its entirety, time skips will occur at the end of each turn moving players forward to the next stage of the conflict (i.e. moving from conflict escalation to war termination to post-conflict reconstruction). This style requires the control cell to extrapolate the outcome of players’ moves in order to create the time-skipped future vignette.³³

Game Design and Development

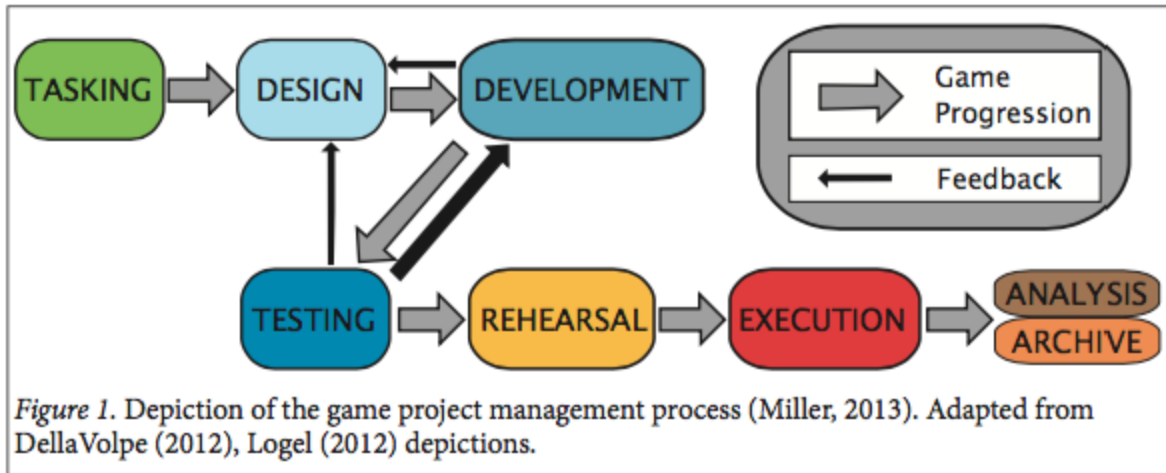
Professional wargames usually begin when someone high up in the chain of command decides that a wargame could be a useful way to investigate a problem the organization is having. By issuing the command to organize the wargame, they become the sponsor. The game design and development process is then done in conjunction with professional wargamers like those at the Naval War College. The game designer is responsible for translating the game sponsor’s wishes into objectives suited for a wargame, choosing or creating a scenario, employing models, and establishing rules.³⁴ Once the mechanical aspects of the game have been decided upon, it is the game developer’s job to critically analyze whether or not the translation from real world problem to simplified and artificial wargame environment has been done in an appropriate way as to produce valid results that are applicable to the real world problem, “One of the most important jobs of wargame developers is to assess the validity of the game’s results and processes in light of the real world.”³⁵ The Naval War College describes the game design, development, and testing as discrete phases but suggests that each stage requires feedback and adjustment.

³² *Ibid.*, 29

³³ *Ibid.*, 24.

³⁴ Perla, *Art of Wargaming*, *op.cit.*, 192.

³⁵ *Ibid.*, 235.



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In the development phase, developers must assess whether the insights gleaned from play are driven by assumptions built into the scenario, the technical mechanics and mathematical models, or by decisions that the players were capable of making.³⁷ Validity of the results can be compromised if outcomes are *not* player driven and are instead mere consequences of the design. Perla describes this as the difference between “stochastic” and “strategic” uncertainties,

Stochastic uncertainties arise from the variations in the outcomes of similar operations or engagements that come about as a result of the probabilistic nature of some kinds of events (such as the probability that a torpedo will strike and sink its intended target once it is launched). Such uncertainties are often characterized as the “role of the dice”...Strategic uncertainties, on the other hand, revolve around the choice of options open to the players.³⁸

Perla notes that professional wargames are particularly susceptible to overlooking the difference between stochastic and strategic uncertainties despite the fact that the stakes of producing a poorly developed wargame are much higher for professionals than for hobbyists.³⁹ As an example of this, Perla cites a particular U.S. Navy and Marine Corps joint wargame with civilian

³⁶ David DellaVolpe et al., *War Gamers' Handbook: A Guide for Professional War Gamers*, ed. Shawn Burns (New Port: United States Naval War College), 7.

³⁷ Perla. *Art of Wargaming*, *op. cit.*, 236.

³⁸ *Ibid.*, 236.

³⁹ *Ibid.*, 237.

leadership in the early 1980s organized to determine how the services could either deter or defeat the Soviet Union in a full-scale war (much like the Global War Game series but with slightly more select participants, according to Perla).

Unfortunately, the conduct of the games fell into an all-too-familiar trap. The strategic questions were already assumed to be answered, for the most part, before play began. Player attention during the game focused principally on lower-level operational issues, such as which aircraft carrier was deployed where, and how many submarines were killed on a daily basis. The decisions of the game players, who represented the National Command Authority and various commanders in chief, seemed to have little effect on the course and outcome of game events.

In essence, these games used senior officers and officials to make “decisions” already preordained by scenario imperatives and assumptions of military capability. This type of practice can lend unwarranted credence to concepts of operations and models and estimates of systems effectiveness that have not, in fact, received the thorough scrutiny and approval of professional judgment that their use in a such a game may imply. This scrutiny is the developer’s primary responsibility.⁴⁰

Despite this critical role, the emphasis in the literature falls heavily on avoiding pathological game design while seldom addressing development as a distinct process. Perhaps this is because it approaches a deeper set of philosophical and epistemological questions about the nature of reality versus simulation, and questions what variables are salient enough to be preserved in a wargame. However, for a wargame to succeed in illuminating areas of intersubjective bias, it must be designed in such a way that allows such biases to be identified.

Game designers must be careful to create games that facilitate objectives that wargames are able to explore. Technical objectives such as trying to predict who would win or lose in a given scenario are not best explored in a wargames setting, instead the emphasis should be placed on the process. While the wargame is in play, the game director’s decisions must also consider the real objectives of the wargame as a means to illuminate problematic or false assumptions in the strategy or tactic in question. As Perla’s anecdote shows, there is a tendency for either designers or participants to lose sight of the purposes of wargaming, especially in a

⁴⁰ *Ibid.*

professional setting. In many cases this is accompanied by intervention during either the design, development or execution phase. Naval War College wargamer Stephen Downes-Martin refers to the sources of intervention as the “Three Witches of Wargaming” and warns professional wargame designers to be aware of the potential negative impacts invention can have on a wargame’s analytical validity.

The Three Witches of Wargaming

The three witches, in Downes-Martin’s view, are the wargame director’s senior chain-of-command, the senior players within each game cell, and the game’s sponsor (or his chain-of-command).⁴¹ In each case, these groups have a tendency to try to change or redesign game elements.⁴² Downes-Martin believes that these attempts at intervention stem from a misunderstanding of the purposes of wargaming as well as confidence in their own way of doing things.⁴³ The sponsor of the wargame is often someone in a senior leadership position or acting on their behalf. While they are aware of a specific problem they would like to address with a wargame, the game designer must interpret their request to fit within the bounds of the game. Communicating this to a sponsor is a challenge on its own.⁴⁴ Senior players may present a larger problem to game directors as they challenge adjudication and design decisions throughout the course of the game.

Two examples of manipulation from various incarnations of the three witches spring to mind from the literature: the Japanese wargame of the Battle of Midway (May 1942) and the 2002 Millennium Challenge wargame (July/August 2002). In both cases, drastic decisions were made to alter the quantitative results of the game and refloat sunken naval fleets. In both cases, critics cite the decision to refloat as instances of the wargames being “cooked” to reach certain conclusions. However, critics fail to mention that the interventions come from game designers

⁴¹ Stephen Downes-Martin, "Your Boss, Players, and Sponsor: The Three Witches of War Gaming," *Naval War College Review* 67, no. 1 (Winter 2014): 32.

⁴² *Ibid.*, 34.

⁴³ *Ibid.*, 32.

⁴⁴ *Ibid.*, 35.

and directors who overrule unrealistic quantitative game elements in an effort to fulfill the wargames' original objectives. It can therefore be understood that such interventions were actually done to mitigate outside influences and protect the validity of results.

Battle of Midway Wargame

In May of 1942 the Japanese Combined Fleet ran a series of wargames to examine the range of possible operations the Japanese envisioned for the next phase of the war; among these was the proposed capture of Midway and the west Aleutians.⁴⁵ The outcomes of the wargames were favorable to Japan in all cases, due at least in part to the frequent intervention of Rear Admiral Ugaki, the presiding officer and game director.⁴⁶ The most famous intervention occurred during tabletop maneuvers. Japanese aircraft were deployed to Midway, leaving the carrier fleet exposed. The enemy team took the opportunity to bomb the fleet from land-based aircraft. The umpire Lieutenant Commander Okumiya cast dice to determine the results of the attack, and concluded that the fleet had incurred nine total hits which resulted in two of its carriers, Akagi and Kana, being sunk. Admiral Ugaki, responded by arbitrarily reducing the number of hits to three, refloating Akagi. Later Kaga too made a reappearance. Ugaki then raised the question of whether the Nagumo force (which included Akagi and Kana) had prepared for a contingency wherein an enemy carrier task force might appear on its flank while Japanese aircraft were deployed to Midway. The Nagumo force staff replied in a way that suggested that they had not prepared for this. In the actual Battle of Midway this is what happened, resulting in heavy Japanese losses.⁴⁷

Most accounts of these events point to the wargames of Midway as an example of bias in wargaming but as Peter Perla suggests, the bias may not have come from Ugaki, "The myth that the Japanese umpires successfully predicted the course and outcome of the battle of Midway only to be overruled by the overly optimistic game director is one that is in serious need of

⁴⁵ Perla, *Art of Wargaming*, *op. cit.*, 46.

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

exploding.”⁴⁸ To Perla, the game director’s doctoring of die rolls did not constitute the failure, the willful ignorance of issues raised during play did.⁴⁹ As Downes-Martin says, it is the responsibility of the game director to mitigate the biases that different participants may bring either to the design process or the game itself. Ugaki’s arbitrary refloating of the fleet allowed the game to continue so that other issue areas may have been investigated. In the actual battle, American land-based aircraft, the B-17s, did attempt to hit the Japanese fleet without a single successful hit. Furthermore, it is possible that the bias in the Midway wargames had occurred during the design phase. According to Commander Minoru Genda who participated as an air officer for Nagumo’s staff, the American red team commander, Captain Chiaki Matsuda, played his role uncharacteristically. This, he said, was the wargame’s principal failure.

The wargame of Midway illustrates an important point about wargames and their critics, the purposes of wargames and the types of conclusions we can draw from them are often misunderstood not only by those outside of wargaming circles but also by players and sponsors. The 2002 Millennium Challenge wargame is an even clearer example of the potential influences of the witches and why they are so hard to avoid.

Millennium Challenge ‘02

Millennium Challenge ‘02 has been used by critics of wargaming and military decision-making as an example of a “rigged” wargame. Millennium Challenge ‘02 was organized by Joint Forces Command (JFCOM) in the early 2000’s as a means to “explore critical war fighting challenges at the operational level of war that will confront United States joint military forces after 2010.”⁵⁰ The event would be one of the most expensive and elaborate concept-development exercises in history, costing \$250 million to develop and including the participation of 13,500 servicemen.⁵¹ The event combined simulated events with live training exercises and maneuvers organized to test emergent joint forces concepts of “effects-based operations,” “rapid decisive operations,”

⁴⁸ *Ibid.*, 47.

⁴⁹ *Ibid.*

⁵⁰ Zenko, *op. cit.*, 52.

⁵¹ *Ibid.*, 53.

and a standing JF headquarters.⁵² The “featured activity” of Millennium Challenge 02 was a free-play wargame situated in an Anti-Access/Area Denial (A2/AD) environment in the year 2007 against a fictionalized enemy widely understood to be either Iraq or Iran.⁵³ JFCOM Commander General Buck Kernan had high hopes for the event and hand-picked Marine Lieutenant General Paul Van Riper to head the OPFOR Red Team. Kernan believed Van Riper was a great choice for the Red Team because he was “a devious sort of guy” and “a no-nonsense solid professional warfighter.”⁵⁴ Although most accounts of Millennium Challenge are quick to praise Van Riper much in the ways Kernan did, we can already see the signs of two of the witches of wargaming.

Having senior leadership choose participants could be considered intervention, especially in this case because Van Riper was not selected on his knowledge of wargaming but instead of *warfighting*. In expert interviews, it was mentioned that from a technical perspective, playing the Red Team is a much more difficult task than playing Blue since Blue players’ in-game roles are usually similar to their real-life roles. Red Team players must have a greater knowledge of the goals and decision-making methods of Red and must act accordingly within the bounds of the game. As such, senior wargamers are often assigned to either White (the umpire or adjudication cell, also known as control) or Red cells while more junior wargamers assume Blue roles. While someone may be a senior in the chain of command, they may not be a senior wargamer. As Downes-Martin says, senior players constitute a threat to the validity of the results of the wargame if they make attempts to modify design decisions throughout the course of play. This is especially true if senior players don’t particularly understand why design decisions were made in the first place due to a lack of wargaming expertise.

Van Riper did have some wargaming experience prior to MC’02. However, his comments on the previous year’s JFCOM wargame Unified Vision 2001 demonstrate that his focus was on the technical outcomes of play when he took issue with Blue’s ability to destroy his

⁵² *U.S. Joint Forces Command Millennium Challenge 2002: Experiment Report*, report (Norfolk: Joint Forces Command), v.

⁵³ Zenko, *op. cit.*, 53.

⁵⁴ *Ibid.*

ballistic missiles with future technologies despite not knowing their whereabouts.⁵⁵ Van Riper complained that because of this type of decision, the wargame had lost its validity. Before MC'02, Van Riper raised these concerns again and was promised the MC'02 would be “a free play and honest exercise.”⁵⁶

At the outset of MC'02 Blue issued an ultimatum ending in surrender. The Red team and Van Riper believed Red's political leadership would reject the terms and began to prepare for a Blue intervention. Van Riper's strategy was built as a countermeasure for the American “preemption doctrine” announced by George W. Bush's administration in the months preceding the game. Van Riper's forces “pre-empted the preemptors” first by sending a barrage of missiles from ground based launchers and commercial ships. They also avoided radio communications to avoid having their communiques intercepted by Blue.⁵⁷ The operation was highly successful for Red and Blue team leader General B.B. Bell admitted that the move had produced “an extremely high rate of attrition, and a disaster, from which we all learned a great lesson.”⁵⁸ The controversy came in the aftermath when Kernan and the White cell (control) made the decision to refloat the ships that had been sunk by Van Riper's attack. The decision was motivated by the fact that live training exercises had been planned around the different parts of the wargame and forces were awaiting orders at Fort Bragg, San Diego and the Fort Irwin National Training Center.⁵⁹ The ships were refloated and Bell's team adjusted their strategy based on the lessons learned from Van Riper's attack.

Over the next few days, Van Riper was told numerous times that his plans would not be allowed by the White cell. This included shooting down V-22 Ospreys and deploying chemical weapons. Van Riper was outraged and considered the White cell's intervention to have “irredeemably compromised the integrity of the entire process.”⁶⁰ When Van Riper went to Kernan, he was told “You are playing out of character. The OPFOR would never have done what

⁵⁵ *Ibid.*, 54.

⁵⁶ *Ibid.*

⁵⁷ *Ibid.*, 55.

⁵⁸ *Ibid.*, 56.

⁵⁹ *Ibid.*

⁶⁰ *Ibid.*, 57.

you did.”⁶¹ The obstruction to Van Riper’s decisions are pointed to over and over again as evidence that the wargame was rigged or staged, even in the most comprehensive accounts such as the one that appears in Micah Zenko’s *Red Team* maintain this argument. However, it is likely that those in Perla and Schelling’s camp would disagree with this assessment. Returning to the wargame of Midway, remember that the reason why the game could be considered a failure was due to the poor analysis and recognition of areas of weakness that had been demonstrated during play. In the case of MC’02, the records show that the consequences of Van Riper’s opening salvo *were* considered and analyzed. Moreover, these lessons were implemented in the move after the fleet was refloated. Both Perla and Schelling emphasize that value of wargaming is in the discoveries made during the process of play and not in the outcome. Using this as a measuring stick we can see that MC’02 retains its analytical value even after intervention from the game director.

Constraining Van Riper’s actions is a problem that the wargame designers should have been more careful to address. As we will discuss in the following chapter on the Title 10 wargames, the tendency of professional wargames to limit the scope and weight of player actions can negatively impact the validity of the results because it stanches the wargame’s ability to investigate alternative courses of action that had not been thought of. However if his reasoning is because it allowed Blue forces to win unfairly, which it seems to be, then he has misunderstood the relevance of victory for wargaming analysis.

Kernan’s comments that Van Riper acted out of character are even more telling. In a real war, both parties are surely trying to achieve their own victories but they are also often constrained by numerous factors that influence their decisions in war. Perhaps the White cell believed that given the geopolitical environment built into the scenario, OPFOR would not deploy chemical weapons or commit other acts that could negatively impact its relationships with others in the region. Simply trying to win in a wargame violates the game’s connection with the real world because all decisions in real life are contingent on context and time never stops.

⁶¹ *Ibid.*

Consider wargames of nuclear deterrence. If both sides know that the wargame will end after five rounds, what prevents the last team from deploying all of their missiles on the fifth round and utterly destroying their opponent before he gets an opportunity to respond? From a game perspective this may be how to win, but it can't teach us anything about what two states in a similar situation would do in real life because all actions have subsequent consequences. Even if the war is lost, there is still a tomorrow. It is perhaps the case that Van Riper's actions as OPFOR were made from the limited perspective of a Red Team leader who desired to defeat Blue forces in the wargame and not from the perspective of a political and military leader facing war with the United States and its allies.

After the exercise, Van Riper's discontent with the wargame was leaked to the *Army Times* and became a scandal.⁶² Even though JFCOM has tried to defend itself from the claims that the game was rigged, most critics still paint Van Riper as a whistle-blower on military misconduct. While it is clear that many of the United States' assumptions about combat were woefully misinformed, there actually was a valuable insight developed from Van Riper's actions. Ironically, Van Riper missed his own contribution to MC'02 by focusing solely on whether Red could achieve victory over Blue. Instead he should have been considering how his actions were illuminating flaws in Blue's thought process. On the other hand, Blue commander Bell did notice the power of Van Riper's strategy and hailed Van Riper's performance as a "watershed 'eureka' moment."⁶³ Because Van Riper acted "a-doctrinally," JFCOM was caught unawares and as a result everyone learned from the experience.⁶⁴

Free Versus Rigid *Kriegsspiel*

Another way to frame the debate between Van Riper's concerns and the decisions of the White cell is by looking at the enduring debate between proponents of free and rigid *kriegsspiel*. In the early days of Prussian wargaming, *kriegsspiel* was adjudicated through die rolls that correlated to

⁶² *Ibid.*, 58.

⁶³ *Ibid.*, 60

⁶⁴ *Ibid.*

very specific events which were laid out by a table or chart.⁶⁵ Later, the adjudication process was placed in the hands of an umpire who would use his expertise to make conclusions about the outcomes of attacks (damage to vehicles, numbers of troops lost).⁶⁶ Today, it is very common among professional military wargaming circles to utilize a combination of elements taken from both free and rigid *kriegsspiel*. Especially so after the rise of seminar-style wargaming where the emphasis was placed on raising discussion around a particular problem.⁶⁷ It is common practice in this type of wargaming to see the White cell modify a raw outcome of a model in order to “keep the game on track toward achieving its objectives.”⁶⁸ Both free and rigid *kriegsspiel* have drawbacks. Where free *kriegsspiel* can be mismanaged by a poor umpire, rigid *kriegsspiel* runs the risk of overly quantifying the experience of wargaming and is susceptible to errors or limitations in the underlying model. Game designers are quick to assert that neither is the “correct” way of wargaming and that both have value as a technique given particular circumstances.⁶⁹

In both the cases of the wargame of Midway and the Millennium Challenge ‘02 wargame, free *kriegsspiel* techniques were employed to varying degrees of success. However, critics usually characterize the decisions as inappropriate or unjustified which, based on the literature from design experts, is not necessarily the case. The decision of the adjudicator to alter the raw outcome of a move does not necessarily constitute bias or a rigged game. Instead, a wargame’s validity is determined by how well the game designers and developers understand types of lessons that can be learned from wargames as well as those that cannot.

⁶⁵ Peter P. Perla, Albert A. Nofi, and Michael C. Markowitz, *Wargaming Fourth-Generation Warfare (U)*, publication (CNA Corporation, 2006), 33.

⁶⁶ *Ibid.*

⁶⁷ *Ibid.*, 34. Seminar-style wargaming differs from the traditional style where each team gets a turn within a series of consecutive rounds. Seminar-style games sometime utilize time skipping vignettes where team actions are discussed and described but do not directly follow the previous round of action.

⁶⁸ *Ibid.*

⁶⁹ *Ibid.*, 35.

Conclusion

Wargaming is an important feature of military analysis and defense planning in the United States. Over the past century, professional wargames have strived to develop best practices for each area of the wargaming process from design to execution. However, in many cases, challenges to these best practices can and do arise. Deviating from the best practices often results in biased outcomes that negatively affect the utility of the wargame as a rational analytical process. While experts have taken the time to warn designers of these potential pitfalls in design or development decisions, they are still widespread in professional military wargaming. To make matters worse, there are still large communities in the military that are unfamiliar with the tenets of wargaming and will take issue with design elements that are necessary for protecting the integrity of the post-game analysis. As wargaming becomes further institutionalized into defense planning processes in the future, it is possible that a larger proportion of the defense establishment will be educated about the utility of wargaming, the reason for game director intervention, and, conversely, the dangers of intervention from outside parties. But for now, the three witches of wargaming are very much alive in professional military wargaming as we will see with the Title 10 series.

CHAPTER 4: CASE STUDY OF THE TITLE 10 WARGAMES

Introduction

Chapter 2 sought to answer several questions about service parochialism - where did it come from and why has it continued despite numerous reforms to defense structures? Based on the thesis that service parochialism is a condition arising from challenges of autonomy and institutional identity, it is clear why Goldwater-Nichols has not been able to profoundly alter the services' tendency toward parochialism. The follow-up question is whether or not service parochialism has observable influence in theoretically rational elements of the defense planning process such as wargaming. In Chapter 3, I explained the development and institutionalization of wargaming into the defense planning process, the components of a modern wargame and the limitations of wargaming as an analytical tool.

In this chapter I will show how a particular feature of service-based defense planning, the Title 10 wargames, are not only susceptible to the influence of parochialism due to recent game design decisions but have shown bias in the past that may have supported service-oriented decisions instead of joint ones. Wargames are often used by the military to investigate a variety of problems and scenarios but the Title 10 wargames have several unique features that make them an appropriate case study. **First of all, the Title 10 wargames are specifically designed to investigate challenging elements of defense planning.** Not all wargames are organized for this purpose but the Title 10 annual wargames are, offering us a view of the services' emergent capabilities and doctrines. **The Title 10 wargames are futures events,** they exclusively look at the future of the force. This is a necessary part of defense planning as it takes over a decade to implement most doctrine and acquire new capabilities. Many joint wargames, organized by the Combatant Commands or other Joint Operations offices are situated in the present and meant to address current challenges to national security. They may be less likely to speculate about the

deep future. **The Title 10 wargames are organized by each of the services individually.** Under Title 10 of the US Code the services are given the responsibility to organize, train, and equip the armed forces for the purpose of use by the Combatant Commanders. The services are, generally speaking, given full authority over this process with the stipulation that they follow the recommendations laid out in the national level briefings on defense priorities such as the Quadrennial Defense Review, the National Security Strategy, and the National Military Strategy. If they are using defense planning processes to promote traditional service interests, the service wargames may be a far better indicator than any type of joint planning process. Wargames are a cheap method to investigate and test out emerging strategies and tactics and provide the analytical benefits, such as illuminating unknown unknowns, that military exercises can't provide. Future wargames also assume technological and doctrinal advancement, further separating them from the challenging realities of the present. In a sense, these wargames represent the idealized future of the services and thus offer us a unique insight into the kind of role they foresee for themselves ten to twenty-five years down the line.

My research shows that the modern Title 10 wargames suffer shortcomings similar to Peter Perla's example of the Naval and Marine Corps games from the 1980s. Unlike Stephen Downes-Martin's conception of the three witches described in Chapter 3, the weaknesses of the Naval and Marine Corps games lie in a larger institutional bias that may be held by the wargaming departments themselves. In the case of the Title 10 series, the weaknesses are most observable as a disconnect between the intended objectives of the series as a whole and their final design and execution. At an individual level, the Title 10 wargames in the modern era appear to be more concerned with stochastic uncertainties than strategic ones, indicating a problem in the development phase of the wargaming process. The outcomes of these wargames are then used to buttress service decisions about which capabilities and operating concepts to move forward with as if they had been properly vetted and analyzed.

Combined with the propensity of the services to preserve their own interests, as described in Chapter 2, this creates a large opportunity for the Title 10 wargames to maintain a status quo of service parochialism in defense planning. Interestingly, this has not always been true of the strategic wargames in the Title 10 family. The predecessors of the Title 10 wargames, the Global

War Game series, did not demonstrate such weaknesses in the design and development. In what ways have the Title 10 wargames changed and what accounts for this change? I will address these questions below.

The data I have collected on the Title 10 wargames begins in 1979 with the first Global series and finishes in 2015 with the 2014 Title 10 events. The data has been derived through a content analysis of executive summaries, game reports, and final reports of the Title 10 wargames published by the organizing institutions within the services. In addition, this data was supplemented by expert interviews I conducted between 2014 and 2015.

Origins of Title 10 Wargaming

The Title 10 wargames originally grew out of a series of wargames first played by the Navy in the late 1970's known as the Global War Game. Each Global War Game series was comprised of five war games, held once annually beginning in 1979. As the name suggests, the first and second Global War Game series were dedicated to examining Naval strategy and capabilities in a global war against the Soviet Union. After the Cold War ended, the Navy began to consider the Global War Game series a part of the Title 10 process, officially beginning the tradition of the annual Title 10 wargames.¹ In 1995 the Air Force began its own Title 10 wargames. In their case, it took two forms - The Future Capabilities Game which concentrates on capabilities for a force deep in the future, more than twenty years out; and Unified Engagement which considers concepts in the same vein as the other services.² The Army began its Title 10 series officially in 2003 with the first iteration of Unified Quest. The organization and aims of Unified Quest were largely a continuation of previous wargames played by Army Capabilities Integration Center as part of the Army After Next deep futures wargame initiative. Army After Next ran from 1996 to 1999 and was followed by the Army Transformation Wargames in the early 2000's.³ The

¹Douglas Ducharme, *Approaches to Title 10 Gaming*, report (U.S. Naval War College War Gaming Department, 2012), 1.

² *Ibid.*, 4.

³ Walter L. Perry and Marc Dean Millot, *Issues from the 1997 Army After Next Winter Wargame*, report (RAND Corporation Arroyo Center, 1998), iii.

Navy's annual Global series continued until 2000 when the Navy ran a large and unclassified war game (aptly named Global 2000). Between 2001 and 2007, the Navy took a hiatus from wargaming, apparently because senior leadership did not consider this type of analytical wargaming useful during this time. In 2003 the Marine Corps began their annual war game, Expeditionary Warrior, possibly as a way to make up for Global's absence.⁴ In 2016, the Army, Navy, Marine Corps and Air Force all spend a great deal of time and resources organizing their own Title 10 wargames and will likely continue for years to come. In recent years, the services, with the exception of the Air Force, have made an effort to publicize the Title 10 events and even publish some game materials online. This illustrates the growing institutionalization of wargames into mainstream military analytics that Undersecretary of Defense Bob Work and Secretary of the Navy Ray Mabus hope to further in the coming years. Each of the game series in use today has its own focus and objectives, however based on the information about the wargames that I have collected over the course of this study, there are distinct differences between the current iterations of the Title 10 wargames and their predecessors like the Global War Game series.

First Global Series

As previously mentioned, the Global War Game series beginning in 1979 would lay the foundation for the future Title 10 wargames that we see today. Researchers developed the Global series in order to broaden the analysis beyond tactical level wargames that were prevalent at the time.⁵ Strategic war games hadn't been given much attention at Newport since the wargaming of War Plan Orange and the naval matchup against Japan during the 1930's.⁶ However, the Global War Game would be the first of the huge resurgence of strategic level gaming that continues to this day.⁷ These multi-sided, strategic level wargames were used as a "test bed or crucible for

⁴ Ducharme, *op. cit.*, 2.

⁵ Bud Hay and Bob Gile, *Global War Game: The First Five Years*, report, The Newport Papers (Newport: U.S. Naval War College, 1993), Notes to the Reader.

⁶ Other branches such as the Air Force did give attention to strategic level games during this period and much of the political wargaming that took place at RAND considered strategic issues.

⁷ Peter P. Perla, *The Art of Wargaming: A Guide for Professionals and Hobbyists* (Annapolis, MD: Naval Institute Press, 1990), 97.

emerging maritime strategy.”⁸ The series was designed to investigate the potential outcomes of a full-scale war between the Soviet Union and the United States in the year 1985, and more specifically, how the Navy would fare in such a scenario. At first the Army and Air Force consulted with participants about how their services would be played in the wargame but Naval War College organizers quickly realized that having proper representation from the other services as well as partner civilian agencies and organizations helped to provide a broader perspective.⁹ The first five years chose a geographical area to begin conflict each year while maintaining the initial year of 1985. Both Red (Soviet Union) and Blue (United States) cells were able to learn from play and adjust strategies to better achieve their respective objectives. Known as the “game-study-game” concept, the Global War Games built heavily on knowledge gained in previous years.¹⁰

The first series was largely hailed as a success and would be followed by three others, running in five year increments through to 1998 after it was deemed “one of the preeminent analytic resources of the U.S. national security community.”¹¹ The second series of the Global War Game built upon the lessons of the first, not only from a strategic, operational, and tactical perspective but also in terms of how the wargames were played and organized and who participated. In this series, there were more caveats to what the different cells were allowed to do as the focus became specific aspects of warfighting: protracted war (without nuclear weapons) and war termination. The scenarios still centered around a war between NATO/Warsaw Pact where offensive naval actions resulted in positive results for Blue.¹² Some of the stipulations associated with the game design directly related to the lessons learned from the previous series.

The third and fourth series of wargames in the Global series remain classified, and unfortunately their contribution to the development of modern Title 10 wargaming could not be analyzed in my research. Before the Navy put Global on hiatus, they held a final unclassified

⁸ Hay and Gile, *op. cit.*, Notes to Reader.

⁹ *Ibid.*, ix.

¹⁰ *Ibid.*, 1.

¹¹ *Ibid.*, xvii.

¹² Robert H. Gile, *Global War Game: Second Series, 1984-1988*, report, The Newport Papers (Newport: U.S. Naval War College War Gaming Department, 2004), xiv.

game in 2000. This wargame was designed to explore “*the Capstone Concept for the Navy After Next*,” which at the time was known as Network-Centric Operations.¹³ The wargame was set further in the future than the first and second series had been; in this case the year in question was 2010.

This wargame is the first recognizable example of divergence from the first and second Global series that we see. In addition, many of the design and development decisions that exist in Global 2000 became common in later Title 10 games across the services. Not by coincidence, these changes in design and development also weaken the validity of the results of the wargames and render them susceptible to the influence of service parochialism.

From Global 2000 onward, there is a marked difference in game design that drastically affects the type of results that the wargames are able to have and thus, the analytical value of the wargames themselves. Whereas the earlier games were focused on whether or not the strategies and doctrines the Navy had developed would be useful in a dangerous confrontation with the Soviet Union, the current series is more concerned with troubleshooting a particular doctrine or strategy. Such a design change opens the door for service parochialism to steer the direction of the wargames from the start since the wargames can no longer assess whether a doctrine or strategy is useful compared to other strategic options, only that it functions according to the service’s vision. Broadly speaking, the major changes that occur between the first Global series in the early 80’s and the Title 10 wargames of the past fifteen years fall into three categories: changes in scope of objectives, changes in scenario construction, and changes to the number of sides/player cells.

Limited Focus and Objectives

The original Global Series had a very expansive set of objectives which allowed players to make decisions in the game that then led to unanticipated insights. For example, throughout the series

¹³ Kenneth Watman, “Global 2000,” *Naval War College Review* 54, no. 2 (Spring 2001): 75. The Army had a similar name for its future force - Army After Next (AAN).

it was discovered that a Blue defensive strategy would actually be less effective than an offensive one given the identity and objectives of the Red cell.¹⁴ In this way, the first Global series is considered to be a true strategic level wargame where different operations and tactics had to be employed in different regions and a larger broad strategy of seapower was tested against a realistic enemy. The modern Title 10 wargames, which are still considered strategic level wargames had a far more limited scope of play and rarely consider an objective so broad as “test the utility of naval strategy and doctrine.” Instead they have tended to consider a single operating concept and its requisite capabilities in an isolated scenario. Because of this, the Title 10 wargames resemble operational level wargaming much more closely than strategic level. When game design limits the objectives and approaches operations level wargaming, as with the 1980s games criticized by Perla, it runs the risk of building a set of assumptions about strategy into the scenario. In other words, whether or not the operating concept will be useful in a larger global strategy of seapower or airpower is not a question the wargame seeks to answer. The benefit of limiting the scope and objectives of a wargame is that the wargames can be used to troubleshoot the mechanics of a doctrine without the high cost of field testing. On the other hand, the more limited the scope, the fewer out-of-the-box insights are possible, especially strategic level insights. Consider the following descriptions of the scope of the Title 10 wargames by service.

Navy Global

Navy Global was on hiatus from 2001 to 2007, with a new series beginning in 2008. In that time, the focus of the wargames has fallen into only two categories: international cooperative maritime strategy for low-intensity operations (2008, 2010) and combating Anti-Access/Area Denial (A2/AD) with the Air-Sea Battle Concept (2009, 2011, 2012, 2013, 2014).¹⁵ It is common practice within the Title 10 wargames to choose one concept to focus on for multiple years, with

¹⁴ Gile, *op. cit.*, xiv.

¹⁵ Anti-Access/Area Denial usually refers to technologies that restrict access to an area. Key technologies used in A2/AD include long-range precision-strike systems, littoral anti-ship capabilities such as mines and submarines, high-quality air defenses, and long-range artillery and rocket systems. See John Gordan, IV and John Matsumura, *The Army's Role in Overcoming Anti-Access and Area Denial Challenges*, report (Santa Monica: RAND Corporation Arroyo Center, 2013) for more details.

each year examining a particular feature of the concept. Detailed in the table below, we see that the Navy has been investigating the specifics of the doctrine for Command and Control (C2) in recent years.

Year	Objective
Navy Global	
2008	Cooperative Strategy for 21st Century Seapower “CS 21” Examine operating concepts for operations other than Major Combat Operations (i.e. Humanitarian Aid/Disaster Relief and maritime security) ¹⁶
2009	Seacontrol in A2/AD environment ¹⁷
2010	Global Maritime Partnerships, Cooperative Strategy for 21st Century Seapower (CS-21), Maritime Domain Awareness Identify impediments to forming effective regional and global partnerships within the maritime domain from both international and U.S. perspectives. ¹⁸
2011	Seabasing and Seacontrol ¹⁹
2012	Air-Sea Battle Concept (countering A2/AD)

¹⁶ "Global 2008," U.S. Naval War College, accessed April 13, 2016, <https://www.usnwc.edu/Research---Gaming/War-Gaming/Documents/RAGE/Gaming/-Global-Title-X-Series/Global-2008.aspx>.

¹⁷ "Global 2009," U.S. Naval War College, accessed April 13, 2016, <https://www.usnwc.edu/Research---Gaming/War-Gaming/Documents/RAGE/Gaming/-Global-Title-X-Series/Global-2009.aspx>.

¹⁸ "Global 2010," U.S. Naval War College, accessed April 13, 2016, <https://www.usnwc.edu/Research---Gaming/War-Gaming/Documents/RAGE/Gaming/-Global-Title-X-Series/Global-2010.aspx>.

¹⁹ "Global 2011," U.S. Naval War College, accessed April 13, 2016, <https://www.usnwc.edu/Research---Gaming/War-Gaming/Documents/RAGE/Gaming/-Global-Title-X-Series/Global-2011.aspx>.

	Challenges to implementing new concept, overcoming A2/AD challenges ²⁰
2013	Air-Sea Battle Concept Command and Control in High-intensity, cross-domain operations with A2/AD challenges ²¹
2014	Very similar to Global '13, Air-Sea Battle Concept Command and Control in High-intensity, cross-domain operations with A2/AD challenges ²²

The wargames with the largest scope are the 2008 and 2010 games which consider how naval strategy can interface with other state's navies and naval practices. The other wargames are circumscribed to examining how the Navy can overcome Anti-Access/Area Denial threats by using the operating concepts of seabasing and more recently the multi-service concept of Air-Sea Battle (This has since been renamed).²³ A2/AD has been a preoccupation across the services in recent years, this is especially obvious when looking at the Marine Corps objectives for Expeditionary Warrior. While investigating challenges to overcoming A2/AD is an important part of the defense planning process, the sheer emphasis that the Title 10 wargames places on concepts related to A2/AD gives the impression that it is the most important element in future Naval and Marine Corps strategy. However, the Title 10 wargames do not consider whether or not it is actually the most fruitful area of investigation for a robust Naval or Marine strategy in

²⁰ "Global 2012," U.S. Naval War College, accessed April 13, 2016, <https://www.usnwc.edu/Research---Gaming/War-Gaming/Documents/RAGE/Gaming/-Global-Title-X-Series/Global--2012.aspx>.

²¹ "Global 2013," U.S. Naval War College, accessed April 13, 2016, <https://www.usnwc.edu/Research---Gaming/War-Gaming/Documents/RAGE/Gaming/-Global-Title-X-Series/Global-2013.aspx>.

²² Don Marrin and Walter Berbick, *U.S. Navy Title X War Game Global '14 Game Report*, report, Naval Global War Game Series (U.S. Naval War College War Gaming Department, 2014), 1.

²³ Seabasing refers to the operating concept of developing a "base" at sea of networked ships capable of operating even in environments with A2/AD threats or too little infrastructure to support a traditional base.

the 21st century. This may be because the objectives of the wargames are determined in large part by the wargame sponsor who is often acting on behalf of the service chief. The wargaming departments are obliged to fulfill the sponsor's objectives as best as possible within the context of the wargame. The sponsor who is acting in the best interest of the service, may be unconsciously bringing the type of stove-piped thinking that creates parochialism into his original game objectives.

Marine Corps Expeditionary Warrior

Data from the years available reveals that the Marine Corps' objectives are restricted to a particular operating concept, similar to the Navy. Overcoming A2/AD is the service's primary concern for five of the past six years. From 2008 to 2011, the Marine Corps troubleshot the Seabasing operating concept heavily, coming to realize that force aggregation with the Navy would likely be necessary to overcome A2/AD challenges.²⁴ This is particularly relevant to the Marine Corps because they have maintained that their place in warfighting is an expeditionary and amphibious force.²⁵ The case of the Marine Corps is perhaps the greatest example of how service interests can infiltrate futures planning and analysis. The Title 10 wargames do not attempt to investigate how the Marine Corps could shift its focus away from dangerous amphibious operations against enemies with developed A2/AD technologies. Instead they simply troubleshoot what improvements to capabilities and concepts would be necessary to overcome them. Whether pursuing this strategy will be more costly or less effective than another strategy is not part of the game design.

²⁴ In the face of A2/AD threats, the Marine Corps will require the help and offensive capabilities of the Navy to protect Marines trying to make their way ashore.

²⁵ *Expeditionary Warrior 2009 Final Report*, report (Wargaming Division, Marine Corps Warfighting Laboratory, 2009), B-1.

Year	Objective
Marine Corps Expeditionary Warrior	
2009	Seabasing for Foreign Internal Defense/Counterinsurgency (FID-COIN) ²⁶
2010	Seabasing Operationalizing Seabasing in irregular warfare environment ²⁷
2011	Seabasing Joint operational access concept (JOAC), overcoming Anti-Access/Area Denial (A2/AD) ²⁸
2012	Air-Sea Battle Concept JOAC, overcoming A2/AD ²⁹
2013	Future Maritime Operating Concept Marine Corps-Navy force aggregation and challenges to interoperability ³⁰
2014	Operational and tactical level examination of Marine Corps-Navy integrated maritime operations center and regionalized marine Expeditionary Brigade headquarters ³¹

²⁶ *Ibid.*, 4.

²⁷ *Expeditionary Warrior 2010 Final Report*, report (Wargaming Division, Marine Corps Warfighting Laboratory, 2010), 1.

²⁸ *Expeditionary Warrior 2011 Final Report*, report (Wargaming Division, Marine Corps Warfighting Laboratory, 2011), iii.

²⁹ *Expeditionary Warrior 2012 Final Report*, report (Wargaming Division, Marine Corps Warfighting Laboratory, 2012), i.

³⁰ *Expeditionary Warrior 2013 Final Report: Future Maritime Operations for the 21st Century Operating Environment*, report (Wargaming Division, Marine Corps Warfighting Laboratory, 2013), 1.

³¹ *Expeditionary Warrior 2014 Final Report*, report (Wargaming Division, Marine Corps Warfighting Laboratory, 2014), i.

Army Unified Quest

Considering the available data from the past decade, the Army appears to be in a different position than the Navy and the Marine Corps. This is likely due to the fact that the Army was embroiled in full-scale combat operations in 2003 and 2004 and then transitioned to post-combat operations like stability operations and provincial reconstruction in the years following. The early Unified Quest events, despite being futures wargames, actually focused on contemporary gaps in doctrine and planning in irregular warfare environments. This is apparent not only in the focus and objectives but also in the scenarios and use of the Red cell. However, as time goes on, Unified Quest does begin to trend toward a wargame with a more limited focus. The Army's Title 10 wargames seem to suffer the least from the potential of buttressing doctrines and capabilities that are not in line with joint doctrine. The reasons for this will be unpacked in the sections below.

Year	Objective
Army Unified Quest	
UQ03	Stated: Better define Joint and Future Force concepts and capabilities, identifying key issues, insights, and implications and in addressing [specific] Unified Quest Issues Investigate how to cope with two simultaneous non-adjacent Major Theater Wars ³²
UQ04	Stated: to explore concepts and capabilities that enable Joint Operations Concepts Develop doctrine for post-combat operations such as stability operations,

³² David E. Johnson et al., *Joint Paths to the Future Force: A Report on Unified Quest 2004*, report (Santa Monica: RAND Corporation Arroyo Center, 2006), iii.

	continued development of COIN doctrine ³³
UQ05	Scenario driven exploration into how effectively future concepts and capabilities might enable a U.S.-led coalition to defeat an adaptive, networked adversary using traditional, irregular, catastrophic, and disruptive means ³⁴
UQ07	Protracted conflict (“Long War”) Investigation of Full Spectrum Dominance concept ³⁵
UQ08	Building Partnership Capacity in irregular warfare environments ³⁶
UQ11	Homeland Security, Disaster Response specifically regarding the Combined Arms Maneuver and Wide Area Security operating concepts ³⁷
UQ12	Cyber security and building partnership capacity, special operations and conventional force interdependence, and the Army’s role in the Air-Sea Battle concept ³⁸
UQ13	Expeditionary Maneuver Investigating how Army can become more of an expeditionary force in the future ³⁹
UQ14	Urban warfare and operating in megacities ⁴⁰

³³ *Ibid.*, 1.

³⁴ David E. Johnson et al., *Strategic Dimensions of Unified Quest 2005: A RAND Analysis*, report (Santa Monica: RAND Corporation Arroyo Center, 2006), xiv.

³⁵ *Full Spectrum Operations: Unified Quest 2007*, report (Fort Monroe: U.S. Army Training and Doctrine Command, 2008), 5.

³⁶ *Ibid.*, 47.

³⁷ Usarmytradoc, "Unified Quest 2011: Homeland Operations Wargame," YouTube, April 19, 2011, section goes here, accessed April 13, 2016, <https://www.youtube.com/watch?v=qJQoPrZaDu8>.

³⁸ "Unified Quest 2012 - Building Partnerships and Partner Capacity," The United State Army Stand-to!, February 6, 2012, section goes here, accessed April 13, 2016, <http://www.army.mil/standto/archive/issue.php?issue=2012-02-06>. See also Ash McCall, "Unified Quest – Army Future Game," Army Live, section goes here, accessed April 15, 2016, <http://armylive.dodlive.mil/index.php/2012/05/army-future-game/>.

³⁹ *Unified Quest 2013 Deep Future Wargame 2030-2040 Executive Report*, report (Fort Eustis: Future Warfare Division, Army Capabilities Integration Center U.S. Army Training and Doctrine Command, 2013), 3.

⁴⁰ *Unified Quest 2014 Executive Report: Win in a Complex World*, report (Fort Eustis: Future Warfare Division, Army Capabilities Integration Center U.S. Army Training and Doctrine Command, 2014), 2.

With the exceptions of some of the Army Unified Quest games, we can see a shift away from strategic level wargaming that the first Global series initiated. This design decision is most likely motivated by the desires of the sponsors of the Title 10 events. Limited-objective wargames do have the benefit of being more focused and in-depth about the specifics of a challenging aspect of defense planning, but also consequently remove the larger discussion of a concept's utility from the objectives of the wargame event. If parochialism is a concern for defense planners, this is a notable weakness for the Title 10 wargames because the services have the power to direct the wargames toward investigating concepts that confirm the preferences of the service. In combination with back-end scenario construction and the use of a passive red cell (discussed below), the wargames are even more susceptible to biased outcomes.

Back-end Scenarios

The term “scenario” typically refers to the background information about the setting of the wargame that provides the context for player action. Peter Perla notes a particular set of characteristics,

There are many components of a scenario: the background situation, attitudes, intentions, goals and physical conditions of the militaries, governments and countries that are being simulated in the wargame; the objectives or missions of all players and cells; command relationships among players and cells as well as between players and control (the white cell); resources and force structures .⁴¹

The ways in which the modern Title 10 wargames differ from the original series concern the importance and realism of the scenarios in the game design. This is closely linked to the limited scope previously discussed and the notion of a passive Red cell. The 1979 Global series set out to address one of the worst potential outcomes of the Cold War between the United States and the Soviet Union, an all-out nuclear war. Because the wargames were put on by the Naval War College, they invested more resources into simulating the naval component of the Blue cell, but

⁴¹ Perla, *Art of Wargaming*, *op. cit.*, 208.

Army and Air Force participants were still able to make strategic decisions about how their services would react, especially in 1982 and 1983 events.⁴² Because the scope and purposes of the wargame were so large, a scenario with accurate and, more importantly, salient geopolitical and military features was crucial to the ability of the game to produce synthetic experience. In the first series, Global game designers chose scenarios set in the near future, 1985, with conflict triggers that were likely to occur in the future or had already heightened tensions in the past: proxy wars set in Southwest Asia, Eurasia or the Persian Gulf instigated by tensions over oil prices and production. In the final games of the series, the scenario had a European focus with Red moving westward and nuclear attacks on Blue and Red homelands.⁴³ This type of wargame is referred to by the Naval War College War Gamer's Handbook as a "front-end scenario."⁴⁴ If the sponsor considers the scenario to be essential for achieving the game's objectives, it is considered front-end. If, on the other hand, the objectives are not dependent on the scenario, they are deemed "back-end scenarios" and are chosen after other design elements have been put in place.⁴⁵

Based on available data, most Title 10 wargames from the past 15 years can be considered back-end scenarios, with the exception of the Army's 2003-2007 Unified Quest events. One reason for this, which many interviewees mentioned, is that the Title 10 wargames of the current era are not intended to identify and prepare against known actors threatening national security. Instead they abstract the threats that the United States may potentially face in the future: nuclear, biological, and chemical weapons, A2/AD, irregular and asymmetrical warfare, cyber-attacks, and terrorism, to name a few. The rapidly changing operating environment and uncertainty of who US adversaries may be in 10 to 15 years provides further justification for the use of back-end scenarios.

There are several drawbacks to this practice, however. Firstly, it further reduces the potential to investigate whether an operating concept or capability will be effective in a real

⁴² Hay and Gile, *op. cit.*, 1.

⁴³ *Ibid.*, 4-15.

⁴⁴ David DellaVolpe et al., *War Gamers' Handbook: A Guide for Professional War Gamers*, publication, ed. Shawn Burns (New Port: United States Naval War College), 23.

⁴⁵ *Ibid.*

engagement. The back-end scenarios aren't chosen at random, they are still designed according to some rationale. Usually the rationale is how well the scenario precipitates the abstract threat the operating concept is meant to combat. Whether or not that scenario is likely to occur is not addressed by the game design, this is especially so if political sensitivities actually nudge game designers away from real world adversaries. The starkest example of this is the Marine Corps' long running investigation of staging amphibious operations from seabases. While potentially useful when dealing with hostile coastal states, the Marine Corps has found itself fighting in landlocked countries as ground forces for the majority of the conflicts in Iraq and Afghanistan. Front-end scenarios both allow and require a higher degree of realism in order to collect and analyze useful data. A front-end scenario will often include area specialists to consult on Red's actions, motivations and cultural proclivities and operations research will provide realistic estimations of the capabilities, doctrine and kinds of training the Red military might have. These things can exist at a higher level of abstraction in the back-end scenario and might resemble a composite of various enemies Blue would be likely to face.

A second danger is that back-end scenarios could create bias in the outcomes. Certain areas of the world would likely pose greater physical and geographical challenges, not to mention the sophistication of adversaries varies greatly from region to region. Demonstrating an operating concept in an unlikely locale, or against an unlikely adversary could potentially lend credence to the concept's generalizable utility, which it may not accurately reflect the reality. Therefore, back-end scenarios could increase the chances that a capability or doctrine that could typically be considered a service interest be unduly supported by the event analysis.

This is particularly important after the recent strategic "pivot" toward the Asia-Pacific region that the President announced in the 2012 Strategic Guidance report.⁴⁶ While terrorism and conflicts in the Middle East will still create security challenges for the United States, the recent military activities in Russia, the military buildup of China, and the effects these actions will have in the region have created a degree of discomfort for the defense establishment in the US. The

⁴⁶ Todd Harrison, *Analysis of the FY 2013 Defense Budget and Sequestration*, report (Center for Strategic Budgetary Assessments, 2012), 1.

2010 Quadrennial Defense Review stated that overcoming A2/AD challenges in the future would be a priority for US forces so that they could continue to project power in order to “deter, defend against, and defeat aggression by potentially hostile nation states.”⁴⁷ Navy and Marine Corps Title 10 wargames have been dedicated to exploring how to overcome A2/AD (Navy global 2009 (classified), 2011 (classified), 2012 (partially classified); 2013, 2014; Marine Corps Expeditionary Warrior 2011, 2012, 2013, 2014)⁴⁸ however, many of the scenarios used in these events take place against adversaries in Africa or island nations in the Pacific that only have moderate A2/AD capabilities. Advanced A2/AD capabilities could cause significant problems for the Marine Corps and the Army in future conflicts:

The littoral threats could constrain the arrival of Army (and Marine Corps) forces in the operational area, whether through sea-based forced entry or an administrative move ashore from shipping. Shallow-water mines could impose significant threats to Marine Corps amphibious operations. Even after a forced entry operations has theoretically cleared a portion of enemy coastline, it is conceivable that the area offshore could be “reseeded” with high-tech naval mines delivered by enemy submarines or unmanned undersea vehicles. High-speed missile-armed vessels that can hide in cluttered terrain along a coast or mingle with civilian shipping can also pose a serious threat to U.S. ships operations in littoral regions.⁴⁹

Wargames focusing on regions and adversaries with less advanced capabilities may not have utility in helping military planners identify strategies to overcome these advanced threats. Critics like Major Christopher McCarthy warn that current doctrine to overcome A2/AD challenges is insufficient when facing an advanced adversary like China.⁵⁰ While it is possible that classified wargames of the Navy are examining war with China, the Marine Corps seems heavily focused on Africa and the South Pacific. This is even more confounding because the Expeditionary Warrior scenarios are still falling on the high-intensity side of the conflict spectrum, which are statistically less likely to occur than low-intensity conflicts like insurgency or terrorism. The doctrinal gap that Major McCarthy speaks of may actually be the reason for this avoidance of

⁴⁷ Christopher J. McCarthy, *Anti-Access/Area Denial: The Evolution of Modern Warfare*, working paper (U.S. Naval War College), 5.

⁴⁸ Please refer to Appendix for details

⁴⁹ John Gordan, IV and John Matsumura, *The Army's Role in Overcoming Anti-Access and Area Denial Challenges*, report (Santa Monica: RAND Corporation Arroyo Center, 2013), 26.

⁵⁰ McCarthy, *op. cit.*, 2.

scenarios with advanced adversaries; it is possible that the Marine Corps simply would not be able to overcome such a challenge.

As Chapter 3 explained, winning is not an important objective in a wargame. Instead, identifying areas of intersubjective and institutional bias and strategic weakness should be the focus of all actors involved in the design of and participation in a wargame. It can't be said for sure that the Marine Corps is avoiding such a scenario because it could demonstrate its weaknesses, but if the Title 10 wargames are to be used to support the services in acquiring funding, developing doctrine, and procuring capabilities, a demonstration of failure could be harmful to service interests. If the United States were to face war with China, methods other than amphibious insertion may be necessary and the Marines may not be able to participate in the fashion they most associate with their institutional identity. By utilizing back-end scenarios, the Title 10 wargames are able to showcase the qualities the services value the most and avoid situations that would challenge the saliency of their preferred doctrines.

Passive Red

The last major difference between the original Global series and the current Title 10 wargames is the role and importance of the Red cell. Wargames are archetypically two-sided, where Red and Blue are opponents.⁵¹ Red cell players in US military wargames are often more senior either to the military or to wargames in general because it is typically understood to be a harder role to play accurately.⁵² Blue players, on the other hand, often come directly from their area of expertise although they will usually have higher ranking roles in game than their real ranks. By doing this, the Blue cell players don't have to rely on the scenario to dictate their attitudes about political, cultural or doctrinal practices. In order to glean useful synthetic experience from a wargame between two different adversaries, the actions of the players must cleave as closely to

⁵² This was based on a comment of a senior wargamer interviewed for this thesis.

their real world counterparts as possible. In the past, area experts and military analysts have been brought in to consult on these topics.

Related to the use of back-end scenarios is the reduction of the Red cell to a passive non-interactive role, often built into the scenario or taken on as a task of the control cell instead of actually being played by an opposing team. The materials available make it difficult to discern the exact relationship of Red to White cells, but the reports often describe the events as seminar style “one sided,” or “one-and-a-half sided” wargames.⁵³ Seminar-style techniques were adopted by the Global series originally to explore special topics like “potential uses of advanced weapons systems, the complications of chemical warfare, or the prospects of nuclear escalation in a conventional war.”⁵⁴ These days, the special topics have become the main events of the wargames and seminar-style learning is a common style of game design across the services in the Title 10 wargames.⁵⁵ Seminar-style events don’t necessarily dictate the role of Red, but the objectives and scenario often make it clear that the focus of the analysis is on Blue player actions and not on the decisions made by Red. The limited scope and objectives remove the grand strategic implications of the event. More often in recent years the wargames appear to be capability and doctrine troubleshooting seminars. It follows from these objectives that the scenarios and the actions of the Red player are more or less perfunctory elements of the game. Thomas Schelling in particular opposes the use of a passive Red. In 1964, RAND economist Bob Levine wrote that perhaps a malevolent control would do just as well as an active Red cell in crisis games. His statements provoked this passionate response by Schelling,

Bob raises the question [in the report] why we should have a red team at all...There is a good answer. You lose most of the benefits of the game. I have tried it. All of the awareness of a conscious adversary who is somewhat in the same boat -- all of the problems of collaboration and communication, of accommodation and intimidation, of designing a pattern of actions to convey something to an adversary and evaluating the

⁵³ William L. Simpson, Jr., comp., *op. cit.*, 25. “A One sided game is like solitaire. The opposition is provided by the situation, the MESL injects, or the results of a pre-gamed operation. The purpose of this game does not require a live, thinking opponent. A one and a half sided game has an embedded “Red” player or team. Red plays the “Devil’s Advocate” presenting arguments or obstacles to Blue’s plans. This method represents a situation where Red’s ability to oppose Blue is limited or it is less that the opposition presented by the other factors such as time, distance or terrain. Two sided games are the basic Red vs. Blue setup.”

⁵⁴ Perla, *Art of Wargaming*, *op. cit.* 97.

⁵⁵ Almost all of the Navy Global and Marine Corps Expeditionary Warrior games are considered seminar style.

situation the adversary is in, all the sense of risk and danger, the apprehension of over-response and under-response, and the opportunity to exploit an adversary's apprehension -- disappear when a team knows that it is just playing against a control team that has no stake involved and that has complete access to the team's thinking. According to the definition I used above, it ceases to be a "game."⁵⁶

It may be the case that a passive Red cell makes more sense when considering the objectives of the modern Title 10 wargames but it further endangers the ability of the wargame to illuminate new concepts and ideas, a fundamental goal of wargaming.

Navy Global

Based on the available data, Navy Global continued to utilize an independent Red cell in Global 2000, but began a trend of two-sided wargames with passive Red cell in 2008.⁵⁷ It is possible that the classified wargame events in 2009 and 2011 did utilize a fully functioning Red player but in all other cases, Red is a reactionary mechanic.

Navy Global		
Event Year	Number of Sides	Description
2008	One sided: Blue and White cell, no red cell Seminar-style	Blue Cell: six Regional cells (North America, Latin America and Caribbean, Central Asia and Middle East, Asia Pacific, Africa, Europe) and a Global cell "parachuted" into alternative futures White cell/Control cell: composed of NWC personnel ⁵⁸
2010	One sided: Player cells and white cell, no red cell	Player cells: Multiple cells composed of international participants from 46 countries as well as US cell

⁵⁶ Robert Levine, Thomas Schelling, and William Jones, *Crisis Games 27 Years Later: Plus C'est Deja Vu*, publication (Santa Monica: RAND Corporation, 1991), 36.

⁵⁷ Global 2000, *op. cit.*, 78. This summary suggests that the Red cell was actively making decisions in-game.

⁵⁸ Global '08 Game Report, 8.

	Seminar-style	White/Control cell: assisted participants where needed Red cell: not present ⁵⁹
2013	One sided: Blue cell and White cell, no red cell ⁶⁰ Seminar-style	Blue cell: divided into three combined operational planning teams formed to support geographic Combatant Commanders in fictional region White/Control: directed Red response and provided scenario description Red cell: not present ⁶¹
2014	1 ½ sided: Blue cell and integrated Red/White cell Action/reaction turn based game with open intelligence	Blue cell: multi-cell configuration Red cell: Manned by War Game Department's Office of Naval Intelligence White cell: worked together with red cell ⁶²

Marine Corps Expeditionary Warrior

The Marine Corps' Expeditionary Warrior is similar to Navy Global in its utilization of a passive Red cell. The game design usually uses vignettes at certain points in time that the Blue participants then use to design a strategy. Unlike an archetypical wargame, the event does not proceed like a game of chess. There is no move by move exchange of fires; instead larger-scale strategies are developed and then a time skip brings participants to the next vignette. This game design does not necessarily benefit from an active Red cell since the focus of the game on the

⁵⁹ Warren M. Wiggins et al., *Global Maritime Partnerships Game: Game Report*, report (New: U., 2010), 10.

⁶⁰ Don Marrin and Walter Berbrick, *U.S. Naval War College Global 2013 Game Report*, report, Navy Global War Game Series (Newport: U.S. Naval War College, 2013), E-1. The report refers to this type of game as "one sided."

⁶¹ *Ibid.*

⁶² Marrin and Berbrick, *U.S. Navy Title X War Game Global '14 Game Report*, *op. cit.*, 9.

development of Blue strategy is based on the context given in the scenario. As such, no available Expeditionary Warrior report indicates an active Red cell.

Marine Corps Expeditionary Warrior		
Event Year	Number of Sides	Description
2009	One sided: Blue cell, assumed presence of White cell Seminar-style	Blue cell: 7 teams investigated a range of topics related to FID-COIN Red cell: not specifically mentioned, based on depth of scenarios it is likely that the white cell controlled red activity White cell: not specifically mentioned ⁶³
2010	1 ½ sided: Blue cell, red cell provided feedback, it can be assumed white cell provided support to blue cell Seminar-style	Blue cell: two blue teams of four cells analyzed operating concepts over 5 moves. Red cell: provided feedback to the Blue team's responses in Move 4. White/Control cell: not specifically mentioned ⁶⁴
2011	One sided: Blue cell, White cell Seminar-style	Blue cell: organized into six different cells White/Control cell: directing moves and facilitating

⁶³ EW09 Final Report, *op. cit.*, 6. Unfortunately, this game report did not specifically address game design mechanics.

⁶⁴ EW10 Final Report, *op. cit.*, 4.

		Red cell: not present ⁶⁵
2012	<p>1 ½ sided: Blue cells had imbedded Red cell that provided enemy perspective on Blue strategies, White cell is not mentioned but it can be assumed Control was present to facilitate the moves/scenario</p> <p>Seminar-style</p>	<p>Blue cell: four blue cells reviewed five different vignettes across three moves</p> <p>Red cell: embedded within each of the four blue cells</p> <p>White/Control cell: not expressly mentioned⁶⁶</p>
2013	<p>One sided: Blue cell, White cell</p> <p>Move/counter move seminar</p>	<p>Blue cell: three different cells, A, B, C</p> <p>White cell: enemy and partner nations were played by white cell</p> <p>Red cell: not present⁶⁷</p>
2014	<p>One sided: Blue Cell was main focus</p>	<p>Blue cell: three different player cells</p> <p>White/Control cell: not explicitly mentioned</p> <p>Red: not mentioned⁶⁸</p>

⁶⁵ EW11 Final Report, *op. cit.*, 2.

⁶⁶ EW12 Final Report, *op. cit.*, 5.

⁶⁷ EW13 Final Report, *op. cit.*, 4.

⁶⁸ EW14 Final Report.

Army Unified Quest

While the availability of data is limited, Unified Quest events appear to utilize the two-sided game much more often than the Navy or the Marine Corps. Even the most recent year's wargame appears to have an active Red cell. This decision is positive for Unified Quest because it preserves the tension and creative maneuvering that a tradition wargame design creates between players.

Army Unified Quest		
Event Year	Number of Sides	Description
2004	Two sided: Blue cell, Red cell, White cell	<p>The game design consisted of four cases A,B,C, and D with the latter three composed of competitive Red and Blue teams.</p> <p>White/Control Cell: present in all four cases⁶⁹</p>
2005	Two sided in Operational Cases A, B: Blue cell, Red cell, White cell	<p>The game design consisted of three cases A,B, and C where A and B were composed of competitive Red and Blue teams.</p> <p>White/Control Cell: present in Cases A and B⁷⁰</p>
2007	One sided: Blue cell, White cell	Blue Cell: Divided into four operational panels

⁶⁹Johnson et al, *Joint Paths*, op. cit., 9.

⁷⁰ Johnson et al, *Dimensions*, op. cit., 9.

		White/Control Cell: Adjudicated the operational panels ⁷¹
2012	Two sided: Blue Cell, Red Cell, White cell	Operational Working groups were competitive, composed of Red and Blue teams White/Control Cell: adjudicated player actions ⁷²
2013	Operational Groups, Two sided: Blue Cell, Red Cell, White Cell	Two Operational Working Groups were competitive, composed of Red and Blue teams White/Control Cell: adjudicated player actions ⁷³
2014	Multi-sided: Blue Cell, Red Cell, White Cell, Green Cell	Three Operational Working Groups: Blue Cell (US-led coalition forces), Green Cell (host nation, regional governments, international organizations), Red Cell (regional insurgency) conducted an interactive wargame ⁷⁴

Instead of building Red into the scenario as a perfunctory adversary, independent Red players will actively and creatively counter Blue maneuvers. This also provides a greater opportunity for all participants to identify what Schelling called “the hidden face in the picture.” Signaling and communication is an important aspect of warfare, even between enemies, and the fog of war can often obscure a situation that would be easily discernable in a situation with perfect information.

⁷¹ UQ07 Report, *op. cit.*, 9.

⁷² Ash McCall, *op. cit.*

⁷³ UQ13 Report, *op. cit.* 5.

⁷⁴ UQ14 Report, *op. cit.*, 3.

The decision of the Navy and Marine Corps to orient the Title 10 wargames toward the actions of Blue alone further removes it from the circumstances of the real world. Security threats in the future will be tenacious, creative, and observant and they will attempt to exploit any weaknesses that they can identify in the American strategy. It is important to simulate that experience in a wargame if the military hopes to identify flaws in their thinking before they employ such strategies in the field. To not do so creates an opportunity for mistakes to be made and areas of weakness to be overlooked. Once again, if the Title 10 wargames are to be used as evidence to support the funding of programs, procuring of capabilities, and implantation of doctrine and concepts, they should be designed in such a way that allows an objective assessment of the strengths and weaknesses of a strategy and not as a way to showcase new concepts.

Game Design Conclusions

Without a full data set it is difficult to accurately assess all aspects of the Title 10 wargames, but we can identify certain trends in game design. It is apparent that Unified Quest most closely resembles the original Global War Game series that the Naval War College organized between 1979 and 1983, though it still suffers from a more limited scope and the use of back-end scenarios to some extent. Expeditionary Warrior and the current Navy Global series both diverge significantly in design from the original series. The limited scope and objectives, back-end scenarios, and passive Red cell all combine to reduce the choices available to players and instead put a greater emphasis on the stochastic uncertainties that arise during play. With all three factors in place, a wargame will still have the ability to troubleshoot what areas of a concept need improvement, such as challenges to Command and Control in seabases, but they will not allow players to abandon seabasing for an alternative strategy nor will anything occur during play that would require them to change strategic course. In a sense, to call many of the Title 10 wargames “strategic level” games is misleading because they are so heavily tailored to examine a particular aspect of a doctrine in a relative vacuum. Games designed with these characteristics are susceptible to biased outcomes that would support the adoption of capabilities or concepts that have not been thoroughly analyzed. Not only would this call into question the utility of

wargames as an analytical tool but it could also have negative consequences for the Combatant Commanders down the road.

This conclusion does not, however, suggest that the Title 10 wargames are actually being used as an instrument of parochialism in order for the services to make programming decisions that would knowingly have negative consequences for the Combatant Commands. Instead, it is simply a statement that the current system continues to allow for the possibility of service parochialism to influence in defense planning processes. It is important to remember that even parochial decisions are usually made under the assumption that they are benefiting the military as a whole. However, what accounts for the changes in design that occur between 1979 and the modern era? It is possible that the answer relates back once again to the Goldwater-Nichols act. After the Goldwater-Nichols Act passed in 1986, the responsibilities of the Services vis-a-vis the Combatant Commands changed in a way that emphasized the Services' responsibility under Title 10 of the U.S. Code to organize, train, and equip their forces for the purposes of national security.⁷⁵ As the Combatant Commands were given full responsibility for warfighting, it became their priority to assess threats and develop regional military strategies for wartime and peacetime. Expert interviews revealed that classified wargames organized by the Combatant Commands were more likely to address real world threats to national security than the Title 10 wargames. Therefore questions of a doctrine or capability's utility are more likely to be addressed by the Combatant Commands in the present day. However, because the CoComs are more concerned about the present rather than the future, their wargames would do little to offer insight for planning purposes. Before Goldwater-Nichols, these questions were still considered by the services, as is evidenced by the first and second series of the Global War Game. It is possible that design weaknesses in the Title 10 wargames that create the opportunity for service parochialism to influence defense planning outcomes may actually be the result of the restructuring of the Department of Defense under the most recent set of reforms.

⁷⁵ Ducharme, *op. cit.*, 1.

Are Traditional Service Interests Observable in the Wargames?

The last question to consider is whether service interests have actually been perpetuated by the Title 10 series or if the possibility is merely present. Has the focus of the wargames demonstrated significant changes to the service priorities that have been at one point or another been deemed parochial? In short, no. All three services included in this study remain fairly committed to the critical tasks and missions that have traditionally been considered part of their institutional identity. The most obvious examples of this are the preponderance of scenarios involving high-intensity conflict and the Navy and Marine Corps reversion to traditional roles of sea control and amphibious expeditionary forces.

High Intensity Conflict

Across the board, the services prefer to dedicate time and resources to the study of mid- and high-intensity conflict instead of examining low-intensity conflict and post-conflict operations. Although the boundary between low- and mid-intensity conflicts is muddy, much of the past decade of US involvement in the Middle East and Africa can be characterized as low-intensity conflict. The US Department of the Army Field Manual 100-20, *Low Intensity Conflict* considers them as follows:

- Low-intensity conflict: a limited political-military struggle to achieve political, military, social, economic, or psychological objectives. It is often protracted and ranges from diplomatic, economic, and psychosocial pressures through terrorism and insurgency. It is generally confined to a geographic area and is often characterized by constraints on the weaponry, tactics, and levels of violence. Low-intensity conflict involves the actual or contemplated use of military capabilities up to, but not including, combat between regular forces.
- Mid-intensity conflict: a war between two or more nations and their respective allies, if any, in which the belligerents employ the most modern technology and extensive resources in intelligence; mobility; firepower (excluding nuclear, chemical, and biological weapons); command, control, and communications; and service support for limited objectives under definitive policy limitations as to the extent of destructive power that can be employed or the extent of geographic area that might be involved.
- High-intensity conflict: a war between two or more nations and their respective allies, if any, in which the belligerents employ the most modern technology and extensive

resources in intelligence; mobility; firepower (including nuclear, chemical, and biological weapons.)⁷⁶

Of the seven recent Navy Global wargames, five addressed mid- to high-intensity conflicts while only two investigated low-intensity conflicts such as maritime security and Humanitarian Aid/Disaster Relief.⁷⁷ For the Marine Corps, of the six most recent wargames, four of them considered mid- to high- intensity scenarios.⁷⁸ The Army proclivity toward examining mid- to high-intensity conflicts is specifically called out by Arroyo Center reports on early Unified Quest games. While data is unavailable for Unified Quest events from 2008 to 2011, it appears that Unified Quest 2012, 2013, and 2014 all considered mid- to high- intensity operations.⁷⁹

Preparation for mid- to high-intensity conflicts is nothing new, and not surprising when considering that the service identities are often based on the most dramatic historical examples of victory. Moreover, major acquisitions like aircraft carriers, submarines, and F22's are often linked to mid- to high-intensity conflicts. This is problematic from a defense planning perspective however, because as the figure below demonstrates, there is an inverse relationship between the intensity of conflict and the likelihood of occurrence.⁸⁰

⁷⁶ Scott R. McMichael, *A Historical Perspective on Light Infantry*, report (Combat Studies Institute, 1987), xv.

⁷⁷ Global '08 had seven key issues areas: persistent maritime presence, maritime security, credible combat power, building partnerships, Humanitarian Aid/Disaster Relief, shared awareness and strategic communications (Global '08 Game Report, 4) and Global '10 investigated building global partnerships (Global '10 Game Report).

⁷⁸ Expeditionary Warrior 09 considered seabasing strategies in low-intensity conflict scenarios, Expeditionary Warrior 14 investigated Non-Combatant Evacuation Operations.

⁷⁹ UQ12 examined the Air-Sea Battle concept and overcoming A2/AD challenges, UQ13 looked into the Expeditionary Maneuver and forced entry operations, and UQ14 focused on operations in megacities.

⁸⁰ This a commonly used model even in the post-Cold War era. See for example Mahan Scholars, *Navy 2020: A Strategy of Constriction*, MS 99-02 (Newport, RI: Center for Naval Warfare Studies, U.S. Naval War College, August 2000), 29, 50.

Figure 1–1. The Spectrum-of-Conflict Model

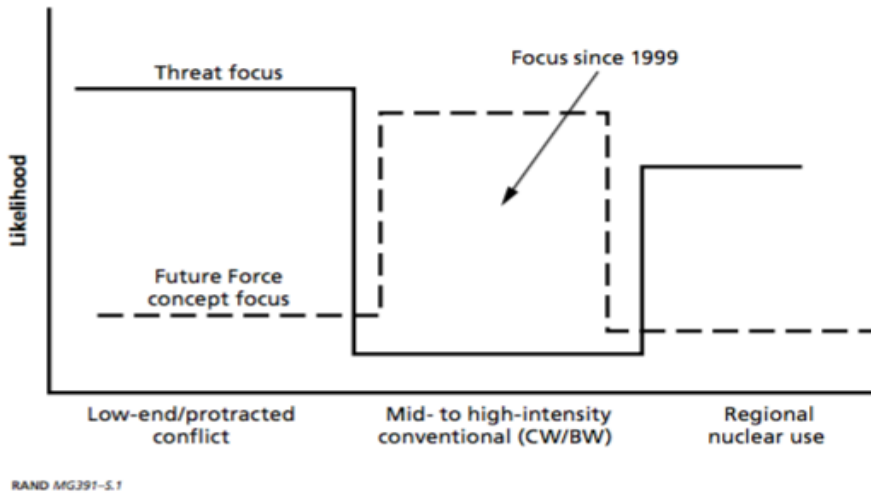


Source: *The Maritime Strategy*, U.S. Naval Institute Proceedings, January 1986 supplement, 8.

Integrating doctrine for operations in low-intensity conflicts into the services' set of critical tasks has been challenging, as peacekeeping, humanitarian aid, and stability operations have not been preferred tasks of the US military, evidenced by their minimal appearance in the Title 10 wargames. However, managing low-intensity conflict will be a common concern for Combatant Commanders. Having appropriate strategy and doctrine to address these scenarios may be an important area that the services are currently ignoring in their defense planning processes.

The Army's Unified Quest games between 2003 and 2005 are very demonstrative of the danger of ignoring low-intensity operations in defense planning. In 2004, the Arroyo Center's report on Unified Quest explained that the gaps in low-intensity conflict futures analysis could have been responsible for the poor and ineffective doctrine the Army entered Iraq and Afghanistan with. The figure below shows the analytic focus of Army defense planners in the years leading up to Unified Quest 04:

Figure S.1
The Adaptive Threat and Concept Development



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According to the report, the emphasis on the mid- to high- end of the spectrum was due to the conventional wisdom that a) it was the most difficult case and thus required more analysis and b) that forces capable of conducting operations in mid-to high-intensity environments would be “equally adept at stability operations with only a modest amount of task organization.”⁸² Though the Unified Quest wargames, as well as results from the field dispelled this notion, the Unified Quest wargames continued to include an element of mid- to high-intensity conflict in their scenario design. Similarly, the Marine Corps in a recent House of Representatives Armed Forces Committee hearing suggested that doctrine developed for mid-to high-intensity environments could be equally effective in low-intensity humanitarian operations, “In humanitarian operations, these same littoral maneuver capabilities allow us to deliver disaster relief supplies directly to the points needed ashore.”⁸³

⁸¹ Johnson et al, *Joint Paths*, op. cit., 33.

⁸² *Ibid.*

⁸³ House, The Subcommittee on Seapower and Projection Forces of the Committee of Armed Services, *Amphibious Operations: Hearing Before the Subcommittee on Seapower and Projection Forces of the Committee of Armed Services*, 112 Cong., 1st sess., H. Doc. (Washington D.C.: U.S. Government Printing Office, 2011). Full transcript available at <https://www.gpo.gov/fdsys/pkg/CHRG-112hhrg65592/html/CHRG-112hhrg65592.htm>

Recommendations in 2004 specifically stated that future wargame events should consider low-intensity conflict so as to accurately reflect the future operating environment,

Figure S.1 depicts the notion that U.S. military forces have focused on developing concepts that address mid- to high-intensity conflict. UQ 03, as well as the ‘post-conflict’ phases of ongoing operations in Afghanistan and Iraq, has made it clear that the successful execution of major combat operations—which overwhelming U.S. conventional capability almost guarantees—does not necessarily spell victory. It logically follows, then, that concepts explored in wargames focused primarily on mid- to high-intensity conventional combat operations would lack the fidelity to be suitable for dealing with operations on the opposite ends of the spectrum. In short, these potentially difficult operations are not lesser-included cases for what is supposed to be a full-spectrum force. Consequently, the low end of the conflict spectrum, in particular, requires a rigorous review and perhaps a new, more expansive theory of conflict and supporting operational concepts.⁸⁴

Despite the evidence that investigation of low-intensity conflicts could reveal crucial insights into more effective doctrine, the Title 10 wargames have routinely focused on less likely scenarios.

Sea Control and Amphibious Operations

The Navy and Marine Corps are technically two separate services with different service identities related to their critical tasks, however they share funding allocated to the Department of the Navy. The Marines have traditionally acted in a similar way to naval aeronautics, in support of naval mission of sea control. The role of the Marines was strengthened as the Navy turned its attention away from waging ship-to-ship combat on the high seas toward sea control based on strategies of nuclear deterrence, power projection, and littoral warfare. The Marines were the Navy’s army, specializing in expeditionary amphibious operations that originate at sea.

The wars in Iraq and Afghanistan beginning in 2001 challenged the Marine Corps the utility of amphibious operations but now as those conflicts come to a close the Marine Corps has emphasized that it will once again “get back to the sea.”⁸⁵ During the previously mentioned

⁸⁴ Johnson et al, *Joint Paths*, *op. cit.*, xi.

⁸⁵ Otto Kreisher, "U.S. Marine Corps Is Getting Back to Its Amphibious Roots," Defense Media Network US Marine Corps Is Getting Back to Its Amphibious Roots Comments, November 8, 2012, section goes here, accessed April 13, 2016, <http://www.defensemmedianetwork.com/stories/return-to-the-sea/>.

House Committee hearing in 2011, Representative of the Subcommittee on Seapower and Expeditionary Forces, Susan A. Davis explained, “There is no question that our Marines have been a crucial part of our forces in both Iraq and Afghanistan, but it is essential that we transition the Marine Corps away from being a second land force and back to one that is an amphibious-based expeditionary force.”⁸⁶ Statements by Deputy Chief of Naval Operations for Integration of Capabilities and Resources Terry Blake and Lieutenant General George Flynn of the Marine Corps Combat Development Command both reiterated the importance of amphibious capabilities for full spectrum operations ranging from high-intensity combat down to humanitarian aid operations.⁸⁷ While a return to amphibious operations does not necessarily contravene joint defense priorities in a way that could be considered parochial, it does suggest that the decade of military operations in Iraq and Afghanistan did not have a profound impact on Marine Corps institutional identity. There is no evidence in the Title 10 wargames that the Marines are interested in developing doctrine for protracted land operations despite their experience in this realm.

Conclusion

Based on the limited data that was available to conduct this study, it appears that service interests play a significant role in determining the focus of the Title 10 wargames; high intensity conflicts such as those involving A2/AD are the best example of this. Combined with game design decisions that reduce the scope of the wargame and the weight of player action, the Title 10 wargames have the potential to produce analysis that could be used to skew the perception of a concept or doctrine later on in the defense planning process. This set of design decisions have likely developed as a way to fulfill the sponsor or sponsoring institution’s objectives but render the wargames, which are intended to be strategic level games, more susceptible to influences of parochial thinking. Wargamers must be aware of the critical role that game development plays in

⁸⁶ *Amphibious Operations: Hearing Before the Subcommittee on Seapower and Projection Forces of the Committee of Armed Services, op. cit.*

⁸⁷ *Ibid.*

tying the wargame to the real world and likely real-world scenarios that the US may face in the future. The bias that arises from service parochialism exists within the institution long before a wargame design phase begins. A game designer may be able to mitigate some of this bias by utilizing game design elements that allow institutional or player bias to be exposed during play. The original Global War Game series did a good job of this by designing the events as massive strategic level games with two competitive sides each working hard to outwit and undermine the other's strategic decisions. This design is preferable to the elements often utilized in modern Title 10 wargaming: a more limited scope, use of a back-end scenario, and passive Red cell.

CHAPTER 5: FINAL CONCLUSIONS

The purpose of my research has been to determine whether the Title 10 wargames are subject to the influence of service parochialism based on their design as well as their content. In Chapter 2, I discussed the fact that for many years, defense reforms have aimed to curb the parochial tendencies of the services by removing their decision-making autonomy when it came to defense planning. After considering the importance of organizational culture and the desire for institutions to be able to express their identities, it is clear that these types of reforms will not reduce parochialism and can, in some cases, reinforce it. This is made evident by the persistence of service parochialism despite the numerous defense reforms that have occurred from the 1950s onward. Without comprehensive restructuring of the Department of Defense that dissolves deeply ingrained and fixed service identities and alters the competitive bureaucratic structure of the Pentagon itself, it is unlikely that service parochialism can be eliminated.

In Chapter 3, I considered the process of designing and developing a wargame as well the strength and weaknesses of wargames as an analytical tool. Scholars of wargames have identified various ways in which bias can enter the design process of a wargame and how this can jeopardize the analytical utility of a wargame's results. Intervention from senior stakeholders or players have been given special attention by experts as these types of interventions are usually done to produce results that wargames are not intended to produce – or to answer questions that wargames are not intended to answer; for example, focusing on who would win in a given conflict instead of how. Wargames are at their best when they strive to answer process oriented questions and are designed in a way that allows the participants to identify areas that they overlooked.

In Chapter 4, I connect the findings of Chapters 2 and 3. The existence of service parochialism challenges the notion that defense planning decisions are the outcome of a rational, objective planning and analysis process that considers how best to address threats to national security. Moreover, the insistence that defense planning is rational may actually make decision-

makers immune to identifying their own intersubjective biases socialized into them by the institutions they are part of. This is one of the primary problems that we see in the Title 10 wargames. The influence of service parochialism on the wargame events begins long before initial design decisions are even made. It begins with the preferences of the services to participate in certain missions and tasks to the exclusion of others, even if they are necessary or likely such as the Air Force's constant resistance to conducting close-air support for the Army. These preferences can be transferred into the wargame by the sponsor who will direct the objectives and scope of the game. Then, both designers and participants may be subject to the same type of innate parochialism and stove-piped thinking born out of the socialization they receive as members of the institution.

We can see this happening most in the cases of the Marine Corps and the Navy in the recent Title 10 games. Unlike the early Global War Game series, the past decade of Title 10 wargames have had a very limited focus on one concept (i.e. seabasing, Air-Sea Battle, overcoming A2/AD challenges). Because of the limited scope and objectives, there is a greater emphasis placed on lower-level operational questions while the strategic questions are already assumed to be answered. Further, the use of back-end scenarios can at times divorce the wargame from a likely operating environment and the commonly employed passive Red cell reduces the challenge to players' strategic choices. In combination, these three elements reduce the opportunities of players and analysts to discover areas of oversight or strategic weakness, one of the fundamental purposes of wargaming.

The Title 10 wargames are part of a larger category of professional analytic wargames that strive to produce valid and usable insights about the future of the US military. Without careful consideration of the propensity for bias to enter into the creation and play of the wargame, the Title 10 series, as a service-based futures analysis process, is highly susceptible to the influence of service self-interest and parochialism. This is perhaps best illustrated by the Marine Corps continued focus on amphibious operations in high-intensity scenarios even when the challenges to execution seem almost insurmountable.

While wargame designers in the service wargaming departments have made strides in developing strategies to reduce the influence of senior stakeholders in wargame design, how to mitigate the pervasive institutional bias in the defense planning process writ large has proved to be a greater challenge. Limiting the scope and objectives of a wargame, reducing the role of the Red cell, and utilizing back-end scenarios are not necessarily flawed game design decisions. They only become weaknesses in design when we try to link them to the original intent of the Title 10 wargames as a strategy oriented analytical tool. This is most evident in comparison to the predecessor of the Title 10 wargames, the large scale strategic Global War Game.

Recently, the Title 10 wargames have had a tendency to forego any discussion of the actual utility of a concept or doctrine and instead focused their analytical efforts on determining functionality. As Peter Perla notes in his discussion of the early 1980s joint Navy and Marine Corps wargames, the results of such wargames should not be used to buttress acquisitions or doctrinal decisions because they do not constitute a thorough enough analysis.¹ Wargaming has not always been accepted as a legitimate tool for analysis and for wargames to be used to artificially reinforce institutional biases may create a backlash for wargames as a whole. Because the Title 10 wargames are intended to be an objective part of the defense planning process, wargamers responsible for Title 10 events in the future should take into consideration the potential for the analysis to be misused.

It is unfortunate that time constraints have prevented a full examination of all instances of the Title 10 wargames. At this time, I am still awaiting the release of documents requested under the Freedom of Information Act requests I submitted in 2014 and 2015. A more in depth analysis into the Title 10 wargames as well as other military wargames could reveal valuable insights about the defense establishment in the United States, a topic that is rarely examined in political science. While studying military affairs as a civilian is a difficult task, its study should not be ignored by the discipline.

¹ Peter P. Perla, *The Art of Wargaming: A Guide for Professionals and Hobbyists* (Annapolis, MD: Naval Institute Press, 1990), 237.

Appendix

Navy Global			
Event Year	Scenario	Setting Year	Concept
1979	Southwest Asia conflict between Red/Blue over oil ¹	1985	The First series focused heavily on the concept of horizontal escalation as a way to distract Red from the main theater
1980	Eurasia (Soviet/US), Oil again was an important factor ²	1985	multiple conflicts, proxy wars with Red
1981	Red goal of seizing Turkish Straits Secondary goal of Gulf and Mideast Oil Join invasion of Kuwait by Iraq and Red in SWA ³	1985	Objective was to examine factors involved in nuclear escalation
1982	European focus, territories, relationships with European nations such as Norway SWA was still an issue area. Israel and Syria at war in 85. Red forces in Iran. ⁴	1985	War was already in progress
1983	Red was having a lot of problems all of the world. Blue wanted to gain an advantage in Central Front ⁵	1985	Defend conventionally on Central Front to gain maritime superiority

¹ Bud Hay and Bob Gile, *Global War Game: The First Five Years*, report, The Newport Papers (Newport: U.S. Naval War College, 1993), 4.

² *Ibid.*, 5.

³ *Ibid.*, 8.

⁴ *Ibid.*, 9.

⁵ *Ibid.*, 11.

1984	Poland and Eastern Europe had deteriorated economically, primarily Europe focused ⁶	1990	Second series learned from 1st and focused on offensive rather than defensive strategies Focused on planning aspect, blue strategy was divided by regions and all capabilities were utilized
1985, 86, 87	Conflict beginning with East and West Germany GDR/FRG, there were also other elements in Central Asia and Latin America. In November 1990s, Spec Ops Blue engaged with Red forces in Afghanistan. Red then began operations in Europe ⁷	1990	Key objectives of these wargames were "Restoration of NATO territorial integrity and the restoration of status quo ante for Austria, West Berlin, and Azerbaijan. Reduction of the status and influence of Red and the Warsaw Pact and a diminution of Red "global reach." Attrition of Red nuclear assets to the point that Blue finishes the war with a favorable nuclear balance." ⁸
1988	End of 87 D+75 Main focus was again on Central theater in Europe where other theaters were concluded based on 87 play. ⁹	1990	War termination
Data from 1989 to 1999 unavailable			
2000	A technologically advanced Red threatens Blue ally Brown over border dispute. Escalation begins with "active defense" exercises by Red ¹⁰ Look like East Asia	2010	Network centric operations Meant to investigate the "pillars" or "subconcepts" of the capstone concept Information/knowledge advantage,

⁶ Robert H. Gile, *Global War Game: Second Series, 1984-1988*, report, The Newport Papers (Newport: U.S. Naval War College War Gaming Department, 2004), 35.

⁷ *Ibid.*

⁸ *Ibid.*, 39.

⁹ *Ibid.*, 85.

¹⁰ Kenneth Watman, "Global 2000," *Naval War College Review* 54, no. 2 (Spring 2001): 78

			assured access, effects-based operations, and sea basing
2001 to 2007 Global on Hiatus			
2008	<p>Four different alternative future scenarios in different regions, all scenarios had themes of extremism or resource rivalry:</p> <ul style="list-style-type: none"> • Asia/Pacific & Latin America/Caribbean • North America • Central Asia/Middle East & Europe • Africa & Global¹¹ 	N/A	<p>A Cooperative Strategy for 21st Century Seapower (CS21)</p> <p>This game examined seven major themes: maritime security, persistent maritime presences, credible combat power, building partnerships, humanitarian assistance/disaster relief, shared awareness, and strategic communications¹²</p>
2009	Classified	N/A	Examined Sea control in A2/AD environment ¹³
2010	Global Maritime Partnerships Game invited 46 different countries to discuss challenges to global maritime security in the current security environment. ¹⁴	Present Day	<p>Global Maritime Partnerships</p> <p>Cooperative Strategy for 21st Century Seapower (CS-21)</p> <p>Maritime Domain Awareness</p>

¹¹ *Global '08: U.S. Navy Title X War Game "Implementing Maritime Strategy" Game Report*, report (Newport: U.S. Naval War College, 2008), 3.

¹² *Ibid.*, 13.

¹³ "Global 2011," U.S. Naval War College, accessed April 13, 2016, <https://www.usnwc.edu/Research---Gaming/War-Gaming/Documents/RAGE/Gaming/-Global-Title-X-Series/Global-2011.aspx>.

¹⁴ Warren M. Wiggins et al., *Global Maritime Partnerships Game: Game Report*, report (New: U., 2010), 1.

			Identify impediments to forming effective regional and global partnerships within the maritime domain from both international and U.S. perspectives.
2011	Classified	N/A	Seacontrol and Seabasing in support of Joint Operational Access concept (JOAC) ¹⁵
2012	Mostly classified High intensity A2/AD environment	N/A	Air-Sea Battle Concept ¹⁶
2013 One-sided	Three different teams divided by region. Within the region, tensions between the antagonistic Red and their regional neighbors continued to escalate over a series of four notional vignettes High intensity A2/AD environment ¹⁷	N/A	Air-Sea Battle concept Command and Control in High-intensity, cross-domain operations with A2/AD challenges Joint Operational Access Concept
2014	A synthetic region of “Bartland” was created specifically for the event and was not modeled after any particular real-world	N/A	Air-Sea Battle Concept

¹⁵ <https://www.usnwc.edu/Research---Gaming/War-Gaming/Documents/RAGE/Gaming/-Global-Title-X-Series/Global-2011.aspx>

¹⁶ "Global 2012," U.S. Naval War College, accessed April 13, 2016, <https://www.usnwc.edu/Research---Gaming/War-Gaming/Documents/RAGE/Gaming/-Global-Title-X-Series/Global--2012.aspx>.

¹⁷ Don Marrin and Walter Berbrick, *U.S. Naval War College Global 2013 Game Report*, report, Navy Global War Game Series (Newport: U.S. Naval War College, 2013), E-1.

	<p>geography; rather it contained features conducive to the investigation of A2/AD challenges (e.g., time, space, and force).</p> <p>Region composed of 5 countries: Red, Brown, Green, Gray and Purple that representing a spectrum of military capability and industrial development, and NOT any real-world countries Australia, Canada, Great Britain, Japan and the US were collectively referred to as the Blue Coalition, or simply Blue.</p> <p>Red was the region's hostile military peer to Blue; Green was the most industrially advanced and closely supported Blue, while Brown, Gray and Purple reflected varying lesser degrees of development and support.¹⁸</p>		<p>Improve Command and Control in cross-domain, high-intensity A2/AD situations</p>
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Marine Corps Expeditionary Warrior			
Year	Scenario	Setting Year	Concept
2003	Data unavailable for these years		
2004			
2005			
2006			

¹⁸ Don Marrin and Walter Berbeck, *U.S. Navy Title X War Game Global '14 Game Report*, report, Naval Global War Game Series (U.S. Naval War College War Gaming Department, 2014), 7.

2007			
2008			
2009	<p>Horn of Africa (USAFRICOM)/Indonesia (USPACOM)¹⁹</p> <p>Regional insurgency al-Shabaab is the primary antagonist in the Horn of Africa scenario. With backing from Al-Qaeda, Eritrea and regional warlords, al-Shabaab captures parts of “Greater Somalia” including northeastern Kenya and the Ogden region of Ethiopia.²⁰</p> <p>In Indonesia, the collapse of the Indonesian market in 2009 brings about legislation that alters pre-existing federal revenue sharing agreements with the semi-autonomous Aceh region of Sumatra. Aceh, having only ended hostilities with the federal government in 2005 after 30 years of insurgency declares itself autonomous from the Government of Indonesia and reforms its military wing.²¹</p>	2016-2028	<p>Seabasing for FID-COIN</p> <p>Seabases provide way to overcome A2/AD problems</p>
2010	<p>EW10 focuses on more likely scenarios instead of more dangerous</p> <p>Littoral nation - called the backdrop here - the political climate of various non-state threats, geographic challenges, operational environments and multinational and host nation sensitivities create access challenges for Blue forces.²²</p> <p>The coastal nation had limited infrastructure</p>	2020-2027	<p>Seabasing: operationalizing Seabasing in irregular warfare environment</p> <p>Seabased support to security cooperation operations, foreign humanitarian assistance/disaster relief operations, noncombatant evacuation operations, and stability operations.</p>

¹⁹ *Expeditionary Warrior 2009 Final Report*, report (Wargaming Division, Marine Corps Warfighting Laboratory, 2009), 3.

²⁰ *Ibid.*, 7.

²¹ *Ibid.*, 9.

²² *Expeditionary Warrior 2010 Final Report*, report (Wargaming Division, Marine Corps Warfighting Laboratory, 2010), 4.

	<p>that had been further degraded by attacks from a variety of low end capable threat forces resulting from a complex combination of endemic tribal, ethnic, communal, sectarian, inter-gang and criminal related violence from armed ethnic militias, local militias, vigilante groups, religious vigilante groups and violent extremist organizations, as well as criminal militias and gangs and militant separatists.²³</p> <p>The 4 game moves addressed 4 different types of operations:</p> <p>Move 1:</p> <ul style="list-style-type: none"> • 2020-2022 • Using seabasing to build partnership capacity with Host Nation <p>Move 2:</p> <ul style="list-style-type: none"> • 2022 • FHA/DR <p>Move 3:</p> <ul style="list-style-type: none"> • August 2023 • Non-Combatant Evacuation Operations <p>Move 4:</p> <ul style="list-style-type: none"> • 2025-2027 • Stability Operations 		
2011	<p>Two scenarios and two tactical vignettes against fictional enemy forces and threat levels that range from near-peer levels of Anti-Access/ Area-Denial (A2/AD) threats to hybrid threats²⁴</p> <p>Non-State Actor Scenario: United States and international partner nations conduct operations in support of the fictional Republic of Denaclave (Horn of Africa</p>	2024	<p>Joint operational access concept (JOAC)</p> <p>Enhanced Marine Air-Ground Task Force (MAGTF)</p>

²³ *Ibid.*, 5.

²⁴ *Expeditionary Warrior 2011 Final Report*, report (Wargaming Division, Marine Corps Warfighting Laboratory, 2011), iii.

	<p>region). The Republic of East Africa is a failing state which has large tracts of under-governed areas and lack capacity to deal with the fictional Front for the Liberation Of the Horn of Africa, a separatist group. The non-state actor had access to cross domain and functional A2/AD capabilities.²⁵</p> <p>State Threat Scenario: united States and international partners engage in operations against the fictional Republic of East Africa under Article 7 of the Charter of the United Nations. Blue force goals included restoring freedom of navigation through international waters and neutralizing robust A2/AD capabilities.²⁶</p>		
2012	<p>West Africa, political unstable ally “Savanna” struggling with internal irregular army, the Free Savanna Movement in addition to an invading neighbor, the West African Federation. The WAF provided a conventional enemy while regional power, Volta, supported adversaries against invention by a U.S.-led coalition. This scenario featured both conventional and unconventional threats armed with credible A2/AD capabilities.²⁷</p>	2024	<p>Joint Operational Access Concept (JOAC)</p> <p>Navy and Air Force’s Air-Sea Battle Concept</p>
2013	<p>Fictional ally Karta, made up of real nations of Malaysia, Indonesia and Brunei. When the King of Karta unexpectedly dies, a power struggle between US-friendly heir and his anti-American traditionalist younger brother. After the younger prince reveals plans to stage a coup, the Kartan Army breaks into factions. US goals are to support the friendly heir and stabilize region.</p>	2035	<p>Joint Operational Access Concept (JOAC)</p> <p>Air-Sea Battle Concept</p> <p>Specifically investigating the joint and naval force’s ability to overcome A2/AD challenges.</p>

²⁵ *Ibid.*, 3.

²⁶ *Ibid.*, 4.

²⁷ *Expeditionary Warrior 2012 Final Report*, report (Wargaming Division, Marine Corps Warfighting Laboratory, 2012), 7.

	<p>Notable Regional Shifts:</p> <ul style="list-style-type: none"> ● Korea has unified and no longer hosts US bases ● Taiwan and China have unified peacefully and project power in the region ● A new Status of Forces agreement with Japan has led to a reduced military footprint in Japan and Okinawa²⁸ 		
2014	<p>West Africa, fictional US ally, Volta, constructed with the geography of Ghana, Ivory Coast, parts of Mali and Burkina Faso. Volta is politically stable but suffers from corruption and weak institutions. Criminal gang, the Volta Revolutionary Forces, sought to dominate the country's illicit trafficking market and when Volta's government attempted to crackdown on VRF activity, violence escalated prompting US to conduct Non-Combatant Evacuation (NEO) operations.²⁹</p>	2023	<p>Expeditionary Force 21</p> <p>Integrated maritime operations</p>

Army Unified Quest			
Event Year	Scenario	Setting Year	Concept
2003	<p>US-led coalition engaged in two overlapping major combat operations in the Southwest Asian nation of Nair and in the Southeast Asian nation of Sumesia. Major regional power, Nair was within a month of possessing nuclear capabilities via</p>	2015	Major Combat Operations

²⁸ *Expeditionary Warrior 2013 Final Report: Future Maritime Operations for the 21st Century Operating Environment*, report (Wargaming Division, Marine Corps Warfighting Laboratory, 2013), 5.

²⁹ *Expeditionary Warrior 2014 Final Report*, report (Wargaming Division, Marine Corps Warfighting Laboratory, 2014), 5.

	intercontinental ballistic missiles which could target the US homeland. In Sumesia US-led coalition forces assisted the government in preventing a destabilizing insurgency. ³⁰		
2004	Following the events of UQ03, UQ04 began at the climax of major combat operations in Nair and Sumesia. ³¹	2016	Post-conflict stability operations
2005	A fictional Redland composed of states from Eastern europe. Redland has a high population, 124 million, and possesses nuclear capabilities. Demographically, the report notes that 90% of the population of Redland is Muslim. Redland is a supporter of worldwide Islamic Fundamentalist terrorist activities and is threatening nearby ally nation Anatolia (Turkey region). ³²	2015	Major Combat Operations with adaptive, network-enabled, nuclear-capable adversary
2006	Data unavailable		
2007	A protracted long war between US-led coalition forces and the fictional nation of Redland, either similar to or the same as the Redland appearing in UQ05. ³³	2030-2040	Full Spectrum Operations (FSO) Persistent Security Building Partnership Capacity
2008	Data unavailable		Building Partnership Capacity in irregular warfare
2009	Data unavailable		
2010			

³⁰ David E. Johnson et al., *Joint Paths to the Future Force: A Report on Unified Quest 2004*, report (Santa Monica: RAND Corporation Arroyo Center, 2006), , 2.

³¹ *Ibid.*

³² David E. Johnson et al., *Strategic Dimensions of Unified Quest 2005: A RAND Analysis*, report (Santa Monica: RAND Corporation Arroyo Center, 2006), 11-15.

³³ *Full Spectrum Operations: Unified Quest 2007*, report (Fort Monroe: U.S. Army Training and Doctrine Command, 2008), 55.

2011	Focuses solely on Homeland operations	N/A	Combined Arms Maneuver Wide Area Security
2012	“Scenarios featured failing states, access challenges, WMD proliferation, humanitarian crises, and dynamic geo-political environments.” ³⁴	2020	Integration of special operations and conventional forces Rapid deployment and entry operations to overcome Anti-Access/Area Denial strategies Countering weapons of mass destruction proliferation The Army’s ability to fully leverage cyber and space operations. ³⁵
2013	In this scenario the US has been attacked by terrorists and militants based in the collapsing nation of Sasani. They have also launched attacks against US forces participating in a humanitarian relief operation in the country of Japur. This scenario features entirely fictional geography as well a number of fictionalized opponents. ³⁶	2030	Expeditionary Maneuver and forced entry operations

³⁴ *Army Future Game Event Summary*, 1.

³⁵ *Ibid.*

³⁶ *Unified Quest 2013 Deep Future Wargame 2030-2040 Executive Report*, report (Fort Eustis: Future Warfare Division, Army Capabilities Integration Center U.S. Army Training and Doctrine Command, 2013), 6.

2014	A notional regional power, closely aligned to the United States, faced internal security challenges while a catastrophic flood displaced millions and killed nearly 500,000. The United States responded to a host nation request for security forces to lead coalition operations aimed at supporting their government and managing international humanitarian assistance. ³⁷	2030-2040	Win in a Complex World Operations in megacities Light-footprint operations
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³⁷ *Unified Quest 2014 Executive Report: Win in a Complex World*, report (Fort Eustis: Future Warfare Division, Army Capabilities Integration Center U.S. Army Training and Doctrine Command, 2014), 3.

Research Ethics Board Consent Form

Project: Title X Wargames and the Development of Defense Policy in the United States

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You are being invited to participate in this research project, by agreeing to be interviewed in person or via Skype or telephone. It is estimated that the interview will take around 30-45 minutes. The interview will be audio-recorded for transcription purposes only.

Purpose of this Research Project:

Every year the US military dedicates significant time and money to wargaming. In part wargames are used to train personnel. However, they are also extensively used as an analytical method for “decision support,” designed to illuminate a range of operational and strategic issues: the development of appropriate responses to existing and emerging threats; the impact of new weapons and technologies; the refinement of strategy; the development of operational and tactical doctrine; the development of force structures; and the exploration of defense acquisition and budget issues-among others.

Despite extensive use of wargames by militaries across the world, within political science very limited research has been done to investigate their role and impact. This MA thesis project will conduct a qualitative investigation into the role of analytic wargaming in the development of US national security policy in the post-Cold War era.

The “Title X” series of annual service wargames will serve as the case studies for the project. These wargames are set between 10 and 0 years in the future and as such provide researchers with a window into what military decision-makers foresee as being the most important setting and scenarios to train and prepare for.

Informed Consent:

It is a requirement of McGill University that you provide formal consent to participate in this study. You may provide formal consent by completing this form.

Confidentiality:

All data collected during this interview will be safely stored against the possibility that participation or even just permission to use some part of the data is withdrawn at some future point. I will keep your identity confidential, unless you indicate otherwise. In case you do wish to maintain confidentiality, only I will have access to any identifiable data, and this information will only be presented in a manner that safeguards your identity at all times.

Please select one of the following:

☐ All responses are to be kept confidential. My comments may be reported, but my name, position, organization/agency may not be identified in any published materials.

☐ All responses are to be kept confidential. My comments and organization/agency may be reported in any published materials, but only in a general way that makes specific association with me impossible

☐ My name, organization/agency, and comments may be freely reported in any published materials.

Additional Requests:

☐ I consent to audio-recording of this interview. The audio-recording will only be used for transcription purposes.

[] Data from this interview can be stored for an indefinite period (seven years) for the purposes of use in future studies.

You have the right to refuse to answer any questions, and to withdraw from this project at any time.

If you have any questions or concerns regarding your rights or welfare as a participant in this project, please contact the McGill Ethics Manager, Linda McNeil, via telephone at: (514) 398-6831 or via email at: lynda.mcneil@mcgill.ca.

_____	_____
Respondent's Name	Date

_____	_____
Respondent's Signature	Date

_____	_____
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