## Hedgemony

# A Wargame to Evaluate Senior Joint Professional Military Education Learning Objectives

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**Abstract:** The *Officer Professional Military Education Policy* directs Joint professional military education institutions to develop officers who demonstrate critical and creative thinking skills. The chairman of the Joint Chiefs of Staff's intent is to develop strategically minded officers who will "creatively apply military power to inform national strategy, conduct globally integrated operations, and fight under conditions of disruptive change." The wargame *Hedgemony* is unlike most other wargames. Its focus is on teaching defense professionals how strategies are a complex interaction between force development, force posture, and force employment. *Hedgemony* also provides a way in which the Marine Corps War College measures its program outcomes.

**Keywords:** strategy, learning objectives, force structure, complex, professional military education, PME, resource management, wargame

#### Introduction

argaming at the senior professional military education (PME) institutions is a critical part of the students' education. The learning objectives of the majority of wargames are designed to teach students to both appreciate and succeed in complex campaigns that require innovative

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and creative solutions. The majority of the wargames the senior PME students engage in are both historical and futuristic. However, the Marine Corps War College (MCWAR) mission is to "develop critical thinkers, military strategists, joint warfighters and strategic leaders who are prepared to meet the challenges of a complex and dynamic security environment." The complex and dynamic security environment consists mainly of the management of defense resources, national security strategies, force structures, and national interests. Senior PME institutions should ask the question: To what extent does the curriculum include active learning activities focused on managing defense resources, force structure, and force posture? If, as the Joint Chiefs of Staff direct, PME institutions are to leverage wargames and exercises to "develop deeper insight and ingenuity," then it follows that senior PME institutions should incorporate a wargame that focuses less on the battlefield maneuvering and more on the national defense challenges facing the Joint Chiefs of Staff, the Service chiefs, and the combatant commanders.<sup>3</sup> MCWAR incorporated the wargame *Hedgemony: A Game* of Strategic Choices into its curriculum and successfully leveraged it to provide deeper insight and ingenuity in formulating strategy, the management of defense resources, and the risks and trade-offs associated with force structure development and global force posture to protect the interests of the United States in a dynamic security environment.

This article examines the Marine Corps War College's experience with a wargame that offers active learning for its students while emphasizing resource management. It evaluates how well the game met the educational objectives and intent set forth by the Joint Chiefs of Staff for senior-level PME. For two days in the academic year 2021, the students at MCWAR played Rand's Hedgemony: A Game of Strategic Choices (yes, with a "d"). Hedgemony is a war game focused on connecting policy and strategy, balancing defense modernization and readiness, working with allies, and the ultimate challenge of remaining a hegemon. Hedgemony may not be as thrilling as other wargames. However, in the same vein as the adage that amateurs study tactics and professionals study logistics, former deputy secretary of defense Robert O. Work, while speaking on the subject of artificial intelligence, said, "in this environment, amateurs talk about applications and professionals talk about architectures and networks." 4 In the environment of strategy making, professionals talk about resource management, national interests, and force structure and posture. This article highlights the importance of defense resource management in the senior PME curricula and shares MCWAR's experience with *Hedgemony*. This article is structured first to examine the name Hedgemony and its significance to PME education. The following section examines the complex nature of strategy formulation and the necessity for senior PME students to embrace a deep understanding of its nature. The main section of this article examines the lessons learned from playing *Hedgemony* at the Marine Corps War College and evaluates the ability of the faculty and facilitators to use the game to reach prescribed learning objectives.

The prescribed learning objectives for the game were: evaluate the elements of conventional and nuclear deterrence by examining historical cases and theory, the force structure, national security strategy, and national defense strategy; evaluate the military and other nations' dimensions of power and challenges to U.S. national interests, evaluating the best use of the military instrument across the full spectrum of conflict to achieve national security objectives; evaluate national strategic guidance, Joint operations, and campaign plans; explain how risks impact the strategic construct of ends, ways, and means; and assess the efficacy of current force development efforts for today's complex security environment and that of the potential future. As with any course, to achieve the learning objectives, the faculty must first ensure the students understand the context in which the lesson lies. The name *Hedgemony* captures much of the context and meaning for the game, and both need to be explicitly understood by the students.

## The Name of the Game and the Meaning Behind It

The designers of *Hedgemony* deliberately spelled the title of its wargame to allude to the international relations' concept of hedging. The term comes from the financial world, as "to hedge one's bets." As John Hemmings put it, "the basic assumption is that hedging means a state spreads its risk by pursuing two opposite policies towards another state." In the rule book, the designers of the game address how they decided to give the game the name *Hedgemony* as U.S. defense policy makers are faced with a wide variety of challenges to American interests, and those challenges come from many different areas around the planet. Each challenge is different and requires a unique response. Meanwhile, defense strategists must consider the immediate challenges and those that are most likely to occur in the future. Meeting the needs of U.S. national security issues creates inherent tensions requiring strategists and game designers to think about hedging strategies, similar to strategists in financial investment markets.

The name of the game, *Hedgemony*, implies that there is a hegemon or there is a competition for hegemony as much as it implies hedging strategies. Students at the PME institutions should learn about hegemons and the various international relations theories in which a hegemon is a central element. Students should understand the context of hegemony and the interaction between a hegemon and other states. There are varying definitions of hegemony, but the Gramscian definition gives meaning to both the game and position of the United States in the international system. Antonio Gramsci was an Italian-born Marxist writer imprisoned by Benito Mussolini for his Marxist

writings and opposition to fascism. While in prison, Gramsci developed his concept of hegemony. Gramsci's concept of hegemony is influenced heavily by his Marxist thinking. Hegemony, as Gramsci defines it, is a class that dominates another class through a "subtle fusion of coercion and consent." However, Gramsci eschews reductionism and considers hegemony to be a complex relationship between the classes. The complex relationship between the classes is a crucial framework that is critical to understanding how a hegemon interacts with international actors. The United States came into true hegemony after World War II. Liberal institutions were created and headquartered in the United States. America's only real competition was the Soviet Union. When the Soviet Union collapsed in 1991, the United States had achieved true global hegemony, at least to the extent that the modern international system has experienced. However, the uncontested era of American hegemony did not last, and now the United States finds itself in competition with other states seeking hegemony. The purpose of this section is not to debate the potential hegemonic reach of other states but to make it clear that the United States faces competition in several areas of power. Hegemony often refers to economic power. A state's hard power must underwrite the security necessary to achieve and maintain economic power and leadership to achieve hegemonic economic power. In addition to hard power, a post-World War II hegemon has political power and has a market economy and liberal institutions. The combination of hard power and soft power supports Gramsci's concept of a subtle fusion of coercion and consent. A key lesson learned from the students at MCWAR is the same conclusion by Dennis Florig, who argues that "most of the failures of the policies of the current hegemon come from poor choices rather than an inexorable mechanical process, a better metaphor would be hegemonic overreach."9

The game *Hedgemony* was designed by Rand but funded by several key departments of national security. The game was sponsored in part by a wide variety of civilian- and military-led offices. The sponsors range from the Office of the Under Secretary of Defense for Policy to the Joint Staff to several national intelligence agencies. <sup>10</sup> The Department of Defense used *Hedgemony* to help write the 2018 *National Defense Strategy*. <sup>11</sup> MCWAR's program outcome of developing strategists aligns with the objectives of the game. Before a student becomes a strategist, and before the student can take full advantage of the learning offered by playing *Hedgemony*, the student must develop an in-depth understanding of the complexity of strategy formulation.

## The Meaning and Complexity of Strategy Formulation

Thinking about and developing strategy at the national level requires a deep understanding of the meaning of strategy. The debate about a suitable definition that encapsulates everything about strategy has been ongoing for centuries. Skipping a history lesson on the venerable thinkers of strategy over the centuries, the most notable and recognizable model for a strategy is the ends, ways, and means model. Jeffrey Meiser acknowledges that this is a useful but simplistic model to describe strategy. However, he is also critical of this model because it is widely used as a crutch and undermines creative and effective thinking. The ends, ways, and means model was codified initially by U.S. Army colonel Arthur F. Lykke Jr. and was first published in *Military Review* in 1989, in which the model was described as "strategy equals ends (objectives toward which one strives) plus ways (courses of action) plus means (instruments by which some end can be achieved)." The Lykke model offers a simplified concept of strategy.

Meiser criticizes how strategists and PME institutions have propagated the model as strategy. He cites Antulio J. Echevarria II, who noted that the Ends + Ways + Means = Strategy model is recognizable to strategists as Albert Einstein's  $E = mc^2$  is to physicists. <sup>14</sup> More to the point,  $E = mc^2$  is a highly complex and sophisticated equation that shows us that there is an interchangeable relationship between energy and mass. Mass increases with speed. As mass approaches the speed of light, it increases toward infinity. Even in this simplified version, the equation offers many more insights into the relationship between mass and energy. However, the equation is derived from the theory of special relativity. Even though  $E = mc^2$  is one of the world's most recognizable equations, this does not mean that it is fully understood by most, and yet likely only fully understood by well-educated physicists and mathematicians. The same can be said for the Ends + Ways + Means = Strategy equation, albeit to a lesser extent. The Lykke model superficially indicates a relationship between ways and means and ends, and that strategy results from combining those elements. Lykke's model does not elucidate the complex nature of the interaction between the three elements. Much like the Department of Energy would not want a nuclear weapon built by someone with superficial knowledge of  $E = mc^2$ , the Department of Defense does not want its strategists to only have a superficial knowledge of Ends + Ways + Means = Strategy. Instead, the chairman of the Joint Chiefs of Staff, the highest-ranking officer in the U.S. military, issued a policy on officer military education directing PME institutions to develop officers who can "demonstrate critical and creative thinking skills, interpersonal skills, and effective written, verbal, and visual communications skills to support the development and implementation of strategies and complex operations." The chairman's intent is to develop strategically minded officers who will "creatively apply military power to inform national strategy, conduct globally integrated operations, and fight under conditions of disruptive change."16

The war colleges educate officers to understand strategy formulation's complex nature and think critically about force structure and posture concerning

national strategic objectives. *Hedgemony* reinforces those learning objectives by actively demonstrating the inherent tensions between limited means and ways in light of the unclear, ill-defined, and often abstract nature of a strategic end or objective.

Strategy and tactics differ in many ways, but most notably, they differ by the nature of their objectives. A tactical objective is clear, well-defined, and tangible. A commander can usually assess whether a tactical objective has been reached. A glance at both of these equations highlights that one is nonlinear and the other linear. If there is one thing that both equations have in common, it is that they both model nonlinear systems. Right away, one should note that strategy is not the product of a linear process. Strategy is developed within and about complex, interdependent systems. Therefore, strategy development or formulation is a process that produces feedback. Strategists must use that feedback to reevaluate and reformulate the strategy continuously. While the Ends + Ways + Means = Strategy model helps one comprehend strategy elements, it by no means adequately addresses the nature of strategy or strategic formulation. It is only helpful to those who have studied strategy and to those practitioners who are strategists. Meiser argues that strategy is a theory. By incorporating the works of Elliot Cohen, Barry Posen, and Lawrence Freedman, Meiser settles on defining strategy as a theory of victory or success.<sup>17</sup> The idea that strategy is more a theory than a plan breaks from the Lykke model and gives the budding strategist a more accurate understanding of strategy's complex and nonlinear nature.

Even though a strategy is inherently complex and nonlinear, the strategist must seek to accomplish an objective. Meiser argues that "defining strategy as a theory of success . . . [keeps] the strategist rooted in the process of causal analysis; it brings assumptions to light and forces the strategist to clarify exactly how they plan to cause the desired end state to occur." A theory is, by most definitions, a causal hypothesis that explains how A causes B. The explanation provides more detail on how the causation occurs, in which case often involves the intervening variables previously mentioned. Students at senior PME need to use their time at school to work through the causality of strategies. Faculty can ensure this occurs through papers, oral exams, and war games. Hedgemony is designed for students to develop strategies and for the students to evaluate the extent to which their strategies were successful in causing conditions to change so that the students reach their strategic objectives.

Generally speaking, Meiser's attempts to define strategy as a theory of success or victory are much more helpful and accurate than Lykke's model of ends, ways, and means. If a theory is appropriately framed, it presents causality and is falsifiable. A good strategy will have many elements of a good theory. However, the nature of strategy means that causality is more likely to be hypothesized

rather than theorized. The importance of this distinction lies in the unknown and untestable nature of national security strategies. Van Evera proposes that a hypothesis is a conjectured relationship between A and B, by which one would demonstrate or presuppose that A causes B.<sup>20</sup> A hypothesis, therefore, rests on assumptions.

Assumptions are a significant part of any strategy. Until the strategist receives feedback, an assumption is assumed valid. Assumptions are critical to strategic formulation because a strategist will likely never have enough information to make a perfectly informed decision.<sup>21</sup> A strategist must make informed assumptions. If the strategist makes an ill-informed assumption and puts the strategy in action, the feedback will likely demonstrate that the strategist must reevaluate an assumption. For example, a strategist may assume an actor has the same values or motivations as the strategist and develop a strategy that anticipates behaviors that are unlikely to occur.<sup>22</sup> If this occurs, then the strategy must be reevaluated, reformulated, and reimplemented. Strategy is cyclical, iterative, and nonlinear.

### **Follow-on Student Billets and Resource Management**

War college students are likely to be assigned to a billet on some staff, be it a combatant command staff, the Joint staff, or a Service headquarters staff. Wherever they are assigned, their commanders will wrestle with meeting the needs of national security and the resources allocated to them to do so. This year, a new administration is shaping the national security strategy through the budget. The fiscal year (FY) 2022 defense budget is projected to be much less than previous years. A significantly smaller budget means the Services and the combatant commands must determine how they will meet the national security objectives with fewer resources than previous years. For instance, defense budget analysts and the Center for Strategic and International Studies (CSIS) pose five key areas that will challenge the strategist, combatant commanders, and Service chiefs and secretaries. The Army and Navy face budget reductions that will significantly affect their current trajectory in the near and long term. The Army seeks a more significant role in competition with China. The Army argues that its long-range, land-based fires, missile defense, and global logistics have a role in the Western Pacific. That means the Army will need to trade end strength for more capacity and modernization. The Navy faces similar competing priorities as it tries to determine the number and type of ships it needs for the future security environment. The Services need to determine how it will manage its legacy tactical aviation platforms, how it will maintain them, and how it will replace them. The Lockheed Martin F-35 Lightning II program needs to be reevaluated. The program is far more expensive than when it was proposed. The Department of Defense (DOD) needs to determine the F-35

end strength, but each Service has its requirements and has multidecade plans to procure them and meet their respective missions. Finally, CSIS asks if the new administration can justify the current end strength of the entire DOD.<sup>23</sup>

The 2018 *National Defense Strategy* sought to "defeat aggression by a major power, deter opportunistic aggression elsewhere, and disrupt imminent terrorist and [weapons of mass destruction] WMD threats" while defending the homeland and maintaining nuclear deterrence.<sup>24</sup> To do so required 58 total Army brigade combat teams, 355 Navy ships, about 1,200 Air Force aircraft, and a Marine Corps of 185,000 personnel. There was no description of how the administration determined these precise force levels from the very general description of strategic goals that it was proposing. Unclear force structure calculations are not unusual.<sup>25</sup>

The report continues to analyze other areas that will need to be addressed. For instance, DOD must address the force laydown in Guam and the associated infrastructure costs, nuclear modernization, acquisitions related to the space domain, and the next-generation interceptor for homeland defense. Any general or flag officer is familiar with the dilemmas of meeting the nation's national security objectives and prioritizing how to use those resources. In real life, this is highly complex, and there are laws and processes to guide how the nation's resources are used. Hedgemony streamlines laws and processes for purposes of the game, but the dilemmas and decision making are still there. The students must grapple with limited resources and global security requirements. The trade-offs and risks are what make Hedgemony such a valuable learning experience.

## Lessons Learned from Playing Hedgemony at MCWAR

MCWAR played *Hedgemony* as part of its curriculum about midway through its spring semester of the 2021 academic year. The game took place over two days, and the students were split into two different games, each with about 15 players. In each game, the students were divided into a blue team and a red team. The blue team represented the United States, North Atlantic Treaty Organization (NATO), and the European Union. The red team represented Russia, the People's Republic of China, the Democratic People's Republic of North Korea, and Iran. Each side was "presented with a global situation, competing national incentives, constraints and objectives, a set of military forces with defined capacities and capabilities, and a pool of periodically renewable resources." The first day was dedicated to learning the rules, understanding the concept of play, and working out anything that would improve the game for the following day. Dr. Yuna Wong and Sebastien J. Bae facilitated the game, and both had worked at Rand when the game was designed. Dr. Wong is one of the original game designers. Additionally, MCWAR course directors

played as the president of the United States. They served as experts for the blue teams with experience in U.S. national security, the Office of the Secretary of Defense, the Joint Chiefs of Staff, and think tanks. The red teams were assisted by Dr. Amin Tarzi, an expert in Middle East affairs; Dr. Yuval Weber, an expert in Russian affairs; and Dr. Christopher Yung, a China expert and dean of MCWAR. It is important to note that these experts helped to facilitate the game. The students made the final decisions on how the countries they represented would play. They consulted with the facilitators to ensure that the students' moves and strategies were realistic and characteristic of the respective countries.

A red team that genuinely understands the side it represents is critical for the learning experience, so the team of regional experts was crucial to the successful learning experience. The students had studied the various countries represented, international relations, and strategic formulation at the point in the curriculum that MCWAR played *Hedgemony*. To better guide the students, especially those representing the red teams, the regional experts helped the students develop strategies and played in ways that were accurately representative of the countries. The students understood they were to compete against each other and within the likely characteristics of a representative country. However, the regional experts provided both a sense of realism and offered the students ideas they might not have considered. The students had studied the red team countries and were familiar with their patterns of international behavior, with the interests they pursued, and the values they upheld—or did not.

Additionally, the students made realistic assumptions about the behavior of the red team countries, including the type of alliances the countries might pursue, weapon systems they might employ, military capabilities they are developing, and diplomatic pressures they might employ. The students also made assumptions about how the countries relied on cyber warfare and information warfare to achieve their strategic objectives. Balanced with the regional expertise, the red teams acted in realistic ways. Had the students simply acted as wily as they wanted and were not constrained by realistic strategic pursuits of the red team countries they represented, all learning objectives would have been lost. The students playing either the blue or the red teams must be educated to understand the interests of each country and the threats they pose to U.S. interests. This is a difficult task for the faculty to achieve. Relying on regional or country-specific experts to augment the teams creates a more realistic experience and enhances the overall learning experience of playing *Hedgemony*. In the end, the well-educated and experienced red teams and facilitators were critical to achieving the learning objectives.

"I felt like everyone was out to get us, all the time, from every angle," claimed one of the students who represented the United States. It is an accu-

rate statement because life as a hegemon is fraught with endless competition. The idea that competition is ceaseless, especially as a hegemon, also brings to light the purpose of teaching international relations theories to war college students. A game like *Hedgemony* reinforces those learning objectives. It helps the students come to terms with abstract ideas of international relations theories and concrete examples of competition and cooperation. In *Hedgemony*, the students experienced complex relationships among competing states, alliances, and hard choices about force structure and force posture. The students playing the United States learned the challenges of being a hegemon.

Unlike many other wargames that focus on a campaign or battle, *Hedgemony* reinforces the political-national strategy linkages. It reinforces Carl von Clausewitz and his axiom that war is an extension of politics. Clausewitz writes that policy permeates and continuously influences all military action. He goes on to say that "the political object is the goal, war is the means of reaching it, and means can never be considered in isolation from their purpose." War college students study how political interests interact with global international politics and meet the stark realities of passing a national defense budget to achieve those political objectives. *Hedgemony* is designed explicitly for defense professionals to learn "how different strategies could affect key planning factors in the trade space at the intersection of force development, force management, force posture, and force employment." The lessons the students learned from playing the game also reinforced MCWAR's model to guide students through the strategy-making process.

The strategy-making model that MCWAR uses can be found in its recently published *Strategy Primer*.<sup>31</sup> As with all models, this does not reflect reality, but it does "seek to streamline many of the contradictions that [the students] will encounter . . . without actually correcting them. That is the 'art' of the strategist . . . who must often choose between multiple contradictory solutions and approaches."<sup>32</sup> The model is focused on influencing actor behavior necessary to achieve desired objectives. The model begins by considering ways to reach national-level strategic objectives. Resources are considered and will shape the strategy, but the students can start to develop an optimal strategy shaped by ways rather than at starting what is available.

To determine how to allocate resources, force structure, and force posture, the students on each team must draft a strategy. For the U.S. forces, the strategy only involves the DOD. Any national security strategy takes a whole-of-government approach, but the game limits the United States to the DOD to reinforce learning objectives. The game is based on the U.S. strategy. Therefore, it is optimal to play the game near the end of the academic year after the students have had enough of the curriculum at a war college to play *Hedgemony* in a meaningful way.

Additionally, as previously mentioned, one of the course directors at MCWAR role-played as the president to guide the students to develop a strategy. The role-playing president does not seek to influence the strategy but instead acts as a facilitator to ensure that the strategy is sound and realistic. Additionally, the facilitator must set clear learning objectives. The learning objectives can reinforce learning objectives from previous courses and a measure against a PME institution's program outcomes. For example, in one of the rounds, North Korea met its objectives, thereby winning the game. North Korea's strategic objectives were well thought out by the red team, informed by a regional expert, and judged to be highly realistic and likely. The interesting thing was that North Korea's objectives were not unrealistically radical, which allowed North Korea to achieve its objectives without much notice or resistance by the blue team or other red team countries. North Korea won because the blue teams did not fully understand North Korea's limited strategic objectives. Additionally, the North Korean problem set was neither well understood nor communicated by the blue teams. In this case, the entire class was able to see the errors made by the blue teams, debrief the reasons for the errors, and continue the game informed by the errors and with a better understanding of the complex nonlinear nature of strategy.

#### Conclusion

One of the issues with *Hedgemony* is that the game was designed around the 2017 world. This means that some scenarios and conditions for victory are no longer relevant, and there are scenarios and victory conditions that are relevant but are missing. Faculty members and facilitators can make changes to the game by updating some scenarios to meet learning objectives. The game, however, is complicated and relies on the facilitators having adequate experience in force development and force management. Facilitators should not underestimate the complexity of developing new scenarios but should develop them to meet the learning objectives outlined by the chairman of the Joint Chiefs of Staff.

The chairman of the Joint Chiefs of Staff, through the chairman's staff, directs PME institutions to leverage wargames and exercises. The purpose of this article is not to recommend that senior PME institutions need to exclude traditional wargames and exercises focused on battlefield maneuvering. However, instead, they should include those games and exercises that emphasize the national defense challenges facing the Joint Chiefs of Staff, the Service chiefs, and the combatant commanders and meet the *Officer Professional Military Education Policy* requirements.<sup>33</sup> The *Officer Professional Military Education Policy* outlines six Joint learning areas (JLA), all of which can be assessed in a culminating game of *Hedgemony*.<sup>34</sup> The Marine Corps War College incorpo-

rated *Hedgemony* into its curriculum and successfully leveraged it to provide deeper insight and ingenuity in formulating strategy, managing defense resources, and protecting the interests of the United States in a dynamic security environment.

An entire academic year curriculum is needed to educate officers in all of the JLAs. However, there is an opportunity to observe the students' ability to integrate and apply the JLAs in a strategic setting. This article is not a pitch for Joint professional military education (JPME) institutions to rush out and purchase *Hedgemony*. It is an evaluation of the game that the MCWAR faculty and students played in 2021. More importantly, while many of the wargames played in PME institutions are excellent at manifesting creative and innovative campaign-level play, *Hedgemony* is heavily focused on strategy. A war college student cannot think linearly in terms of Ends + Ways + Means = Strategy and successfully play *Hedgemony*. Students must comprehend current world events, national strategy, threats, interests, risks, and assumptions in a complex interactive system. Therefore, the gameplay results, the lessons learned, and a constructive after-action review will be an indictment on not just the students but on the war college's efficacy of its curriculum and faculty.

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