

A New Look at the Theories of Operational Art and the Levels of Warfare

A Monograph

by

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Abstract

A New Look at Operational Art and the Levels of Warfare Theories, by Maj Chad A. Buckel, 51 pages.

Theory is a critical component of military thinking and doctrine. It underpins how the United States views, comprehends, and acts within the strategic environment. The Joint Force views warfare through the lens of the 'Levels of Warfare' model and the Theory of Operational Art. These theories relate to and interact with political, strategic, operational, and tactical theories to form a complex environment that the Joint Force must view, understand, and act within. By reviewing and revising these theoretical constructs and their relationships, the Joint Force Commanders can better see and understand the environment's emergent properties to aid understanding, modeling, and decision making. This study shows that operational art is more than the use of elements to design major operations and campaigns, it is a way of thinking that uses mindset, methods, and methodologies to affect an opposing system by denying its aim, reducing its options, disrupting its synergy and function, overloading its processes, and disrupting its equilibrium and cohesion. It makes five specific deductions. First, each military theory is separate and distinct with its own logic and use but cannot be viewed or used in isolation from the others. Second, the current 'Levels of War' model misapplies and misrepresents how these theories interact. Third, the theory of operational art is currently misunderstood in the American military, as it has been linked with operational theory (the operational level of war), which causes practitioners to use the theory in an improper manner. Fourth, the linear model (levels of warfare) must be updated to represent all of the complex linkages and relationships between each theoretical sphere. Finally, operational art is a mindset of beliefs, behaviors, and practices used to manage the connections between each of the other theoretical spheres and uses methods and methodologies to affect other systems in pursuit of strategic advantage and political power.

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Abbreviations

ADP	Army Doctrine Publication
FM	Field Manual
JP	Joint Publication
MCDP	Marine Corps Doctrinal Publication
US	United States

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Introduction

Theory is a critical component of military thinking and doctrine. It underpins how the US views, comprehends, and acts within the strategic environment. This monograph is fundamentally about theory and more specifically about the theory of operational art. It explores how the Joint Force views warfare and demonstrate how the theory of operational art is related to and interacts with political, strategic, operational, and tactical theories. Increased understanding of operational art prepares commanders and their staffs (the operational artists) to better understand how the military instrument of power can be applied in novel ways to contribute to political and strategic objectives.

This study makes five specific deductions. First, each of the above theories are separate and distinct entities with their own logic and use but cannot be viewed or used in isolation from each other. Second, the current 'Levels of War' model misapply and misrepresent how these theories interact. Third, the theory of operational art is currently misunderstood in the American military, as it has been linked with operational theory (the operational level of war), which causes practitioners to use the theory in an improper manner. Fourth, the linear model (levels of warfare) must be updated to represent all the complex linkages and relationships between each theoretical sphere. Finally, operational art is a mindset of beliefs, behaviors, and practices used to manage the connections between each of the other theoretical spheres and uses methods and methodologies to affect other systems in pursuit of strategic advantage and political power.

This monograph capitalizes on established research and reexamines the existing body of evidence regarding the theory of operational art. It focuses on the development of the theory of operational art in context of its relationship to other theories, then redefines what operational art should entail and how it should be applied and practiced. Next, it suggests a new framework for how the Joint Force Commander should view warfare to synchronize its four component theories: political, strategic, operational, and tactical. It provides a needed evolution of the current theory of

operational art into a new construct that helps the operational artists (the Commander and his Staff) interface with policy makers, strategists, and tacticians.

Each of the theories in this study is examined independently to gain a baseline of what they are, what they are attempting to explain, and how they tend to work in practice. While time is spent explaining the purpose of theory and describing political, strategic, operational, and tactical theories, most of this study focuses on the theory of operational art. This is done for several reasons: first, it helps establish the base line of what the American theory of warfare is, since this idea stems from the combination of each of the above theories. Second, it enables a better understanding of each individual part, to show how the parts interact, before examining the whole. Finally, this method allows the Joint Force Commander to fully understand the context and use of the theory of operational art; thereby, allowing them to refine the theory's structure, use, and utility.

The Joint Force views warfare as a three-rung ladder, with the tactical level on the bottom, the operational level in the center, and the strategic level on top.¹ This theoretical construct has served the Joint Force since the 1980's with the adoption of the operational level of war into US doctrine. It serves as the fundamental model of the United States' theory of warfare.² By constructing these theories into a linear top-down model, the Joint Force creates a cognitive anchor that does not reflect the fluid and dynamic nature of war, even though this dynamic is well understood within the force. This model also corresponds with and supports the current definition and theory of operational art, one that confounds its four component theories.

The current way the Joint Force thinks about and practices the theory of operational art and its model of warfare are rooted in America's industrial and expeditionary nature and heavily shaped by Cold War practices. A review and revision of both theories and their relationships to each other allows the Joint Force Commander to formulate a more complete understanding of how each theory

¹ Joint Staff. Joint Publication 1-0, *Doctrine for the Armed Forces of the United States. Incorporating Change 1* (Washington, DC: Government Publishing Office, 2017), I-7.

² United States Army. Field Manual 100-5, *Operations* (Washington, DC: Government Publishing Office, 1986), 9.

functions in relation to the others and how these relationships can enhance the commander's (operational artist's) understanding of the environment. In theory, the Joint Force Commander understands that tactical actions can have immediate operational, strategic, and policy effects (of varying degrees), but American doctrine fails to illustrate this phenomenon. The current model indicates a stratified system of effects, with tactical actions having to pass through operational effects before impacting the strategic level. This failure is due to what Daniel Kahneman calls "theory-induced blindness: once you have accepted a theory...it is extraordinarily difficult to notice its flaws."³ The Joint Force must evolve beyond the theoretical underpinnings of its doctrine and update its model and definition of operational art to better equip its commander's in achieving US national objectives.

The purpose of this study is to introduce a new theoretical construct that describes the interplay of policy, strategy, and tactics through the lens of the theory of operational art. For a theory to be successful, it must provide answers over time and across a wide range of cultures and circumstances. This study seeks to update the theory of operational art into a more mature and practical construct that can serve the Joint Force Commander. It also seeks to aid the policy maker, strategist, tactician, and operational artists by introducing a new model and theory of warfare, one that compliments a new theory of operational art. Ultimately, it seeks to educate and influence US military thinking and doctrine and to aid its warfighters in their pursuit of achieving national objectives.

The intended audience for this study is the Joint Force Commander and his staff and the policy makers that they serve. For the Joint Force to properly fulfill its purpose, operational artists must understand each theory that shapes their thinking and how those theories interact to create and explain the strategic environment. Therefore, this monograph delivers a new model, informed by

³ Daniel Kahneman, *Thinking, Fast and Slow* (New York: Farrar, Straus and Giroux, 2011), 277.

theory, to serve as a starting point for policy makers, strategist, operational artists, and tacticians to speak on equal ground.

The significance of this study is that it presents a model to integrate different yet intimately interconnected theories. It also presents an updated definition and understanding of the theory of operational art, one that focuses on the relationships and emergent properties of each component theory. This study argues that the most important aspect of the theory of operational art is not the “how” aspect, but the “why” aspect. It argues for a focus on the connections and relationships between the component theories and not the “things to do” within them.

The Joint Force’s linear model of warfare is no longer sufficient to achieve its desired political and strategic aims. The world, and the warfare it produces, is too complex for a linear model to be effective. To ensure success, the Joint Force must arm every echelon of leadership with a mental construct of how warfare manifests itself and how their actions and decisions can and will affect American interests and policy objectives.

To avoid confusion, this study provides definitions of several key concepts discussed throughout the paper. They are critical to the theories presented in this monograph. Though no stated definition of these exists, this study examines current doctrine and academic scholarship to determine their meanings. Political, strategic, operational, and tactical theories are defined later in the text during each of these theories’ reviews.

The Joint Force theory of warfare refers to how the US conducts military operations, in conjunction with civil actions, to achieve its political objectives. This study suggests that the US theory of warfare is its inherently joint and combined approach to warfare. The US has often used joint and combined forces and operations to pursue and achieve its policy objectives. The Joint Force model of warfare refers to how it views the application and interaction of political, strategic, operational, and tactical theories. Often known as the *Levels of Warfare* diagram, it is the linear and hierarchical model of the strategic, operational, and tactical levels of war presented in Joint

Publication (JP) 1 and JP-3.⁴ The Levels of Warfare model graphically depicts how the Joint Force views and treats each of the represented theories and their interaction. It is a theoretical framework that has a substantial impact on the military's thinking and represents a summation of a large body of theoretical work.

The hypothesis of this study is that the Joint Force is handicapping itself in how it views and practices operational art by constructing a linear model of war that does not depict the fluid and dynamic nature of conflict. This model affects not only how the Joint force interprets the relationship between tactics, operations, and strategy, but it also negatively affects how the military thinks of policy and interacts with its civilian leaders as a tool of policy. By creating a model that breaks the linear paradigm and allows for a mental construct that can account for the fluid nature of war and the speed with which actions and decisions interact, the Joint Force can optimize the use of operational art.

This study has a few key limitations. Primarily, the author is unable to speak with many of the original theorists of operational art. As such, it relied on a modern understanding of their work with an attempt to place their ideas in context with their historical and cultural meaning. A second limitation is the narrow use of primary sources. To mitigate this limitation, the researcher collected a large volume of secondary sources. This was useful because secondary sources informed how the Joint Force interpreted the theory of operational art and how it placed it into doctrine.

This study relies on two assumptions. The first assumption is that political, strategic, operational, and tactical theories possess their own logic and framework, which shapes how the Joint Force interprets the strategic environment. That assumption allows this study to update the current theory and model of the strategic environment to better explain how this environment works. The second assumption is that the interactive and dynamic nature of the strategic environment is governed by complex social connections that lead to an infinite number of possible

⁴ Joint Publication 1-0, *Doctrine*, I-7 / Joint Staff. Joint Publication 3-0, *Joint Operations* (Washington, DC: Government Publishing Office, 2017), II-11.

outcomes. This assumption allows for the removal of prescriptive elements of the theory of operational art and shows that descriptive elements can be introduced to better explain and anticipate how this environment functions over time.

Methodology

This study used historical review and path dependency methods to collect, analyze, and present data.⁵ The historical review method was used to research and collect information on the various theories relevant to this study. The path dependency method was used to trace the evolution of the theories and establish how these developments have and continue to influence current American understanding of them. This methodology allows the study to suggest different ways to advance the American practitioner's understanding and utilization.

This study also used two different methodologies to explore the various theories and their relationships. It first takes a reductionist approach, exploring the logic of each individual theory. This approach explores the parts of the whole to gain an understanding of how the parts work. This study then takes a holistic approach to gain insight on how each theory, or part, interacts with the others. Then it seeks out relationships in a systems theory manner, for it is in the relationships between the theories that one finds the essence of operational art. As with any complex system, the Joint Force model of warfare and understanding of operational art must account not just for the parts (theories, levels, or spheres) but also the relationship between the parts, the collective behavior that they exhibit, and the effect of this behavior on the environment.⁶

Research and data collection for this study utilized secondary and doctrinal sources. Data collection focused on the theory aspects of operational art history and the context in which that theory and its constituent theories developed. Secondary sources focused on provided data from third party analysis of the theorists and other author's analysis and use of such theories. Doctrine

⁵ Scott Page, "Path Dependence" in *Quarterly Journal of Political Science*; Jovita J. Tan, *Historical Research: A Qualitative Research Method* (San Francisco, CA: Academia.edu).

⁶ Yaneer Bar-Yam, *Making Things Work Solving Complex Problems in a Complex World* (Cambridge, MA: Knowledge Press, 2004), 24-26.

was used to understand past and current use of the theory of operational art within the Joint Force. Research also focused on how the American theory of operational art interacts with the current three Levels of Warfare model and how this interaction forms and shapes the United States theory of warfare.

This monograph sought to answer the following research question: How does the current US theory and model of warfare effect its cognitive process when thinking about and practicing operational art? This study uses two sub-questions to guide research, frame analysis, and provide insights into theory development and use. The first sub-question asks, what should the American theory of operational art be and how does it serve America's way of war? The second sub-question asks, what is the future of American operational art and what is the role of the American operational artist?

This study is divided into five parts. The first part is a literature review that explores the past and current understandings of what operational art is and does. The second part presents definitions and explanations of the four component theories that interact with the theory of operational art. The third part discusses the current paradigm and why it fails to accurately model and explain reality. The fourth part presents a new model of warfare and the fifth part discusses a new understanding of operational art.

Literature Review

The literature used to support this monograph focused on how the Joint Force interprets the theory of operational art today and how past theorists defined the subject. The theory of operational art and the concept of an operational level of war was not a theoretical notion until the 1920s and 1930s in Soviet Russia.⁷ Numerous studies have suggested that the concept and practice of this theory appeared before its conceptual naming, specifically with the French Revolution and

⁷ Bruce W. Menning, "Operational Art Origins," in *Historical Perspectives of the Operational Art* (Washington, D.C.: Center of Military History, 2005), 3.

Napoleonic Wars, the Mexican American War, the American Civil War, and the Wars of German Unification.⁸

It is important to note that the theory of operational art and the Joint Force model of warfare, as with any social or political science theory, must contend with other theoretical frameworks. The first such theory is Robert Putnam's Two-Level Game theory.⁹ In this article, Putnam posits that any international negotiation or deal must conform to acceptable domestic and international terms.¹⁰ This theory has major implications on the relationships between all of the theories used in a model and employed by the operational artist. Another theory that must be accounted for is Peter Berger and Thomas Luckmann's Social Construction of Reality theory.¹¹ This theory argues that societies construct their realities and knowledge through a process of institutionalization, legitimation, and internalization by using language, symbols, tradition, roles, and primary and secondary education.¹² This theory is important because how the Joint Force constructs its models and defines the interactions and relationships of those models, influences how it views itself and its environment.

JP-3, Army Doctrinal Publication (ADP) 3-0, and Field Manual (FM) 3 state, "Operational art is the cognitive approach by commanders and staffs—supported by their skill, knowledge, experience, creativity, and judgment—to develop strategies, campaigns, and operations to organize and employ military forces by integrating ends, ways, and means."¹³ JP-5 adds "and evaluating

⁸ Krause and Phillips, *Historical Perspectives*; Shimon Naveh, *In Pursuit of Military Excellence The Evolution of Operational Art Theory* (Abingdon, Oxon: Frank Cass Publishers, 1997); Clayton R. Newell and Michael D. Krause, *On Operational Art* (Washington, D.C.: Center of Military History, U.S. Army, 1994); John Andreas Olsen and Martin van Creveld, *The Evolution of Operational Art* (New York: Oxford University Press, 2011); James J. Schneider, "The Loose Marble—And the Origins of Operational Art." *The US Army War College Quarterly* (1989).

⁹ Robert D. Putnam, "Diplomacy and Domestic Politics: The Logic of Two-Level Games" in *International Organization* (MIT Press, 1988).

¹⁰ *Ibid*, 427.

¹¹ Peter L. Berger and Thomas Luckmann, *The Social Construction of Reality*. (New York: Anchor Books, 1966).

¹² *Ibid*, 1-18.

¹³ Joint Publication 3-0, *Joint Operations*, II-3; US Department of The Army. United States Army. Army Doctrinal Publication 3-0, *Operations* (Washington, DC: Government Publishing Office, 2019), 2-1; US Department of The Army. United States Army. Field Manual 3-0, *Operations* (Washington, DC:

risk” to the definition.¹⁴ This definition begins by recognizing that operational art is a cognitive process, a mindset. It then says that operational art is used to develop strategies, campaigns, and operations to organize and employ forces by using the current American strategy making model: ends, ways, and means. The inclusion of strategy development is interesting, as this is the role of the strategists, not the operational artist. These nuanced aspects are important later in the study.

The 1986 edition of FM 100-5 had a different approach. It stated that, “Operational art is the employment of military forces to attain strategic objectives in a theater of war or theater of operations through the design, organization, and conduct of campaigns and major operations.”¹⁵ This definition states that campaigns and major operations are used to achieve strategic objectives within a defined theater and does not outline a specific model to be used. NATO’s definition of operational art is, “The employment of forces to attain strategic and/or operational objectives through the design, organization, integration and conduct of strategies, campaigns, major operations and battles.”¹⁶ This definition focuses on the why of operational art, the attainment of strategic or operational objectives while also demanding that the why be accomplished through the production of strategies, campaigns, operations, and battles. This means that operational art not only spans each theory, but that the artists must do the job of a tactician and strategist.

Theoretical Framework – The Theory of Operational Art and the Levels of Warfare

Aleksandr Svechin stated that, “[t]he art of conducting military operations cannot be divided by any clear boundaries into completely independent and delineated sections.”¹⁷ The starting point of this theoretical framework is the model used by US forces to represent the interplay of three theories. JP 1 outlines a linear construct for the three levels of warfare with strategic on

Government Publishing Office, 2017), 1-20.

¹⁴ Joint Staff. Joint Publication 5-0, *Joint Planning* (Washington, DC: Government Publishing Office, 2020), xii.

¹⁵ Field Manual 100-5, *Operations*, 10.

¹⁶ Allied Administrative Publication 06, Edition 2019, *NATO Glossary of Terms and Definitions* (Brussels: NATO Standardization Office, 2019), 93.

¹⁷ Aleksandr A. Svechin, *Strategy* (Minnesota: East View Information Services, 2004), 67.

top, operational in the center, and tactical on the bottom.¹⁸ JP 3-0 states that, “Three levels of warfare—strategic, operational, and tactical—model the relationship between national objectives and tactical actions.”¹⁹ FM 100-5 mentioned the levels of war but did not provide a definition or framework for them.²⁰ Understanding warfare as a tiered linear construct anchors almost every thought of warfare and military action, just as the levels of warfare construct permeates each of these theories.

G.S. Isserson, states that operational art is not a guide to action, yet is a way of thinking, one that “presupposes freedom of methods and forms which should be carefully chosen each time to fit a concrete situation.”²¹ Brigadier General Huba Wass de Czege states that, “[o]perational art is not a level of war, or the art of generalship. It is what goes on in the explorer’s mind, the mediating and balancing interaction between his strategic and tactical reasoning.”²² Michael Krause describes it as simultaneously tactical and strategic, used to create “...a vision of unity of action on the battlefield that ultimately achieves a strategic objective.”²³ It is interesting to note that these theorists view operational art as a mindset using methods and forms to fit each unique situation and not as adhering to a set list of maxims.

Mikhail Tukhachevskiy recognized that the character of war changes with time, place, and technology and that armies may no longer be vulnerable to destruction in a single battle.²⁴ Svechin described operational art by stating that it “...dictates the basic line of conduct of an operation, depending on the material available, the time which may be allotted...the forces which may be deployed...and the nature of the operation itself.”²⁵ James Schneider refines this theory by stating

¹⁸ Joint Publication 1, *Joint Operations*, I-7.

¹⁹ Joint Publication 3-0, *Joint Operations*, I-12.

²⁰ Field Manual 100-5, *Operations*, 56.

²¹ G. S. Isserson, *The Evolution of Operational Art*, Translated by Bruce W. Menning. (Fort Leavenworth: Combat Studies Institute Press, 2013), 5.

²² Huba Wass de Czege, “Thinking Like and Early Explorer: Operational Art is not a Level of War” *Small Wars Journal* (2011), 3.

²³ Krause and Phillips, *Historical Perspectives of the Operational Art*, vi.

²⁴ US Department of The Army. United States Army. Art of War Colloquium, *New Problems in Warfare by Mikhail Tukhachevskiy*. (US Army War College, 1983), 60-61.

²⁵ Svechin, *Strategy*, 69.

that operational art is, "...the integration of temporally and spatially distributed operations into one coherent whole."²⁶ These theorists describe operational art in terms of time and space.²⁷

Clayton Newell views the operational level of war and operational art as synonymous.²⁸ He further argues that this theory is key in modern warfare because it integrates tactical capabilities to strategic objectives by planning and conducting campaigns.²⁹ In their study of operational art, John Olsen and Martin van Creveld discuss the theory of operational art as the grey zone between strategy and tactics.³⁰ They continue to argue that operational art encompasses the theory and practice of planning and executing operations and campaigns in pursuit of strategic and operational objectives within a theater.³¹ These theorists focus their theory on the use of a campaign by the operational artist to achieve strategic objectives within a defined space.

Michael Matheny contends that the "story of modern American operational art is the story of joint operations..."³² Milan Vego argues that operational art "...occupies an intermediate and indispensable position between policy and strategy on the one hand, and tactics on the other."³³ He further argues that operational art's main role is to "...sequence and synchronize...the employment of military forces and nonmilitary sources of power to accomplish strategic and operational objectives."³⁴ Here theorists argue that the theory of operational art encompasses joint and non-military use of power.

²⁶ James J. Schneider, "The Loose Marble—And the Origins of Operational Art.", 87.

²⁷ For a more in-depth and complete understanding of Soviet thinking and execution of operational art via their deep battle concept, refer to a copy of Alexander Hill's *The Red Army and the Second World War*. This volume does an incredible job of not just outlining how Soviet thinking progressed, but places their theory of operational art in context of their political, strategic, operational, and tactical problem sets. It also does a masterful job of describing and detailing how the Soviet theory was put into practical use.

²⁸ Newell and Krause, *On Operational Art*, 3.

²⁹ Ibid, 10-11.

³⁰ Olsen and van Creveld, *The Evolution of Operational Art*, 1.

³¹ Ibid, 1.

³² Michael R. Matheny, *Carrying the War to the Enemy: American Operational Art to 1945* (Oklahoma: University of Oklahoma Press, 2011), xvi.

³³ Milan Vego, *Operational Warfare* (New Port, RI: The Naval War College, 2000), 1.

³⁴ Vego, *Operational Warfare*, 1.

The above literature review provides some insight into the historical trends of the theory of operational art. Broad themes, such as mindset, methods, time, space, campaigns, joint and inter-governmental, and the use of tactics to achieve strategy are used to describe what operational art is and does. Although these are but a few theorists, represented by a limited number of passages, the highlighted themes hold true with other theorists and are indicative of how the theory of operational art is considered and applied.

Component Theories

Operational art, like any art form, must by its nature change with the time, materials, artists, and social and environmental factors that inform it. Therefore, historians and theorists constantly debate “when” operational art first appeared and “what” constitutes operational art to begin with. It grew out of other well established and matured theories and continues to evolve in concert with these older theoretical constructs. The four theories below are critical to the theory of operational art and cannot be divorced from each other. While each has its own logic and function, each logic cannot properly fulfill its purpose without a proper interface with the other theories. Once each theory is understood on its own, this study shows how, when combined, their emergent logic can best be understood from a different, non-linear model. These theories collectively form a system that includes the theory of operational art.

Theory

What is a theory? According to Mary Jo Hatch, a theory is “a set of concepts whose proposed relationships address a phenomenon of interest, either by offering an explanation or by enhancing understanding or appreciation of it.”³⁵ She goes on to describe concepts as “basic building blocks of theory” and that theory is a “set of concepts whose relationships are used to explain, understand, or appreciate the phenomenon of interests the theorist wants to address.”³⁶

³⁵ Mary Jo Hatch, *Organizational Theory: Modern, Symbolic, and Postmodern Perspectives 4th Edition* (Oxford, United Kingdom: Oxford University Press, 2018), 9.

³⁶ Hatch, *Organizational Theory*, 5.

Everett Dolman argues that theory is used to shape the perception of the world around us.³⁷ Alan Lamborn describes theory as an intellectual framework that must generate positive heuristics that lead to other theoretical relationships.³⁸ Colin S. Gray describes a theory as something that “provides a unifying context of relevant concern” and cannot be predictive but should aid in anticipation.³⁹ Theory starts with observed phenomenon that evolves into conceptual approaches and finally ends in a coherent theory to explain the observed environment. In this study, theory means a set of concepts addressing a phenomenon of interests that is used to shape and inform how one views the world and interacts with it.

Political Theory (Policy and Interests)

There are many volumes of work dealing with the subject of political theory. For the purposes of this study, political theory narrowly refers to policy and interests at the national level and does not discuss the subject writ large. This study defines interests and policy to better understand political theory’s interaction with the theory of operational art. Joint Doctrine defines interests as “those fundamental, enduring conditions a state chooses to pursue.”⁴⁰ It goes on to define three types of interests: vital, important, and peripheral, each with its own level of importance to the state.⁴¹ Harry Yarger offers a definition of interest as “desired end states categorized in terms such as survival, economic well-being, favorable world order, and enduring national or group values.”⁴² When referring to interests, this study means those objectives that the state seeks to achieve to survive and thrive in the domestic and international political environment.

³⁷ Everett Carl Dolman, *Pure Strategy Power and Principle in the Space and Information Age* (New York: Routledge, 2005), 188.

³⁸ Alan C. Lamborn, “Theory and Politics in World Politics” (Wiley on behalf of The International Studies Association, 2014), 190.

³⁹ Colin S. Gray, *Theory of Strategy* (Oxford, United Kingdom: Oxford University Press, 2018), 10.

⁴⁰ US Department of Defense. Joint Staff. Joint Doctrine Note 1-18, *Strategy*. (Washington, DC: Government Publishing Office, 2018), vii.

⁴¹ Joint Doctrine Note 1-18, *Strategy*, II-3 to II-4.

⁴² Harry R. Yarger, *Strategic Theory for the 21st Century: The Little Book on Big Strategy*. (Carlisle, PA: U.S. Army War College, 2006), 6.

Marine Corps Doctrinal Publication (MCDP) 1-1 describes politics as “the process by which power is distributed in any society...”⁴³ It also states that policy is a pattern of action used to achieve an objective.⁴⁴ Nathan Finney describes policy as “an expression of politics within the external security environment, often bounded by the national interests at hand.”⁴⁵ Yarger describes policy as “the expression of the desired end state sought by the government...the clear articulation of guidance for the employment of the instruments of power towards the attainment of one or more objectives or end states.”⁴⁶ Politics, and therefore policy, are continuous, they do not stop and they do not end. As such, policies are continuously evolving and adapting to the changes in the body politic (society) and the environment. In this study, policy is the expression of the state’s desired objectives, through guidance, to achieve power and influence in the pursuit of its national interests.

Strategic Theory

Strategic theory is as old as organized warfare. Along with tactical theory, strategic theory is one of the first frameworks developed to discuss war and its use. Modern definitions are based on an evolution of strategic theory from ancient Greece to modern Joint Publications. Many modern-day writers separate Grand Strategy from Military Strategy. This study does not. It treats the subject inclusively in its definition and discussion. JP 1 defines strategy as “a prudent idea or set of ideas for employing the instruments of national power in a synchronized and integrated fashion to achieve theater and multinational objectives.”⁴⁷ Carl von Clausewitz defines strategy as “the use of engagements for the object of the war.”⁴⁸ Svechin saw strategy as both an art and a theory. As an art, he described strategy as “the art of combining preparations for war and the

⁴³ US Department of The Navy. United States Marine Corps. Marine Corps Doctrinal Publication 1-1, *Strategy* (Washington, DC: Government Publishing Office, 1997), 11.

⁴⁴ MCDP 1-1, *Strategy*, 39.

⁴⁵ Nathan K. Finney, *On Strategy: A Primer* (Fort Leavenworth: Combat Studies Institute Press, 2020), 6.

⁴⁶ Yarger, *Strategic Theory for the 21st Century*, 7.

⁴⁷ Joint Publication 1, *Doctrine for the Armed Forces of the United States*, I-7.

⁴⁸ Carl von Clausewitz, *On War*. Edited by Michael Eliot Howard and Peter Paret (New Jersey: Princeton University Press, 1989), 128.

grouping of operations for achieving the goal set by the war for the armed forces.”⁴⁹ He goes on to state that strategy dictates the employment of forces and the use of national resources to achieve the war aims.⁵⁰ As a theory, he recognized its arrival during the same period that political economy developed, linking the development and maturation of political theory and strategic theory.⁵¹ The above theorists focus on strategy’s use on obtaining the war’s aims through the use of national instruments of power and the engagement.

Finney argues that the term strategy is best understood as “the threat or use of force for political purposes.”⁵² He also argues that strategy provides the “why,” translates military means to political ends, and bounds and limits military actions to create desired political conditions.⁵³ Frans Osinga addresses strategic theory in his opus on John Boyd. In it, Osinga argues that strategy “...tells one how to conduct a war, or how to achieve political objectives, using the military instrument”, concluding that strategy changes “...tactical performance into strategic effect...in the service of policy.”⁵⁴ These theorists focus on strategic theory’s utility in advancing policy and political gain, specifically with use of tactical actions.

Everett Dolman argues that strategy is not concerned with winning or losing, that war is only one part of political competition and that victory has no meaning in strategy; concluding that the outcomes of battles are but moments in time and that the strategist is primarily concerned with the “...favorable continuation of events.”⁵⁵ Yarger states that “strategy at all levels is the calculation of objectives, concepts, and resources within acceptable bounds of risk to create more favorable outcomes than might otherwise exist by chance or at the hands of others.”⁵⁶

⁴⁹ Svechin, *Strategy*, 69.

⁵⁰ Ibid, 69.

⁵¹ Ibid, 70.

⁵² Finney, *On Strategy*, iii.

⁵³ Ibid, 3-4.

⁵⁴ Osinga, *Science, Strategy, and War*, 9-10.

⁵⁵ Dolman, *Pure Strategy*, 5.

⁵⁶ Yarger, *Strategic Theory for the 21st Century*, 1.

Colin S. Gray describes strategy as “a quality, perhaps a value, that needs to be added to tactical realities.”⁵⁷ He argues that strategic theory is timeless, but that strategies themselves must be about consequences, since it is made up of tactical and operational actions.⁵⁸ He further argues that strategy is “really about the legacy value that has been earned tactically and possibly operationally.”⁵⁹ These theorists view strategic theory through a ‘conditions’, ‘advantage’, and ‘legacy’ lens and tie strategic and tactical theories together in a symbiotic relationship. B. H. Liddell Hart defined strategy as “the art of the general” and argued that its success depends on “sound calculation and coordination of the end and the means.”⁶⁰ This theory shows the beginning of the ends, ways, means model used by the current Joint doctrine.

Like policy, strategy is evolutionary, continuous, and not concerned with victory and defeat, only advantage and consequences. Strategic theory is non-linear and does not necessarily reflect a cause-and-effect dichotomy. This link of continuity, evolution, and constant quest for advantage explains why tactics continuously evolve and why the theory of operational art must account for dynamic and chaotic environment. For this study, strategy is defined as a nation’s attempt to gain relative advantage against an opponent(s), in pursuit of policy aims and interests, within time, space, and context, through the setting of conditions and management of consequences by the use of actions.

Operational Theory

Operational theory spawned the operational level of war within the Joint Force. Operational theory was developed to explain war’s progression from the strategy of a single point and decisive battle to distributed battles over time and space seeking decisive results. The Soviets were the first to identify this theory and credited its inception to the German Field Marshal Helmuth von

⁵⁷ Gray, *Theory of Strategy*, 16.

⁵⁸ Ibid, 17.

⁵⁹ Ibid, 18.

⁶⁰ B. H. Liddell Hart, *Strategy* (Hawthorne, CA: BN Publishing, 2008), 127.

Moltke.⁶¹ Isserson argued that a deep operation was “...a complicated system that amalgamates all combat efforts into a single centralized and unified complex of actions along a front and in the depths, on land and in the air.”⁶² He further explains that operations should influence the enemy on a tactical scale and that they should involve “...the crushing power of a direct tactical blow.”⁶³ Finally, he describes an operation as “...a weapon of strategy...”⁶⁴ Edward Luttwak states that the operational dimension pursues “...the goals set by theater strategy through suitable combinations of tactics.”⁶⁵ These theorists view operational theory as a tool of strategy to connect and control tactical actions and inform strategic thought.

Svechin states that an operation is “...a conglomerate of quite different actions...” and combines the preparation of logistics, movement, maneuver, and combat to achieve the “...capture or holding of a certain line or geographical area.”⁶⁶ Michael Matheny seems to tie operational art and operational theory together, and argues that the operational level of war deals with “...logistically supportable joint and combined-phased operations...”⁶⁷ Vego also defines operational theory in the same context as operational art, arguing that operational art is both an art and science.⁶⁸ He argues that operational warfare, what this study calls operational theory, is focused on “...the theater-wide employment of combat forces and logistics.”⁶⁹ He further argues that operational theory encompasses operational command and control, fires, protection, logistics, and sustainment and that theory must “...deal with each war and each age on its own terms...”⁷⁰ These theorists make three main arguments. First, they argue that operational art and operational theory are one in the same. Secondly, they argue that the joint operation is the essence of modern

⁶¹ Isserson, *The Evolution of Operational Art*, 11-12.

⁶² Ibid, 5.

⁶³ Ibid, 5.

⁶⁴ Ibid, 12.

⁶⁵ Edward N. Luttwak, “The Operational Level of War,” (International Security Project Muse, Winter 1980/81), 61.

⁶⁶ Svechin, *Strategy*, 69.

⁶⁷ Matheny, *Carrying the War to the Enemy*, xiv.

⁶⁸ Vego, *Operational Warfare*, 2.

⁶⁹ Ibid, 4.

⁷⁰ Ibid, 8.

operational art. Finally, they argue that the modern-day Warfighting Functions manifest themselves with this theory.

Shimon Naveh equates operational theory as the military application of systemic design and describes operational theory as being founded and centered on warfare and not detached from it.⁷¹ Hew Strachan states that operational theory thinking was driven by militaries who were interested in thinking about war and not policy and that most thinkers of the time equated strategy with nuclear deterrence and therefore, saw operational theory as a politics free area of military operations.⁷² Strachan seeks to correct this theoretical mistake by stating that "...although operational doctrine must be congruent with strategy, it is not strategy itself."⁷³ He sees operational theory as a stand-alone theory from strategic and tactical theory and states that its American manifestation was in the 1980s with the invention of the operational level of war.⁷⁴ These theorists have different but important perspectives on operational theory. One sees it in the light of systems thinking and the other as being developed as a separate but equal theory from strategic and tactical. It is also noted that early theorists, many of whom conflate operational art and operational theory, sought a politics free area to practice military art. This basis caused a misapplication of theory and has led to the current model and thinking.

From the various theorists, it becomes clear that operational theory supports strategic and political theory by arranging and sequencing the effects of tactical actions on the environment or targeted system. These actions must be arranged in time, space, and sequence to produce a desired and specific effect, such as denying a system its intended aim or disrupting its function. Operational theory can then be used to not only generate these effects (consequences of tactical actions), but also to sequence these effects in time and space to create relative advantage and favorable conditions over an opponent within a given time and environment. Often, these effects have either

⁷¹ Naveh, *In Pursuit of Military Excellence*, 3.

⁷² Strachan, *The Direction of War*, 17-20.

⁷³ Ibid, 67.

⁷⁴ Ibid, 38.

a negative or positive aim, depending on what the operational artist is targeting and seeking to accomplish. Positive aims would constitute five general effects against a system or environment: deny its aim, reduce its options, disrupt its synergy or function, overload its processes, and disrupt its equilibrium or cohesion. Negative aims would seek to prevent an adversary from accomplishing these positive aims against a friendly system. These effects can be achieved through a multitude of methods (ways) and combinations of methods (methodologies). For this study, operational theory refers to the use of tactical actions, in time and space, to achieve effects against a system or environment to create desired conditions and consequences.

Tactical Theory

Tactical theory has been consistent throughout history. Its meaning and use have generally translated through time and culture. Carl von Clausewitz describes tactical measures as “...the manner in which the forces are to be used in the event of an engagement.”⁷⁵ He also links tactical theory to that of strategic theory when he stated that “[t]he original means of strategy is victory—that is, tactical success...”⁷⁶ Clausewitz clearly saw tactics as occurring in the action of the forces employed. Svechin agrees with Clausewitz, and states that, “[t]actical art is more closely related to battle requirements than the other components of military art.”⁷⁷ He further states that tactical theory equates to “technical topics” which are symbiotic with “modern battle conditions.”⁷⁸

Isserson links tactics and its evolution to the creation and evolution of operations and that tactics has a direct effect on strategy.⁷⁹ He also equates tactics to battle and the use of the military to apply force.⁸⁰ US doctrine also views tactics as “the art and science of winning battles and engagements.”⁸¹ Michael Matheny also sees tactics in the same light as the above theorists. He

⁷⁵ Clausewitz, *On War*, 130.

⁷⁶ *Ibid*, 143.

⁷⁷ Svechin, *Strategy*, 68.

⁷⁸ *Ibid*, 68.

⁷⁹ Isserson, *The Evolution of Operational Art*, 11-12.

⁸⁰ *Ibid*.

⁸¹ US Department of the Navy. United States Marine Corps. Marine Corps Doctrinal Publication 1-3, *Tactics* (Washington, DC: Government Publishing Office, 1997), 3-4.

states that, “[t]actics is the art of placing and employing weapons and combat units on the battlefield.”⁸² He further states that, “[t]he evolution of strategy and tactics is determined by social organization, technology, the size of armies, and the scale of warfare.”⁸³ Each of the above theorist links together strategic and tactical theory and argues that tactical theory is about the direct application of weapons and units.

Vego states that tactics “is both the art and science of planning, preparation, and employment of individual platforms, weapons and associated sensors, and combat arms to accomplish assigned tactical objectives...”⁸⁴ He further states that tactics can be influenced by politics, especially domestic politics.⁸⁵ Everett Dolman states that tactical thinking forms the realm of “individual actions and decisions” and that these actions and decisions are designed to culminate events in support of the political objectives.⁸⁶ Colin Gray states that tactics are military actions that often result in immediate consequences and that tactical actions have strategic consequences, since strategy is composed of tactical behavior.⁸⁷ Each of these theorists see tactics, strategy, operations, and policy as linked and dependent on each other to properly function.

For this study, tactics means influenced actions taken by forces within a given environment that seeks to create and combine effects against a system or environment for the purpose creating conditions that enable the accomplishment of campaigns and operational objectives.

The Current Paradigm

The above-mentioned authors and theorists compose but a fraction of the extensive work produced on these subjects. The important part of this review is the three trends that manifest themselves from these theorists. First, strategic and tactical theory are interlinked and cannot be considered in isolation from each other. Even though time, culture, definitions, and context have

⁸² Matheny, *Carrying the War to the Enemy*, 3.

⁸³ Ibid, 3.

⁸⁴ Vego, *Operational Warfare*, 6.

⁸⁵ Ibid, 6.

⁸⁶ Dolman, *Pure Strategy*, 5-7.

⁸⁷ Gray, *Theory of Strategy*, 7-10.

changed, these theories are consistent in remaining linked in their application and understanding. Second, operational theory is a tool of strategy that uses various methods to subordinate tactical actions to strategic need. This theory is much more convoluted in how and with what tools it uses but does remain consistent with how it is supposed to function. Finally, policy and politics are a constant influence on each of these theories and cannot be discounted.

From these three trends, this study makes five specific deductions. First, each of the above theories are separate and distinct entities with their own logic and use but cannot be viewed or used in isolation from each other. Second, the current Levels of War model misapplies and misrepresents how these theories interact. Third, the theory of operational art is currently misunderstood in the American military, as it has been linked with operational theory (the operational level of war), which causes practitioners to use the theory in an improper manner. Fourth, the linear model (levels of warfare) must be updated to represent all the complex linkages and relationships between each theoretical sphere. Finally, operational art is a mindset of beliefs, behaviors, and practices used to manage the connections between each of the other theoretical spheres and uses methods and methodologies to affect other systems in pursuit of strategic advantage and political power.

The Theory of Operational Art and the Levels of Warfare

Based on these deductions, the Joint Force must update its Levels of Warfare model and theory to fully appreciate each of these theories, their relationships, and how they function. Without correcting this mental construct, the various theories that comprise the Joint Force's mental model will continue to be misaligned and misused, for warfare is a summation of all its parts and not just the parts themselves. It is in understanding the parts and their function while observing their interactions and relationships that the operational artist becomes effective. Figure 1 shows how the Joint Force views the three levels of warfare as a stratified Venn diagram with the three levels laid out linearly. The 'operational level' is the only one to experience overlap with the other levels and national policy is subsumed into the strategic level. Despite Joint doctrine, and multiple theories

used by the military acknowledging that tactical actions have strategic and policy effects, its model separates the two with no interaction, save through the ‘operational level’.⁸⁸

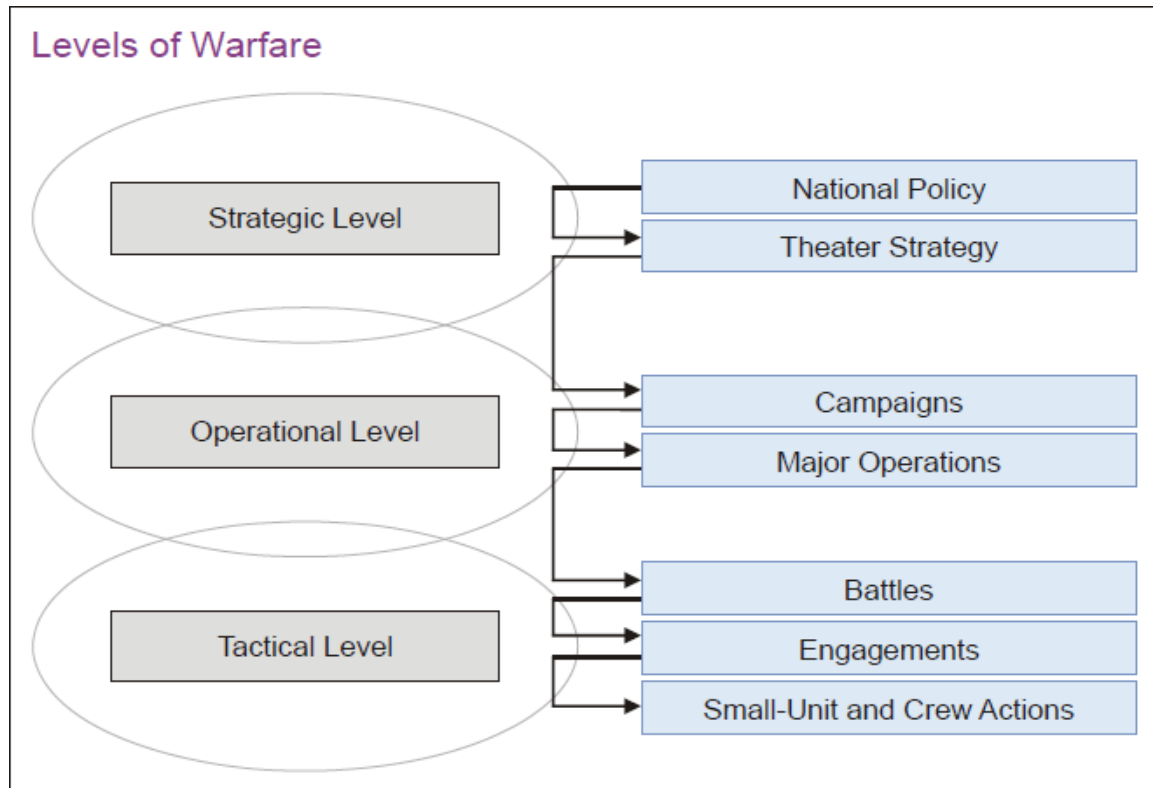


Figure 1. Levels of Warfare. Joint Staff. Joint Publication 1-0, *Doctrine for the Armed Forces of the United States*. Incorporating Change 1 (Washington, DC: Government Publishing Office, 2017), I-7.

It is important to recognize that two other corrections and modifications to this theoretical construct have been offered by two very accomplished and respected scholars. Edward Luttwak posits that the levels of war are actually levels of strategy, where he asserts that each level “...has its own reality but is rarely independent of other levels...”⁸⁹ His approach still sees a linear structure, the current paradigm, but sees each stratified level as a component of strategic theory and not separate theories interacting. Luttwak fully acknowledges that each level operates with its own

⁸⁸ Joint Publication 3, *Joint Operations*, I-12.

⁸⁹ Luttwak, *Strategy*, 87.

“reality” and must exist with the other levels, but still contends that they are governed by a common theory. This approach, although well-articulated, leaves several unaddressed issues.

Luttwak’s argument seeks to explain the current linear construct and how it operates but does not offer any compelling arguments as to why the structure functions better through the singular lens of strategic theory. He articulates many of the observed phenomenon of the current model and even admits that, “...the outcomes are not simply imposed in a one-way transmission from top to bottom because the levels interact with each other.”⁹⁰ He also lists five levels of strategy, further stratifying the current joint model, adding a technical level and dividing the strategic level into theater and grand strategy.⁹¹ This additional stratification of the linear model, although designed to better articulate the issue each level is meant to address, only further moves tactical actions away from strategic and policy effects and further conflates strategic theory with political theory.

Some of military history’s most renowned theorists warn us not to make the above-mentioned mistakes. The first mistake is delinking strategic and tactical theories. Clausewitz states that, “[the] original means of strategy is victory-that is, tactical success...” and further argues that “...strategy is directly linked to tactical action.”⁹² Liddell Hart agrees with Clausewitz and states that, “...tactics is an application of strategy on a lower plane...”⁹³ Colin Gray posits that “[t]he general theory of strategy recognizes explicitly that it is made from...a tactical level of military theory.”⁹⁴ Gray, like Luttwak, uses the linear level paradigm but shows that strategic and tactical theories are linked by further arguing that strategy is about managing tactical consequences.⁹⁵ Both theorists fail to explain this intricate link, save saying that they interact.

⁹⁰ Ibid, 89.

⁹¹ Ibid, 89-90.

⁹² Clausewitz, *On War*, 143; 210.

⁹³ Hart, *Strategy*, 127.

⁹⁴ Gray, *Theory of Strategy*, 16.

⁹⁵ Ibid, 17.

The second mistake is the conflating and joining of political and strategic theory. Svechin states, "...the claim that politics is superior to strategy is universal in nature" and that bad policy cannot be rescued by good strategy.⁹⁶ Svechin further argues, in a full chapter, that political maneuvering and negotiation must continue during war, and that strategy and military actions must be separate and subordinate from political actions.⁹⁷ Liddell Hart states that, "[t]he object in war is to attain a better peace...[h]ence it is essential to conduct war with a constant regard to the peace you desire."⁹⁸ With this, Hart distinguishes between political theory (a better peace) and the use of war to attain that goal (strategy). Colin Gray recognizes this separation when he argues that strategy relies on policy formulation as a critical starting point and emphatically states that, "...political ends, which are policy, are the most significant trigger for all that follows in strategy."⁹⁹ Yarger further solidifies this point by stating that strategy advances state interests, based on policy, by using the nation's instruments of power and that strategy's role is to influence the strategic environment to achieve policy-driven objectives.¹⁰⁰ With these counter-points in mind, the Luttwak model is incomplete. His model certainly offers new and relevant insights, but does not fundamentally explain the shortcomings of the Joint Force's current model.

Another distinguished theorist, Milan Vego, offers a different model to better explain how the various theories interact. In his seminal work, *Operational Warfare*, he offers another Venn diagram, but one that is not hierarchical.¹⁰¹ In his diagram, the overlapping circles are arranged into an upside-down triangular shape, with strategy on the top left, tactics on the top right, and operational art on the bottom center. He further labels strategy and operational art as military art

⁹⁶ Svechin, *Strategy*, 85.

⁹⁷ Ibid, 145.

⁹⁸ Hart, *Strategy*, 136.

⁹⁹ Gray, *Theory of Strategy*, 42.

¹⁰⁰ Yarger, *Strategic Theory*, 6.

¹⁰¹ Vego, *Operational Warfare*, 3.

and tactics and operational art as military science.¹⁰² This model is labeled, not as the levels of war, but as military art.

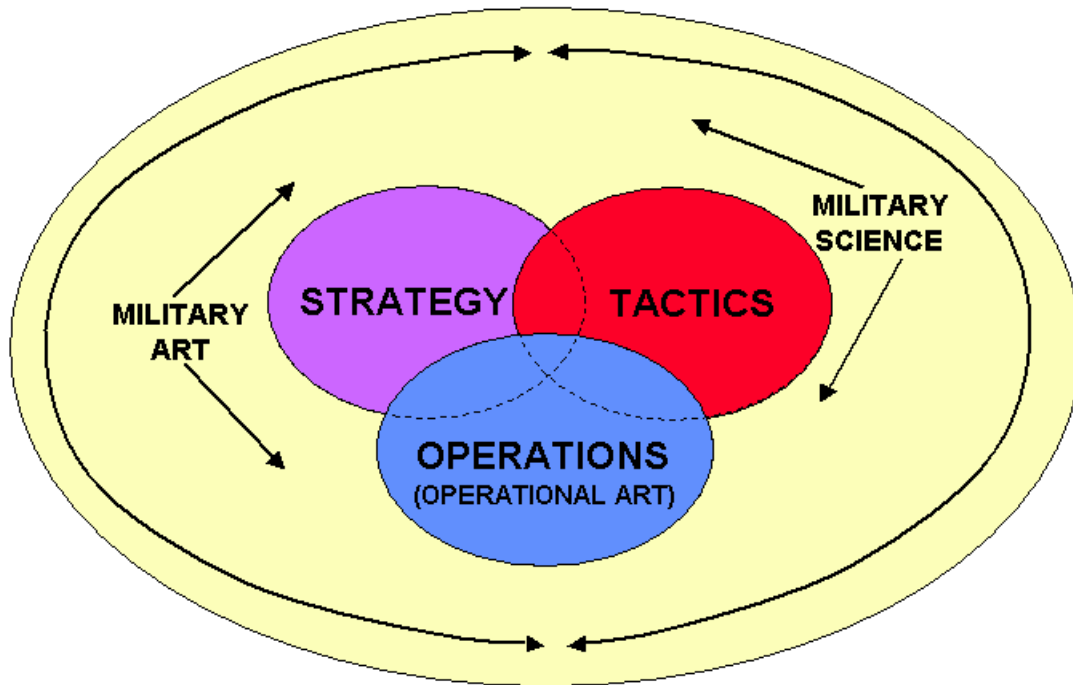


Figure 2. Military Art. Milan Vego, *Operational Warfare* (New Port, RI: The Naval War College, 2000), 3.

With this model, Vego gets closer to addressing some of the glaring deficiencies with the current Joint model. His model deals only with military theory and recognizes that a hierarchical model is dysfunctional and is demonstrating the fluidity and overlap of each sphere. Where he errs is in excluding policy from his model and conflating operational theory and operational art. The separating of policy and strategy has been argued under Luttwak's model and applies to this model too. Political and strategic theory are separate theories, with their own logic, purpose, and use and cannot be confused as one in the same. The second error is his use of operational art as a sphere and not an operational sphere. This is odd, in that his massive work is a treatise on operational theory, discussing its factors, functions, elements, methods, planning, and leadership.¹⁰³

¹⁰² Vego, *Operational Warfare*, 3.

¹⁰³ Vego, *Operational Warfare*, iii-iv.

One of the founders of the US theory of operational art, Huba Wass de Czege, wrote an article in 2011 stating that operational art is not a level of war.¹⁰⁴ In this article, he argues that tactical and strategic logic are separate but must act in concert with each other and that operational art is not a level of war, as was depicted in the 1980's US model of warfare; it is in fact another word for campaigning.¹⁰⁵ In saying this, Wass de Czege makes some important insights. He recognizes that the art does not lie in a stratified level, yet lies in the mind of the operational artist (the explorer in his article), who uses the campaign and its subsidiary operations, to link tactical actions and consequences to create strategic conditions and advantages.¹⁰⁶ This would indicate two things; first is that operational theory is a sphere but operational art is not and second, that operational art is a way of thinking and a pattern of thought, not a set of rules to follow.

Vego and Luttwark make several important contributions to the body of theory surrounding operational art and the 'levels of warfare' construct. They recognize the intricate links between the theories, even if their models do not show this well. They also recognize that each theoretical sphere has its own logic and function and that the theory of operational art and the operational artist must account for these functions. However, both fail to address the fundamental issues with the Joint model that it is stratified and does not include policy within its considerations.

By combining the conclusions gained from analyzing the other proposed theoretical models and this study's five deductions, this study can assert that operational art is a mindset that allows a practitioner to harmonize political, strategic, operational, and tactical theories to create strategic advantage and accomplish policy objectives. These various theories interact with each other in a non-linear manner, as part of a whole that is recognized during conflict. Each theory acts as an element within a whole, forming a system. Operational art does this through the use of actions (tactical) to create effects in time, space, and purpose (operational), so that the artist can set

¹⁰⁴ Wass de Czege, *Thinking and Acting*, 1.

¹⁰⁵ Ibid, 1-4.

¹⁰⁶ Ibid, 2-4.

conditions to gain relative advantage over an adversary (strategic) in pursuit of power and influence (political), to ensure national success and survival (interest).

Operational and Systems Theory

Traditional American operational theory is based on Jominian and Clausewitzian theories, often interpreted and reinterpreted by theorist such as Mahan, Corbett, Svechin, and Hart, among others, and often include various checklists, such as elements, characteristics, and tenants. The commonality of these theories forms what Vego called operational thinking or classical military thought.¹⁰⁷ Many of these traditional ideas are reflected in US Joint and service doctrine. This study does not expound upon classical operational theory, other than to acknowledge that it exists, that it dominates most western thinking on warfare, and that it offers many time tested and relevant observations. This form of thought stands in contrast with a more recent structure, systems thinking, which has made an episodic impact on US Joint thinking within the last three decades.

Systems theory was introduced to the US military in the 1930s when the US Army Air Corps planners developed their theory of strategic bombing.¹⁰⁸ This line of thought saw that militaries and societies were a set of complex system of systems, comprising of nodes and links, and if influenced properly, could produce a shock that would force the system to change and lose its normal functionality.¹⁰⁹ This line of thinking has created the current systemic design method within planning, which actively seeks to find key nodes (critical vulnerabilities) to attack for maximum effect.

In his piece, “What is a System,” Alex Ryan defines a system as, “...a representation of an entity as a complex whole open to feedback from its environment.”¹¹⁰ He believes that a system is a representation of an observed reality or phenomenon and functions best as an idealization,

¹⁰⁷ Vego, *Systems versus Classical*, 43.

¹⁰⁸ Ibid, 41.

¹⁰⁹ Ibid, 41-42.

¹¹⁰ Ryan, “What is a system”, 28.

concluding that “...the systems movement is an attempt to understand organization...”¹¹¹ In a separate piece, he argues that systemic design consists of three levels: mindset, methodology, and methods.¹¹² His argument of systems design is that of a cognitively initiated and driven practice that is not defined by set processes or checklists, but through a way of viewing, thinking about, and approaching a challenge. It is one that is governed by a flexible mental model and not by a rigid and set piece mentality.

There are strengths and weaknesses to each model of thinking, with staunch proponents on each side of the debate. Each model and theory offer clues and insights for an operational artist to use in pursuit of his strategic and policy aims. It is because of this recognition of value for each theory, that the Joint Force currently employs aspects of each theory into its doctrine and tries to harmonize these bi-polar theories. Vego argues that operational thinking is rooted in the human factors of warfare; that war is a social interaction and cannot be boiled down to an exact science or accurately predicted.¹¹³ He further argues that systems thinking is akin to a scientific approach that focuses on the whole and not the parts to predict how inputs into the system effect outputs within the system.¹¹⁴ This thinking is in line with Max Wertheimer, Kurt Koffka, and Wolfgang Kohler’s Gestalt Theory that states humans seek order out of disorder by seeing individual parts as a whole.¹¹⁵ Vego’s thoughts are indicative of the classical operational approach theory, one which warrants merit and enjoys a long history of continuity. Alex Ryan agrees that systems theory complements scientific traditions but believes that a focus on the whole system and not just its parts allows for a better understanding of its behavior.¹¹⁶ He also argues that a system is a representation

¹¹¹ Ryan, “What is a system”, 28-30.

¹¹² Ryan, “A Theory of Systemic Design”, 1.

¹¹³ Vego, *Systems versus Classical*, 43-46.

¹¹⁴ Ibid, 43-46.

¹¹⁵ Interaction Design Foundation. *Gestalt principles* (interaction-design.org).

¹¹⁶ Ryan, “What is a system”, 2.

of reality and not the reality itself.¹¹⁷ This distinction allows the practitioner to view the system as a whole to determine its function, processes, purpose, and equilibrium.

Both theories have their champions within the Joint Force and both theories represent valuable aspects that the Joint Force seeks to capitalize on; however, much like warfare, neither theory offers an absolute truth. Both should be used to devise a new theory of warfare and operational art, to synchronize and harmonize all of the theories that inform modern warfare. The final section of this study does just that; it suggests a new model of warfare and theory of operational art.

The Evolved Model of Warfare

The above research and analysis have established some key findings critical to the formulation of a new model and theory of operational art. The first finding is that a theory of warfare is a conglomeration of multiple interacting theories (political, strategic, operational, and tactical). The second finding is that a link has always, and must continue to, exist between policy, strategy, and tactics. The third finding is that a linear model of warfare, especially one that inserts a 'level' between strategy and tactics, constrains practitioner thinking and misapplies the theories that exist within warfare. The fourth finding is that each theory exists within a complex, open system, where inputs and outputs into one theoretical sphere, can and will create inputs (influence) into each of the other theoretical spheres simultaneously. The force of those inputs and their effect on each sphere vary depending on the condition of the system. The fifth and final finding is that systems thinking, when applied to the theory of operational art, removes characteristics and elements, and replaces them with mindset, methods, and methodologies.

Current doctrine teaches that operational art is comprised of certain elements, but the history and practice of the theory shows us that this is an incomplete way of viewing operational art. It is true that these elements can be found throughout many historical campaigns, but so can

¹¹⁷ Ryan, "What is a system", 27.

many other maxims that exist within doctrine. These maxims are manifestations of something deeper, not of a way of doing, but of an approach to thinking and analyzing. They are merely tools used by commanders who understand how to read their situation and bring resources to bear to create a favorable outcome. The Army Design Methodology (ADM) calls for a similar approach. As with the current Operational Art definition, ADM calls for “...critical and creative thinking to understand, visualize, and describe...”¹¹⁸ The doctrine lists out four activities and seven key concepts to use within ADM.¹¹⁹ These maxims try to steer the practitioner towards a mindset, a pattern of thought, habits, and values.

These findings, from across time, culture, and context, lead to a new model and theory that the Joint Force should apply to current strategic and operational challenges. Adhering to both classical and systems theory, the Joint model of warfare (‘the levels of warfare’) must reflect the reality it is intended to represent. To be accurate, this reflection cannot be a linear model, as in Joint doctrine. It also must be inclusive of the theories that interact within the reality being modeled and how their relationships exist daily. Figure 2 provides a model that achieves this goal.

¹¹⁸ US Department of The Army. United States Army. Army Techniques Publication 5-0.1, *Army Design Methodology* (Washington, DC: Government Publishing Office, 2015), 1-3.

¹¹⁹ Army Techniques Publication 5-0.1, *Army Design Methodology*, 1-3 to 1-5.

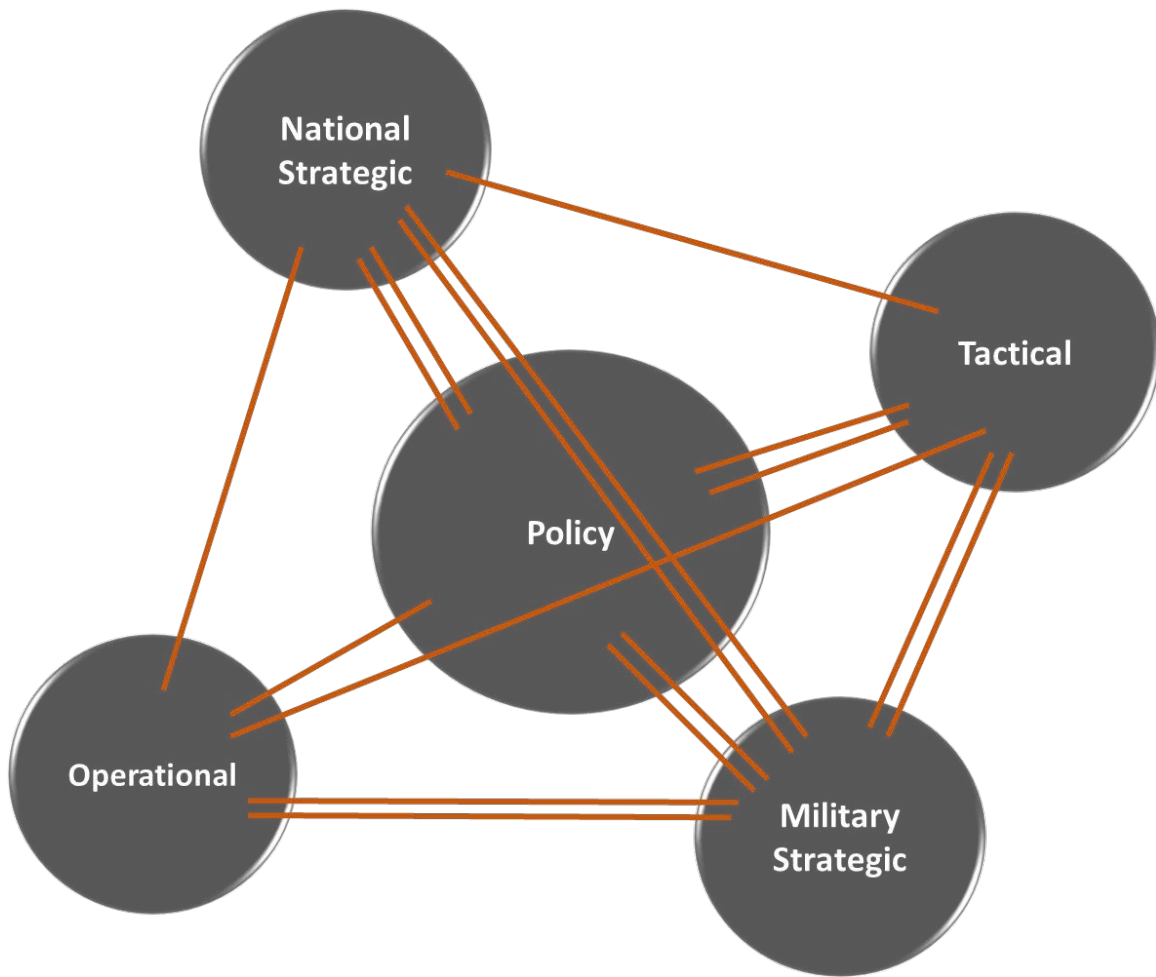


Figure 3. Evolved Model of Warfare. Maj Chad A. Buckel.

This model abandons the linear construct for a model that is three dimensional, allowing for a proper representation of the interaction that occurs between the various theories involved. It is a systems model that allows the practitioner to properly frame the complex and interconnected nature of his reality. Each theory is represented by its own sphere, with policy rightfully possessing the center point. It also allows the user to visualize how actions (inputs and outputs) into one sphere can influence the other spheres. By establishing links, some normal (single line) and some strong (double lines), it enables the practitioner to visualize and illustrate how actions can have different effects across the model, with single bonds having less consequential or immediate impacts than double bonds. The model recognizes and acknowledges what past theorists have told us: war is complex, unpredictable, and can only be understood in context, time, and environment. With this

model, the theory of operational art can be fully and appropriately applied, by seeing operational art as the synchronization of the bonds between each sphere.

By placing operational art within the context of this model, this study can now address what American operational art is, how it can evolve, and how an operational artist can use it. The current definition states that operational art is a “...cognitive approach...” that is “...supported by skill, knowledge, experience, creativity, and judgment...”, and is used to “...develop strategies, campaigns, and operations...” to “...organize and employ military forces...”¹²⁰ This definition does not support the body of historical or theoretical evidence that exists. The ‘cognitive approach’ points to a mindset, something this study agrees with. It has also shown that the theory of operational art does not develop strategies but serves strategy and policy. The evidence has also indicated that operational art uses military force to create effects that can be exploited to serve policy, it does not simply organize and employ. If this is not what operational art is, then what is it?

The Evolved Theory of Operational Art

Operational art is a mindset that uses methods and methodologies to leverage harmony amongst the various theoretical spheres to achieve strategic and policy objectives. This achievement of harmony is the art in the form of systems thinking, since every single situation is unique, even if many aspects are similar.

The mindset of operational art is the most important aspect; for it allows the operational artist to think in a manner that properly frames and makes sense of chaotic and complex situations. The behaviors, beliefs, and practices that make up this mindset are broad and can be different for each artist. It acknowledges that each situation exists within its own context and that solutions must be creative, unique to its specific problem, and that results often diverge from intended consequences. Even though each artist’s mindset is influenced by culture, environment,

¹²⁰ Joint Publication 3-0, *Joint Operations*, II-3.

technology, and language, some important trends can be observed. A habit of thought consisting of an open and inquisitive mind that is willing to experiment, explore, and err; yet is anchored to the needs of the policy objectives, the reality imposed by the environment and situation, the nature of war, and resources available with which to work are the hallmarks of an operational artists mindset. Since the environment is dynamic, the artist too must possess a dynamic mind, one able to bend with the environment and to develop and use tools creatively to solve problems.

Methods are a procedure or technique for accomplishing something. They are the observable physical manifestations of the theories handed down to us from theorists such as Jomini and Clausewitz. They are contextual and normative in nature and provide a solid foundation from which an artist can apply and combine in unique and creative ways to achieve a stated goal. In current Joint Doctrine and in historical examples, this is what the Joint Force recognizes as maxims: tenants, elements, forms, aspects, and principles. The Elements of Operational Art, Joint Warfighting Functions, Leadership Principles, and Forms of Maneuver are but just a few examples of methods used by practitioners to apply military force in pursuit of political and strategic aims. It is the combination of these methods, into unique groupings, that form operational art's methodologies and, when applied correctly, are guided by an operational artist's mindset to address unique problems and impose changes on a targeted environment or system.

Methodologies are ideas and ways; they are abstract in nature. Since a methodology is a grouping of methods, operational art methodology must be descriptive and not proscriptive. It must explain what needs to occur and not how or by what manner. There are no set rules to developing methodologies since there are no set rules for how societies evolve, view, and translate their political and strategic environment, and choose to interact with them. As such, there are five methodologies of operational art that describe the desired outcomes or effects on a system that are sought. These five methodologies are: affect an opposing system by denying its aim, reducing its options, disrupting its synergy and function, overloading its processes, and disrupting its equilibrium and cohesion. Since each system is unique to its particular time, environment, and

context, each one of these methodologies must manifest themselves into different combinations of methods, each with different degrees of effect. Therefore no two battles, operations, or campaigns can be identical, even though they may have some similarities.

The Artist and the Art

The above framework supports the operational artist in three ways: by properly defining who the artist is; by making key distinctions on the utility of theory in practical use; and by establishing an anchoring mechanism that properly models reality.

The first utility of this theory is describing who the operational artist is and why it matters. Operational theory tells us that the operation and campaign are the primary vehicles by which a practitioner achieves strategic and political objectives. This would indicate that the commander and his immediate staff, in charge of a named operation or campaign, are in fact the operational artists. This means that operational theory and the theory of operational art can be practiced by any echelon of command, so long as that commander is tasked with executing an operation or campaign. As such, current Joint doctrinal thinking that labels echelons of command as tactical or operational is misguided and a byproduct of the misapplication of theory via the stratified 'levels of warfare' model. Once the Joint Force acknowledges that an operational artist is the 'owner' or commander of an operation or campaign, then the force can deliberately institutionalize and organize towards this artist. Under the current US organizational chart, this would indicate a component or Task Force commander. Once this occurs, then the Joint Force can determine what organizations can conduct operations and campaigns (depending on the mission type and scope) and ensure that the commanders of these organizations are properly trained and staffed to accomplish this task, potentially requiring a change in staffing models and the current train, man, equip models.

The second utility of this theory is explaining the key distinctions of theory in practical use. If operational art is a mindset that uses habits of thought and non-prescriptive approaches, then maxims, such as elements and characteristics, do not belong to the theory of operational art, but belong to operational theory. The art is not in the maxims; it is in their unique combinations and

use. This conclusion is an important nuance. Operational art is not constrained by any specific form or method and does not have to weigh or balance any specific checklist to be successful. The artist is free to engage his challenges with any combinations of methods that he believes are required to gain success. With a focus on mindset, an anchoring on strategy and policy, and a new mental model to visualize from, the operational artist can exercise disciplined initiative, be unpredictable, and outthink an opponent. By adopting a systems approach to thinking, the artist can use the theory to frame, explain, effect and manipulate his reality, better aligning the actions of the Joint Force to the needs of the commander and body politic.

The third utility of this theory is to establish a framing mechanism that properly models reality and enables broad thinking. By providing a model that can be molded to fit an artist's reality and a theory that talks about managing the relationships between each sphere, the artist is given tools that enable what Joint Doctrine is calling for, critical thinking and unique applications against complex problem sets. This tool can be used to understand the past, frame the present, and provide feasible options for future actions, from both a friendly, neutral, and enemy perspective. This model can also interact with many of the other theoretical models in use by the military, to include John Boyd's OODA Loop, Army Design Methodology, Joint Design, the Joint and service planning processes, and campaign design. The model provided by this study enables an artist to understand, visualize, describe, and direct.¹²¹

¹²¹ Army Techniques Publication 5-0.1, *Army Design Methodology*, 1-2.

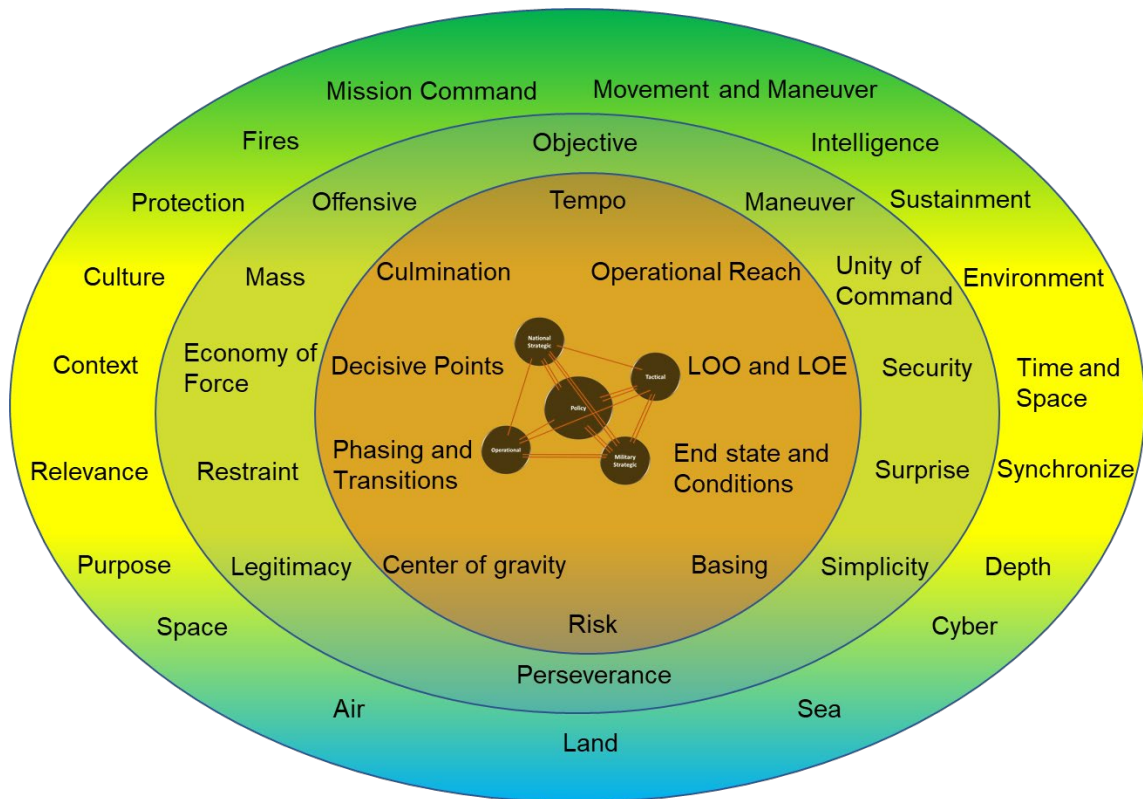


Figure 4. Operational Art. It is not the maxims that matter. It is the relationships of those maxims to each other, in context with the specific situation that the artist faces that matters. Maj Chad A. Buckel.

This study has examined the theories that apply to conflict, described how each theory interacts with each of the others, introduced a new model to show this interaction, introduced a new concept for the theory of operational art, defined who the operational artist is, and provided an explanation for the utility of the above model and theory. With this done, this study can propose an evolved definition of operational art. Operational art is a mindset that leverages the relationships between the policy, strategy, operations, and tactics of us and our adversary, through the use of consequences and conditions within a given time, space, environment, culture and context (campaigns and operations within a theater), to gain a relative advantage over an opponent and achieve policy or strategic objectives. This definition considers past and current definitions, the various theories and their place within warfare, and the conclusions of this study. It is an evolution of the American understanding of warfare yet is designed to explain the theory's essence and

history. It recognizes the primacy of policy and strategy without interposing itself onto their theoretical constructs and logic. Most importantly, it focuses on the linkages and connections between the theoretical spheres and not on a particular theory or sphere.

Conclusion

This study sought to analyze and learn from the various theories that compose warfare, to reevaluate the Joint Force's logic of its Levels of Warfare model and its understanding of operational art. It showed that each theory has its own logic, is rooted in classical and systems operational theory, and that each theory is intrinsically linked to each other in bounded relationship. Even though each sphere is governed by its own logic and serves its own purpose, they cannot exist or function properly without the inputs from each other. By viewing them as a whole, the study was able to draw out how they interact and co-exist with each other. Next, by searching other theoretical models, presented by accomplished and acclaimed theorists, this study was able to determine the strengths and weaknesses of each to formulate a stronger and more enduring model. Finally, this study produced such a model, proposed a more complementary understanding of what operational art is, described how operational art uses the relationships represented in the mental model, and proposed a more complete description of how operational art can be used (through its five methodologies) to design operations and campaigns to achieve strategic and political objectives.

There are several implications associated with the findings. The first is related to doctrine. The Joint Force needs to refine its doctrine, at both the Joint and Service level. The second is related to who the operational artist is. This study identified the campaign or operation owner, the commander, and his immediate staff, as the operational artists. The implications of this acknowledgment are that the Joint Force would need to invest in leader development to ensure that assigned commanders and staffs have appropriate education and depth of understanding to properly function in this role. The third implication is a continued outreach to other governmental

departments and allies. If doctrine and understanding change, specifically in the Joint Force's model of warfare and theory of operational art, then it will require its adjacent organizations to adopt a similar understanding and lexicon. This includes an increased outreach and education of political leaders and may require a Presidential Decision Directive to have other departments adopt these findings. It also includes engaging with NATO and other allies to gain consensus and change the Alliance doctrine and thinking.

Finally, this study will require further research to confirm its theoretical assertions. Further historical research into recent campaigns and operations are needed to confirm if the proposed model and understanding of operational art are consistent with practical execution. Further research will also be needed to ensure that this study's findings can support and work in concert with Joint and service level concepts. By integrating the findings of this study into Joint Doctrine, nesting it with Joint, Service, and other department concepts, and incorporating it into Allied thinking, the US can posture itself to better view, understand, decide, and act within its environment at every echelon.

BIBLIOGRAPHY

- Baer, George W. *One Hundred Years of Sea Power*. Stanford: Stanford University Press, 1994.
- Bar-Yam, Yaneer. *Making Things Work Solving Complex Problems in a Complex World*. Cambridge, MA: Knowledge Press, 2004.
- Berger, Peter L. and Thomas Luckmann. *The Social Construction of Reality*. New York: Anchor Books, 1966.
- Biddle, Stephen and Jeffery A. Friedman. *The 2006 Lebanon Campaign and the Future of Warfare Implications for Army and Defense Policy*. Strategic Studies Institute, 2008.
- Boyd, John R. *A Discourse on Winning and Losing*. Edited. By Dr. Grant T. Hammond. Maxwell AFB: Air University Press, 2018.
- Clausewitz, Carl von. *On War*. Edited by Michael Eliot Howard and Peter Paret. New Jersey: Princeton University Press, 1989.
- Corbett, Julian S. *Some Principles of Maritime Strategy*. London: Filiquarian Publishing, 1911.
- Czege, Huba Wass de. "Thinking Like and Early Explorer: Operational Art is not a Level of War" *Small Wars Journal* (2011), accessed August 4, 2020, <https://smallwarsjournal.com/jrnl/art/operational-art-is-not-a-level-of-war>.
- Dolman, Everett Carl. *Pure Strategy Power and Principle in the Space and Information Age*. New York: Routledge, 2005.
- Echevarria, Antulio J. "Strategic Anarchy and the American Way of War*" *Infinity Journal*, Volume 6, Issue 3 (Winter 2019): 10-21, accessed August 1, 2020, <https://www.militarystrategymagazine.com/volume/6/issue/3/>.
- Evans, David C. and Mark R. Peattie. *Kaigun Strategy, Tactics, and Technology in the Imperial Japanese Navy 1887-1941*. Annapolis: Naval Institute Press: 1997.
- Finney, Nathan K. *On Strategy: A Primer*. Fort Leavenworth: Combat Studies Institute Press, 2020.
- Gat, Azar. *A History of Military Thought from the Enlightenment to the Cold War*. Oxford, United Kingdom: Oxford University Press, 2001.
- Georgii Samoilovich Isserson. *The Evolution of Operational Art*. Kansas: Combat Studies Institute Press, 2013.
- Gray, Colin S. "Can Strategy be Taught?" *Infinity Journal*, Volume 6, Issue 3 (Winter 2019): 4-8, accessed August 1, 2020, <https://www.militarystrategymagazine.com/volume/6/issue/3/>.
- . *Theory of Strategy*. Oxford, United Kingdom: Oxford University Press, 2018.

- Harrison, Richard W. *Architect of Soviet Victory in World War II*. Jefferson, North Carolina: McFarland and Company, 2010.
- Hart, B. H. Liddell. *Strategy*. Hawthorne, CA: BN Publishing, 2008.
- Hatch, Mary Jo. *Organizational Theory: Modern, Symbolic, and Postmodern Perspectives 4th Edition*. Oxford, United Kingdom: Oxford University Press, 2018.
- Hill, Alexander. *The Red Army and the Second World War*. Cambridge, United Kingdom: Cambridge University Press, 2017.
- Hogan Jr., David W. *Defeat into Victory Battling Japan in Burma and India 1942-1945*. New York, NY: Cooper Square Press, 2000.
- Hornfischer, James D. *Neptune's Inferno The U.S. Navy at Guadalcanal*. New York, NY: Bantam Books, 2011.
- Hughes, Daniel J. *Moltke on the Art of War*. New York: Ballantine Books, 1993.
- Huntington, Samuel P. *The Soldier and the State The Theory and Politics of Civil-Military Relations*. Cambridge, Massachusetts: The Belknap Press, 1957.
- Interaction Design Foundation. *Gestalt principles*. Accessed on December 8, 2020, <https://www.interaction-design.org/literature/topics/gestalt-principles>.
- Isserson, G. S. G. S. *Isserson and the War of the Future*. Translated and edited by Richard W. Harrison. Jefferson, North Carolina: McFarland and Company Inc., 2016.
- . *The Evolution of Operational Art*. Translated by Bruce W. Menning. Fort Leavenworth: Combat Studies Institute Press, 2013.
- Kahneman, Daniel. *Thinking, Fast and Slow*. New York: Farrar, Straus and Giroux, 2011.
- Krause, Michael D. and R. Cody Phillips. *Historical Perspectives of the Operational Art*. Washington, D.C.: Center of Military History, 2005.
- Kinnard, Douglas. *The War Managers Thirtieth Anniversary Edition*. Annapolis, Maryland: Naval Institute Press, 1979.
- Lauer, Stephen. "Blue Whales and Tiger Sharks: Politics, Policy, and the Military Operational Art." *The Strategy Bridge* (2018), accessed August 2, 2020, <https://thestrategybridge.org/the-bridge/2018/2/20/blue-whales-and-tiger-sharks-politics-policy-and-the-military-operational-artist>.
- Lamborn, Alan C. "Theory and Politics in World Politics" Wiley on behalf of The International Studies Association. (2014), accessed August 2, 2020, <http://www.jstor.org/stable/3013931>.
- Leonhard, Robert R. *Fighting By Minutes Time and the Art of War*. San Bernardino, CA, 2017.

- Luttwak, Edward N. *Strategy The Logic of War and Peace*. Cambridge, Massachusetts: The Belknap Press, 2001.
- . “The Operational Level of War,” *International Security Project Muse* (Winter 1980/81), accessed May 15, 2020, <https://muse.jhu.edu/issue/23594>.
- Matheny, Michael R. *Carrying the War to the Enemy: American Operational Art to 1945*. Oklahoma: University of Oklahoma Press, 2011.
- Mattelaer, Alexander. *The Crisis in Operational Art*. Brussels: Chatham House, 2009.
- McPherson, James M. *Ordeal by Fire The Civil War and Reconstruction*. New York, NY: McGraw-Hill Higher Education, 2001.
- Michael D. Krause and Cody Phillips. *Historical Perspective of the Operational Art*. Washington, D.C.: Center of Military History, U.S. Army, 2005.
- Millett, Allan R., Peter Maslowski, and William B. Feis. *For the Common Defense 3d Ed*. New York: Free Press, 2012.
- Naveh, Shimon. *In Pursuit of Military Excellence The Evolution of Operational Art Theory*. Abingdon, Oxon: Frank Cass Publishers, 1997.
- Newell, Clayton R. and Michael D. Krause. *On Operational Art*. Washington, D.C.: Center of Military History, U.S. Army, 1994.
- North Atlantic Treaty Organization. Allied Administrative Publication 06, Edition 2019, *NATO Glossary of Terms and Definitions*. Brussels: NATO Standardization Office, 2019.
- Olsen, John Andreas and Martin van Creveld. *The Evolution of Operational Art*. New York: Oxford University Press, 2011.
- Osinga, Frans P. B. *Science, Strategy, and War The strategic theory of John Boyd*. New York, NY: Routledge, 2007.
- Page, Scott, “Path Dependence” in *Quarterly Journal of Political Science*, 1, pp. 87-115, accessed October 4, 2020, <https://web.archive.org/web/20160629130434/http://dev.wcfia.harvard.edu/sites/default/files/Page2006.pdf>, 2006.
- Paret, Peter. *Makers of Modern Strategy*. Princeton, New Jersey: Princeton University Press, 1986.
- Prados, John. *Islands of Destiny The Solomons Campaign and the Eclipse of the Rising Sun*. New York, NY: Penguin Group, 2012.
- Putnam, Robert, D. “Diplomacy and Domestic Politics: The Logic of Two-Level Games” in *International Organization*, Vol. 42, No. 3 (Summer, 1988), pp. 427-460, accessed August 5, 2020, <http://www.jstor.org/stable/2706785>.
- Rosenau, James N. *The Scientific Study of Foreign Policy*. London: Frances Printer, 1980.

- Ryan, Alex J. *A Theory of Systemic Design*. Norway: Systemic Design Association (2013): <https://systemic-design.net/wp-content/uploads/2013/12/Ryan.pdf>.
- . *What is a Systems Approach?* Ithaca, New York: Cornell University, 2008.
- Schneider, James J. "The Loose Marble—And the Origins of Operational Art." *The US Army War College Quarterly* (1989), accessed August 12, 2020, <https://press.armywarcollege.edu/parameters/vol19/iss1/26>.
- . *Vulcan's Anvil: The American Civil War and the Foundations of Operational Art*. Fort Leavenworth: Presidio Press, 1994.
- Stoker, Donald. *Why America Loses Wars*. New York: Cambridge University Press, 2019.
- Strachan, Hew. *The Direction of War*. Cambridge: Cambridge University Press, 2013.
- Svechin, Aleksandr A. *Strategy*. Minnesota: East View Information Services, 2004.
- Tan, Jovita J. *Historical Research: A Qualitative Research Method*. San Francisco, CA: Academia.edu, 2015, accessed October 4, 2020, https://www.academia.edu/24276932/HISTORICAL_RESEARCH_A_QUALITATIVE_RESEARCH_METHOD
- Tse-tung, Mao. *On Protracted War*. The Maoist Documentation Project, 2004, accessed August 13, 2020, https://www.marxists.org/reference/archive/mao/selected-works/volume-2/mswv2_09.htm.
- . *Problems of Strategy in China's Revolutionary War*. The Maoist Documentation Project, 2004, accessed August 13, 2020, https://www.marxists.org/reference/archive/mao/selected-works/volume-2/mswv2_09.htm.
- Tukhachevskiy, Mikhail N. *New Problems in Warfare*. Fort Leavenworth: US Army War College, 1983.
- US Department of Defense. Joint Staff. Joint Doctrine Note 1-18, *Strategy*. Washington, DC: Government Publishing Office, 2018.
- . Joint Staff. *Joint Concept for Integrated Campaigning*. Washington, DC: Government Publishing Office, 2018.
- . Joint Staff. Joint Publication 1-0, *Doctrine for the Armed Forces of the United States*. Incorporating Change 1. Washington, DC: Government Publishing Office, 2017.
- . Joint Staff. Joint Publication 3-0, *Joint Operations*. Washington, DC: Government Publishing Office, 2017.
- . Joint Staff. Joint Publication 5-0, *Joint Planning*. Washington, DC: Government Publishing Office, 2020.

- US Department of The Army. United States Army. Army Doctrinal Publication 3-0, *Operations*. Washington, DC: Government Publishing Office, 2019.
- . United States Army. Army Techniques Publication 5-0.1, *Army Design Methodology*. Washington, DC: Government Publishing Office, 2015.
- . United States Army. Art of War Colloquium, *New Problems in Warfare by Mikhail Tukhachevskiy*. US Army War College, 1983.
- . United States Army. Field Manual 100-5, *Operations*. Washington, DC: Government Publishing Office, 1986.
- . United States Army. Field Manual 3-0, *Operations*. Washington, DC: Government Publishing Office, 2017.
- US Department of The Navy. United States Marine Corps. Marine Corps Doctrinal Publication 1-1, *Strategy*. Washington, DC: Government Publishing Office, 1997.
- . United States Marine Corps. Marine Corps Doctrinal Publication 1-2, *Campaigning*. Washington, DC: Government Publishing Office, 1997.
- . United States Marine Corps. Marine Corps Doctrinal Publication 1-3, *Tactics*. Washington, DC: Government Publishing Office, 1997.
- Vego, Milan. *Operational Warfare*. New Port, RI: The Naval War College, 2000.
- . “Systems versus Classical Approach to Warfare” *Joint Force Quarterly*, issue 52 (2009): <https://ndupress.ndu.edu/portals/68/Documents/jfq/jfq-52.pdf>.
- . *The Operational Idea*. New Port, RI: The Naval War College.
- Weigley, Russell F. *The Age of Battles The Quest for Decisive Warfare from Breitenfeld to Waterloo*. Indianapolis, Indiana: Indiana University Press, 1991.
- . *The American Way of War*. Indianapolis, Indiana: Indiana University Press, 1977.
- White, Charles Edward. *The Enlightened Soldier*. New York, NY: Praeger Publishers, 1989.
- Wilson C. Blythe Jr. “A History of Operational Art,” *The Military Review* (Nov-Dec 2018), accessed August 9, 2020, <https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/November-December-2018/Blythe-Operational-Art/>.
- Wylie, J. C. *Military Strategy A General Theory of Power Control*. Annapolis, Maryland: Naval Institute Press, 1989.
- Yarger, Harry R. *Strategic Theory for the 21st Century: The Little Book on Big Strategy*. Monographs, Books, and Publications (2006), accessed August 26, 2020, <https://press.armywarcollege.edu/monographs/723>.
- . *Strategy and the National Security Professional*. Connecticut: Praeger

Security International, 2008.

———. “Toward a Theory of Strategy.” Chapter 8 in *Guide to National Security Policy and Strategy, 2nd edition*. U.S. Army War College, Carlisle, PA, June 2006, pp. 107-113.