WAR THEORY:
THE EVOLUTION OF WAR AND MILITARY THOUGHT
SYLLABUS
AY 19

JOINT PROFESSIONAL MILITARY EDUCATION
PHASE I INTERMEDIATE LEVEL COURSE

UNITED STATES AIR FORCE
AIR COMMAND AND STAFF COLLEGE
21st Century Leaders for 21st Century Challenges
FOREWORD

This syllabus for the War Theory course for the Air Command and Staff College, August-October 2018, provides both an overview of the course narrative, objectives, and questions, as well as a detailed description of each lesson to assist students in their reading and preparation for lecture and seminar. Included herein is information about course methods of evaluation, schedule, and the fulfillment joint professional military education core goals.

SIGNED
Kelly A. Grieco, PhD
Course Director, War Theory

APPROVED

James Forsyth, PhD
Dean of Academic Affairs
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WAR THEORY
COURSE OVERVIEW

COURSE DESCRIPTION
War Theory introduces military theory, addressing both the nature and character of war. It examines the theoretical writings of classical military theorists, as well as the evolution of warfare and military thought over the last two centuries. The course explores a number of the most outstanding historical cases of military innovation, assessing the utility of military theories across the military domains. The course also considers the future evolution of warfare, analyzing both change and continuity in armed conflict. In applying military theory to contemporary security challenges, students will be able to better anticipate and respond to operational problems across the range of military operations.

COURSE OBJECTIVES
1. Comprehend both the nature and character of war, as well as continuity and change in warfare.
2. Apply military theory to understand and address contemporary and future operational security challenges.
3. Analyze the evolution of military theory across the military domains over the last two centuries.

COURSE QUESTIONS
1. What is the nature of war?
2. How has war and military thought evolved across the military domains over the last two centuries?
3. How has its fundamental nature and character endured and/or changed?
4. Which military theories are most relevant for understanding the nature and the character of war today and in the future?

COURSE ORGANIZATION AND NARRATIVE
War Theory seeks to prepare leaders of the joint force to be “strategically minded, critical thinkers and skilled joint warfighters.”¹ To this end, the course asks students to grapple with complex political, technological, economic, and social changes to the Profession of Arms over the last two centuries and, in turn, expand their thinking beyond the level of tactics to that of policy, strategy, and operations. This course stresses critical strategic thinking about the role of the Profession of Arms in the contemporary environment. It drives students to think critically about war, instilling in them the ability to anticipate and recognize change in armed conflict, and to communicate such understanding with clarity and precision.

War Theory has three phases, with each phase of the course organized around answering a core question about the nature and character of war. Phase I explores the nature of war, seeking to deepen students’ understanding of war as political, social and cultural phenomena, with its own fundamental purpose and logic. It introduces the classical military theorists—Antoine-Henri

¹ Chairman of the Joint Chiefs of Staff, CJCS Visions for Joint Officer Development (Washington, DC: Department of Defense, 2005), p. 2.
Jomini, Carl von Clausewitz, and Sun Tzu—as a way to comprehend the purpose, role, and function of armed forces.

Phase II of the course considers the evolution of theory and principles of war across the military domains over the last century. It introduces students to the seminal theoretical contributions of J.F.C. Fuller, Heinz Guderian, Alfred Thayer Mahan, Julian S. Corbett, Giulio Douhet and J.C. Slessor. These theorists provide a framework to comprehend current joint doctrine, as well the interrelationship between service doctrine and joint doctrine. By exploring a number of historical cases of military operations, students gain a better understanding of the utility of military theory across the military domains.

Phase III of the course examines the evolution of both contemporary and future military operations, analyzing both continuity and change in armed conflict. It presents the views of more contemporary theorists like Thomas C. Schelling, John A. Warden, III, Robert Pape, and John R. Boyd. In this phase, students also explore the integration of space and cyberspace operations with other lines of operation at the operational level of war. It applies military theory to understand and address current and future operational challenges, giving students a better understanding of the role of the Profession of Arms in the contemporary security environment. Students gain a better appreciation of the importance of factors such as geopolitics, society, culture, and religion in the planning and execution of joint operations. They also comprehend more fully the capabilities and limitations of US military forces to conduct the full range of military operations in pursuit of national interests.

In each of these phases, War Theory employs an interdisciplinary approach to the study of war, integrating the disciplines of anthropology, history, political science, security studies, and psychology with joint concepts from the Profession of Arms. The course methodology is unique, combining the study of foundational theories of war with application and close analysis of historical and contemporary case studies. Students thus derive lessons, concepts, and ideas as the basis for decision making in strategy, planning, and operations.

Each day’s readings are ordered according to the following model: 1) theory – introduction of the key concept, 2) extension – refinement of the key concept, and 3) application – connection of the concept to a case study. This methodological approach illustrates how theory and principles of war apply to the operational level of war across the range of military operations. The cases stress the importance of adaptation and innovation on military planning and operations, giving students the chance to evaluate and discuss the relative success or failure of past military planners in crafting effective strategies. The cases also provide a means to examine the efforts of both civilian and military leaders to reconcile national objectives with the means available, giving students a better appreciation of relationships between national security objectives, military objectives, conflict termination, and post-conflict transitions.

At a time when the global security environment is so uncertain and complex, it is all the more important for military professionals to develop their own “theory” of war and prepare themselves intellectually for future armed conflict. The goal of War Theory is to provide such an education through the study of military theory and historical and contemporary case studies, conceptualizing the wider social and political impact of change and continuity in war.
JOINT LEARNING AREAS AND OBJECTIVES (JPME-1)

War Theory addresses Intermediate-Level College Joint Learning Areas and Objectives for Joint Professional Military Education (JPME), established by the Chairman of the Joint Chiefs of Staff via the Officer Professional Military Education Policy (OPMEP), CJCSI 1800.01E, signed 29 May 2015. The course supports the following Joint Learning Areas and Objectives, listed below with points of explanation:

**Learning Area 1 – National Military Capabilities Strategy**

a. Comprehend the capabilities and limitations of US military forces to conduct the full range of military operations in pursuit of national interests.
   - Lessons WT-512, 514, 516, 520, and 525 discuss the capabilities and limitations of ground, naval and air forces from both theoretical and historical contexts.
   - Lessons WT-517, 518, 521, 522, 523, and 524 discuss the role of nuclear weapon, space and cyber capabilities in military operations.
   - Lessons WT-526 and 527 relate current US military capabilities and limitations to contemporary and future security challenges.

**Learning Area 2 – Foundation of Joint Warfare and the Profession of Arms**

a. Comprehend current joint doctrine
   - All course lessons relate military theories and case studies to current joint doctrine (see “related joint doctrine”).

b. Apply solutions to operational problems in a volatile, uncertain, complex or ambiguous environment using critical thinking, operational art, and current joint doctrine.
   - All course lessons prepare students to think strategically about the range of military operations.
   - Lessons examine both continuity and change in the conduct of war.
   - Lessons apply military theory and operational art to historical and contemporary cases.
   - Written assignments WT-601 and 602 apply military theory and operational art to contemporary and historical cases.
   - Lessons 521, 522, 523, 524, 525, 525, 526, and 527 examine the future of warfare, including the challenge of operating in a volatile, uncertain, complex, and ambiguous environment.

**Learning Area 3 – Joint and Multinational Forces at the Operational Level of War**

a. Comprehend the security environment within which Joint Forces are created, employed, and sustained in support of JFCs and component commanders.
   - Lessons WT-517, 518, 519, 520, 521, 522, 523, 524, 525, 526, and 527 discuss the contemporary security environment.
   - Written assignment WT-602 examines the contemporary security environment in which joint forces are created, employed, and sustained.

b. Comprehend the interrelationships among strategic, operational, and tactical levels of war.
• All course lessons discuss the strategic, operational, and tactical levels of war, including continuity and change in the relationships between them.
• In particular, lessons WT-517, 518, 519, 520, 522, 523, 524, and 526 examine whether particular military technologies can produce strategic effects.

d. Comprehend how theory and principles of joint operations pertain to the operational level of war across the range of military operations to include traditional and irregular warfare that impact the strategic environment.
• All course lessons explain the theory and principles of joint operation at the operational level of war, with lessons WT-505, 510, 512, 513, 514, 515, 516, 517, 518, 520, 521, 522, 523, 524, and 525 covering the range of military operations.
• In particular, lessons WT-508, 509, 521, and 525 discuss irregular warfare.
• Written assignments WT-601 and 602 apply military theory and the principles of joint operations to contemporary and historical cases.

f. Analyze a plan critically for employment of joint and multinational forces at the operational level of war.
• Lessons WT-505, 507, 508, 509, 510, 512, 513, 515, 520 and 525 apply theory to analyze critically wartime operational plans. These lessons draw from both historical and contemporary cases.

g. Comprehend the relationships between national security objectives, military objectives, conflict termination, and post conflict transition to enabling civil authorities.
• Lessons WT-504, 506, 514, 516, 518, 520, and 521 examine the concept of decisive victory. WT-505, 507, 510, 512, 513, 515, 520, and 525 apply the concept of decisive victory to understand historical and contemporary case studies.
• Lesson WT-506 and 507 discuss political-military integration, whether the military means align with the achievement of political objectives, and issues of war termination.
• Lessons-508, 509, and 521 analyze indirect approaches to the achievement of both military objectives and national security objectives.
• Lesson WT-507 and WT-525 discuss the issue of conflict termination and post-conflict transitions.

Learning Area 4 – Joint and Multinational Forces at the Operational Level of War
a. Comprehend the relationship among national objectives and means available through the framework provided by the national levels systems.
• Lesson WT-506 and 507 provides a theoretical understanding of the importance of reconciling the available means with national objectives.

b. Comprehend the fundamentals of joint operation planning across all the phases of a joint operation.
• Lessons WT-504, 506, 507, 512, 514, 516, 523, 524, and 525 provide the theory and historical context to comprehend the fundamentals of joint operational planning across all phases of a joint operation.

e. Comprehend the integration of IO and cyberspace operations with other lines of operations at the operational level of war.
• Lessons WT-521, 522, and 525 discuss the integration of information operations and cyberspace operations with other lines of operations.
• Lesson WT-521 examines the importance of strategic narrative and information operations in contemporary operations.

f. Comprehend the roles that factors such as geopolitics, geostrategy, society, region, culture/diversity, and religion play in shaping planning and execution of joint force operations across the range of military operations.
• Lessons WT-502, 503, 504, 505, 506, 507, 508, 509, 521, 522, 524, and 525 discuss the role of geopolitics, society, region, culture, and religion play in shaping the nature and/or character of war.

Learning Area 5 – Joint Command and Control

c. Comprehend the effects of networks and cyberspace on the ability to conduct Joint Operational Command and Control.
• WT-521, 522, 523, and 524 discuss the effects of networks and cyberspace on the ability to conduct Joint Operational Command and Control.

Learning Area 6 – Joint Operational Leadership and the Profession of Arms

1. Comprehend the role of the Profession of Arms in the contemporary environment.
• All course lessons provide the theoretical and/or historical basis for understanding the role of the Profession of Arms in the contemporary environment. In particular, the course considers both change and continuity in the Profession of Arms over the last two centuries.
• Written Assignment WT-602 examines the role of the Profession of Arms in the contemporary environment.

2. Comprehend critical thinking and decision-making skills needed to anticipate and recognize change, lead transitions, and anticipate/adapt to surprise and uncertainty.
• All course lessons emphasize critical thinking and decision-making skills, honing student abilities to think critically about operational challenges and speak articulately about them.
• Lessons WT-503, 504, 505, 510, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, and 525 provide examples of theorists and practitioners anticipating and recognizing change in the conduct of war, whether the sources of such change are political, social, cultural or technological.
• The case studies evaluate the strategic decision-making and innovation practices of past military leaders.
• Written assignments WT-601 and 602 prepare students to think and write critically about military operations.

c. Comprehend the ethical dimension of operational leadership and the challenges it may present when considering the values of the Profession of Arms.
• WT-525 discusses the ethical dimension of operational leadership and the challenges of ethical leadership in contemporary operations.

e. Communicate with clarity and precision.
• Writing assignments WT-600, 601, and 602 prepare students to think and write critically about military operations.
• All lectures provide students with examples of critical thinking and clear communication.
• All seminars provide the chance for students to become skilled in thinking and communicating clearly about military theory, strategy, operations, and policy.

f. Analyze the importance of adaptation and innovation on military planning and operations.
• Lessons WT-504, 505, 510, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, and 527 analyze the importance of adaption and innovation on military planning and operations in both military theory and contemporary and historical cases.
• Written Assignment WT-602 analyzes the importance of adaptation and innovation on military planning and operations.

AY 2018-2019 SPECIAL AREAS OF EMPHASIS FOR JPME-1
War Theory supports the following AY 2018-2019 Special Areas of Emphasis (SAE) for Joint Professional Military Education (JPME), listed below with points of explanation:

SAE 1 – Transregional, Multi-Function, Multi-Domain Joint Warfighting
a. An understanding of what characteristics define the current strategic landscape and the modern battlefield.
   • Lessons WT 502, 503, 517, 518, 521, 522, 523, 524, 525, 526, and 527 provide an understanding of the current strategic landscape.
   • All course lessons address the characteristics of the modern battlefield.
b. A comparative perspective on the endure nature of war vice the changing character of war.
   • All course lessons address both the enduring nature and changing character of war.
   • Written Assignment WT-602 analyzes the enduring nature and changing character of war.
c. The ability to understand and address warfare in the seams, including economic, information, and gray zone competition.
   • Lessons WT 508, 509, 521, 522, and 525 analyze the role of information warfare, irregular warfare, hybrid warfare, and/or gray zone competition.
d. Consideration of how current organizational and command and control constructs are (or are not) optimized for the current fight and for future challenges.
   • Lessons WT 520, 522, 523, and 525 provide theoretical and empirical understandings of current command and control constructs and assess their efficacy for the current fight and future challenges.
e. A foundation for renewed thinking about how the joint force engages across the spectrum of warfare.
   • All course lessons provide a foundation for renewed thinking about how the joint force engages across the spectrum of warfare.

SAE 2 – Strategic Deterrence in the 21st Century/Deterrence and Escalation Dynamics
a. Deterrence Theory: An evolution of the “escalation ladder” (being filled in by asymmetric caps and limited nuclear concept), “waves” of deterrence theory
(retaliation, rational actor model, perceptions, and misperceptions), and extended deterrence commitment (nuclear umbrella).

- Lessons WT 517 and 518 provide a foundation in deterrence theory, including issues of extended deterrence and escalation dynamics.

b. Escalation risk: Deterring military conflict, interwar deterrence objectives, and reestablishing deterrence after a major deterrence failure.
- Lessons WT 517, 518, 520, 523, and 524 address escalation risk and deterrence.

c. Deterrence in the 21st century: Trans-regional and cross-domain deterrence (both deterring threats from cross-domain capabilities and applying non-nuclear capabilities and methods, to include deterrence by denial and forward presence, to deter nuclear threats), reducing reliance on nuclear weapons, and proliferation implications.
- Lesson WT 524 offered a theoretical and empirical understanding of cross-domain deterrence.

SAE 3 – Non-Traditional Threats to Security and Stability

a. An historical overview of the relationship between environmental factors and subsequent regional instability.
- Lessons WT 502, 503, 504 analyze the relationship between environmental factors and conflict occurrence.

b. An understanding of how to use modeling and gaming tools that consider environmental factors for forecasting and risk assessment of future regional instability.
- Lesson WT 504 examines the analytical method of net assessment.

SAE 4 – Information as the 7th Joint Function

1. An understanding of the complexities and challenges of information to national security
- Lessons WT 521, 522, 524, and 525 provide a theoretical understanding of information operations and assess the complexities and challenges of information to national security.

COURSE REQUIREMENTS

1. READINGS. Before lecture and seminar, students are expected to complete all assigned readings for the day. Students are encouraged to read the explanation given in the syllabus before reading the assigned books and articles. The syllabus also provides information on current joint doctrine, as it relates to the topic of the day. While students are not required to read joint doctrine for this course, they are encouraged to explore the connections between military theory, operational art, and current joint doctrine.

2. LECTURES. Students will attend faculty lectures relating to assigned readings and seminar. These presentations compliment the readings and seminar discussion, and therefore enhance knowledge of the course concepts. Lectures are not for attribution.
3. **SEMINAR PARTICIPATION.** Student participation in seminar discussions is vital to the success of the course. Students must prepare for each seminar by completing all of the assigned readings. Each member of seminar is expected to contribute to the discussion.

4. **WRITTEN ASSIGNMENTS.** There are two written, graded assignments and one written, ungraded assignment in fulfillment of the requirements of the War Theory course: One single-page, ungraded response paper; one three-to-four-page take-home examination; and one five-page take-home final examination. Importantly, all written work must include as the first citation an acknowledgement of colleagues who made an intellectual contribution to the work.

5. **METHODS OF EVALUATION.** The three-to-four-page take-home examination is worth 30 percent of the final course grade; the five-page take-home final examination is worth 70 percent of the final course grade.

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**COURSE ADMINISTRATION**

There are two types of readings in this course: 1) readings from books issued by ACSC; and 2) selected chapters and articles posted on Canvas. To avoid confusion, the syllabus denotes all readings posted online as “EL” (“electronic”). Students can access the syllabus, course calendar, and selected readings as well as other supplemental materials online. In addition, lecture slides will be posted no later than forty-eight hours following the lecture.

The syllabus includes sections on “related joint doctrine” for all course lessons. Students are encouraged but not required for this course to read the related joint doctrine. Both course lectures and seminars, however, will discuss the connections between military theory and current joint doctrine. Online, students will find a supplementary packet containing the key Joint Warfighting Concepts (JWC), as they relate to this course. These documents are referred to as JWC 1-8 throughout this syllabus.

ACSC provides students with copies of the following course books, which must be returned at the conclusion of the course:

• Thomas C. Schelling, *Arms and Influence* (New Haven: Yale University Press, 2008 [1966]).

Please refer any questions to Dr. Kelly Grieco (Course Director, kelly.grieco@us.af.mil, Office 249) or LTC Chadwick Shields (Deputy Course Director, chadwick.shields@us.af.mil, Office 224).
LESSON OBJECTIVES
1. Review the course objectives, course questions, and course narrative.
2. Review the course syllabus, methods of evaluation, and expectations for seminar.
3. Comprehend the purpose of military theory and history for the military professional.
4. Comprehend the distinction between the nature and character of war.

LESSON OVERVIEW
WT-500 (L): Course Overview (Grieco)
Overview: War Theory introduces military theory, addressing both the nature and character of war. This course examines the theoretical writings of classical military theorists, as well as the evolution of warfare and military thought over the course of the twentieth century. This lecture introduces students to the course objectives, schedule, and requirements, as well as the overall narrative and three phases of the course. Additionally, this lecture introduces the distinction between the nature and character of war, and addresses the contemporary relevance of military theory and history for the military professional.
CONTACT HOURS: 1.0-hour lecture

WT-501 (S): Course Introduction
Overview: In this seminar, instructors introduce themselves to their seminars, discuss classroom policies, and set the stage for seminar discussions schedule for Day 1.
CONTACT HOURS: 1.0-hour seminar

WRITTEN ASSIGNMENT
ASSIGNMENT FOR ONE-PAGE (UNGRADED) RESPONSE PAPER DISTRIBUTED.

REQUIRED READINGS

   [This reading reviews the fundamental principles guiding the employment of US military forces. It introduces the principles of war and other joint concepts explored in greater detail throughout this course].

RECOMMENDED READING (OPTIONAL)

RELATED JOINT DOCTRINE
None.
PHASE I: WHAT IS THE NATURE OF WARFARE?

War as Human Nature, Science, and Politics
DAY 1 – WAR AS HUMAN NATURE

DATE: 7 August 2018

LESSON OBJECTIVES
2. Relate the arguments of Hobbes and Rousseau to history, anthropology, sociology, primatology, and evolutionary biology.
3. Examine historical trends related to war, the reasons humans fight, and the importance of human nature for understanding the contemporary security environment.

LESSON OVERVIEW
WT-502 (L): Is the State of Nature a State of War? (Forsyth)
Overview: This lecture considers whether the state of nature is a “war of all against all,” in which human beings are purely self-interested, constantly fear violent death, and make cooperation all but impossible. It draws on a mix of classical texts about war—from Thucydides to Machiavelli, Hobbes to Rousseau—to assess whether the rise of China will be peaceful or violent.
CONTACT HOURS: 1.0-hour lecture

WT-503 (S): War as Human Nature
Overview: Is war an inseparable part of human nature? Is war declining? If so, have we managed to escape our nature? The answers to these questions are critical for our understanding of war. The readings offer philosophical, historical, political, anthropological, and biological explanations for the continued resort to armed conflict throughout human history. The aim of the seminar is not to offer definitive answers to these complex questions, but to encourage students to explore and develop their own understandings of war.
CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

   Theory [Key Concept]: Hobbes asserts that the “natural condition of mankind” is a state of which in which life is “solitary, poor, nasty, brutish, and short.” Is Hobbes right to depict human existence as a “war of all against all”? In other words, can human nature adequately explain the recurrence of war?


   Extension [Concept Refinement]: Rousseau offers a contending understanding of human nature and the cause of war. For Rousseau, man embodies “natural goodness,” and therefore the causes of war are to be found in civil society. Is Rousseau right that society, not human
nature, is to blame for the recurrence of war? In your view, does the political thought of Hobbes or Rousseau offer a better explanation of war?

3. Steven Pinker, *The Better Angels of Our Nature*, Chs. 2 (pp. 31-56), 8 (509-569), and 9 (571-592).

   **Application [Case Study]:** Pinker examines the arguments of Hobbes and Rousseau against the historical record and findings from anthropology, evolutionary biology, sociology, and psychology. Does the evidence better support the arguments of Hobbes or Rousseau, or is a new understanding of human nature and war needed?

**RELATED JOINT DOCTRINE**

DAY 2 – WAR AS SCIENCE

DATE: 10 August 2018

LESSON OBJECTIVES
1. Comprehend elements of both continuity and change in warfare in the period of the Napoleonic Wars.
2. Comprehend Jomini’s fundamental principles of warfare, including offensive, objective, strategy, lines of operation, mass, maneuver, decisive points, and strategic combinations.
3. Relate Jomini’s scientific approach to war to contemporary net assessment and operations analysis.

LESSON OVERVIEW
WT-504 (S): War as Science

Overview: Antoine-Henri Jomini, a Swiss officer who rose to the rank of general of brigade in Napoleon’s army before switching his allegiance to Russia in 1813, emerged as one of the earliest and most influential military scholars of the Napoleonic period. His seminal work, The Art of War, first appeared in 1838. Jomini, a product of the Enlightenment and the Age of Reason, applied the scientific method, as he understood it, to the study of warfare. He argued that war could be reduced to a universal immutable set of principles for achieving battlefield success. This seminar examines the theoretical writings of Jomini and explores the application of Jomini’s scientific approach to war and strategy to modern operations. Are Jomini’s principles for the employment of military force still applicable today? How is net assessment and operations research an extension of Jomini’s notion of war as a science? What might such analyses miss about the nature of war?

CONTACT HOURS: 3.0-hour seminar

WRITTEN ASSIGNMENT
**ONE-PAGE (UNGRADED) RESPONSE PAPER IS DUE**

REQUIRED READINGS
1. Michael Howard, War in European History, Chapters 4-5, pp. 54-93.

   Background [Strategic Context]: This reading on the Napoleonic period provides historical context to better understand the changes in European warfare influencing the ideas of both Jomini and Clausewitz.

   Theory: These selections from the writings of Jomini present his more scientific approach to war.


Extension [Concept Refinement] and Application [Case Study]: In this seminal article, Mearsheimer extends Jomini’s view of war as a military science to the method of net assessments. He applies a more scientific approach to war to assess the Soviet threat to Western Europe in the Cold War. Students should consider what, if anything, might be missing from his analysis.

**RECOMMENDED READINGS (OPTIONAL)**

**RELATED JOINT DOCTRINE**
1. Joint Publication 1, Chapter 1 (“Levels of Warfare), pp. I-7 to I-8. [JWC 1]
DAY 3 – War as Politics (Direct)

DATE: 14 August 2018

LESSON OBJECTIVES

1. Comprehend Clausewitz’s arguments about the relationship between politics and war, including the relationship between political objectives and military objectives in war.
2. Comprehend Clausewitz’s views on the trinity, friction, centers of gravity (COG), absolute war vs. real war, the principle of continuity, limited war, and decisive victory.
3. Discuss Clausewitz’s arguments about effective civil-military relations, specifically the responsibilities of statesmen and commanders.

LESSON OVERVIEW

WT-505 (L): Comparing and Contrasting the Theories of Jomini and Clausewitz in the French Revolutionary Wars (Hayworth)

Overview: The ideas of Jomini and Clausewitz were linked to changes in war that occurred during the French Revolution. This lecture will use the French Revolutionary Wars - principally the 1794 Belgium Campaign - to evaluate the ideas of Jomini and Clausewitz and to consider the impact of the French Revolution on war and warfare. Following a turbulent period of initial victory and devastating setbacks, the French military underwent significant transformation in 1793 during a period of intense national emergency. A new generation of officers rose to command armies formed of citizen soldiers. Directed by a strong centralizing state that ordered the first national conscription - the levée en masse - these armies leveraged new developments in operational art to achieve victory. The 26 June 1794 Battle of Fleurus demonstrated the effectiveness of this new approach to war. In what ways can the ideas of Jomini and Clausewitz help us to understand this campaign? Was this a revolution in military affairs?

CONTACT HOURS: 1.0-hour lecture

WT-506 (S): War as Politics (Direct)

Overview: Carl von Clausewitz, a Prussian contemporary of Jomini, is arguably the most influential of military theorists. While Jomini offered a more systematic and scientific study of war, Clausewitz developed a more nuanced, philosophical tome on the nature of war and the complexity of waging it. For Clausewitz, war was “not merely an act of policy but a true political instrument, a continuation of political intercourse, carried on with other means” (On War, p. 87). To this point, war could not be reduced to a set of military axioms, for it was far too complex and unpredictable, a paradoxical trinity of reason, chance, and primordial violence. How do Jomini and Clausewitz compare in their views of war? Is Clausewitz’s understanding of war still relevant today?

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Carl von Clausewitz, On War, Book II: chaps. 1-4; Book I, Chaps. 1, 2, 4, 7; and Book VIII: Chaps. 1-8. (Please read in the assigned order, specifically begin On War not with Book I, but with Book II. In Book II, Clausewitz explains his purpose in writing On War and lays the methodological foundation for the entire book).
Theory [Key Concept]: This classic study of war is a difficult reading, not because Clausewitz was a poor writer but because his ideas are sophisticated and complex. It is the most influential work of military theory to this day. Recalling his professional military education, General Colin Powell wrote, “Clausewitz was an awakening for me. His On War, written 106 years before I was born, was like a beam of light from the past, still illuminating present-day military quandaries.”

RECOMMENDED READING (OPTIONAL)

RELATED JOINT DOCTRINE
1. Joint Publication 1, Chapter 1 (“Levels of Warfare), pp. I-7 to I-8. [JWC 1]

DAY 4 – War as Politics (Direct)

DATE: 21 August 2018

LESSON OBJECTIVES
1. Comprehend Clausewitz’s concepts of strategy, the engagement, moral factors, economy of force, maneuver, and the culminating point of victory, and the relationship between offense and defense.
2. Apply Clausewitz’s concepts to the issue of war termination in the First Gulf War.
3. Analyze the relevance of Clausewitz’s concepts for contemporary joint operations.

LESSON OVERVIEW
WT-507 (S): War as Politics (Direct)
Overview: Clausewitz wrote that "War is an act of force to compel our enemy to do our will" (p. 75). If Clausewitz is correct, what is the implication of his statement for war termination? This seminar will explore the issue of war termination in the First Gulf War, using the case as a way to engage Clausewitz’s ideas about strategy, limited war, center of gravity, and the culminating point of victory, as well his concepts of uncertainty, chance, and friction.
CONTACT HOURS: 2.0-hour seminar

WT-508 (L): The Roles of Conventional and Irregular Warfare in Direct and Indirect Approaches to War (Pavelec)
Overview: This lecture will bring together a number of the themes from the first block of War Theory instruction, providing a conceptual overview of the theory and providing a number of relevant historical examples. The lecture will offer a broad overview of the direct vs. indirect approach, as well as a comparison between conventional and unconventional (insurgency) war. Then, the lecture will provide real-world examples of the theories, citing examples where all of the theories were used (wittingly or not) in actual events. The capstone example will be a brief analysis of the Chinese Civil War, 1935-1950.
CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS (SEMINAR)
   Extension [Concept Refinement]: Our reading of Clausewitz’s continues, as we focus on his ideas about strategy, moral factors, maneuver, the relationship between offense and defense, and the culminating point of victory.

   Application [Case Study]: As you read about US decision-making and events surrounding the end hostilities against Iraq in the First Gulf War, try to apply Clausewitz’s ideas about strategy, limited war, centers of gravity, and friction, as well as other related concepts.
REQUIRED READINGS (LECTURE)

RELATED JOINT DOCTRINE
1. Joint Publication 1, Chapter 1 (“Levels of Warfare”), pp. I-7 to I-8. [JWC 1]
DAY 5 – War as Politics (Indirect)

DATE: 24 August 2018

LESSON OBJECTIVES
1. Comprehend the “indirect approach” to war and military strategy.
2. Apply the “indirect approach” to North Vietnamese and US military strategy in the Vietnam War.
3. Analyze Sun Tzu’s ideas about strategy, deception, surprise, and intelligence.

LESSON OVERVIEW
WT-509 (S): War as Politics (Indirect)

Overview: This seminar examines the “indirect approach” to war and military strategy. The classic treatise is Sun Tzu’s *The Art of War*, written in 500 B.C.E. Sun Tzu stressed the importance of achieving victory through indirect methods, arguing the “supreme art of war is to subdue the enemy without fighting.” Liddell Hart, writing in the aftermath of the First World War, emphasized Sun Tzu’s ideas on the indirect approach to war. From a historical analysis of twenty-five centuries of warfare, Hart concluded that “throughout the ages, decisive results in war have only been reached when the approach was indirect. In strategy, the longest way round is apt to be the shortest way home.” (*Strategy*, pp. 4-5). In his view, the indirect approach to warfare conferred to the victory a moral and psychological advantage over the enemy. How might the theories of Sun Tzu and Liddell Hart explain the puzzle of strong-actor defeat in asymmetric wars?

CONTACT HOURS: 3.0-hour seminar

WRITTEN ASSIGNMENT

ASSIGNMENT FOR THREE-TO-FOUR-PAGE PAPER DISTRIBUTED.

REQUIRED READINGS

   Theory [Key Concept]: Sun Tzu’s *The Art of War* is deceptively simple. It might appear like a “cookbook” on war and strategy, but its pithy maxims convey deeper meaning. It remains one of the most influential books on war ever written.


   Extension [Concept Refinement]: As you read Liddell Hart’s writings on strategy and the “indirect approach,” examine his treatment of Sun Tzu’s ideas.


   Extension [Concept Refinement] and Application [Case Study]: This article offers a theory of strategic interaction, explaining how both “direct” and “indirect” strategies interact to
determine military outcomes. He then uses his strategic interaction theory to explain the outcome of the Vietnam War. Students should consider whether strategic interaction theory usefully explains the outcomes of more recent wars, such as the US wars in Iraq and Afghanistan.

RECOMMENDED READINGS (OPTIONAL)

RELATED JOINT DOCTRINE
Phase II: How has war and military thought evolved across the military domains over the last two centuries?

Military Revolution or Evolution?
LESSON OBJECTIVES
1. Order ideas and outline a three-to-four-page paper.
2. Discuss thesis statement with seminar instructor.
3. Comprehend the technological, and doctrinal developments leading up to the First World War and their contribution to static warfare, as well as efforts to adapt and find new strategies and tactics to overcome the deadlock.

LESSON OVERVIEW

WT-510 (L): World War I and the Evolution of Combined Arms Maneuver Warfare (Campbell)

Overview: This lecture outlines successive developments before and during the First World War leading to later twentieth century understanding of modern maneuver warfare. In responding to the challenges posed by static warfare in Europe, the belligerents strove to harness both new technologies, along with ideas about how to apply these technologies in a quest for decisive battles leading to victory. The differing national military interpretations of these lessons have shaped subsequent events, as well as understanding and perceptions of warfare down to the present day.

CONTACT HOURS: 1.0-hour lecture

WT-511 (S): Writing Day and Student Meetings with Faculty

Overview: In lieu of seminar, students will have the opportunity to write and meet with faculty to discuss and review thesis statements for the graded take-home examination, due on Day 7.

REQUIRED READINGS


Theory [Key Concept]: This chapter presents a theory of force employment, termed the Modern System. Biddle argues that victory and defeat in battle results from mastery of modern system tactics—cover, concealment, dispersion, deep positions, reserves, small-unit independent maneuver, suppression, and combined arms integration. He further contends that only a small number of countries have managed to master these complex tactics, explaining why western militaries have certain advantages in war. Though student-faculty meetings will occur in lieu of seminar, students are responsible for the context of this reading, and can expect it to be discussed in seminar on Day 7.

RECOMMENDED READINGS (OPTIONAL)


**RELATED JOINT DOCTRINE**

1. Joint Publication 1, Chapter 1 (“Levels of Warfare”), pp. I-7 to I-8. [JWC 1]
DAY 7 – Land Domain—Maneuver Warfare

DATE: 4 September 2018

LESSON OBJECTIVES

1. Comprehend J.F.C. Fuller’s theory of strategic paralysis and Heinz Guderian’s conception of mechanized warfare.
2. Apply these theories of mechanized warfare (and other military theories) to explain the outcome of the Battle of France in 1940.
3. Analyze the relative contributions of the tank and Modern System tactics to the return of mobility on the Western Front in 1918, as well as to the development of German “blitzkrieg” warfare.

LESSON OVERVIEW

WT-512 (S): Maneuver Warfare

Overview: Interwar Europe was a period of great transition, as military strategists struggled to understand the impact of technological change on the modern battlefield. They sought to find an approach that would avoid a repetition of the bloody trench stalemate from 1914-1918 and return mobility to the battlefield. Military theorists and practitioners J.F.C. Fuller and B.H. Liddell Hart in Great Britain, Charles de Gaulle in France, and Heinz Guderian in Germany, recognized the potential of armored warfare. How well did the military leaders and analysts of the interwar period understand the importance or role of weapons introduced during World War I? In examining the Battle of France (1940), how successful were they in developing doctrine that reflected the capabilities of the technologies of the day?

CONTACT HOURS: 3.0-hour seminar

WRITTEN ASSIGNMENT

**THREE-TO-FOUR-PAGE PAPER IS DUE**

REQUIRED READINGS


   Extension [Concept Refinement]: Fuller, who was one of the earliest advocates of mechanized warfare, argues the tank can deliver a crippling moral blow, thus achieving a quick and decisive victory. We will return to the idea of strategic paralysis again in our discussions of airpower.


   Extension [Concept Refinement]: Guderian, a contemporary of Fuller, played a central role in the development of interwar German armor doctrine. His conception of mechanized warfare differed in important ways from that of Fuller.

   **Application [Case Study]:** This chapter provides a concise summary of the respective military strategies and doctrines of France and Germany. As you read, consider whether one or both of these militaries better exemplified Biddle’s modern system of warfare.


   **Application [Case Study]:** As you read about the Battle of France, examine whether the battle history offers support for the ideas of Fuller and/or Guderian, and develop your own explanation for the German victory and French defeat.

**RECOMMENDED READINGS (OPTIONAL)**


**RELATED JOINT DOCTRINE**

1. Joint Publication 1, Chapter 1 (“Levels of Warfare), pp. I-7 to I-8. [JWC 1]


DAY 8 – Maritime Domain—Command of the Sea or Sea Denial

DATE: 7 September 2018

LESSON OBJECTIVES
1. Comprehend the naval theories of Mahan and Corbett, and compare their different ideas about naval strategy, command of the sea, and sea denial.
2. Apply the theories of Mahan and Corbett to explain the outcome of naval operations in the North Sea in World War I.
3. Analyze the importance of sea power and the maritime domain for both historical and contemporary security environments.

LESSON OVERVIEW
WT-513 (L): Corbett or Mahan? The Struggle for Mastery of the Seas (LaSaine)
Overview: The Napoleonic wars left their marks on the writings of the two great naval historians and strategic thinkers of the late-19th and early-20th centuries: American naval officer, Alfred Thayer Mahan, and English lawyer, Julian S. Corbett. This lecture analyzes the principles of maritime warfare and naval strategy that these two influential writers derived from the study of history. Drawing heavily on Jomini’s writings, Mahan produced the first comprehensive conception of sea power and principles of naval strategy, emphasizing the importance of strategic geography, lines of communication, concentration of force, and offensive operations aimed at decisive victory over the enemy’s main force(s)—his battle fleet(s). By contrast, Corbett, influenced by Clausewitz, emphasized maritime war and naval strategy as components of a broader historical conception of war as a political act. The lecture uses the Anglo-German naval rivalry culminating in “The War in the North Sea, 1914-18” to illustrate and assess the application in war of ideas associated with Mahan and Corbett, respectively.
CONTACT HOURS: 1.0-hour lecture

WT-514 (S): Naval Theorists—Command of the Sea or Sea Denial?
Overview: Which set of ideas, Mahan’s or Corbett’s, better accounts for the “influence of sea power upon history” since the military-technological revolution of the late-19th and early- 20th centuries? Are Mahan and/or Corbett’s ideas still relevant to our understanding of maritime warfare and naval strategy today?
CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

   Background [Strategic Context]: This reading introduces the importance of the maritime domain and seapower for both historical and contemporary security environments.

Theory [Key Concept]: Mahan is arguably the most influential American naval theorist and historian. This reading contains excerpts from his work and develops his views on naval strategy, including strategic positions, the relationship between offense and defense, and strategic lines. Note the influence of Jomini on his understanding of strategy and maritime operations.


Extension [Concept Refinement]: Corbett, a contemporary of Mahan, emerged as Britain’s foremost naval theorist prior to the First World War. In this work, he lays out his views on maritime strategy, stressing the importance of command of the sea, the principle of the “fleet in being,” and the relationship between land and naval forces. Note the influence of Clausewitz on his thinking.

Note on Application [Case Study]: Ideas of Mahan and Corbett are applied to Anglo-German naval rivalry and “The War in the North Sea, 1914-18” in lecture.

RECOMMENDED READING (OPTIONAL)

RELATED JOINT DOCTRINE
DAY 9 – Air Domain—The Origins of Air Power

DATE: 11 September 2018

LESSON OBJECTIVES
1. Comprehend emerging concepts of air superiority, strategic bombing, interdiction, and close air support in the writings of Douhet and Slessor.
2. Apply the theories of Douhet and Slessor to air operations in the Norwegian Campaign (1940).
3. Compare similarities and differences in the theories of Douhet and Slessor regarding the employment of air power.
4. Analyze the influence of other military theories on the writings of Douhet and Slessor.

LESSON OVERVIEW
WT-515 (L): Theories of Airpower in the Norwegian Campaign (Lukasik)
Overview: This lecture examines the use of airpower in the Battle of Norway (1940). Though it was not the first major campaign to feature a significant air component, the Norwegian campaign was the first large-scale operation in which airpower functioned as the central, and arguably the most important, influence on its ultimate outcome. In addition, it was the first truly tri-service campaign in the history of modern warfare. Its planning and execution illustrated some of the most important challenges associated with integrating airpower into the framework of joint, combined, and coalition operations in an expeditionary setting. Seen in this light, the Norwegian campaign represents one of the earliest test-cases for the interwar airpower theory. Do the ideas of Douhet or Slessor offer the best explanation for air operations in this campaign? What did the major combatants learn from the use of airpower in combat operations?
CONTACT HOURS: 1.0-hour lecture

WT-516 (S): The Origins of Air Power
Overview: When World War I began, few understood how to employ airpower as an instrument of national policy. By the end of the war, more questions than answers remained. During the interwar period, bold claims for the power of air forces to supplant land and sea power matured—alongside arguments for the emergence of independent air services. Airmen and theorists like Giulio Douhet in Italy and J.C. Slessor in Great Britain extolled airpower’s future prospects and made it a basis for their theories of airpower employment; this included discussions of air superiority, strategic bombing, interdiction, and close air support. The modern discourse of airpower theory was born, commencing the conversation about the capabilities and limitations of airpower—which continues to this day. What problems does airpower theory attempt to resolve? In what other forms of military theory do we see the origins of airpower theory? What are the common threads between the ideas of these classical airpower theorists? Where do they diverge? How does classical airpower theory apply to the modern warfighter?
CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS
Theory [Key Concept]: Douhet’s *Command of the Air*, first published in 1921, continues to influence American airpower thinking. In this seminal work, Douhet develops his arguments about air superiority, aerial maneuver, offensive operations, and the importance of bombers. Note the influence of other military theories on his writings.


Extension [Concept Refinement]: Slessor, a contemporary of Douhet, drew on his experience flying in the First World War, to make the case for a strategy of air interdiction in support of land forces. This seminal book—based on a series of lectures he delivered in the early 1930s while on staff at the Army Staff College—was very much ahead of its time. Note the similarities and differences between him and Douhet. Also consider the relevance of these airpower theories for today.

Note on Application [Case Study]: Ideas of Douhet and Slesson are applied to the Norwegian Campaign in Lecture.

RECOMMENDED READING (OPTIONAL)


RELATED JOINT DOCTRINE

2. Joint Publication 5-0, Chapter 3 (“Elements of Operational Design”), pp. III-18 to III-38. [JWC 5]
Phase III: How might warfare evolve in the future?
Which military theories are most relevant for understanding the nature and the character of war today and in the future?

*The Present and Future of Warfare*
DAY 10 – The Nuclear Age

DATE: 18 September 2018

LESSON OBJECTIVES
1. Comprehend the three classical approaches to nuclear deterrence.
2. Comprehend Schelling’s arguments about nuclear deterrence and coercion, specifically the contrast of brute force with coercion, the distinction between deterrence and compellence, the importance of relinquishing the initiative, the challenges extended deterrence, and the dangers of brinkmanship.
3. Apply these concepts to Chinese nuclear modernization.
4. Analyze the implications of Chinese nuclear modernization for US-China security relations.

LESSON OVERVIEW
WT-517 (L): Nuclear Revolution or Evolution? Nuclear Deterrence Theory (Deaile)
Overview: This lecture introduces the key concepts and terminology used in the study of nuclear deterrence theory. In examining the origins of the first offset, it presents three classical approaches to nuclear deterrence. It concludes with a discussion of the contemporary US approach to nuclear deterrence, emphasizing the continued challenges of extended deterrence.
CONTACT HOURS: 1.0-hour lecture

WT-518 (S): The Meaning of Nuclear Weapons
Overview: The atomic bombs dropped on Hiroshima and Nagasaki in August 1945 occurred at the end of the Second World War and ushered in the nuclear age. Nuclear weapons transformed the use and the threatened use of force. Atomic and nuclear weapons raised questions about the varying advantage of defense over offense. Some strategists maintained that the advent of nuclear weapons undermined the very utility of war as a tool of statecraft while others argued that these new weapons gave military power a decidedly different political purpose—to deter rather than wage war. Were nuclear weapons simply more destructive or fundamentally different from conventional weapons? What about tactical nuclear weapons? How do nuclear deterrence concepts apply to US-China security relations today?
CONTACT HOURS: 2.0-hour seminar

WRITTEN ASSIGNMENT
FINAL PAPER ASSIGNMENT DISTRIBUTED

REQUIRED READINGS

Theory [Key Concept]: This reading is from a draft of the book and has marginalia from General Dwight D. Eisenhower. It represents one of the earliest attempts to grapple with the consequences of a major technological innovation in warfare.

   Extension [Concept Refinement]: Schelling won the Nobel Prize in Economics in 2005 for his work on nuclear deterrence theory. His theory of a “diplomacy of violence” was highly influential in shaping US Cold War Strategy, and it continues to shape thinking about strategy and nuclear weapons to this day.


   Application [Case Study]: In this article, Christensen applies the theories of Brodie, Schelling and other classical deterrence theorists to predict the future of US-China security relations.

**RECOMMENDED READING (OPTIONAL)**


**RELATED JOINT DOCTRINE**

1. Joint Publication 1, Chapter 1 (“Levels of Warfare”), pp. I-7 to I-8 and (“Range of Military Operations”), pp. V-1 to V-5. [JWC 1, 6]
DAY 11 – Coercive Uses of Airpower in Contemporary Conflicts

DATE: 21 September 2018

LESSON OBJECTIVES
1. Comprehend Warden’s theory of airpower, based on a five-ring model of enemy systems.
2. Comprehend Pape’s theory of airpower coercion, including his arguments about the effectiveness of punishment, risk, denial, and decapitation strategies.
3. Apply these theories to the air campaign in Gulf War I.
4. Analyze the “revolutionary” impact of precision-guided munitions and stealth technologies on air operations.

LESSON OVERVIEW

WT-519 (L): Revolution or Evolution in Military Affairs? The Implications of Precision-Guided Munitions and Stealth (Terino)

Overview: This lecture examines the development of precision-guided munitions and stealth technologies. It considers whether advanced technologies were a response or driver of a technological revolution in military affairs, and whether these technological advances fundamentally altered the nature and/or character of war.

CONTACT HOURS: 1.0-hour lecture

WT-520 (S): Coercive Uses of Airpower in Contemporary Conflicts

Overview: Have advances in technology made it possible to defeat the enemy by strategic paralysis? Colonel John Warden developed an approach to airpower employment in the late 1980s that married ideas of strategic attack with emerging investments in precision-guided munitions, stealth, and intelligence, surveillance, and reconnaissance. By compressing time and space through parallel attack, Warden argues that airpower can paralyze the enemy, leading to rapid victory and a better state of peace. At the same time, Robert Pape challenges the effectiveness of strategic attack, concluding that aerial coercion succeeds only when the coercer renders the target state unable to achieve its objective through the use of military force. Daryl Press examines both sides of the argument in his study of airpower’s effectiveness in Gulf War I. How do Warden’s ideas reflect Jominian and Clausewitzian thinking? Is Warden a proponent of an indirect approach to airpower strategy? How do Pape and Press challenge the ideas of Warden? How does Warden respond? What evidence does each side offer to support their key claims? Who is more persuasive?

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

Theory [Key Concept]: Warden was one of the main architects of air campaign in Gulf War I. He drew on this experience in developing his later theory of airpower, including his “five rings” model. In the “The Enemy as a System,” Warden outlines the tenets of his theory.
Note the influence of earlier airpower theorists and other classical military theorists on his thinking.


_Extension [Concept Refinement]:_ Pape is a former faculty member of School of Advanced Air and Space Studies (SAASS) and now a Professor of Political Science at the University of Chicago. He provides a provocative analysis of air power as a coercive instrument in American military strategy. Note how his theory challenges Warden, as well as the influence of other military theorists on his thinking.


_Extension [Concept Refinement]:_ This article offers Warden’s response to Pape’s critique of the five-ring model. Evaluate the relative merits of the two sides in this debate.


_Application [Case Study]:_ In this article, Press examines the evidence from the air campaign in Gulf War I. As you read, evaluate whether the historical record offers better support for Warden or Pape.

**RELATED JOINT DOCTRINE**


LESSON OBJECTIVES
1. Comprehend Boyd’s theory of strategy, based on his concept of the OODA loop.
2. Analyze whether cyber war constitutes war per se, or merely sophisticated versions of subversion, espionage, and sabotage.
3. Apply the concept of the OODA loop to cyber warfare and information operations, such as recent Russian cyber warfare and information operations.
4. Compare Boyd’s OODA loop with Russian writings on non-linear warfare, specifically the Gerasimov Doctrine and the theory of reflexive control.

LESSON OVERVIEW
WT-521 (L): Revolution or Evolution in Military Affairs? The Cyber Age and Russian Information Operations (Schwonek)
Overview: This lecture explores the role of cyber warfare and information operations in contemporary Russian strategy. Although lampooned as artless and profligate of manpower, Soviet and Russian strategic thought is quite sophisticated. It has long prized integration of military and non-military instruments and careful preparation of the battlespace. From Deep Battle to the theory of reflexive control and the Gerasimov Doctrine, controlling and manipulating information and perceptions have been crucial. In current conditions which require the Russian Federation to avoid attacking an opponent’s army or cities, a genuine indirect strategy has emerged, with the potential, “to subdue the enemy without fighting.”
CONTACT HOURS: 1.0-hour lecture

WT-522 (S): The Cyber Age, Information Operations, and the Future of War
Overview: This seminar considers the applicability of the theoretical insights of John Boyd to cyber warfare and information operations. Is cyber an independent domain of conflict and war? In other words, will network-based technologies act as an enabler of traditional forms of warfare, or as a new form of warfare itself? How likely are stand-alone acts of cyber war today and in the future? Has information technologies changed the nature and/or character of modern war? To explore these issues, the seminar analyzes Boyd’s decision-making analytical framework. It considers both the promises and perils of cybersecurity, given the capacity of information-technologies to manipulate and disorient the enemy, as well as endanger US military decision-making and situational awareness. As Admiral Michael Rogers, NSA Director, has cautioned, “But what happens when suddenly our data is manipulated, and you no longer can believe what you’re physically seeing?” The seminar applies Boyd’s framework to recent Russian cyber operations, comparing Boyd’s ideas with the Gerasimov doctrine and the theory of reflexive control.
CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS
Background [Strategic Context]: This article usefully examines what constitutes cyber war and identifies the range of cyber activities. Note the influence of Clausewitz on his thinking.


Theory [Key Concept]: Col John Boyd, a USAF fighter pilot who flew the F-86 Sabre during the Korean War, developed lessons from his combat experience into a generalized theory of conflict. He presented his ideas as a series of briefings slides. This chapter offers a summary and analysis of Boyd’s main arguments. As you read, apply Boyd’s ideas to information campaigns, space, and cyber warfare, as well as air operations. For those interested in reviewing Boyd’s slides, see [http://dnipogo.org/john-r-boyd/](http://dnipogo.org/john-r-boyd/) and [http://pogoarchives.org/m/dni/john_boyd_compendium/essence_ofWinning_Losing.pdf](http://pogoarchives.org/m/dni/john_boyd_compendium/essence_ofWinning_Losing.pdf).


Extension [Concept Refinement]: General Valery Gersasimov, Chief of the General Staff of the Russian Federation of Armed Forces, examines the future of war. After noting a tendency toward blurring the lines between war and peace, he argues non-military means are not auxiliary to the use of force but the preferred way to win. Give particular attention to his arguments about the “single intelligence-information space,” information technologies, and asymmetrical actions. Analyze the role of cyberspace attacks and information operations in the Gerasimov doctrine.


Extension [Concept Refinement]: This article reviews the Russian theory of reflexive control. Compare these ideas with those of Boyd.


Application [Case Study]: This chapter provides a useful overview of recent Russian cyberspace operations, exploring the fusion of traditional Russian ideas about disinformation and reflexive control with the use of information warfare in the cyber domain.

**RELATED JOINT DOCTRINE**
1. Joint Publication 3-13, Chapter 1 (“Overview”), pp. II-5 to II-13. [JWC 8]
DAY 13 – New Warfighting Domain: Space

DATE: 28 September 2018

LESSON OBJECTIVES

1. Comprehend the types of orbits, the constraints of geometry, and the most common types of satellites.
2. Comprehend Chinese strategic writings on military strategy, integrated strategic deterrence, and space operations;
3. Apply the ideas of the Science of Military Strategy to explain and assess Chinese military reforms and space operations.

LESSON OVERVIEW

WT-523 (L): Revolution or Evolution in Military Affairs? Space as the Final Frontier (Ziarnick)

Overview: This lecture introduces the promises and pitfalls of applying terrestrial theories of war to space operations. The fundamental consideration of any medium is its physical characteristics. However, space power – the increase in national power derived from operations in space – is essentially a human construct. Therefore, understanding physical and technical phenomena such as orbits, rockets, and satellites is not enough to understand warfare in space. Since war is a human activity, the great theorists of war – sufficiently modified to address the unique physical qualities of space – may yield great insight into war in space. Efforts to apply terrestrial war theory to space are risky, but they are also critical to confront this important problem where there is little experience with which to otherwise guide responsible behavior.

CONTACT HOURS: 1.0-hour lecture

WT-524 (S): Space Operations and the Future of War

Overview: “There’s nothing we do today, there’s not a sailor, soldier, or marine that operates in their domain that isn’t using space capabilities to conduct their mission,” warns General Raymond, commander of Air Force Space Command. The United States military is dependent on space capabilities, a critical vulnerability not lost on US adversaries. In a nightmare scenario, adversaries disable and destroy our satellites in space, leaving all communications, GPS navigation, and network-based systems in the dark. The vulnerability of US satellites to attack has been a serious public concern for at least last decade, ever since the Chinese conducted their first successful anti-satellite missile test. Space is not the “benign domain” of popular imagination, Raymond warns, and the US must prepare for its constellation of satellites to be the first targets in the next war. Is space an auxiliary to operations in traditional domains of warfighting, or a new form of warfare itself? How likely are stand-alone acts of space war today and in the future? Has the militarization of the final frontier—space—changed the nature and/or character of modern war? This seminar takes up these issues through an examination of Chinese thinking about military strategy and space operations, specifically notions of integrated strategic deterrence (or cross-domain deterrence). It then applies these concepts to better understand the evolution of Chinese military reforms and space operations.

CONTACT HOURS: 2.0-hour seminar
REQUIRED READINGS


   **Background [Strategic Context]:** This chapter provides a useful primer on the fundamentals of space orbits and satellites.


   **Theory [Key Concept]:** In December 2013, the Chinese Academy of Military Sciences published an updated version of the *Science of Military Strategy*, an authoritative and influential statement of Chinese strategic thought. It offers valuable insights into PLA’s thinking on military strategy, including the role of the space domain and space operations within Chinese strategy. Consider the Chinese concept of “integrated strategic deterrence,” which stresses the interdependence of military domains and the need to coordinate nuclear, space, and cyberspace capabilities to achieve Chinese political objectives.


   **Extension [Concept Refinement] and Application [Case Study]:** This article examines the role of outer space in Chinese military strategy, examining the influence of the *Science of Military Strategy* on Chinese space doctrine and military reforms.

RELATED JOINT DOCTRINE

1. Joint Publication 3-13, Chapter 1 (“Overview”), pp. II-5 to II-13. [JWC 8]
DAY 14 – Old Wars, New Wars, and the Changing Character of Contemporary Conflicts

DATE: 2 October 2018

LESSON OBJECTIVES
1. Comprehend the arguments of “old” and “new” wars scholars, specifically whether the nature and/or character of war have changed since the end of the Cold War.
2. Comprehend Simpson’s theory of war as an interpretative structure, including his arguments about polarity, strategic audiences, and strategic narrative.
3. Apply the ideas of “old” and “new” wars to recent combat operations in Afghanistan.
4. Analyze the merits of arguments about “old” and “new” wars.

LESSON OVERVIEW
WT-525 (S): Old Wars, New Wars, and the Changing Character of Contemporary Conflicts

Overview: Some commentators believe that insurgents, terrorists, and warlords have transformed not merely the character of war but even its nature. So unfamiliar has the conduct of modern wars become to Western conceptions of war that some commentators have privileged them with the title of “new wars.” But, what is really new about contemporary conflict, as opposed to what seems new? This seminar considers whether the nature and/or character of war has changed since the end of the Cold War. Are wars fought today fundamentally different from earlier conflicts? Is war still a useful instrument of policy? Which of the military theorists examined in this course are still relevant for understanding the nature, character, and conduct of war today and in the future?

CONTACT HOURS: 3.0-hour seminar

REQUIRED READINGS

   Theory [Key Concept]: Kaldor offers a restatement and defense of the “new wars” thesis, in which she argues wars of the twenty-first century are fundamentally different from those of the past, as they are “post-Clausewitzian.” As you read, consider the merits of this argument and start to form your own position on this debate.

2. Bart Schuurman, "Clausewitz and the "New Wars" Scholars," Parameters (Spring 2010): 89-100. [EL]

   Extension [Concept Refinement]: This article offers a cogent critique of the new wars thesis. As you read, consider whether the tenets of Clausewitz’s theory—the trinity, the primacy of politics, and the role of reason—still apply to contemporary and future wars.

Extension [Concept Refinement] and Application [Case Study]: Simpson, a former British infantry officer who served with the Royal Gurkha Rifles in Afghanistan, aligns himself with the new wars scholars. He argues that contemporary armed conflict has blurred the distinction military activity and politics. As you read, consider the implications of his argument for the future of war.

RELATED JOINT DOCTRINE

1. Joint Publication 1, Chapter 1 (“Levels of Warfare), pp. I-7 to I-8; and 1 (“Range of Military Operations”), pp. V-1 to V-5. [JWC 1, 6]
Day 15 – The Future of War

LESSON OBJECTIVES
1. Comprehend political, social, economic, and technological changes transforming contemporary armed combat.
2. Discuss the implications of these changes for the future of warfare, specifically the nature and/or character of war in the future.
3. Apply the theories studied in this course to the contemporary and future security environment.

LESSON OVERVIEW
WT-526 (L): The Future of War—Carnage and Connectivity (Betz)
Overview: In this capstone lecture, Dr. David Betz (King’s College London) explores the both fundamental change and persistent continuity in the practice of war. Observing that war itself has not changed but warfare—“how we fight—continues to transform, he examines the technological drivers of this transformation, of which the information is the latest. The United States and its allies in the West have serially tried and failed to use technology to disconnect from war’s enduring nature. They have pursued a “fantasy of war” as fast, easy, and decisive, only to find each time that it is slow, protracted, and inconclusive in practice. Today, global connectivity has important implications for character of war, even if not its nature. Future adversaries will find new ways to circumvent and confound US military dominance, and thus war will remain the realm of chance and probability. Increasingly, however, military conflicts will be less contests between conventional forces than wars to shape the beliefs and opinions of populations through multimedia communications networks.

Dr. David Betz is Professor of War in the Modern World in the Department of War Studies, King’s College London. He is also a Senior Fellow of the Foreign Policy Research Institute. He has advised the UK Ministry of Defense on Counterinsurgency and Stabilization Doctrine and Cyber Security, as NATO ISAF on strategic communications, counterinsurgency, and countering corruption. Dr Betz’s main research interests are insurgency and counterinsurgency, information warfare and cyberwar, propaganda, also civil-military relations and strategy. He has published on these subjects in the Journal of Strategic Studies, the Journal of Contemporary Security Studies, and Orbis. His most recent book, Carnage and Connectivity: Landmarks in the Decline of Conventional Military Power, was published by Oxford University Press in 2015.

CONTACT HOURS: 1.0-hour lecture

WT-527 (S): The Future of War
Overview: This course has explored the consequences of societal, political, organizational, and technological changes over the course of the last three hundred years. We have observed both fundamental change and persistent continuity in the practice of war. As war is fundamentally a human activity, as humankind evolves, so do the ways and means of human
violence. Now, many scholars and strategists argue that radical and lasting changes have transformed the character and perhaps even the nature of war. The sources of these changes are political and social, as well technological. Are we in the midst of a revolution in military affairs? How might the nature and/or character of war change in the future? This seminar engages these fundamental questions, as it reviews the main themes, theories, and readings of the course.

CONTACT HOURS: 1.0-hour seminar

WRITTEN ASSIGNMENT

**FINAL PAPER IS DUE**

REQUIRED READINGS


This reading, assigned at the start of the course, reviews the fundamental principles guiding the employment of US military forces. Note the influence of the different military theories and theoretical concepts studied in this course.

RELATED JOINT DOCTRINE

None.
APPENDIX: COURSE FACULTY

**Dr. Trevor Albertson** is an Assistant Professor at Air University’s Air Command and Staff College (ACSC), and the Course Director for the Airpower I course. Dr. Albertson has taught at other institutions, including the United States Air Force Academy. He earned a PhD from the University of California, Merced, with a major field of 20th Century United States Political-Diplomatic history, a Masters in International Affairs from the Catholic University of America, and graduated cum laude from Norwich University. In addition to his teaching experience, Dr. Albertson has published in multiple scholarly periodicals, and he is completing a book on Curtis E. LeMay and the SAC commander’s advocacy for justified nuclear preemption. In his professional life he has served as a congressional staffer, a Deputy Secretary of a cabinet department of California state government, and as a civilian with the Department of Defense. Dr. Albertson is a veteran of the United States Air Force and a current reserve officer.

**Dr. Lisa L. Beekenbaugh** is an Assistant Professor of Military and Security Studies at Air University's Air Command and Staff College (ACSC). Dr. Beckenbaugh received her degrees master's degree from St. Cloud State University and PhD from the University of Arkansas. Dr. Beckenbaugh has taught at a variety of undergraduate and graduate civilian institutions. She also served as the Interim Project Lead and Military Analyst II for the Operational Leadership Experiences (OLE) Project under the aegis of the Combat Studies Institute at Fort Leavenworth and held a Post-Graduate Historical Research Fellow at the Defense POW/MISSING Personnel Office. Dr. Beckenbaugh is the Faculty Lead for the Gathering of Eagles and is completing a book on the Versailles Treaty. Dr. Beckenbaugh's current research is on the 1st MASH (Mobile Army Surgical Hospital), later redesignated 8209th MASH, during the Korean War.

**Dr. Terry Beekenbaugh** is an Associate Professor in the Department of Joint Warfare at Air University’s Air Command and Staff College (ACSC). He came to ACSC from the US Army Command and General Staff College at Fort Leavenworth, Kansas, where he taught for nine years in the Department of Military History. Dr. Beekenbaugh received his PhD in 19th Century US History from the University of Arkansas, and his Masters and Bachelors in US History and History, respectively, from Shippensburg University of Pennsylvania. Beekenbaugh has taught at a variety of undergraduate and graduate civilian institutions. He is currently working on a book on the White River Campaign in Arkansas in the spring-summer of 1862, and has numerous publications and conference presentations.

**Lt Col Joel R. Bius** is the Deputy Chair in the Joint Warfighting Department and Assistant Professor of National Security Studies at Air University’s Air Command and Staff College. Joel received his Ph.D. in US History from the University of Southern Mississippi in May 2015. He also has an MA in Military Studies with emphasis in the American Civil War and is a graduate of Air Command and Staff College. He was commissioned through ROTC at Valdosta State University in Valdosta, Georgia. In addition to teaching the joint warfighting core courses, Joel also teaches electives on the history of American military culture and the history of vice in the military. When not teaching, Joel enjoys playing guitar, cycling sports, coaching/teaching youth sports, and church activities.
Dr. James D. Campbell is an Associate Professor of Military and Security Studies at the US Air Command and Staff College (ACSC). A retired US Army Brigadier General, Dr. Campbell served as an Infantryman and Strategic Plans and Policy Officer for thirty years, with assignments at all levels of command and staff, in both the Regular Army and the National Guard. Most recently he served as the Deputy Chief, Operations Plans Division at US Central Command, and prior to his retirement served as the 39th Adjutant General of Maine and Commissioner of the Maine Department of Defense, Veterans and Emergency Management. A graduate of Colby College, Dr. Campbell holds a M.A. in European History and a Ph.D. in British History from the University of Maine. He is a graduate of the US Army War College where he was given the Commandant’s Award for Distinction in Research, and he was an International Security Studies Fellow at the Fletcher School of Law and Diplomacy, Tufts University. He has written on both military history and contemporary security issues, and his book, titled “The Army Isn’t All Work:” Physical Culture and the Evolution of the British Army 1860-1920, was published in 2012. He remains focused on issues related to the Reserve Components, Homeland Security and Arctic security, and his current historical research interests include British imperial military operations and the Army in India.

Dr. Ronald Dains currently serves as Chair, Department of International Security. He holds an MA and PhD in Political Science from the University of Alabama and a MAS in Aeronautical Science and BS in Professional Aeronautics from Embry-Riddle Aeronautical University. During his doctoral matriculation, he specialized in International Relations with minor fields of study in American Politics and Public Administration. His dissertation, “Lasswell’s Garrison State Reconsidered: Exploring a Paradigm Shift in U.S. Civil-Military Relations Research,” explored the existence of plausible indicators to determine the potential for an increasingly influential military presence in the US policymaking process. He offers elective courses in US Civil-Military Relations and Logistics and the Use of Military Force. Dr. Dains was assigned to the Air Command and Staff College (ACSC) from 2005 to his retirement in 2006.

Dr. William Dean is an associate professor of history at the Air Command and Staff College at Maxwell AFB, AL. He is a graduate of the University of the South (Sewanee) and received his doctorate and master’s degrees from the University of Chicago in European military and diplomatic history. He was a Chateaubriand recipient from the French government and has won the Military Officer of America Association (MOAA) award for civilian educator of the year and the Major General John Alison Award for Air Force Special Operations. He has published on French colonial warfare, intelligence, and air power issues in Revue Historique des Armees, Penser les Ailes Francais, Defense Intelligence Review, and several chapters in various books.

Dr. Melvin G. Deaile is an Associate Professor in the Joint Warfighting Department at Air University’s Air Command and Staff College and has served as the Course Director of the capstone ACSC course, Joint Warfighting 2: Airpower Operations. As a PhD and a retired Colonel from the Air Force, he has considerable knowledge and expertise about the employment of joint air power as well as nuclear operations. The Fresno, CA native graduated with an honors degree in Astronautical Engineering from the U.S. Air Force Academy in 1988. He holds Masters Degrees from Louisiana Tech University, the Army Command and General Staff College, and the Air Force School of Advanced Air and Space Studies (SAASS). In 2004, SAASS selected him for their faculty pipeline program and sent him to UNC-Chapel Hill for a
PhD. Three years later, Dr. Deaile earned his PhD in American History researching organizational culture in Strategic Air Command. In addition to his academic background, Dr. Deaile served two tours in the B-52 Stratofortress and a tour in the B-2 Spirit. He has flown combat operations as part of Operations DESERT STORM and OPERATION ENDURING FREEDOM, including a record setting 44.3-hour combat mission, and deployed in support of Operation IRAQI FREEDOM. Dr. Deaile is the recipient of the Distinguished Flying Cross and a distinguished graduate of the USAF Weapon School.

**Dr. Everett Carl Dolman** is Professor of Comparative Military Studies at the US Air Force’s Air Command and Staff College (ACSC). His focus is on international relations and theory, and he has been identified as Air University’s first space theorist. Dr. Dolman began his career as an intelligence analyst for the National Security Agency, and moved to the United States Space Command in 1986. In 1991, he received the Director of Central Intelligence’s Outstanding Intelligence Analyst award. Dr. Dolman received his PhD in Political Science from the University of Pennsylvania in 1995. He then taught international relations and international political economy at The College of William & Mary, Southern Illinois University-Edwardsville, and Berry College before taking his current position at Maxwell AFB in Alabama. Dr. Dolman received the Air Force’s Educator of the Year Award for 2003/04. His published works include *Astropolitik: Classical Geopolitics in the Space Age* (2002), *The Warrior State: How Military Organization Structures Politics* (2004), *Pure Strategy: Power and Principle in the Information Age* (2005), and *Can Science End War?* (2015). He has written numerous book chapters as well as articles for the *Journal of Strategic Studies, Comparative Strategy, Journal of Small Wars and Insurgencies, Soviet and Post-Soviet Review, Citizenship Studies, Politics and Society, Journal of Political and Military Sociology*, and *The Air and Space Power Review*. Dr. Dolman is also co-founder and editor emeritus of *Astropolitics: The International Journal of Space Power and Policy*.

**Lt Col Benjamin D. Forest** is an Instructor in the Department of International Security (DEI) at Air Command and Staff College. During his 23-year Air Force officer and enlisted career, he has served in a variety of fields, including acquisition, cyberspace operations, recruiting, and contracting. He holds four masters degrees, including a Masters of Systems Engineering Management from the Naval Postgraduate School, and is a recent graduate of the Air War College (AWC) in-residence program at Maxwell AFB, AL. He has served in aircraft and satellite program offices, on the Air Staff, in Iraq and Afghanistan, and is a graduated squadron commander.

**Dr. James Forsyth** currently serves as Dean, Air Command and Staff College (ACSC) at Maxwell AFB, Alabama. Prior to joining ACSC, he served as Professor, International Politics at the School of Advanced Air and Space Studies. A retired Air Force Colonel, Dr. Forsyth has spent more than twenty-five years in military education, with a wide variety of assignments at Maxwell and the United States Air Force Academy. He is the author of ‘Remembrance of Things Past: The Enduring Value of Nuclear Weapons’ and the ‘The Common Sense of Small Nuclear Arsenals’—each garnering national and international attention. His most recent publications, ‘What Great Powers Make It: International Order and the Logic of Cooperation in Cyberspace’ and ‘Structural Causes and Cyber Effects: Why International Order is Inevitable in Cyberspace’ examine the prospects of achieving international cooperation in cyber-space. A native of New
Jersey, he received his PhD from the Joseph Korbel School of International Relations, University of Denver.

**Lt Col Peter Garretson** is an Instructor of Joint Warfare at Air University’s Air Command and Staff College (ACSC), and lead for the Air University Space Horizons Initiative, which seeks to “Re-imagine Spacepower in the Age of Asteroid Mining.” Lt Col Garretson has participated in numerous OSD and USAF wargames focused on Future Warfare and the role of space in future conflict. He is the former Chief of USAF Future Technology, and has served at the Defense Advanced Projects Agency (DARPA) as a Service Chief Fellow, and a Los Alamos National Laboratory as an Academy Research Associate. He has been a strategy and policy advisor to the Chief of Staff of the Air Force on Space and Great Power conflict in Asia. He was the first serving military officer to be detailed as a visiting fellow to Asia’s #1 think tank, the Ministry of Defense Funded Institute for Defense Studies and Analysis (IDSA) in New Delhi, India, where he worked with India’s President Dr. APJ Kalam on long-term US-India collaboration in Space. Lt Col Garretson has over 50 publications including on the topics of space governance, space policy, space based solar power, asteroid mining, planetary defense, strategic culture, and U.S. military strategy and security cooperation in Asia.

**Dr. Kelly A. Grieco** is an Assistant Professor of Military and Security Studies in the Department of International Security at the Air Command and Staff College (ACSC). She is also the Course Director for War Theory and teaches courses in war theory, international security, and military effectiveness. She holds a PhD in Political Science from the Massachusetts Institute of Technology, where she was an affiliate of the Security Studies Program (SSP), and A.B. (*summa cum laude*) in Government from Dartmouth College. She has held fellowships from the MIT Center for International Studies (CIS), the Smith Richardson Foundation, and the Tobin Project. Her research interests include coalition warfare, coalition military effectiveness, military strategy and US force posture. She is currently working on a book manuscript on the sources of coalition battlefield effectiveness.

**Dr. Jordan R. Hayworth** is an Assistant Professor of Military and Security Studies at Air University's Air Command and Staff College (ACSC). He teaches the Airpower I and Airpower II courses for the Department of Airpower. Hayworth received his B.A. in History from High Point University in the Piedmont-Triad region of North Carolina. He earned his M.A. and Ph.D. in European History from the University of North Texas in Denton, Texas, where he studied under Dr. Michael V. Leggiere as a Student Fellow of the Military History Center. Dr. Hayworth's article, "Evolution or Revolution on the Battlefield? The Sambre and Meuse Army in 1794," was published by *War in History* in 2014. He recently authored a book chapter on the French Way of War for an edited volume on *Napoleon and the Operational Art of War* published by Brill. His doctoral dissertation won the 2016 Edward M. Coffman First Manuscript Prize through the Society for Military History and will be published by the University of North Carolina at Chapel Hill Press.

**Dr. Jon Hendrickson** is an Assistant Professor of Security Studies in the Joint Warfighting Department at Air University’s Air Command and Staff College. After being awarded a Tyng Scholarship to Williams College, he earned his Ph.D in military history from The Ohio State University, where he was awarded a Mershon Center Fellowship to conduct research in Vienna,
Rome, Paris and London. This research led to the publication of *Crisis in the Mediterranean*, a book on the shifting alliances and naval races in the Mediterranean before World War I. After graduating from Ohio State, he was awarded the Class of 1957 Post-Doctoral Fellowship in Naval History at the US Naval Academy, and taught at Coastal Carolina University. He has published and presented several papers on naval and military history, ancient history, and diplomatic history.

**Lt Col Paul “Abbie” Hoffman, PhD**, is an instructor in the Department of Airpower at Air University’s Air Command and Staff College. He entered the Air Force in 1995 from the United States Air Force Academy, where he studied history. As an intelligence officer, he held various positions at the squadron, wing, and NAF levels, with an emphasis on unit-level operations, ISR management, and support to the test and evaluation communities. He deployed to Iraq in 2004 and 2006, and deployed to Kandahar Air Field in 2009 as an air advisor to the Afghan National Army Air Corps. An ACSC distinguished graduate, he joined the faculty in 2008. He received his PhD in Political Science (IR and comparative politics) from Indiana University in 2017.

**Dr. Kevin C. Holzimmer** is Professor of Comparative Military Studies at Air University’s Air Command and Staff College (ACSC). Before his current position at ACSC, he was a research professor at the USAF Air Force Research Institute and taught at the School for Advanced Air and Space Studies. Dr. Holzimmer has published numerous studies on World War II in the Pacific, including *General Walter Krueger: Unsung Hero of the Pacific War* (University Press of Kansas). He is currently working on a book-length project that examines how the principal air, land, and sea commanders forged an effective joint team that successfully fought the Japanese in Douglas MacArthur’s Southwest Pacific Area. In addition to his academic pursuits, Dr. Holzimmer has worked on recent policy concerns, first with GEN David H. Petraeus’ USCENTCOM Joint Strategic Assessment Team (9 Oct 2008- Feb 2009) and most recently conducting fieldwork in charting a U.S. Air Force strategy based upon President Obama’s famous “pivot to Asia” speech. He holds a PhD in military history from Temple University.

**Dr. Wes Hutto** is an Assistant Professor of Military and Security Studies at Air University’s Air Command and Staff College (ACSC). He is also the Course Director for International Security I. His research interests include multinational military exercises as they relate to international and regional security dynamics, and institutional processes in international politics. He holds a PhD in Political Science from the University of Alabama.

**Dr. Kenneth Johnson** is the Deputy Chair of the Department of Research and Director of the Electives Program at the Air Command and Staff College. Dr. Kenneth Johnson is an expert in Napoleonic History. Earning his PhD in French History in 2006 at Florida State University, Dr. Johnson has done extensive in-depth research at various French archives on topics of French naval and colonial history. Having taught for the Naval War College and United State Military Academy, Dr. Johnson has been teaching at ACSC since 2010. He has published several articles and a book chapter on Napoleon's use of sea power. In addition to expanding the aforementioned chapter into a book, Dr. Johnson is also writing a biography of a prominent French admiral, Admiral Louis Thomas Villaret-Joyeuse.
Budd A. Jones is an Assistant Professor of Joint Warfare Studies at the Air Command & Staff College. He holds a BA in Military History form the USAF Academy and an MA in American History from the University of Wisconsin at Madison. His currently working on a PhD in the History of Technology through Auburn University. He is retired from the Air Force where he was a fighter pilot (A-10) and a joint and air planner. He also served as the Director of Military History at the USAF Academy from 1991-1992. In addition to teaching Joint Warfare he instructs in the college’s Multi-Domain Operational Strategist (MDOS) program. He has also served as the Chair of the college’s Department of International Security and Director of Joint Education.

Dr. Robert M. Kerr is an Associate Professor in the Joint Warfighting Department at the Air Command and Staff College (ACSC). He also previously served as Course Director for International Security 2: The Use of Armed Force. He holds a PhD in Political Geography from the University of Oregon, and an MA in Geosciences from the University of South Carolina. His BA is in History with an emphasis on the Islamic World from Grand Valley State University. In addition to teaching at ACSC, Dr. Kerr has worked at the Air Force Culture and Language Center, and taught courses at the US Air Force Special Operations School, the Senior NCOA Academy, and the Air Advisor Academy. In 2008-2009 he spent 15 months in NE Baghdad with the 3rd Brigade 4th Infantry Division and 1st Brigade 1st Cavalry Division as an embedded political/cultural advisor.

Dr. Michael Kraig is Associate Professor of International Security at Air Command and Staff College. He earned his PhD in Political Science from the University at Buffalo, New York, with a major in international security studies and a minor in comparative politics. Dr. Kraig served in several senior capacities with the Stanley Foundation, a non-profit, non-partisan NGO devoted to advocating security policy options for the United States and its competitors that would moderate the extremes of their geopolitical disagreements. He was a frequent traveler to Washington, DC, Europe, and the Middle East to give scholarly presentations to senior policy leaders, policy analysts, and academics. His publications include the book, Shaping U.S. Military Forces for the Asia Pacific: Lessons from Conflict Management in Past Great Power Eras by Rowman & Littlefield Press, and numerous articles on US-Iran relations, nuclear deterrence in the developing world between regional rivals, and military theory and its relation to US conventional force posture in East Asia, in The Journal of Peace Research, India Review, Security Studies, and Strategic Studies Quarterly.

Dr. John T. LaSaine, Jr., earned A.B., A.M., and Ph.D. degrees in history from Brown University. His primary academic field is the history of United States foreign relations, with research and teaching interests including modern military history and political-military affairs. Dr. LaSaine has been an ACSC faculty member since 1997, serving as Vice-Dean for Academic Affairs (2003-06) and Chairman of the Department of Leadership and Strategy (2009-12). He has also taught at the University of Georgia, the Air War College, and the School of Advanced Air and Space Studies.

Dr Robert (Bob) Mahoney is the Chair, Department of Joint Warfighting at the Air Command and Staff College. He has a PhD in History from the George Washington University, a MS in
National Resource Strategy from the Eisenhower School, National Defense University (NDU), a MS in Management from Webster University, and a BS in Engineering Sciences from the United States Air Force Academy. Prior to arriving at ACSC, Dr. Mahoney was the Dean of the Marine Corps War College and an Assistant Professor at the Eisenhower School at NDU. His book, "The Mayaguez Incident" was published by Texas Tech Press. He is a retired AF Col with over 27 years of service, commanded a KC-135 flying squadron, was on the AMC and CJCS staff, and was a command pilot with over 3500 hours in the T-37, T-38 and KC-135. His research interests include the US Constitution, Joint Warfighting, Joint Planning, Operational Design, Leadership, US Air Force History, Vietnam War era, WW II, Revolutionary War, and Civil War.

Major Christopher G. Marquis is an Instructor in the Department of Joint Warfighting at the Air Command and Staff College, Air University, Maxwell AFB, Alabama. He joined the ACSC staff in June 2015. His work at DEW includes designing lesson plans and teaching plans, and instructing the two joint warfighting courses (JW1 and JW2). He also instructs the ACSC elective “Understanding the U.S. Constitution” with Dr. Robert Mahoney. His primary career field is contracting, and he is a worldwide deployable contingency contracting officer. Before his current assignment, Major Marquis was the Chief, Operations Branch, Air Force Installation Contracting Agency (AFICA), Operating Location Air Combat Command (OL-ACC), Langley AFB, Virginia. Major Marquis has served five deployments to Afghanistan and Iraq, the latest as the Chief of the Regional Contracting Office in Sharana, Afghanistan in October 2012. He was commissioned in 2001 through the Officer Training School at Maxwell AFB, Alabama. In 2000, he earned his bachelor’s degree from Cornell University in Ithaca, NY. In 2006, he earned his MBA from the University of Massachusetts, Lowell.

Dr. Edwin Redman, Colonel, USAF, Retired, is an Assistant Professor of Military and Security Studies at Air University’s Air Command and Staff College (ACSC). Dr. Redman is a Command Pilot with tours in each of the Air Force’s bomber aircraft. He served as an instructor pilot in the T-38, B-1 and B-2, and flew combat missions in Operation Iraqi Freedom in 2003 in the B-2. He is a graduate of the US Air Force Academy, ACSC, and the School of Advanced Air and Space Studies. Following SAASS, Dr. Redman attended Duke University, where he received his PhD in History. His last operational assignment was Deputy Commander, 509th Operations Group, Whiteman Air Force Base. He completed his active-duty service at Air University, holding several positions, including Director of Warfighting Education at the LeMay Center for Doctrine Development and Education, and Director of the Grand Strategy Seminar, Air War College. He retired from the active-duty Air Force in 2014, and joined Air University as a civilian professor in 2015.

Dr. Jeffery M. Reilly is a retired Army officer with 26 years of active-duty service. He began his service as a draftee and served 28 consecutive months in Vietnam, Thailand, Laos, and Cambodia. His theater-level planning and operations experience includes serving as a theater level combined and joint operations officer, plans division chief, and member of the Secretary of Defense’s “two major theater war” plans team. He is an adjunct faculty member for the NATO School’s Operational Planning Course, a speaker at the USAF Weapons Instructor Course, and a member of the Chairman of the Joint Chiefs of Staff’s Military Education Coordination Council
Working Group. Dr. Reilly has also given a number of presentations at international defense colleges including: the Führungsakademie der Bundeswehr, in Hamburg, Germany, the Roal Danish Defence College in Copenhagen, Denmark, the Ethiopian Defense Staff College in Addis Ababa and the Polish National Defense University in Warsaw. Additionally, he conducted research on design in Afghanistan during 2010, 2011, and 2012 and on the future of C4ISR in Iraq and Africa during 2016. He is the author of *Operational Design: Distilling Clarity from Complexity for Decisive Action*. His most recent article *What’s After Joint?* concerning multi domain operations was published in the March 2016 edition of the *Air and Space Power Journal*. In 2018, he won the Air Education and Training Command (AETC) award for innovation in multi domain and joint warfighting abilities. He currently serves as director of future security studies at the Air Command and Staff College and as the director of the college’s Multi Domain Operational Strategist (MDOS) concentration.

**Lt. Col. Donald A. Seablom** is an instructor in the Department of Airpower at the Air Command and Staff College at Maxwell Air Force Base. A Cyber Operations Officer, he has worked at the squadron and group level with extensive time in the Special Tactics environment, working as a mission support flight commander, Special Tactics Group Director of Communications and Logistics, and squadron commander. He has deployed to Balad Air Base, Iraq as a communicator, Kandahar Airfield, Afghanistan as an executive officer, and Camp Lemmonier, Djibouti as a Joint Task Force J6. Prior to his tenure at Air Command and Staff College, he was the Commander at the 724th Special Tactics Support Squadron, Fort Bragg, NC. He attended Air Command and Staff College and graduated in 2016. Additionally, he received an online masters in IT Management.

**Dr. Matthew R. Schwonek** is Associate Professor of Comparative Military Studies in the Department of International Security of Air Command and Staff College. In ACSC, he has held multiple course director positions, while he currently serves as director of the exchange with the Polish National Defense University. He teaches core courses on international security and military theory as well as electives/research seminars on the First World War and Politics and Security in Central Europe. He holds a Doctor of Philosophy Degree in East Central European and Russian History from The Ohio State University, where he formerly served as assistant director of the Center for Slavic and East European Studies. He is the author of several articles, essays, and reviews on the armed forces of Poland published in *The Journal of Military History, Przegląd historyczny, War in History, The Polish Review*, and *The Journal of Slavic Military Studies*. He currently serves on the editorial board of *Przegląd wojskowo-historyczny* (Warsaw). In progress is a biography of Gen. Kazimierz Sosnkowski (1885-1967).

**LTC Chadwick Shields**, United States Army, is an instructor of Leadership and International Security Studies at the Air Command and Staff College. His previous assignment was at the 101st Airborne Division (Air Assault) where he served as the Squadron Commander for the “Widowmakers”, 1-75th Cavalry Squadron. He has over three and a half years of combat experience in Iraq and Afghanistan along with an operational deployment to Kosovo. He holds a Master’s Degree in Military Art and Science from the School of Advanced Military Studies at Fort Leavenworth, KS and a Master’s Degree in Management from Webster University. LTC Shields is a 1993 graduate of the United States Military Academy with a Bachelor of Science in International Relations.
Dr. Paul J. Springer is a Professor of Comparative Military Studies and the Chair of the Department of Research. He holds a doctorate in history from Texas A&M University. Dr. Springer is the author of five books, with four more expected to publish in 2017. These works include America’s Captives: Treatment of POWs from the Revolutionary War to the War on Terror (Kansas, 2010); Military Robots and Drones (ABC-CLIO, 2013); Transforming Civil War Prisons: Lincoln, Lieber, and the Politics of War (Routledge, 2014, co-authored by Glenn Robins); Cyber Warfare (ABC-CLIO, 2015); and 9/11 and the War on Terror (Greenwood, 2016). His forthcoming works are The Encyclopedia of Cyber Warfare (ABC-CLIO, 2017); Outsourcing War to Machines: The Military Robotics Revolution (Praeger, 2017); America’s Wars: U.S. Military History, 1500-Present (Naval Institute Press, 2017, coauthored by S. Michael Pavelec); and Brothers in Peace and War: The West Point Class of 1829 (Kansas, 2017). He teaches courses on leadership, strategy, terrorism, and technology. Prior to ACSC, Dr. Springer taught at the United States Military Academy at West Point and Texas A&M University. Springer is also the editor of two series, Transforming Warfare and History of Military Aviation, both with the Naval Institute Press.

Dr. Christopher M. Stamper is an Instructor of Joint Warfighting at the United States Air Force’s Air Command and Staff College. He has a Bachelor’s of Science Degree in Oceanography and a Master of Arts in National Security and Strategic Studies. He is currently a doctoral student concentrating his studies on Public Policy and Public Administration of Peacekeeping Operations, specifically in East African Affairs. He has taught at the US Naval Academy and the Air War College.

Dr. John G. Terino is the Chairman of the Department of Airpower at the United States Air Force’s Air Command and Staff College (ACSC). At ACSC, he teaches courses on Leadership and Warfare, Airpower, the Practice of Command, Joint Warfare Planning, Joint Air Planning, and an elective on the Air Force in Fact, Fiction, and Film. Prior to teaching at ACSC, he was a professor at the School of Advanced Air and Space Studies (SAASS). While at SAASS, he directed the school’s course on Technology and Military Innovation, courses on Airpower History, and the institution’s wargaming activities. He is currently researching a comprehensive history of the Joint Strike Fighter Program. Dr. Terino’s dissertation explores interactions of the military-industrial-academic complex in the early Cold War and Vietnam eras and the development of biological warfare under the purview of the USAF. Before coming to Air University, he taught for four years at the Air Force Academy in the Department of History. He retired from the Air Force in the grade of Lieutenant Colonel in 2008 after serving for almost 23 years. He received his PhD in the History and Sociology of Science from the University of Pennsylvania in 2001. In his spare time, John enjoys officiating cross-country and track and field, reading, and attending the cinema.

Dr. Michael E. Weaver is an Associate Professor of History who specializes in the history of war and warfare. He is the author of Guard Wars: The 28th Infantry Division in World War II (Indiana University Press, 2010), as well as five articles. His most recent are “The Relationship between Diplomacy and Military Force: An Example from the Cuban Missile Crisis” in Diplomatic History (2014) and “Missed Opportunities before Top Gun and Red Flag” in Air
Power History (2013). Earlier articles address the Air National Guard in the Berlin Crisis, economic intelligence, and the social composition of the Pennsylvania National Guard. Weaver is now completing a second book, National Policy and Air Power Effectiveness during the Vietnam War. Weaver’s skills include leading small group discussions, academic lecturing, research, and writing. His book reviews have appeared in The Journal of Military History, and H-War, among others. Prof. Weaver has taught courses on U.S. history, war & society, American military history, the Vietnam War, World War II, African-American history, international security, and air power. He received his doctorate from Temple University in 2002 having worked with Russell Weigley and Richard Immerman. Weaver also studied under William Leary, John Morrow, Jr., and Eugene Genovese at the University of Georgia.

COL Thomas G. Wilson, Jr. is an instructor in the Department of Airpower at Air University's Air Command and Staff College. He was commissioned in 1996 as a Field Artillery Officer in the Army from The Citadel, where he studied Physical Education. He has served in a multitude of leadership positions from Platoon Leader to Battalion Commander. He has deployed to Iraq three times. He is a graduate of the Command and General Staff College (CGSC) and the School of Advanced Military Studies (SAMS). LTC Wilson earned a Master's Degree from Kansas State University and a MMAS from CGSC. He joined the faculty in 2017.

Dr. Jonathan Zartman is an associate professor in the Department of Research at Air Command and Staff College. He received his Ph. D. in 2004 from the University of Denver. His dissertation entitled, “Political Transitions in Central Asia: Authoritarianism versus Power-Sharing” explained the peace agreement that ended the Tajik civil war. During the academic year 2000-2001, he taught International Relations, International Economics, and American Foreign Policy at the Technological University of Tajikistan. He also worked as a volunteer for the French humanitarian organization “Agency for Technical Cooperation and Development,” the newspaper “Tojikistan,” helping the Foreign Minister of Tajikistan, and initiating the cultural journal for peace, “Fonus.” In 2005-2006 he taught American Studies and Global Affairs at the Samarkand State Institute of Foreign Languages in Samarkand, Uzbekistan while working on a curriculum development project as a Fulbright Fellow. He has also traveled for research and consultations in Iran, Kazakhstan, Kyrgyzstan, Turkey, and Oman. His published articles and conference presentations cover the topics of Islam, culture, social movements, civil wars, conflict analysis, and durable peace settlements.

Major Brent D. Ziarnick is an Assistant Professor of Comparative Military Studies at the Air University’s Air Command and Staff College and deputy lead for the Air University’s Space Horizons Initiative. Maj Ziarnick is a command space operations officer with extensive experience in Global Positioning System (GPS) engineering, offensive space control, and theater space command and control. In civilian life, he was a launch operations engineer at Spaceport America, New Mexico where he developed the long-range plan for the world’s first purpose-built inland commercial spaceport’s vertical launch activity. He holds a doctorate in economic development from New Mexico State University, a master’s degree in space systems engineering from the University of Colorado-Colorado Springs, a bachelor’s degree in space operations from the United States Air Force Academy, and is a graduate of both the Air Command and Staff
College and the School of Advanced Air and Space Studies. Major Ziarnick is the author of one book and multiple articles on space power theory and strategy.