US Army War College

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Key Strategic Issues List (KSIL) 2021-2022

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Strategic Studies Institute

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Key Strategic Issues List (KSIL)

Academic Years
2021-2022

United States
Army War College

The United States Army War College

The United States Army War College educates and develops leaders for service at the strategic level while advancing knowledge in the global application of Landpower.

The purpose of the United States Army War College is to produce graduates who are skilled critical thinkers and complex problem solvers. Concurrently, it is our duty to the US Army to also act as a "think factory" for commanders and civilian leaders at the strategic level worldwide and routinely engage in discourse and debate concerning the role of ground forces in achieving national security objectives.

The Strategic Studies Institute conducts research and analysis to solve geostrategic issues for the Army, the US defense enterprise, and the nation.

The Center for Strategic Leadership contributes to the education of world-class senior leaders, develops expert knowledge, and provides solutions to strategic Army issues affecting the national security community.

The Peacekeeping and Stability Operations Institute provides subject matter expertise, technical review, and writing expertise to agencies that develop stability operations, concepts, and doctrines.

The School of Strategic Landpower develops strategic leaders by providing a strong foundation of wisdom grounded in mastery of the profession of arms, and by serving as a crucible for educating future leaders in the analysis, evaluation, and refinement of professional expertise in war, strategy, operations, national security, resource management, and responsible command.

The US Army Heritage and Education Center acquires, conserves, and exhibits historical materials for use to support the US Army, educate an international audience, and honor soldiers—past and present.

FOREWORD

The 2018 National Defense Strategy sounded a clear call for the Nation's armed services to prepare for an increasingly intense and, at times, chaotic period of competition with a variety of state and non-state adversaries. The Army responded to this call by accelerating its refinement of a Multi-Domain operating concept as highlighted in a revised Army Vision, Strategy, Campaign Plan, Modernization Strategy, and other key documents published throughout 2018 and 2019.

In mid-2020, however, the Nation finds itself battling a very different enemy in the form of a global pandemic that has already claimed over one hundred thousand victims at home and many more abroad. The pandemic serves as a reminder that while certain strategic problems may recede from time to time, their potential is a constant threat. As such, the practice of strategic art requires careful and vigilant study of the full array of challenges that may face our Army and our Nation.

As we anticipate the future, we rely on our professional military education system and institutions to conduct the research and analysis to develop the strategic insight that will guide our efforts to ensure America's future security. In pursuit of that goal, the Army's educational institutions will identify and tackle the most perplexing strategic issues posed by the ever-changing international security environment. The Key Strategic Issues List (KSIL), developed by the U.S. Army War College, in collaboration with many other organizations and institutions, helps the Army bring to bear our considerable research and analysis capabilities on the most important challenges to the defense of our Nation. This revised KSIL presents over two hundred key strategic issues to guide our research and analysis efforts. We strongly encourage those conducting research through our Senior Service Colleges and Fellows programs, as well as other researchers, to take on the difficult issues listed in the KSIL.

As we build a future force and the capabilities to defend our Nation, we must apply our considerable intellectual power to develop concepts and approaches that will change mindsets in ways that yield extraordinary results. We can do so only through rigorous research and analysis that produces ideas invaluable to the Army and to our Nation.

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Major General, United States Army
Commandant, U.S. Army War College

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James C. McConville
General, United States Army
Chief of Staff

INTRODUCTION

The United States Army War College (USAWC) prepares the Key Strategic Issues List (KSIL) on a biennial basis to help focus the research community on topics important to the US Army, as determined by three criteria:

- Relevance. Research on KSIL topics must have the potential to shape Army actions or policies rather than being background information or for situational awareness.

- Priority. Selection of KSIL topics is informed by Department of Defense (DoD), Joint, and Army strategic guidance, and through the collaboration of defense scholars and military experts.

- Suitability. The KSIL is tailored to the research capabilities of the USAWC and the greater research community that focuses on strategic themes. Highly technical issues requiring extensive data collection and specialized expertise may be more appropriate for other research and analytical organizations.

Each update of the KSIL considers the previous edition's strategic themes and issues. While the strategic themes tend to remain constant from year to year, the strategic issues can change often in response to the security environment, defense policy, and ongoing research.

This edition of the KSIL incorporates the development of Army strategic guidance over the past two years. The first section of the KSIL considers the changing strategic environment and communicates five themes that define this dynamic. The Training and Doctrine Command's G2 assessment of the operational environment (TRADOC PAM 525-92, October 2019) greatly informed this framework. The second section reflects the Army Vision with a supporting theme aligned to each of its elements. Listed under each theme in both sections are key strategic issues that focus potential research. The issues are not in priority order.

Special thanks are owed to COL Steve Cunningham who led the effort to revise this edition of the KSIL.

While the KSIL is published biennially, the revision process is continuous. Send feedback and suggestions for future KSIL themes and issues to COL George Shatzer, at george.r.shatzer.mil@mail.mil, (717) 245-4125, or to usarmy.carlisle.awc.mbx.ssi-webmaster@mail.mil.

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STRATEGIC LINKAGES

This revised KSIL retains its base focus on the unclassified Summary of the 2018 National Defense Strategy (NDS). Portions of it are included to provide a context for the KSIL's themes and to guide researchers as they scope and design their specific research endeavors. The KSIL has also been updated to reflect Army strategic guidance documents published since the NDS and KSIL were published in summer 2018. These Army strategic documents include:

- The Army Strategy, including the Army Vision (2018)
- The Army Campaign Plan 2019+
- The Army Modernization Strategy (2019)
- The Army People Strategy (2019)
- The Operational Environment and the Changing Character of Warfare, TRADOC Pamphlet 525-92, October 2019
- The US Army in Multi-Domain Operations 2028, TRADOC Pamphlet 525-3-1, December 2018

We recommend that users of the KSIL refer to the NDS in its entirety, other national level guidance to include the 2017 National Security Strategy of the United States of America, and to the relevant Army strategic guidance documents when considering how best to select and adapt a topic for research.

Extracted from national and Army strategic guidance:

> The Department of Defense's enduring mission is to provide combat-credible military forces needed to deter war and protect the security of our nation. Should deterrence fail, the Joint Force is prepared to win. Reinforcing America's traditional tools of diplomacy, the Department provides military options to ensure the President and our diplomats negotiate from a position of strength.

> Today, we are emerging from a period of strategic atrophy, aware that our competitive military advantage has been eroding. We are facing increased global disorder, characterized by decline in the long-standing rules-based international order—creating a security environment more complex and volatile than any we have experienced in recent memory. Inter-state strategic competition, not terrorism, is now the primary concern in US national security...[1]

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[1] James Mattis, "Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge" (Washington DC: Department of Defense, 2018), accessed June 10, 2020, https://www.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf, 1.

The US military, and therefore, the US Army, finds itself at a historical inflection point, where disparate, yet related elements of the operational environment are converging, creating a situation where fast-moving trends across the DIME-spheres are rapidly transforming the nature of all aspects of society and human life—including the character of warfare. These trends include significant advances in science and technology, where new discoveries and innovations are occurring at a breakneck pace; a dizzying pace of human interaction and a world:

> a. That is connected through social media and the "Internet of Things" and all aspects of human engagement where cognition, ideas, and perceptions, are almost instantaneously available;

> b. Where economic disparities are growing between and within nations and regions; where changing demographics—like aging populations and youth bulges—and populations moving to urban areas and mega cities capable of providing all of the benefits of the technological and information-enabled advances;

> c. With competition for natural resources, especially water, becoming more common;

> d. And where geopolitical challenges to the post-Cold War US-led global system in which strategic competitors, regional hegemons, ideologically-driven non-state actors, and even super empowered-individuals are competing with the US for leadership and influence in an ever-shrinking world...[2]

The Army Mission—our purpose—remains constant: *To deploy, fight, and win our Nation's wars by providing ready, prompt, and sustained land dominance by Army forces across the full spectrum of conflict as part of the Joint Force.* The Army mission is vital to the Nation because we are the Service capable of defeating enemy ground forces and indefinitely seizing and controlling those things an adversary prizes most—its land, its resources, and its population. Given the threats and challenges ahead, it is imperative the Army have a clear and coherent vision to retain overmatch in order to deter, and defeat if necessary, all potential adversaries. As such, the Army Vision—our future end state—is as follows:

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[2] Theodore Martin, "The Operational Environment and the Changing Character of Warfare," TRADOC Pamphlet 525-92, (Fort Eustis, VA: Headquarters, US Army Training and Doctrine Command, October 2019), accessed June 10, 2020, https://adminpubs.tradoc.army.mil/pamphlets/TP525-92.pdf, 5-6.

The Army of 2028 will be ready to deploy, fight and win decisively against any adversary, anytime and anywhere, in a joint, combined, multi-domain, high-intensity conflict, while simultaneously deterring others and maintaining its ability to conduct irregular warfare. The Army will do this through the employment of modern manned and unmanned ground combat vehicles, aircraft, sustainment systems, and weapons, coupled with robust combined arms formations and tactics based on a modern warfighting doctrine, and centered on exceptional Leaders and Soldiers of unmatched lethality...[3]

The primary end state of the 2019 [Army Modernization Strategy], nested with the 2018 Army Strategy, is a modernized Army capable of conducting Multi-Domain Operations (MDO) as part of an integrated Joint Force in a single theater by 2028, and ready to conduct MDO across an array of scenarios in multiple theaters by 2035. The MDO concept describes how the Army will support the Joint Force in the rapid and continuous integration of all domains of warfare—land, sea, air, space, and cyberspace—to deter and prevail as we compete short of conflict, and fight and win if deterrence fails.[4]

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[3] Mark Esper and Mark Milley, "The Army Strategy" (Washington DC: Department of the Army, 2018) accessed June 10, 2020, https://www.army.mil/e2/downloads/rv7/the_army_strategy_2018.pdf, 1.

[4] Ryan McCarthy, James McConville, Michael Grinston, "2019 Army Modernization Strategy: Investing in the Future" (Washington DC: Department of the Army, 2019) accessed June 10, 2020, https://www.army.mil/e2/downloads /rv7/2019_army_modernization_strategy_final.pdf, 1.

THE WAR COLLEGE APPROACH TO STRATEGIC RESEARCH

Since publication of the previous KSIL, the US Army War College undertook a deliberate effort to refine how it conducts strategic research and analysis. It has sought to do this by formalizing the expert, professional body of knowledge that it has responsibility for and by placing a premium on increasing collaboration throughout the college as well as with external partners such as think tanks and civilian universities. To this end, the Strategic Studies Institute collaborated with the School of Strategic Land power, and the other institutes and programs at the college, to develop this new approach to conducting strategic research and analysis for the Army and the nation.

War College faculty members are highly regarded experts in their respective fields and their scholarly works—such as journal articles, monographs, and even books—have tremendous positive impact on the Army and across the Department of Defense (DOD). The effort to revise the college-wide approach to strategic research seeks to build upon this tradition of brilliant works and elevate it into a more cohesive body of scholarship through a clear articulation of research priorities.

These research priorities will greatly assist students, fellows, faculty, and external partners, in better understanding where to expend precious resources and effort in strategic research and analysis. It will also enhance dialogue with the rest of the Army, helping to build the best possible body of scholarship to solve the most critical strategic problems.

The War College derived these research priorities by asking three basic questions:

- What strategic problems has the Army traditionally struggled with?
- What is it dealing with today?
- What is it likely to face in the future?

Many months of dialogue on these questions led to the creation of a four-part cognitive frame that describes "why" the War College seeks to do strategic research and analysis—to best anticipate change in the strategic environment, the character of war and security, America's world role, and how to build a more effective Army. Within that framework, the War College further defines four "arenas" of research.

The first arena is (Geo) Strategic Net Assessment. This encompasses analysis of regional and transregional threats, understanding sources of adversary compound-threat conduct (their strategies, operational methods, and decision-making), and cooperation with partners, allies, the government interagency, joint services, and commercial entities.
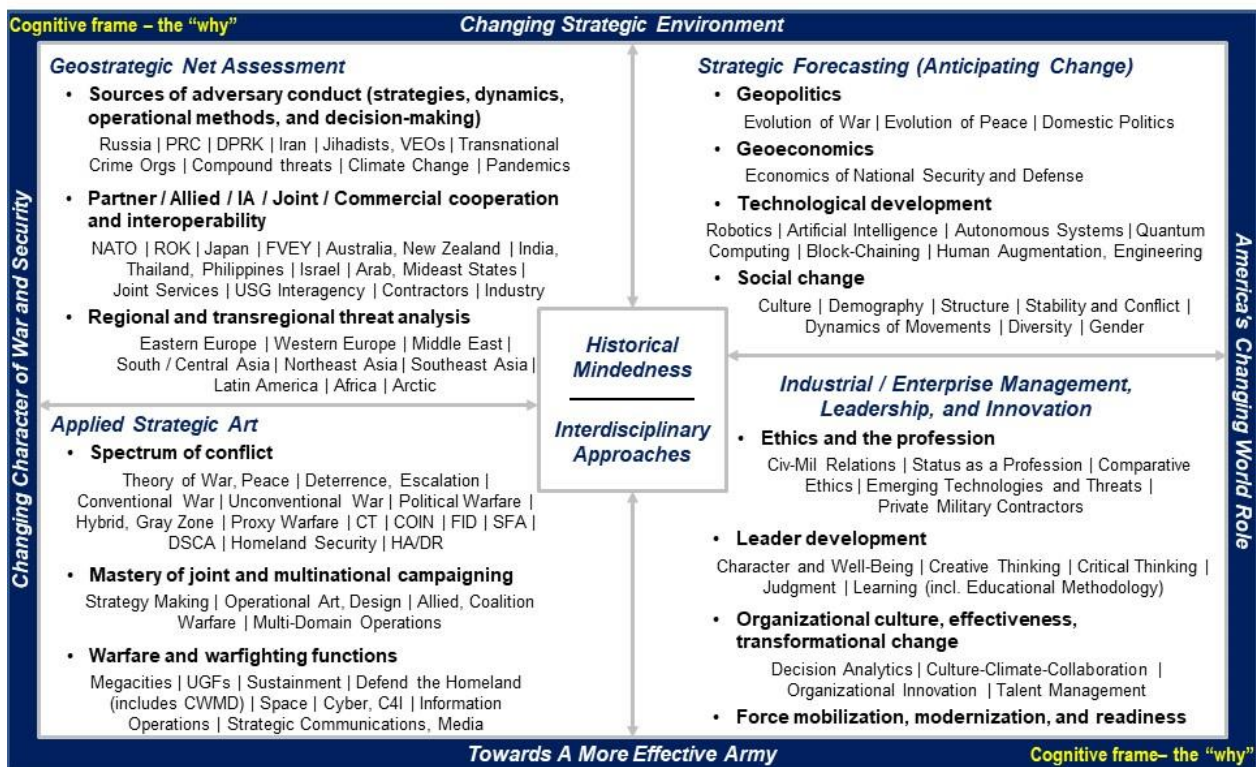
The second arena, (Geo) Strategic Forecasting, is about anticipating change to deal with disruptions and innovations. This arena accounts for topics related to geopolitics, geo-economics, technological development, and social change.

Applied Strategic Art is the third arena and deals with the spectrum of conflict, campaigning, and warfare itself.

The final arena is Industrial / Enterprise Management, Leadership, and Innovation. These topics underpin the Army's ability to address the issues of the other three arenas. Ethics and the profession, leader development, organizational culture and change, and force mobilization and modernization (all things readiness) define this set.

USAWC Research Priorities
What the Army needs…What we own and are expert in

Cognitive frame – the "why" — **Changing Strategic Environment**

Changing Character of War and Security

Geostrategic Net Assessment
- **Sources of adversary conduct (strategies, dynamics, operational methods, and decision-making)**
  Russia | PRC | DPRK | Iran | Jihadists, VEOs | Transnational Crime Orgs | Compound threats | Climate Change | Pandemics
- **Partner / Allied / IA / Joint / Commercial cooperation and interoperability**
  NATO | ROK | Japan | FVEY | Australia, New Zealand | India, Thailand, Philippines | Israel | Arab, Mideast States | Joint Services | USG Interagency | Contractors | Industry
- **Regional and transregional threat analysis**
  Eastern Europe | Western Europe | Middle East | South / Central Asia | Northeast Asia | Southeast Asia | Latin America | Africa | Arctic

Strategic Forecasting (Anticipating Change)
- **Geopolitics**
  Evolution of War | Evolution of Peace | Domestic Politics
- **Geoeconomics**
  Economics of National Security and Defense
- **Technological development**
  Robotics | Artificial Intelligence | Autonomous Systems | Quantum Computing | Block-Chaining | Human Augmentation, Engineering
- **Social change**
  Culture | Demography | Structure | Stability and Conflict | Dynamics of Movements | Diversity | Gender

Historical Mindedness
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Interdisciplinary Approaches

Applied Strategic Art
- **Spectrum of conflict**
  Theory of War, Peace | Deterrence, Escalation | Conventional War | Unconventional War | Political Warfare | Hybrid, Gray Zone | Proxy Warfare | CT | COIN | FID | SFA | DSCA | Homeland Security | HA/DR
- **Mastery of joint and multinational campaigning**
  Strategy Making | Operational Art, Design | Allied, Coalition Warfare | Multi-Domain Operations
- **Warfare and warfighting functions**
  Megacities | UGFs | Sustainment | Defend the Homeland (includes CWMD) | Space | Cyber, C4I | Information Operations | Strategic Communications, Media

Industrial / Enterprise Management, Leadership, and Innovation
- **Ethics and the profession**
  Civ-Mil Relations | Status as a Profession | Comparative Ethics | Emerging Technologies and Threats | Private Military Contractors
- **Leader development**
  Character and Well-Being | Creative Thinking | Critical Thinking | Judgment | Learning (incl. Educational Methodology)
- **Organizational culture, effectiveness, transformational change**
  Decision Analytics | Culture-Climate-Collaboration | Organizational Innovation | Talent Management
- **Force mobilization, modernization, and readiness**

America's Changing World Role

Towards A More Effective Army — **Cognitive frame– the "why"**

This set of research priorities is more than just a collection of lists. It is intended to describe a cohesive body of knowledge. As such, it specifically notes the importance of the study of history and of taking an interdisciplinary approach to all research efforts.

As no model is ever complete, this one necessarily falls short of capturing the totality and true nature of the strategic problem set facing the Army and benefits from improvement. As you take up research and create new knowledge and clarity, provide us your feedback and help improve this model.

THE STRATEGIC ENVIRONMENT

I. Strategic Environment: Today, political, economic, social, and technological changes are creating challenges and opportunities for maintaining the Army's land power dominance. Battlefields are expanding across all domains, geographic scale, and types of actors, while at the same time, decision cycles and reaction times continue to compress. Furthermore, the Army will operate on congested, and potentially contaminated, battlefields while under persistent surveillance. It will encounter advanced capabilities such as cyber, counter-space, electronic warfare, robotics, and artificial intelligence. These dynamics are changing the character of warfare for which the Army of 2028 must be prepared to face global competitors, regional adversaries, and other threats.

A. Futures: Recent decades have witnessed far-reaching changes in how people live, create, think, and prosper. Our understanding of these changes is a prerequisite to understand further how the strategic security environment and the character of warfare itself will transform. Such changes include significant advances in science and technology, where new discoveries and innovations are occurring at a rapid rate. A dizzying pace of human interaction and a world connected through social media highlights growing economic disparities. These factors, along with changing demographics and increasing competition for natural resources, create geopolitical challenges to the post-Cold War global system and US leadership and influence.

Research Topics:

1. Analyze how the Army should study alternative futures. Evaluate if they should be grounded projections from today's environment or developed in the "deep future."

2. As with the recent pandemic response, evaluate the prospect for near to mid-term "strategic shock," its potential origin, character, geopolitical and economic effects, and its impact on defense strategy, concepts, and capabilities.

3. Evaluate if the Army should reorganize to focus on the emerging challenges of the far future (20-30 years). Examine how the Army could employ test units to experiment with future capabilities without affecting current readiness.

4. Analyze and assess capability gaps and future requirements for Army forces to operate in cross-domain operations short of war—the competition period.

5. Prioritize where the Army should invest in Science and Technology over the next 10, 20, and 30 years to increase combat power over emerging peer-threats.

6. Describe the potential impacts of climate change on: a) the character of war; b) vital US national interests; c) emerging security challenges for the United States;

and d) Soldier readiness. Appraise how these impacts could affect landpower and the organization, training, and equipping of the Army.

7. Assess how the Army will integrate emerging changes in energy and water security into strategic, institutional, operational, and logistical planning.

8. Compare the operational impact and cost of manned versus remotely-piloted or autonomous aircraft in similar roles. Describe the operational impact of future vertical lift technologies in 2030-2050, taking into account future operating environments.

9. Propose what logistics, including Army Prepositioned Stocks (APS), could look like in 2030-2050, taking into account emerging technologies (e.g., 3D printing) and requirements to support distributed operations in future, constrained environments.

10. Evaluate how emerging technologies like Soldier enhancement programs, robotics, nanotechnology, new materials and fuels, quantum computing, artificial intelligence, virtual, mixed, and augmented realities, and micro air vehicles capable of delivering biological weapons will affect military strategy and the employment of the Army.

11. Sensing and computing devices worn by Soldiers and embedded in sensors and platforms are capable of acquiring massive amounts of data. Recommend how the Army should manage this pervasive sensing, computing, and communication capability and how it should maintain cyber security.

12. Assess the potential impact of life extending capabilities (e.g., cancer remedies and increases in life expectancy) on future force structure.

B. Geopolitical/Strategic Ends: These changes will create a strategic environment marked by instability. Evolving geopolitics, resurgent nationalism, changing demographics, and unease with the results of globalization will create tensions, competition for resources, and challenges to structures, order, and institutions. The world order will evolve with rising nations challenging the post-Cold War dominance of the US-led Western system. New territorial conflicts will arise, compelling the United States to seek new partnerships and alliances, while climate change and geopolitical competition will open up new theaters of operation, such as in the Arctic.

Long-term strategic competition with the People's Republic of China (PRC) and Russia is the principal priority for DOD, and requires both increased and sustained investment, because of the magnitude of the threats they pose to US security and prosperity. Concurrently, DOD will sustain its efforts to deter and counter rogue regimes such as North Korea (the Democratic People's Republic of Korea–DPRK) and Iran, defeat terrorist threats to the United States, and consolidate operations in Iraq and Afghanistan while moving to a more resource-sustainable approach. Mitigating risks posed by these challenges will require balanced investments determined by domestic priorities for the security and prosperity of the Homeland.

Defense objectives include:

- Defending the homeland from attack;

- Sustaining Joint Force military advantages, both globally and in key regions;

- Deterring adversaries from aggression against our vital interests;

- Enabling US interagency counterparts to advance US influence and interests;

- Maintaining favorable regional balances of power in the Indo-Pacific, Europe, the Middle East, and the Western Hemisphere;

- Defending allies from military aggression and bolstering partners against coercion, and fairly sharing responsibilities for common defense;

- Dissuading, preventing, or deterring state adversaries and non-state actors from acquiring, proliferating, or using weapons of mass destruction;

- Preventing terrorists from directing or supporting external operations against the US homeland and our citizens, allies, and partners overseas;

- Ensuring common domains remain open and free;

- Continuously delivering performance with affordability and speed as we change Departmental mindset, culture, and management systems; and

- Establishing an unmatched twenty-first century National Security Innovation Base that effectively supports Department operations and sustains security and solvency.[5]

Research Topics:

1. Assess US national interests in the preservation of international and regional institutions. Evaluate the extent to which Russian and PRC interests conflict or coincide with the United States in the current international legal order.

2. Define long-term strategic competition and evaluate the Army's role.

3. Assess the ways in which the United States and its military can best avoid turning great power competition into great power conflict.

4. Analyze how changes in US trade policy might affect US security policy, alliance structures, and Army requirements and the Acquisition Program Baseline (APB) of Army Major Defense Acquisition Programs (MDAP) or Major Acquisition Information Systems (MAIS).

5. Assess the global security challenges and opportunities given the impacts of fracking and the recent fracturing of the Organization of the Petroleum Exporting Countries (OPEC).

6. Assess the impact of the PRC's Belt and Road Initiative on US national interests and potential impacts on access for US forces.

7. Assess the impact of economic inequality in Western societies on defense strategies. Address issues such as mass migration, dislocated populations, and the rise in the number of under-governed and failed states.

8. Assess the effect on the transatlantic relationship of changing demographics and potential shifts in cultural norms of North Atlantic Treaty Organization (NATO) allies as a result of the large influx of non-European refugees, asylum-seekers, and economic immigrants from the Middle East, North Africa, and other regions of the developing world.

9. Assess NATO requirements and evaluate current allied contributions for the defense of Europe.

10. Assess the impact of national caveats and mandates on coalition land operations.

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[5] Mattis, "Summary of the 2018 NDS," 4.

11. Assess to what extent India represents a counter-balance to the PRC in the lndo-Asia Pacific to help ensure the PRC remains a status quo power. Explain how the United States can reinforce that counter-balance generally, and from a military standpoint.

12. Identify avenues available to the United States to further its interests in the Indo-Pacific region. Assess how the United States can use ways and means to shape the changing status quo—one that has benefitted the United States since the end of World War II.

13. Examine how the Army (as part of the Joint Force) in a particular Geographic Combatant Command (GCC) area of responsibility (AOR) can enable the US Government (USG) to more effectively converge diplomatic, informational, and economic forms of power during cooperation, competition, and armed conflict.

14. Analyze, compare, and assess authorities and procedures for the Army's role in humanitarian assistance (HA) and disaster relief inside vs. outside US territory and suggest policy changes to improve response efforts.

15. Assess appropriate and inappropriate roles the Army could play in addressing homeland security and support to civil authorities.

16. Assess the appropriateness of transferring Army equipment to US civilian police organizations and under what conditions should specific equipment be considered for transfer.

17. Assess how political trends such as districting (gerrymandering), fundraising, and political action committees and polarization might impact the Army.

C. Modernizing Adversaries: Adaptive, thinking adversaries will modernize their capabilities and adjust them to the changing operational environment. These adversaries will present an array of lethal threats across multiple domains (land, sea, air, space, and cyber). They will operate in urban terrain among populations seeking to negate traditional US technological advantages. They will adopt hybrid strategies that deny a conventional force-on-force fight unless advantageous to them. They will use proxy forces that provide plausible deniability while achieving their objectives without risking a wider conflict. Irregular operations, often in concert with proxies, terrorist, or criminal activities, operating within a "Gray Zone" short of war, will challenge the US ability to confront the enemy and perhaps present an unfavorable cost-benefit decision to our political leaders. They will rely on strategic capabilities, such as weapons of mass destruction (WMD), information operations, and direct cyber-attacks designed to delay response to their actions and provide them the strategic space they need to operate. Finally, they will develop conventional force structures capable of providing anti-access and area denial capabilities designed to block or delay forces entry into a battle space.[6]

Research Topics:

1. As peer and near-peer competitors continue to embrace anti-access and area denial (A2AD) strategies, evaluate the role and relevancy of current power projection concepts in future national security and military strategies.

2. Examine how economic goals, opportunities, constraints shape Russian or PRC foreign and defense policies.

3. Assess the extent to which Russian or PRC leadership needs or wants elites' and public support to pursue offensive, expeditionary military operations. Identify under what circumstances elites' and public opinion may serve as a constraint on offensive, expeditionary military operations.

4. Assess how Russian military leaders and thinkers understand the evolution of the nature of war.

5. Evaluate how Russia or the PRC may attempt to signal intent in deterrence and how well its leaders understand US efforts at signaling American intent.

6. Analyze Russian or PRC effectiveness in command and control systems.

7. Assess Russian or PRC capabilities to integrate operations successfully across domains.

8. Examine how and why the PRC or Russia execute expeditionary operations. Assess the limits of Russia's expeditionary capabilities in different GCC AORs.

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[6] Martin, "The Operational Environment and the Changing Character of Warfare," 7.

9. Evaluate Russia's A2AD capabilities in northeastern Europe and assess how it challenges US forces design and operating concepts (e.g., MDO). Recommend adjustments the US must make to assure the defense of NATO.

10. Assess what PRC or Russian defense industry initiatives lead to a competitive advantage. Evaluate how sustainable Russia's defense industrial innovation is in the face of various challenges.

11. Judge how and to what extent demographic factors affect Russia's military. Assess how demographics affect conscription/recruitment. Examine how the balance between contract and conscripted soldiers and sailors affect Russian capabilities. Evaluate if growing reliance on contract soldiers affects Russian willingness to engage in offensive or expeditionary operations.

12. Identify the opportunities and challenges surrounding Russia-Belarus cooperation or Russian cooperation with any other Eurasian state that was formerly part of the Soviet Union. Evaluate how these relationships are likely to evolve over time.

13. Assess Russian and or PRC activities in the Western Hemisphere and the appropriate US Army support to any USG response.

14. Evaluate the PRC's military strategy and tactics in the Western Pacific and assess the effectiveness of US Army responses to counter those actions.

15. Assess options to counter PRC A2AD cyber capabilities to ensure access in the Pacific region

16. Assess the Joint Force's current capability and capacity to protect the United States and its territories from the growing Russian, PRC, DPRK, and Iranian ballistic, cruise, and hypersonic missile threats.

17. Analyze if NATO's expeditionary, forward posturing is an effective deterrent against Russian aggression. Develop recommendations for any changes needed to improve NATO's deterrent value.

D. Regional Dynamics: While the United States anticipates competition with its main potential adversaries of Russia, the PRC, DPRK, Iran, and radical ideologues, it also anticipates crises and conflicts in other regions. Although there will certainly be unexpected conflicts, it is prudent to anticipate and mitigate potential conflicts in certain regions of the world.

- Europe: Baltics/Eastern Europe, other Russian Near-Abroad, Balkans

- Middle East: Greater Middle East/North Africa, Sunni-Shia Rivalry, Syria-Turkey, Iran-Iraq, Kurds, Israel-Palestinians, Israel-Iran-Hezbollah

- Indo-Pacific: South China Sea, Southeast Asia (PRC, Vietnam, Indonesia, Burma), India-Pakistan, PRC-Taiwan, Korean Peninsula

- Africa: Sub-Saharan Africa (Nigeria, West Africa, Humanitarian), Horn of Africa, Red Sea

- North America: Mexico, Venezuela-Colombia, Arctic[7]

Research Topics:

1. Evaluate and recommend how a particular Army Service Component Command (ASCC), as part of the Joint Force, can better support its respective GCC to enable the United States to more effectively coordinate diplomatic, informational, and economic forms of power during cooperation, competition, and armed conflict.

2. Given potential threats (e.g., A2AD, asymmetric warfare, etc.) from adversaries, assess the Army's challenges and opportunities of forward posturing (i.e., forces, footprints, and access). Specify risks and mitigation measures for force protection and required support from allies and host nations in either US European Command (USEUCOM), US Central Command (USCENTCOM), or US Indo-Pacific Command (USINDOPACOM) AORs.

3. Examine how Multi-Domain Operations will broaden the future contribution of the Army to Joint All-Domain Operations in the Indo-Pacific region.

4. Conduct a comparative analysis of the roles of ASCCs across multiple GCCs. Identify similarities, differences, best practices, opportunities, and challenges. Include a comparison of ASCC policies, plans, and doctrines for command and control of component forces; and a comparison of ASCC security cooperation strategies, policies, and plans.

5. Assess how the rise of regional hegemons will impact Army decisions to forward deploy US land forces or engage in proxy relationships.

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[7] Martin, "The Operational Environment and the Changing Character of Warfare," 8.

6. Assess the effectiveness of ASCCs in reducing the influence of the PRC, Russia, and Iran in their AORs.

7. Assess a particular ASCC's operations and activities to counter Violent Extremist Organizations (VEOs). Identify the authorities and resources required to improve.

8. Assess the effectiveness of ASCC mission command capabilities to respond to small-scale contingencies, foreign humanitarian assistance (FHA), or to respond to USG requests to contain outbreaks of pandemic influenza and other infectious diseases.

9. Evaluate how the ASCCs can most effectively leverage the National Guard and State Partnership Programs in their AORs.

10. Evaluate how the Army can best support DOD (in coordination with other government agencies and host nations) to optimize funding, composition, location, and utilization of authorities, pre-positioned equipment, and activity sets for use in operations short of major combat operations such as FHA, peace operations and Security Force Assistance (SFA).

11. Assess the capability and capacity of the Army to conduct large scale FHA while conducting simultaneous major combat operations.

12. Assess ASCC capabilities to stabilize post-conflict situations that contributes to a positive consolidation of the situation and promotes developments seen as contributing to stability and positive change. Recommend necessary improvements.

US Army Africa (USARAF)

1. Assess US land forces' contributions and effectiveness in reducing transnational VEOs in Africa.

2. Assess U.S. land forces' contributions and effectiveness in reducing the influence of the PRC, Russia, and Iran in Africa.

3. Assess challenges associated with sustainment operations, lack of contracting base, and extended and limited lines of communication in Africa.

4. Assess Army methods for approaching and developing military professionalism within African militaries despite potential violations to the Leahy amendment.

US Army Europe (USAREUR)

1. Evaluate how decisions and actions of intergovernmental organizations, such as NATO and the European Union (EU), impact US land force missions and

associated organizations, functions, capabilities, and capacity. Recommend how the Army can ensure adequate regional access and capabilities are available when required in Europe.

2. Identify and analyze the opportunities and challenges NATO and the United States face in a thawing Arctic.

3. Examine Russian use of private security contractors in Syria and implications for NATO's security posture.

4. Assess and recommend how the Army can best leverage Multi-Domain Task Force (MDTF) capabilities in Europe.

US Army Central (USARCENT)

1. Evaluate the strategic implications of heightened Sunni-Shia sectarianism in the Middle East. Consider this rise of sectarianism in the context of the regional multi-dimensional challenges posed by Iran. Analyze land force options for limiting Iranian influence in the region.

2. Assess and recommend potential changes for US military support to partners in Afghanistan, Iraq, and or Syria.

3. Analyze how the Army can work to minimize transnational VEO threats emanating from the Middle East and Southwest Asia.

4. Analyze how the Army can improve coordination with NATO, FVEY allies, and regional allies and partners to counter Russian and PRC influence in the Middle East and Southwest Asia.

5. Identify the impacts that Army operations in the Middle East and Southwest Asia may have on long-term Arab-Israeli, Palestinian-Israeli, Iranian-Israeli, and Arab-Iranian peace prospects.

6. Assess and recommend how US land forces can counter PRC and Russian influences in the Central Asia/South Asia (CASA) region.

7. Assess and recommend how US land forces should posture to respond to regime changes or collapse across the Middle East and Southwest Asia.

8. Assess and recommend how the Army can best leverage MDTF capabilities in the Middle East and Southwest Asia.

US Army North (USARNORTH)

1. Assess potential security challenges and opportunities with increased access to the Arctic.

2. Assess the challenge posed by transnational and transregional threat networks in Mexico, Central America, and the Caribbean and the appropriate Army response.

3. Assess and recommend changes for Army support to mitigation efforts for mass migration.

4. Assess current Army response capabilities and training against the requirements of a major disaster scenario such as the New Madrid Earthquake or Cascadia Subduction Zone and offer risk mitigation options

US Army Pacific (USARPAC)

1. Evaluate the sustainment architecture and investments needed to compete in the Indo-Pacific region and if required, rapidly transition to conflict.

2. Analyze and describe the risks associated with sustainment support in the Indo-Pacific region to include Title 10 responsibilities, reliance on contracted support, employment of unclassified logistical networks, and force protection implications.

3. Examine how USARPAC can best support the Department of State (DOS), DOD, the Joint Staff, and USINDOPACOM engagement strategies with the PRC. Describe how the Army can develop a productive military relationship with the People's Liberation Army (PLA) and incentivize appropriate participation in USARPAC activities and exercises.

4. Evaluate the effectiveness of the US military strategy and the use of US land forces toward the DPRK and Northeast Asia. Suggest an alternative strategy.

5. Assess the most plausible scenarios for regime collapse in the DPRK. Identify considerations for US, Republic of Korea (ROK), Russian, and PRC interests. Recommend appropriate courses of action for US policy and strategy in the context of each scenario.

6. Evaluate US capabilities and capacity to ensure long-term stability on the Korean Peninsula after combat operations. Identify functions the US Army must be prepared to perform to ensure success during post-conflict operations.

7. Identify and assess the roles the Army may play in a large-scale, pre-conflict Non-combatant Evacuation Operation (NEO) and in supporting the ROK government at the outbreak of a conflict resulting in large-scale destruction and mass casualties (MASCAL) on the Korean Peninsula.

8. Recommend how US Army Pacific should support the Japan Ground Self Defense Force transformation efforts in light of recent changes in the interpretation of Japan's security law. Explain how USARPAC can assist in

allaying the concerns of other Pacific nations regarding Japanese militarism.

9. Assess the appropriate role of US Army assistance for India.

10. Assess the role and impact of deploying US land forces between Pakistan and India during a Kashmir crisis.

US Army South (USARSOUTH)

1. Describe how the Army should set the theater in the USSOUTHCOM AOR to enable great power competition, the execution of contingency plans, and the ideal theater posture to maximize US influence and counter PRC expansion.

2. Assess opportunities and challenges presented by the evolution of the political landscape in Latin America and the Caribbean. Evaluate opportunities for US bilateral and multilateral engagement in the region.

3. Assess the challenges posed by the potential collapse of Venezuela for its neighbors, the region, the United States, and recommend the appropriate US Army response.

4. Assess the challenge posed by transnational and transregional threat networks in Mexico, Central America, and the Caribbean and recommend the appropriate US Army response. Assess United States' regional strategies to counter transnational and transregional threat networks in Central America and Colombia.

5. Assess the Army's capability and capacity to conduct FHA and migrant operations in the Caribbean.

US Army Cyber Command (ARCYBER)

1. Assess the Army role in preparing for and responding to a cyberattack on the nation's critical infrastructure and the impact on the military's ability to support civil authorities while deploying forces in response to an overseas crisis.

2. Evaluate how the Army Reserve can maximize its contributions to ARCYBER.

US Army Space and Missile Defense Command (USASMDC)

1. Assess the efficacy of US Army Space and Missile Defense Command supporting the US Space Force and US Strategic Command.

US Army Special Operations Command (USASOC)

1. Describe how Army forces, as part of a Joint, Intergovernmental, Interagency, and Multinational (JIIM) team, operate against, and compete with, peer

competitors to defeat their subversive activities, unconventional warfare, and information warfare short of armed conflict.

Military Surface Deployment and Distribution Command (SDDC)

1. Evaluate if the Army's current deployment and distribution processes and systems are adequate to support an expeditionary force in future operating environments. Assess what lessons from previous studies should inform future deployment and distribution capability choices for the Army.

2. Given the past decade of contracted service support to forces in the field, assess the Army's force structure and capacity to support the Joint Force logistically (Common User Logistics / Executive Agency) during major combat operations and or FHA and foreign disaster relief (FDR) efforts.

E. Changing Character of Warfare: The US military, and therefore, the US Army, finds itself at a historical inflection point where disparate, yet related, elements of the operational environment are converging. Fast-moving trends across the Diplomatic, Information, Military, and Economic spheres are rapidly transforming the nature of all aspects of society and human life—including the character of warfare. These trends include significant advances in science and technology, where new discoveries and innovations are occurring at a breakneck pace. Such trends will reshape the global security situation and fundamentally alter the character of warfare. While the nature of war remains constant, its speed, automation, effects, and increasingly integrated multi-domain conduct are changing. In addition, the complexity of the terrain and social structures in which warfare occurs will make mid-century warfare both familiar and utterly alien. These changes will require not only assessments of capability gaps, but also the societal and demographic changes necessary to fulfill the personnel requirements of the future force.[8]

Research Topics:

1. Evaluate how the evolving character of war will impact the strategic environment across all domains, and how the Army and the Joint Force should adapt in key doctrine, organization, training, materiel, leadership, personnel, facilities, and policy (DOTMLPF-P) areas. Assess key inhibitors to required change and possible ways of dealing with them.

2. Assess how well stability operations during armed conflict affect the options for the application of all instruments of national power and protect the legitimacy of a USG integrated campaign.

3. Evaluate how an expeditionary Army should incorporate hybrid warfare and constant competition in its operational planning to achieve political objectives short of war.

4. Analyze how the Army can best achieve military objectives throughout the competition continuum while simultaneously preserving, or increasing, the options to employ other elements of national power required for a sustainable political outcome.

5. Analyze how the Army would conduct deception at the national strategic, theater strategic, and operational levels in competition and armed conflict.

6. Assess the evolution of PRC or Russian "gray zone" approaches and the Army and allied role in effectively countering them.

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[8] Martin, "The Operational Environment and the Changing Character of Warfare," 5.

7. Analyze Russia's "Reflexive Control" theory and evaluate US policies, strategies, and processes that can be used to counter it.

8. Assess the role of Army and allied military forces in responding to state-sponsored disinformation campaigns.

9. Assess the impact of "lawfare" on the Army.

10. Examine how the United States should use cyberspace operations and social media to counter the PRC.

11. Assess the US efforts to counter terrorist organizations' use of the internet.

12. Assess the implications of the commercialization and or militarization of space, to include leveraging for friendly force use.

13. Assess the implications of anti-satellite operations for Army operations and activities.

14. Compare the operational impact, morality, and or cost of manned versus remotely-piloted, semi-autonomous, or fully autonomous vehicles.

15. Evaluate how to integrate breakthroughs in fields like autonomy, artificial intelligence, and machine learning to gain competitive advantages in cyberspace.

16. Analyze and assess the scope and impact of autonomous rules and actions across the defense enterprise.

17. Assess how to position forces and capabilities to defend against cyber-attacks before they hit the homeland. Identify the laws that hinder DOD support to cyber protection and cyber offensive operations. Explain if laws such as the *Posse Comitatus Act* are relevant in the cyber domain.

18. Assess the Army's ability to sustain increased end strength, in light of future social, cultural, political, demographic, and economic changes.

19. In light of COVID-19's unprecedented disruption of childcare services, including schools, daycare facilities, babysitters, and family care plans, evaluate the dependence of Army readiness on available childcare.

20. Assess the impact of childhood and adolescent obesity and physical inactivity on the recruitment and accession of the future force.

21. Develop a conceptual design that describes how the Army (in coordination with JIIM partners) can execute the principles of Women, Peace, and Security (WPS) to increase lethality, build capacity and buy down risk. Explain how this reflects multidimensional aspects of the battlespace and how to enable interoperability with partners.

THE ARMY STRATEGY

II. Army Vision. The Army mission—our purpose—remains constant: To deploy, fight, and win our Nation's wars by providing ready, prompt, and sustained land dominance by Army forces across the full spectrum of conflict as part of the Joint Force. The Army mission is vital to the Nation because we are the Service capable of defeating enemy ground forces and indefinitely seizing and controlling those things the adversary prizes most—its land, its resources, and its population.

A. Deploy, Fight, Win: The Army will remain expeditionary. All Army units will be trained and proficient in their ability to deploy, whether it is a strategic deployment from the United States or an operational deployment within a theater.[9]

Research Topics:

1. Analyze and describe the organization, capabilities, and authorities required for operational commanders to increase unity of effort and speed of action to operate against near-peer adversaries.

2. Evaluate how the Army can optimize for competition in the Indo-Pacific Region while optimizing for conflict in Europe.

3. Given the recent pandemic response, test Army assumptions regarding future budget decisions on readiness and modernization. Assess the impact of continuing resolutions on military operations.

4. Based on lessons learned from the recent use of the Defense Production Act, evaluate the capabilities and materials the Army and Joint Force need to prioritize to mitigate risk to operational planning assumptions.

5. Describe how the Army should organize, man, train, equip and partner with the other elements of national power and allies during competition. Explain how these recommendations would evolve from now to 2035.

6. Assess the implications of transitioning from large, centralized, unhardened infrastructure to smaller, dispersed, resilient, and adaptive basing. Identify which technologies should be adopted to achieve this.

7. Assess the costs and benefits of accompanied (three years) vs unaccompanied (one year rotational) tours for outside the contiguous United States (OCONUS) unit stationing.

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[9] Esper and Milley, "The Army Strategy," 1.

8. Examine the right force mix and missions for Army Active and Reserve Components and whether the Army can maintain this force mix with multi-component and or cadre units. Describe decisive spaces as they apply to competition and ways to exploit those spaces.

9. The Army's current unit of action is the Brigade Combat Team. Analyze which echelon would best execute Multi-Domain Operations as the unit of action.

10. Recommend what echelons, above and below brigade, should reside in the Active or Reserve Components. Explain the potential costs and associated deployment constraints that should inform these decisions.

11. Evaluate the impact reductions to the size and numbers of echelons above corps headquarters may have had on the Army's ability to command and control deployed forces on the highly mobile, complex, and dispersed battlefields of the future.

12. Assess how the Total Force could streamline and normalize systems to better identify and source talent between the Active and Reserve Components.

13. Assess the impact of large-scale mobilization and deployment of the Reserve Component during Large Scale Combat Operations and the impact on the ability of the Reserve Component to provide timely and effective support to simultaneous homeland defense and domestic response missions.

14. Analyze how the Army can expand the generating force during large-scale mobilization and deployment for Large Scale Combat Operations without degrading operational effectiveness

15. Evaluate the authorities and coordination, Title 10 and Title 32, between Army components during domestic crises and in defense of the Homeland. Identify potential changes.

16. Assess the implications of growing Air Defense Artillery (ADA) and Ballistic Missile Defense (BMD) capabilities in the Army Reserve.

17. Assuming fewer resources and training time, recommend how the Army Reserve can best maintain levels of training, proficiency, and readiness comparable to the Active Component. Evaluate if this expectation is realistic. Recommend how the pre-mobilization training for the Reserve Component should be managed to support the Total Force most effectively.

18. Evaluate the role of the Army Medical Department in response to a global pandemic, and the resulting impact on the medical readiness of the force.

19. Analyze the use of Department of the Army (DA) Civilians and Contractors within the operational force. Examine the potential risks the Army assumes in competition, crisis, and beyond.

20. Analyze methods for sustained employment of the Army's civilian work force for forward deployed service.

21. Evaluate how the Army Reserve and National Guard can best leverage the civilian skills of its members. Recommend how the Army Reserve and National Guard can partner with industry to incorporate the best talent and technology.

22. Given logistical and technological support constraints, analyze what medical capabilities could translate to the tactical force to improve return to duty rates significantly.

23. Examine and recommend the interoperability concepts and/or modalities most critical to enable or support Army operations.

24. Assess Army capabilities and roles in electronic warfare across all phases of conflict.

25. Evaluate how the Army integrates developments in autonomy, artificial intelligence, and machine learning to enhance training at home station and combat training centers. Recommend how this integration can better prepare Soldiers for high-intensity conflict against near-peer competitors.

B. Joint: The Army will train and fight as a member of the Joint and Multinational Team. Our doctrine, tactics, and equipment must be complementary to and interoperable with our sister services, allies, and partners.[10]

Research Topics:

1. Identify how the Joint Force can better leverage capabilities through innovative authorities to address transregional threats.

2. Assess the impact on the Joint Force and Army on implementing the Joint Concept for Integrated Campaigning.

3. Assess the efficacy of the command and control hierarchies in Joint Publication 3-33. Explain how these may constrain joint force commander experimentation with different methods of C2 to address problems. Discuss how it may promote, or ease, service parochialism.

4. Assess the Army's DOTMLPF-P impediments to leading and building Joint Task Force-capable headquarters capable of fighting hybrid, cyber and gray-area conflicts.

5. Recommend how the Joint Force should mitigate enemy attempts to contest the strategic, operational, and tactical support areas.

6. Evaluate how the Joint Force can destroy, degrade, disrupt, or suppress key enemy capabilities in the deep areas.

7. Assess US land forces' role in in Distributed Maritime Operations and the evolving Joint Warfighting Concept.

8. Evaluate the US Air Force's multi-domain command and control concept and how it will integrate with the US Army's mission command network. Identify opportunities, challenges, and risks in merging these approaches together, under Multi-Domain Operations (MDO).

9. Analyze how the US Navy's Distributed Maritime Operations and MDO can integrate and support each other. Examine whether or not a combined concept is possible between the two ideas. Explain how the Army and Navy can best create a cross-domain fires linkage, similar to the Army's Battlefield Coordination Detachment concept, with the Air Force and Space Force.

10. Assess the capabilities of land forces to contribute to maritime domain awareness and sea control in the Pacific region through innovative use of current US Army

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[10] Esper and Milley, "The Army Strategy," 1.

capabilities, and through building the capacity of foreign Army partners. Develop concepts of operation for specific Army systems or combinations of systems.

11. Assess current Army doctrine to determine how to best support information as a Joint Warfighting function.

12. Identify, evaluate, and recommend the legal authorities the Joint Force needs to pursue adversaries in contested cyber and space environments.

13. Assess the impacts of increasing Cyber Command's force size, modifying its purpose, and embedding cyber warfare assets within Special Operations Forces (SOF) and within conventional forces at battalion and below echelons.

14. Recommend capabilities the Army's aerial and ground intelligence, surveillance and reconnaissance (ISR) assets should possess to meet security challenges as a part of the Joint ISR force providing situational understanding. Identify the aerial and ground ISR capabilities the Army must retain to support Joint ISR requirements.

15. Evaluate the Army's execution of its executive agency for DOD biometrics and forensics responsibilities. Identify potential changes to support Joint Force Commander requirements to conduct identity activities.

16. Provide policy recommendations on how Army components, working with the appropriate interagency partners, host governments, and civil society stakeholders, can best integrate and leverage women's experiences, capabilities, influence, and resources to prevent and counter violent extremism and improve stability and security.

C. Multi-Domain: The Army must be able to fight not only in the land, sea, and air using combined arms, but also in all domains, including cyber, space, information, and the electromagnetic spectrum.[11]

Research Topics:

1. Analyze and assess the institutional limitations, and corresponding solutions, that need to be overcome to achieve unity of command and unity of effort in Multi-Domain Operations (MDO) in the competition and or conflict periods.

2. Assess the US Army warfighting functions and the impact MDO will have on them. Examine the DOTMLPF-P impacts and capabilities required to operationalize MDO. Recommend how the US Army should adapt and identify the risks in these adaptations.

3. Explain how the Army should optimize the Multi-Domain Task Force (MDTF) in terms of authorities and organization to successfully compete short of armed conflict, shape during competition, and contribute to a rapid transition to conflict.

4. Evaluate the advantages and risks of applying the mission command philosophy. Analyze its relevance and practicality on the multi-domain battlefield of the 21st Century.

5. Assess the Army's ability to execute command and control on a multi-domain battlefield that includes: unmanned systems, semi-autonomous (human in the loop) robotic systems, and autonomous (no human in the loop) robotic systems.

6. Explain how theater and or operational level commanders might open windows of advantage and exploit the initiative in the competition and conflict periods in MDO. Account for the operational environment, peer competitors' capabilities, and emerging US and allied capabilities to assess abilities and challenges to "seeing" on a future battlefield.

7. Evaluate how operational commanders can operate in and exploit contested and congested cyberspace, space domains, and the electromagnetic spectrum during both competition and conflict. Analyze and describe the organization, capabilities, and authorities required for these operational commanders and their staffs to operate against peer competitors who wield similar capabilities with different and often less-limited authorities.

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[11] Esper and Milley, "The Army Strategy," 1.

8. Evaluate whether the Army maneuvers in domains (cyber and space) environments (information and electromagnetic spectrum) or if these domains and environments provide fires in support of ground maneuver.

9. Evaluate how Army forces can integrate and manage national, organic, partner, and host-nation information collection capabilities and network architecture.

10. Examine how the Army will liaise with allies and partners to provide and coordinate multi-domain capabilities in the USEUCOM and USINDOPACOM AORs.

11. Evaluate if it is fiscally prudent and operationally relevant for the Army to generate division-level echelon forces for MDO.

12. Assess whether Security Force Assistance Brigades (SFABs) can be used as liaisons to provide multi-domain capabilities to allies and partners, expanding the lethality of the contact force in USEUCOM and USINDOPACOM theaters while maintaining a relatively small forward presence.

13. Analyze Echelon Above Brigade (EAB) roles and functions supporting MDO across an expanded battlespace. Describe how EAB forces shape operations in support of MDO. Describe how EAB forces enable, direct, and support tactical Brigade Combat Team (BCT) and below operations. Evaluate whether EAB elements are simply headquarters or are fighting formations.

14. Define, describe, and explain how cross-domain maneuver and fires will be executed in the multi-domain environment. Identify the changes to DOTMLPF-P required to execute successfully such an operation.

15. Assess the role of information in Multi-Domain Operations and whether information should be characterized as a domain, war-fighting function, or other.

16. Describe how MDO should (or should not) change leader development, readiness and training for the Army. Identify what, if any, training will become obsolete or what new requirements may emerge. Describe the process by which corps- and division-level units would train and become ready to operate in support of MDO.

17. Identify and recommend investments the Army must make to ensure resilient, survivable information ecosystems and command and control nodes.

18. Assess the vulnerability of installations to attack and disruption in multi-domain battle. Describe needs for resiliency and a new approach to installation preparedness, protection, and doctrine given new technologies, such as cyber threats, unmanned aerial vehicles (UAVs), and robotics.

19. Assess the feasibility, suitability, and acceptability of establishing a cybersecurity function for the National Guard in support of state and local infrastructure.

20. Assess the potential use and effectiveness of using identity activities and intelligence in a near peer competitor environment.

21. Assess how the Army can leverage organic forces and capabilities to employ space-based effects on tactically responsive timelines to enable land-based forces to conduct cross-domain fire and maneuver in multi-domain battle.

22. Assess Army Support to Other Services (ASOS) requirements in MDO, including support to Space Force.

D. High-Intensity Conflict: The Army must be ready to conduct major operations and campaigns involving large-scale combat with division- and corps-level maneuvers against near-peer competitors.[12]

Research Topics:

1. What does winning look like in high-intensity conflicts of the 21st Century?

2. Assess the adequacy of the defense management structure, roles and decision-support processes necessary to support total mobilization, including three cases for rapid expansion of the United States Army: growth of five hundred thousand personnel, one million personnel, and two million personnel.

3. Assess the Army's ability to train, deploy, employ, and sustain a totally mobilized Army. Recommend the actions the Army can take to prepare the mobilization enterprise, the national industrial base, and strategic transportation to support a full mobilization.

4. Assess the strategic impact of high casualty rates sustained in a short period against a great power, where contested domains or burgeoning logistical requirements prevent the rapid evacuation of the wounded.

5. Assess requirements and recommend organizational force structure for V Corps to support large-scale, land operations in Europe.

6. Evaluate the effectiveness of United States Army Pacific (USARPAC) or a Joint Force Land Component Command (JFLCC) commander's employment of US land forces in the Asia Pacific region in furthering US national interests.

7. Evaluate the allies, partners, and potential partners best postured to contribute to deterring PRC aggression or to mitigate escalation if aggression occurs. Recommend how to strengthen US cooperation with these allies and partners.

8. Describe a new or modified conceptual operational framework to enable successful visualization and mission command of Army and joint forces across all domains in MDO operations against peer competitors.

9. Considering that peer competitors prioritize the information environment both short of armed conflict and during conflict, identify and describe the capabilities, authorities, and methods required in the information environment for maneuver and effect. Recommend how these capabilities would be employed in an MDO campaign in both competition and conflict.

10. Given that peer competitors are developing ways to fracture the Joint Force and create challenges in all domains, describe how theater and operational

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[12] Esper and Milley, "The Army Strategy," 1.

commanders could engage targets across all domains and the electromagnetic spectrum in conflict.

11. Explain how theater and operational level commanders sustain dispersed formations, of varying unit sizes, across wide areas, when domain superiority is not achieved. Consider actions in the competition period and the conflict period.

12. Evaluate strategic opportunities to leverage the Women, Peace, and Security (WPS) Act and WPS National Strategy to strengthen military to military relationships and prevent escalation of tension between great power adversaries.

13. Analyze specific Army actions during large-scale combat operations (including Army consolidation of gains considerations) related to the meaningful participation of women that differ from pre- and post-conflict activities.

E. Deter: The Army will maintain its conventional deterrence capability with a combination of combat-credible forward forces, robust alliances, and a demonstrated ability to reinforce a region rapidly.[13]

Research Topics:

1. Evaluate and recommend changes to Army doctrine and policy with regard to coercion theory and deterrence. Assess how the Army's treatment of deterrence affects communication with policy makers, academic communities, and across the Army profession.

2. Explain how the principles of conventional and strategic deterrence apply in the modern battle space.

3. Evaluate how the United States should assess military deterrence efforts in support of the NDS.

4. Assess how modern deterrence practice influences policy, force management, and alliance relationships.

5. Analyze how information warfare best complements deterrence efforts framed within MDO.

6. Assess past and present Flexible Deterrent Options to determine how well these planning priorities are integrated into national deterrent decisions.

7. Assess the Army's readiness and force structure to respond to a crisis resulting from the use of a weapon of mass destruction (e.g., highly contagious biological weapon or dirty bomb). Assess the effectiveness of Army relationships with partners to confront regional hegemons and secure vital US interests.

8. Assess the efficacy of US, allies, and partner operations, activities, and investments, to include security cooperation and force assistance, in deterring potential adversaries (e.g., Russia, PRC, DPRK, or Iran).

9. Recommend how Army forces can deter adversaries from conducting subversive activities, unconventional warfare, and information warfare against partners and allies.

10. Identify the strategic components essential for achieving durable US military advantage across the land, air, sea, space, cyber, information, and electromagnetic spectrum domains in the Indo-Pacific region by 2028. Recommend strategy and policy initiatives to ensure the Joint Force can meet defense objectives against regional threats.

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[13] Esper and Milley, "The Army Strategy," 1.

11. Identify and examine the land power capabilities in the physical and information domains most useful to a whole-of-government effort to promote stability, access, and inter-state confidence in Asia, Europe, and other regions.

12. Evaluate US coercive activities against the DPRK and long-term posture change. Explain if such pressure works and how to adjust posture to compel adversary change.

F. Irregular Warfare: The Army will continue to conduct irregular warfare, whether it is counterterrorism, counterinsurgency, or advise and assist operations, and we must train, exercise, and assess these skills to sustain our competence.[14]

Research Topics:

1. Evaluate if US counterterrorism efforts in Africa are sufficient to assist in mitigating the terrorist threat to Europe. Recommend changes to Army counterterrorism assistance programs in light of rising threats to Europe.

2. Analyze how the US Army can help African militaries to increase stability on the continent, counter illicit trafficking of WMD materials, and assist other African partners.

3. Analyze and assess US land force options for partnering with Eurasian forces to combat terrorism while addressing Russian assertiveness.

4. Assess Russia's use of proxy or patriotic hackers and evaluate international laws and norms that can be used to limit their use.

5. Examine the Army's role in support of SOF activities in the pre-crisis period to counter PRC "gray zone" actions.

6. Assess Army options to balance direct action, advisory roles, and capacity development when partnering with Middle Eastern and Central Asian militaries combating transnational VEOs.

7. Assess options for preventing extremists from migrating from a conflict zone in one region to another conflict in a different part of the world.

8. Assess the appropriate role of, and requirements for, Army forces in USG programs that support militaries and law enforcement entities combatting criminal, terrorist, and illicit networks.

9. Identify how the Army can assist institutional and force generation capacities of Libyan and Somali security forces in support of political reconciliation and countering VEO operations.

10. How can the Army recruit and retain a SOF culture to attract and incorporate women, minorities, and "Generation Z?"

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[14] Esper and Milley, "The Army Strategy," 2.

G. Modernization: The Army must build the next generation of combat vehicles, aerial platforms, and weapons systems, and start fielding them by 2028. These systems must be more agile, lethal, resilient, and sustainable on the future battlefield while under constant surveillance and attack. They must also be upgradeable and incorporate robotics, artificial intelligence, and other technologies as they mature.[15] Anticipating requirements for future operational environments, the Army prioritizes acquisition solutions for the following: long-range precision fires; Next Generation Combat Vehicles; future vertical lift; networks; assured positioning, navigation, and timing; air and missile defense; Soldier lethality; and synthetic training environments.

Research Topics:

1. Assess the impact of budget constraints and budget unpredictability on US Army readiness, personnel, and operations.

2. Recommend legislative changes the Army should propose to improve readiness, quality of life, and mission effectiveness.

3. Assess the long-term sustainability of increased Army forces given short-term budget increases.

4. Assess the prospects for large reductions in Army forces given the potential for near-term budget reductions.

5. Compare Army requirements, programming, acquisition, and budget priorities to assess the effectiveness of system and process interface.

6. Analyze and assess current Army and Joint acquisition process challenges that need to be overcome to achieve DOTMLPF-P integration across the domains to meet emerging capabilities of peer competitors. Recommend appropriate solutions.

7. Identify and recommend best practices from industry that the Total Force can leverage to find the best possible return on investment balanced by acceptable levels of risk.

8. Assess the challenges the Army will face when transitioning from legacy equipment to new equipment. Use historical assessments from past major transitions (e.g. Big Five) as a framework and identify relevant changes in acquisition authorities or other legislative constraints that have been added since those periods that will impact the Army's upcoming transition period. Recommend appropriate solutions.

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[15] Esper and Milley, "The Army Strategy," 2.

9. As the Army starts fielding the 31+3 systems under development by the Cross-Functional Teams (CFT) and Rapid Capabilities and Critical Technologies Office (RCCTO), evaluate different approaches for transitioning away from legacy systems, such as divestment, transition to sustainment, depot storage, or maintaining a certain mix of legacy equipment within Army formations.

10. Assess what changes the Army will need to make to installations, facilities, and infrastructure to support modernization efforts and specifically the fielding of the 31+3 systems under development by the CFTs and RCCTO (e.g. ranges).

11. Assess how DOD can maintain continuity of training and operational missions as industry creates and adopts rapid technological advances that conflict with legacy military technology (e.g., 5G frequency spectrum).

12. Army Futures Command, the Army's new 4-Star modernization command, has been operational since 2019. Evaluate the command structure and relationships between Army Futures Command, Assistant Secretary of the Army (Acquisition, Logistics, and Technology), and the rest of the Army Modernization Enterprise, identify points of friction that remain across the enterprise and recommend ways to improve and streamline modernization under this new construct.

13. Assess current policies and gaps related to protection of Army continental United States (CONUS) Mobilization Force Generation Installations (MFGIs) and Power Projection Platforms (PPP) from attacks below the level of armed conflict, including cyber and utilities sabotage.

14. Assess and analyze the impact of modern high casualty producing munitions (e.g., directed energy, thermobaric rounds and tactical nuclear) on the Army and how the Army will conduct MASCAL operations in an A2AD environment.

15. Analyze and assess the Army's current strategy for munitions production, stationing, distribution, and sustainment in relation to future operating environments.

16. Analyze how munitions can be transported to a contested area when an adversary can strike with "carrier killer" missiles.

17. Assess the concept of supply-less logistics, including a bridging strategy for current sustainment concepts from a hybrid state to a future supply-less state. Highlight specific commodities that are better suited to supply-less concepts.

18. Identify and examine the strategic medical sustainment assets, locations, and capabilities required to support medical operations in high intensity conflict, competition, and Defense Support of Civilian Authorities (DSCA) operations.

H. Leadership: The Army will prioritize development and promotion of smart, thoughtful, and innovative leaders of character who are comfortable with complexity and capable of operating from the tactical to strategic level.[16]

Research Topics:

1. Assess whether the changing strategic environment and character of war requires a corresponding change in the way Army leaders think about war.

2. Analyze the role of forecasting, data and statistical literacy, war game results, threat timelines, bargaining, and advisor networks in Army institutional enterprise-level management choices.

3. Assess the Army's effectiveness in identifying the traits, education, training, and experience necessary for leaders of military organizations to be effective in the future environment. Evaluate the extent to which education, training, and experience develop those capabilities.

4. What are the important implications and management considerations as the Army implements cognitive and non-cognitive assessments at different stages of the officer career life cycle?

5. Evaluate current neurocognitive developmental research for impacts to Army commanders' decision-making processes when contending with the acceleration of warfare, social dynamic interactions, and multi-tasking talent development.

6. Assess assumption based planning as a means for informing Army leaders, priorities, and resource allocation.

7. Evaluate leader development requirements for MDO in the operational environment out to 2040. Include analysis for Non-Commissioned Officers, Officers, and DA Civilians.

8. Analyze the nature of mission command at the strategic level and evaluate the Army's ability to employ this concept effectively.

9. Evaluate engagement strategies based on leadership styles and culture. Examine how the United States projects its leadership culture onto other nations and whether this enhances team building in a coalition.

10. Analyze the internal and external factors that affect cognition and decision-making in senior leaders across a broad spectrum of decision categories. Explain how this affects risk tolerance for leaders.

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[16] Esper and Milley, "The Army Strategy," 2.

11. Assess the impact of the FY2019 provisions to the Defense Officer Personnel Management Act on the Army. Analyze the extent to which the Army is using the expanded authorities effectively.

12. Evaluate Army officer talent management and development effectiveness in meeting the alliances and partnership goal of the NDS. Include analysis of factors including language, intercultural competence, multinational and interagency skills.

13. Evaluate the extent to which the Army is preparing leaders to operate effectively with partners in MDO.

14. Evaluate whether the Army now has the "culture of trust" essential to behavior as a profession. Determine if the Army is inculcating its professional ethic into individuals, unit climates, and institutional culture. Recommend adaptations as needed.

15. Analyze and evaluate how to design executive education for senior Army leadership on WPS and gender perspective considerations in strategy development and decision-making.

16. Evaluate how the Army defines and trains understanding cultural aspects of the human domain to account for the effects of gender norms and roles on local populations.

17. Evaluate how well the Army develops and assesses leaders.

18. Evaluate whether the Army is attracting, retaining, and promoting the right people in terms of quality and diversity.

19. Analyze how effectively the Army uses force-shaping tools. Evaluate the impact of extending time-in-grade limits of Soldiers on active duty to "grow" the Army.

20. Assess the impact the Blended Retirement System will have on retaining hard-to-fill Areas of Concentration (AOCs) and Military Occupational Specialties (MOSs) (e.g., medical, cyber, aviation).

21. Assess public attitudes and perceptions of the all-volunteer force and evaluate alternative strategies for countering any negative trends.

22. Assess the impact of social, cultural, political, demographic, and economic changes on the demands and challenges facing Soldiers and military families.

23. Assess the ethical integration of Soldier enhancement capabilities.

24. Identify leadership, cultural, and organizational changes the Army needs to make to recruit, train, enhance, and sustain its technical workforce (cyber, information, space, science, medical, and technology experts).

25. Evaluate whether there is a growing divide between the Army and the rest of civil society. Analyze how the Army can best decrease such a divide to increase the propensity to serve or recommend service.

26. Evaluate acceptable risk, and the military's potential willingness to deviate from accredited, approved civilian practices and requirements in order to recruit and retain specialties.

27. Analyze how the Army can best export military professionalism to its international partners, while accounting for local and regional political, social, and cultural concerns.

28. Identify the challenges senior leaders face in maintaining their own psychological well-being, and in building resilience to stress, while also supporting the behavioral health and well-being of their teams and subordinates.

GLOSSARY OF TERMS AND ACRONYMS

5G	Fifth generation technology standard for cellular networks
A2AD	Anti-Access and Area Denial
ADA	Air Defense Artillery
AOC	Area of Concentration
AOR	Area of Responsibility
APB	Acquisition Program Baseline
APS	Army Prepositioned Stocks
ARCYBER	United States Army Cyber Command
ASCC	Army Service Component Command
ASOS	Army Support to Other Services
BCT	Brigade Combat Team
BMD	Ballistic Missile Defense
C4I	Command, Control, Communications, Computers, and Intelligence
CASA	Central Asia/South Asia
CFT	Cross-Functional Team
COIN	Counterinsurgency
CONUS	Continental United States
CSA	Chief of Staff of the Army
CT	Counterterrorism
CWMD	Countering Weapons of Mass Destruction
DA	Department of the Army
DOD	Department of Defense
DOS	Department of State
DOTMLPF-P	Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, and Policy
DPRK	Democratic People's Republic of Korea
DSCA	Defense Support of Civil Authorities

EAB	Echelon Above Brigade
EU	European Union
FDO	Flexible Deterrent Options
FDR	Foreign Disaster Relief
FHA	Foreign Humanitarian Assistance
FID	Foreign Internal Defense
FVEY	Five Eyes - Australia, Canada, New Zealand, the United Kingdom, and the United States
FY	Fiscal Year
GCC	Geographic Combatant Command
HA	Humanitarian Assistance
ISR	Intelligence, Surveillance, and Reconnaissance
JFLCC	Joint Force Land Component Command
JGSDF	Japan Ground Self Defense Force
JIIM	Joint, Intergovernmental, Interagency, and Multinational
JTF	Joint Task Force
KSIL	Key Strategic Issues List
MAIS	Major Acquisition Information Systems
MASCAL	Mass Casualty
MDAP	Major Defense Acquisition Programs
MDO	Multi-Domain Operations
MDTF	Multi-Domain Task Force
MFGI	Mobilization Force Generation Installation
MOS	Military Occupational Specialty
NATO	North Atlantic Treaty Organization
NDS	National Defense Strategy
NEO	Noncombatant Evacuation Operations
OCONUS	Outside the Contiguous United States
OPEC	Organization of the Petroleum Exporting Countries

PLA	People's Liberation Army
PME	Professional Military Education
PPP	Power Projection Platform
PRC	People's Republic of China
RCCTO	Rapid Capabilities and Critical Technologies Office
ROK	Republic of Korea
SDDC	Military Surface Deployment and Distribution Command
SECARMY	Secretary of the Army
SECDEF	Secretary of Defense
SFA	Security Force Assistance
SFAB	Security Force Assistance Brigade
SOF	Special Operations Forces
TRADOC	Training and Doctrine Command
US	United States
USARAF	United States Army Africa
USARCENT	United States Army Central
USAREUR	United States Army Europe
USARNORTH	United States Army North
USARPAC	United States Army Pacific
USARSOUTH	United States Army South
USASMDC	United States Army Space and Missile Defense Command
USASOC	United States Army Special Operations Command
UAV	Unmanned Aerial Vehicle
USAWC	United States Army War College
USCENTCOM	United States Central Command
USEUCOM	United States European Command
USINDOPACOM	United States Indo-Pacific Command
USSTRATCOM	United States Strategic Command

UGF	Underground Facilities
USG	United States Government
VEO	Violent Extremist Organization
WMD	Weapons of Mass Destruction
WPS	Women, Peace, and Security