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Assessing Russian Biological R&D

America's Special Operations Problem

The Fight for Strategic Cognitive Terrain

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Cover 2 images (top to bottom): Thunderbirds perform at Frontiers in Flight open house and airshow on McConnell Air Force Base, Kansas, September 25, 2022 (U.S. Air Force/Dakota LeGrand); Dr. Victoria Coleman, right, Chief Scientific Adviser to the Secretary of the Air Force, Air Force Chief of Staff, and Chief of Space Operations, gets her anti-gravity suit fitted by Senior Airman Sarah Grabowski, 18th Operations Support Squadron aircrew flight equipment journeyman, at Kadena Air Base, Japan, September 26, 2022 (U.S. Air Force/Sebastian Romawac); Air Force pilot with 510th Expeditionary Fighter Squadron climbs into F-16 Fighting Falcon for last Enhanced Air Policing mission of deployment at 86th Air Base, Romania, July 18, 2022 (U.S. Air Force/Nathan Lipscomb)

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Space Force Technical Sergeant Michelle Holt, Military Training Instructor, 1st Delta Operations Squadron, stands in front of graduating Guardians during basic military training coining ceremony, June 22, 2022, at Pfingston Reception Center on Joint Base San Antonio–Lackland, Texas (U.S. Space Force/Ethan Johnson)

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Lieutenant General Charles J. Cunningham, Jr., commander, 12th Air Force, Tactical Air Command, speaks with Rear Admiral Ted C. Steel, Jr., commander, U.S. Forces, Caribbean, during closing ceremony held for exercise Solid Shield, in Honduras, in 1987 (U.S. Air Force/Kit Thompson)

Executive Summary

The joint force recently lost a quiet giant who not only was one of our nation's most decorated fighter pilots and generals but also a lifelong learner and teacher of national and international strategy. Founding Joint Advanced Warfighting School Strategy Department Chair, Lieutenant General Charles "Chuck" Cunningham, USAF (Ret.), DBA, flew west, as we aviators say, in November. Others can detail how he came to the Joint Forces Staff College, and his military career is available to anyone who seeks his online Air Force biography—and you should. He was a determined but friendly man who always had time to explain a complex concept to students and faculty alike. Not exactly the typical fighter pilot we may envision, Chuck worked hard with his students to assure they became the best they could be. He supported his faculty teammates, so

the instruction they gave hit the mark and assisted his college leadership to make the place he served better than it was. I am unaware of anyone who ever spoke negatively about him, and that is saying something.

Chuck would always help me and others, who often found the world of military education frustrating, find ways to move forward and get to a place where everybody wins. One of his biggest weapons was his huge smile, which was always at the ready. Another was his experience as a young captain on the ground and in the skies over Vietnam during two tours, where he flew nearly 400 fighter sorties and won many medals, including eight Distinguished Flying Crosses. His students were devoted to him as he sought to raise everyone's knowledge and skills in dealing with the sometimes-mystical arts of strategy related to military planning. I had the pleasure of teaching my first strategy course under his leadership.

When I was selected to lead JAWS in a dynamic time of change under budget constraints, I am sure he was key to my success in the job and, in supporting me, along with our teammates, we put a solid first floor on the foundation the school's founder, Colonel Fred Kienle, USA, and the team laid down. Chuck would continue to teach and mentor at JFSC until 2017, and he received NDU's highest award for such service: induction earlier this year into JFSC's Hall of Fame. He served the Nation and the world for nearly seven decades, a record I believe is not equaled and likely never will be.

Chuck called me a few years ago and what I remember from the discussion, he was recommending a student's paper to me to consider for publication. I know Chuck wouldn't have suggested it to me if he hadn't already run the quality checklist, assessed the environment, seen the likely positive impact of the piece on the joint force and joint professional military education, and, most importantly, the positive impact of his student's ideas on the world. I am certain the target was hit. I can see the positive and lasting impact the teaching Chuck and his teammates have had on joint planning staffs around the globe and, in turn, on the continuing strength of the joint force and our partners, wherever a JAWS graduate serves. I am proud to say I was one of Chuck's wingmen as I throw a nickel on the grass in honor of him.

Our offerings in this issue's Forum discuss and analyze world events and provide thoughts for all who engage in the art and science of planning in our government. Gigi Gronvall and Aurelia Attal-Juncqua have done some interesting work on Russia's efforts in biological research and development. While written before the invasion of Ukraine, their work takes on even larger dimensions since last February, with continuing losses on the battlefield for Russia. In one of the more stranger-than-fiction events of late, Jerry Mothershead, Zygmunt Dembek, Todd Hann, Christopher Owens, and Aiguo Wu explore Havana syndrome, beginning with the 2016 reports of illness occurring among the U.S. Embassy personnel in Cuba. For the joint force to be successful—from the tactical to the top leadership—getting the story right and telling it well is essential, and Brent Lawniczak suggests this is best done when including the Narrative Policy Framework in the military planning process. In a refreshing look at how planners pursue the "ends" of the strategy of the commander, Michael Baker proposes seeing the future desired as one where problems will still exist vice one that is problem free, ultimately helping to develop a realistic and appropriate plan to achieve success.

In Commentary, Chad Peltier, Grace Hand, Nathaniel Peterson, Louis Deflice, Kyle Smith, and Justin Handy challenge us to consider how some popular cultural ideas such as tuition-free college and comprehensive health care could affect national defense. Looking at the growing mission set of security cooperation in the Defense Department, Daniel Ward suggests that the U.S. Coast Guard has a significant and valuable role to play.

Features this time has four excellent articles on how we might consider the current joint force's structure and how it fights both physically and in the minds of the people we engage. Richard Hooker, my former boss at NDU and one of the long-time *JFQ* authors whose work first appeared in our inaugural issue in 1993, provides his take on how best to organize our special operations forces for future competition. Extending our ongoing look at Great Power competition, Curt Butler, Phillip Henrikson, Lisa Reyn Mann, and Palmer Roberts suggest ways to optimize the joint force beyond just the deterrence of future challenges. David Wilson takes us inside the ability of the U.S. Army to sustain the joint force in the Indo-Pacific region. Helping us navigate the world of information—the newest joint function—Daniel Hall details how best to gain and maintain superiority in the terrain of the mind.

Closing out *JFQ* this quarter, in Recall, Isaac Johnson, Erik Lampe, and Keith Wilson offer lessons from the British experience with Great Power competition in the 19th century. And, in Joint Doctrine, Thomas Putnam examines how the joint force needs to update its doctrine to better address the issues involved in post-combat "consolidation" from not only a military perspective but also to realistically mature the military's approach to intra- and intergovernmental efforts to establish a working civil society after the guns go silent. We also have three excellent book reviews to keep you aware of new ideas and how they become a part of what the joint force accepts as valid ways of conducting our missions.

I look forward to helping you learn more so each of you can forge a path to success. I ask only that you take the time to reach out to your mentors and thank them for their support. Then find a way every day to pay it forward to those you work with, lead, and serve. **JFQ**

—William T. Eliason,
Editor in Chief

Chemical, biological, radiological, and nuclear specialist with 140th Chemical Company, California Army National Guard, dresses in MOPP 4 protective gear at site of notional nuclear attack on Charlestown, South Carolina, April 21, 2021 (U.S. Army Reserve/Darianne Hudson)

Assessing the Trajectory of Biological Research and Development in the Russian Federation

By Gigi Kwik Gronvall and Aurelia Attal-Juncqua

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Throughout the 20th century, biological warfare research and development (R&D) was part of the Kremlin's military posture. Offensive biological weapons research in Russia extends as far back as 1928, and after the Biological Weapons Convention (BWC) of 1972 made such programs illegal, the Soviet Union and then Russia expanded their development. The clandestine Soviet Biopreparat program aimed to weaponize dangerous

pathogens such as *Bacillus anthracis,* the causative agent of anthrax disease, and the smallpox virus, which had been eradicated except in the laboratory setting. At its peak, the Biopreparat program employed tens of thousands of scientists and engineers across hundreds of different facilities.[1] In 1992, Russian President Boris Yeltsin acknowledged the existence of illegal Soviet-era bioweapons programs, but a few years later, in 1999, then–acting President Vladimir Putin denied that these programs had ever existed. Russia has maintained this position ever since.[2] Biosecurity experts raised concerns that these illegal activities never ceased.[3]

In August 2020, the U.S. Department of Commerce added three institutions allegedly associated with offensive biological weapons programs in modern-day Russia to its Entity List of persons and/or organizations found to be engaged in "activities contrary to U.S. national security and/or foreign policy interests."[4] Later that year, the U.S. Government publicly alleged the existence of these programs at the annual conference of the European Union (EU)'s Non-Proliferation and Disarmament Consortium.[5] Around the same time, the Russian Federation put forward a controversial proposal at the United Nations (UN) General Assembly First Committee on Disarmament and International Security. The proposed resolution aimed to make all investigations of alleged chemical or biological weapons use by the UN Secretary General Mechanism (UNSGM) subject to a vote at the UN Security Council.

The United States stated that this proposal was politically motivated and aimed to weaken the UNSGM by placing it in an "overtly political framework designed to end in gridlock."[6] The measure was overwhelmingly rejected by member states. Later, in April 2021, the Department of State issued an official report that concluded, "The United States assesses that the Russian Federation (Russia) maintains an offensive [biological weapons] program and is in violation of its obligation under Articles I and II of the BWC."[7] In March 2022, following the Russian invasion of Ukraine, both the State Department and the White House became even more forthright on Russia's alleged active bioweapons programs, with the White House publicly sharing concerns that Russia may possibly try to "use chemical or biological weapons in Ukraine, or to create a false flag operation using them."[8]

These events are not the only examples of decaying relations around arms control between the United States and Russia. There are also the recent attempted assassinations of the Russian regime's political opponents in 2018 and 2020 through use of the Russian-developed nerve agent Novichok.[9] In December 2020, a journalistic investigation uncovered that Russia's Federal Security Service has a specialized toxins and nerve agent team, which was allegedly involved in the 2020 poisoning of political rival Alexey Navalny.[10] These activities suggest a diminished regard in Russia for international norms, including those with direct relevance to biological and chemical weapons, and indicate a Russian willingness to use unconventional weapons. In March 2021, the United States joined the EU in condemning these actions and imposed targeted sanctions on Russian individuals for the poisoning and imprisonment of Navalny as well as designating scientific institutions as being suspected of being chemical and biological weapons research centers.[11]

In this troubling environment, it is important to understand the range of advanced biological research and current biotechnology investments by the Russian Federation in legitimate areas of biological research and biotechnology development in order to inform an assessment of the sophistication of Russia's alleged biological weapons program. To aid in this landscape analysis, we undertook a two-round Delphi study to elicit expert opinions about the state of Russian research efforts in advanced biotechnologies, including synthetic biology and high-consequence pathogen research, as well as the expected trajectory of biosecurity concerns about such research. The Delphi method of consensus development is a technique to obtain, combine, and analyze collective expert opinion while avoiding groupthink or undue deference to experts. Twelve participants were recruited to take part in this study. All had subject matter expertise and thought leadership in a specific focus area, including the biological sciences, national security, political science, foreign policy and international affairs, economics, and history, as well as experience with Russian biological sciences and knowledge of past weapons programs. After participants answered a series of questions, they were able to see the anonymous answers of their fellow participants. They were then asked to answer the same questions again and were given the opportunity to change their original answers in response to the new information. For this study, participants answered two iterated response-and-feedback rounds. Several experts who participated in this exercise did not wish to be identified as having taken part in it, and so it was decided that all participants would remain anonymous after completion of the study.

The study also included the United States, China, and India in its analyses, in keeping with the aim to reflect on the broader international landscape of advanced biological research. These nations have bolstered support and investments in their biotechnology infrastructure and offer a pertinent point of comparison for better understanding the current and future U.S. and Russian positions as potential leaders in this field and for identifying areas where international scientific engagement could be productive to increase mutual trust and reduce concerns.[12]

Key Findings and Discussion

Concerns About Management, Biosecurity, and Biosafety of Dual-Use Research of Concern in the Russian Federation. Biology and biotechnology R&D in the Russian Federation must be understood within the broader legacy of decades of offensive biological weapons (BW) programs, extending as far back as 1928. The clandestine Soviet program Biopreparat, which grew significantly in the 1970s, specifically focused on harnessing various dangerous pathogens for use in biological warfare.[13] For example, the authors of *The Soviet Biological Weapons Program* estimate that

the State Research Center of Virology and Biotechnology (also known as the VECTOR Institute) might have had the capacity to produce large amounts of weaponized smallpox virus (Variola) and anthrax *(Bacillus anthracis*) in the years before the collapse of the Soviet Union.[14]

Although current Russian President Vladimir Putin has denied the existence of any sort of contemporary offensive biological weapons program, the experts included in this study highlighted that Russian military laboratories have, to this day, yet to be opened to international inspection. In addition, recent Russian activities clearly suggest an increasing, and problematic, desire to weaken international norms, including those with direct relevance to the control of biological and chemical weapons. In 2019, the United States stated that Russia's backing of the Bashar al-Asad regime in Syria enabled the use of chemical weapons against its civilian populations and that Russia had purposefully worked to undermine the attribution investigations led by the Organisation for the Prohibition of Chemical Weapons.[15] The Russian government also allegedly used the chemical nerve agent Novichok in the attempted assassinations of defector Sergei Skripal in 2018 as well as political opponent Navalny in 2020.

Over the years, the Russian government has also worked to erode international norms against the proliferation and use of biological and chemical weapons through dangerous disinformation campaigns. Although these false allegation campaigns can be traced back to Cold War times, the Russian disinformation ecosystem was revived in the 1990s and has continued to grow over the last few years.[16] In 2010, Russia made unsubstantiated claims that the Pentagon was installing a series of biological weapons research laboratories along its borders with the Republic of Georgia. In 2020, Russia, together with Iran and China, propagated conspiracy theories about the origin of SARS-CoV-2, suggesting that the United States had deployed the virus as a biological weapon.[17] More recently, in March 2022, after launching its invasion of Ukraine, Russia initiated a disinformation campaign about nonexistent U.S. biological weapons laboratories in Ukraine.[18] These false allegations about biological weapons use and development not only sow distrust at the global level but also weaken existing biological disarmament norms by indirectly encouraging other countries to breach them.[19]

The experts who took part in this study agreed that recent Russian activities demonstrate a clear and growing willingness to use unconventional weapons. Moreover, study participants noted persistent concerns about biosafety practices and biosecurity awareness to prevent the accidental release, or intentional misuse, of pathogens in Russia. They expressed high levels of concern about the management and oversight of dual-use research of concern (DURC) in the Russian Federation. *DURC* is defined as

life sciences research that . . . can be reasonably anticipated to provide knowledge, information, products, or technologies that could be directly misapplied to pose a significant threat with broad potential consequences to public health and safety, agricultural crops and other plants, animals, the environment, materiel, or national security.[20]

Experts noted that current legal and regulatory frameworks, treaty commitments, or other mechanisms relevant to the development of biotechnology in the Russian Federation were insufficient to limit the potential for dual-use research to be misused. One participant stated:

It should be evident that I have little trust in the Russian Ministry of Defense or the Putin Administration to abide by the relevant international treaty commitments (the BWC). As for Russian internal regulatory mechanisms, insofar as they exist, I would not expect them to offer any impediment to the Russian government if it sought to again violate the BWC any more than the BWC impeded the Soviet offensive BW program between 1972 and 1992.

Additionally, historical evidence, existing Soviet-era bioweapons development infrastructures, and lack of research transparency were most often listed as reasons for concern. One expert noted that "Russian scientists are highly educated and hence the development of anything nefarious is simply a question of political will and funding."

The Delphi study also asked about concerning statements that Putin had made about biological weapons. In 2012, when listing tasks to be accomplished during his administration, he included "the development of weapons based on new physical principles: radiation, geophysical, wave, genetic, psychophysical, etc."[21] The development of genetic weapons would be a clear violation of the BWC, and Putin's mention of it demonstrates, once again, his contempt for international norms. Five years later, Putin spoke of the creation of genetically modified superhuman soldiers that would be "worse than a nuclear bomb."[22] These statements, and counterallegations, may serve to continue weakening the international taboo against the development of biological weapons. Although many experts who participated in this study believe Putin's statements to be propaganda and not based on ongoing research programs, they noted that the statements could still have an impact on the trajectory of biological scientific research in Russia. They agreed that the government would likely direct funds and research in such areas as hybrid warfare: "It's difficult to distinguish between Russian propaganda and actual aims. Putin's comments will certainly embolden some military scientists. Also, Putin often uses scary hyperbole but doesn't understand the complexities and difficulty of making what he calls 'supersoldiers.'"

No participants were aware of Russian research that could embody such statements, but the majority noted that if such research existed, it would be conducted in military institutions and would be classified. Because of the level of complexity and uncertainty involved in this type of research, group members were divided on whether they should be concerned about its potential existence, with one expert stating, "These investments may not necessarily translate into the successful development of such weapons."

Arrival of first batch of Sputnik V vaccines to Argentina, December 24, 2020 (Courtesy Esteban Collazo)

Uncertainty among the experts extended to their concern about Russian efforts around human germline editing, an activity on which scientists from around the world have recommended a global moratorium.[23] In 2019, Russian geneticist Denis Rebrikov, from the Pirogov Russian National Research Medical University, announced his intention to perform germline editing on human embryos using CRISPR (clustered regularly interspaced short palindromic repeats); the research's ultimate aim would be to genetically alter the genes of babies who would otherwise be born deaf, allowing them to hear.[24] Rebrikov's proposal followed the controversial announcement by Chinese scientist He Jiankui of the birth of the world's first babies with edited genomes in 2018.[25] Russian law currently prohibits the use of genetic engineering under most circumstances; most of the experts in this study believed that this research would likely proceed under the radar and "be publicized [only] if successful, to avoid backlash, similar to the one that followed the CRISPR babies experiment" in China. It should be noted that the global scientific consensus is that such experiments ought to be banned until an international ethical and safety framework can be agreed upon, including under what circumstances such research should be allowed to take place.

Current State of Biotech and Biological R&D in the Russian Federation. Most of the experts who took part in the study ranked the current state of biotechnology and biological research in Russia as "advanced" and "somewhat innovative." Experts believed the Russian biotechnology and biological R&D field was "somewhat well-funded" (in contrast to such research areas in China and the United States, which were thought to be "very advanced" and "well-funded") and likely to maintain the current trajectory over the next 5 years, in terms of both developmental pace and funding. Importantly, some experts noted that although Russia may be generally less advanced than China and the United States, it may have highly advanced capabilities in certain areas of interest for health security, such as biopharmaceuticals, vaccine development, and gene editing. Most participants agreed that while Russia is not currently considered a top-tier nation in life-science research compared with the United States and China and still lags in terms of biotech capabilities and related investments, Russia's path is highly dependent on President Putin's efforts to fund and prioritize life sciences going forward. These expert opinions are also supported by prior research evaluating the current state of the life sciences in the Russian Federation.[26]

HMS *Montrose*'s Lynx helicopter dips her nose toward ship during escort duties for Operation *Recsyr*, which calls for expeditious destruction of Syrian chemical weapons program, January 15, 2014 (Courtesy Royal Navy/Alex Knott)

In recent years, Putin has continued to demonstrate some political will to bolster investments and advancements in the Russian biotechnology sector. In 2012, the Russian government launched a new $18 million program called the BIO-2020 strategy, encompassing eight major focus activities, including biopharmaceuticals, biomedicine, and biotechnology. The investment amount, while not substantial, is still notable as the first of its kind in the post-Soviet era.[27] Furthermore, in 2018 Russia's Federal Research Programme for Genetic Technologies Development disclosed its 2019–2027 strategy supporting the development of a comprehensive plan to accelerate the development of genetic technologies.[28] Two years later, in March 2020, Russian Prime Minister Mikhail Mishustin signed an agreement establishing a governmental research center intended to serve as a base for R&D in the fields of genetic technologies and genome editing.[29] It remains unclear how effectively these strategies will be pursued or funded by the Russian government, and whether other investments are being made covertly for classified work and research.

Despite these recent efforts, study participants believed that the economic crisis resulting from the COVID-19 pandemic (the study was conducted before sanctions were instituted after the invasion of Ukraine in February 2022) might limit future Russian investments in biotechnology R&D. Indeed, experts stated that while Russia might continue to invest in life sciences, there was uncertainty as to whether the government would "prioritize accelerating biotechnology investments compared to other more urgent societal needs" stemming from the economic downturn. Now, more than 2 years into the COVID-19 pandemic, the trajectory and status of Russian biological R&D remain to be determined; however, the Russian government chose to prioritize investments in the rapid development of COVID-19 vaccines.

In August 2020, Russia was the first country to approve a COVID-19 vaccine, named Sputnik V in a clear nod to the Cold War–era space race between the United States and the Soviet Union. Russian regulators approved the vaccine before clinical trials were even completed, overriding international norms and sparking concerns. In response, in September 2020, scientists from around the world signed an open letter outlining potentially suspicious patterns in Sputnik V's preliminary trial data as well as inconsistencies in the description of the trial procedures.[30] Even though initial lack of transparency was an issue, Phase 3 clinical data were published in *The Lancet* in February 2021 and showed the vaccine to be safe and effective. These findings were later called into question by an international group of statisticians who outlined "data discrepancies," "substandard reporting," "apparent errors," and "numerical inconsistencies" in the vaccine efficacy data.[31]

Despite these ongoing concerns, as of March 2021, Russia had three approved vaccines against SARS-CoV-2.[32] Multiple countries, such as India, Mexico, and Saudi Arabia, signed up to buy Sputnik V, and 57 countries have approved it for use. In January 2021, Russia applied for vaccine approval in the EU, while several EU countries, such as Hungary and Slovakia, had already individually approved its use.[33] Sputnik V suffered a few setbacks in April 2021, as the Brazilian health agency declined to approve its import due to safety concerns vis-à-vis allegations that its viral vector might be replication competent. Around the same time, Slovakia's drug regulator announced that the batch of Russian vaccines it received did "not have the same characteristics and properties" as the ones used in *The Lancet* studies.[34]

As the West dabbled in vaccine nationalism, Russia initially promised to boost vaccine manufacturing to aid global supply, aiming to score geopolitical points through vaccine diplomacy while bolstering its image as a scientific power. As of January 2022, it had become clear that Russia had fallen short of meeting its supply commitments and international promises, while its domestic rollout lagged far behind those of most European nations and the United States.[35]

Observations and Recommendations

Throughout modern history, national security concerns have often motivated bilateral engagement, including in the science and technology sectors. After the fall of the Soviet Union, science diplomacy mostly aimed to demilitarize the Soviet science infrastructure and engage with Soviet scientists in constructive and peaceful ways.[36] However, science diplomacy between Russia and the United States also dates to the fraught early days of the Cold War, when the United States and the Soviet Union signed the Lacy-Zarubin agreement on "exchanges in the cultural, technical, and educational fields."[37]

Over the years, Russian-U.S. scientific collaboration was often able to transcend political posturing and tense relationships in ways that significantly advanced biomedical research and public health across the world.[38] In 1956, the State Department and the Soviet Ministry of Foreign Affairs fostered collaboration between American virologist Albert Sabin and two Soviet virologists, Mikhail Chumakov and Anatoli Smorodintsev. Sabin first developed the oral polio vaccines, but Chumakov scaled up its production, allowing for the mass production of the vaccine and for large-scale clinical trials. The Sabin oral vaccine has since been used across the globe to significantly stop transmission of the polio virus.[39] In 1958, another Soviet virologist, Viktor Zhdanov, first put forward the idea of smallpox eradication to the World Health Organization (WHO). It was also a Soviet scientist who first developed the technology to freeze-dry smallpox vaccines, allowing them to be transported without cold-chain requirements. This advance enabled American public health expert Donald A. Henderson to steer a highly successful WHO campaign to eradicate smallpox globally.[40]

Despite past successes, science diplomacy between the two nations has never been without challenges. In the mid-1980s, the Soviets engaged in a widespread disinformation campaign alleging that HIV was a biological weapon created by the U.S. military. In 1986, two high-level

Soldier assigned to 56th Chemical Reconnaissance Detachment clears laboratory suspected of housing components for chemical weapons during training exercise in Utah, January 31, 2022 (U.S. Army/Brandon White)

Russian authorities detain opposition leader Alexey Navalny on Tverskaya Street in Moscow, March 26, 2017 (Courtesy Evgeny Feldman)

delegations of U.S. health officials traveled to the Soviet Union to discuss the resumption of official joint committee meetings to expand government health exchanges. At the first such meeting, in 1987, the United States warned it would end all AIDS research collaboration with the Soviets unless the disinformation campaign stopped.[41] Today, Russia continues to use false allegations about biological weapons development to sow distrust and weaken biological disarmament norms, as has become ever more apparent in its recent charges levied about Ukrainian laboratories.[42] In a context of increased insecurity in Europe, the White House and the Global Engagement Center at the State Department must continue to work closely with international allies to actively expose, and publicly counter, Russia's dangerous disinformation tools and techniques.

As sweeping international sanctions take effect following Russia's unprovoked invasion of Ukraine, Western countries have promptly severed many ties with Russia, including broad-ranging scientific engagements and global initiatives. Risking fines and even jail time, close to 8,000 Russian scientists and academics have signed on to a public letter unequivocally denouncing their government's senseless war in Ukraine and sharing their concerns about its ramifications on the future of scientific research in Russia: "The isolation of Russia from the world means further cultural and technological degradation of our country in the complete absence of positive prospects. War with Ukraine is a step to nowhere."[43]

Historically, science diplomacy has been a useful tool to keep communication lines open when security relations are fraught and has led to positive outcomes for both science and national security. However, Russia's invasion of the sovereign Ukrainian nation makes any bilateral engagements between the United States and Russia unconscionable at this time. These actions are unlikely to be forgotten or forgiven swiftly, and sanctions are likely to

persist for some time. Eventually, at an undetermined point in the future, such engagements will certainly again prove to be important for national security and scientific advancement. In March 2022, the presidents of the U.S. National Academies of Sciences, Engineering, and Medicine published a joint letter expressing their solidarity with Ukraine and Ukrainian scientists, also noting that the U.S. National Academies have "a long history of maintaining open lines of communication with the international community, even in dire geopolitical situations" and that they remained "committed to keeping such channels of communication open, including with Russian scientists, many of whom have spoken against the invasion."[44] In these troubling times, track 2 dialogues, including existing collaborative efforts between the U.S. Academies of Sciences and Russian scientists, could eventually be viable avenues in which to engage on critical areas of interest, such as persistent concerns about biosecurity and biosafety, the development of genetic technologies and gene-editing research, and such programs as the Joint Protocol of the U.S. National Academies and the Russian Academy of Sciences on Cooperation in Various Fields of Studies Concerning COVID-19.[45]

As noted in *The Unique U.S.-Russian Relationship in Biological Science and Biotechnology*, a 2013 National Academies of Science, Engineering, and Medicine report, joint bio-engagement programs have enabled scientists to develop long-term professional and personal relationships that have supported scientific innovation and promoted transparency, openness, and confidence-building between nations.[46] Furthermore, Russian scientists often lack experience dealing with Western publishers. It has been documented that past cooperation between American and Russian scientists has often boosted Russian publications in English-language journals and U.S. access to otherwise inaccessible Russian research.[47] While this is significant from a scientific standpoint, the authors of *Biosecurity in Putin's Russia* argue that heavier reliance on open and legitimate Russian publications and research may indirectly enable the U.S. Government to engage Putin on issues related to noncompliance to the BWC without compromising intelligence sources.[48]

In the medium term, such academic engagements may also indirectly address some of the biosecurity and biosafety concerns voiced by the experts in this study, concerns that are bound to worsen in this new era of Russian isolation. Eventually, bio-engagement programs between American and Russian scientists could again be leveraged to emphasize responsible science in the fields of emerging biotechnologies, to promote broader emphasis on bioethics, and to strengthen biosafety and biosecurity by creating and sustaining healthy laboratory cultures, where Russian and U.S. experts can cooperate and share best practices.[49] As noted by the experts who took part in this study, despite its recent interest in bolstering growth and investments in biotechnology R&D, Russia still ranks lower than the United States and China in that regard. The recent unprovoked invasion of Ukraine and subsequent international sanctions are likely to hinder Russia's capacity to grow its biotechnology sector. In the longer term, the specific areas in which Russia lags, such as gene editing and other high-performance genomic technologies, could eventually provide opportunities for engagements between American and Russian scientists when track 2 dialogues usefully resume.[50]

Limitations

The limitations of this study include those that are intrinsic to the Delphi methodology. The anonymized iterative process aims to reduce groupthink, but the conclusions drawn through the process are still shaped by bias at the individual participant level. Indeed, the experts who took part in this research have individual expertise in different fields, including biological sciences, national security, political science, foreign policy and international affairs, economics, and history, as well as experience with Russian biological sciences and knowledge of the past weapons programs, but all were asked to answer the same set of questions, regardless of their specific expertise.

Other potential limitations to this research include the fact that only 12 experts were recruited to participate in the study and that it was not possible to undertake individual follow-ups with each participant to clarify certain statements or responses. These limitations were because of both the demanding iterative nature of the Delphi process and the specialization of the research topic.

Another important limitation to this study involves the inherent secretive nature of scientific research and development in the Russian Federation. The experts in this study were asked for the most part to project their knowledge of legitimate research and related funding trajectories onto possibly covert DURC and/or offensive research in Russia. It is unclear how accurate these projections may be. Many experts acknowledged that most Russian research is not disclosed and that past Soviet infrastructure for offensive work still exists and can be easily leveraged and covertly reengaged. Any offensive research in the Russian Federation would likely be siloed and separately funded from the country's public R&D efforts, and thus projections solely based on the state of legitimate research will always be imperfect. In theory, these caveats should have been somewhat mitigated by the experts' deep knowledge of the history of the Soviet BW program and the current situation in Russia.

Finally, because this study was conducted before Russia's invasion of Ukraine, the expert views outlined in this article do not reflect ways the participants' thinking may have evolved following recent developments. JFQ

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Secretary of State Antony Blinken delivers remarks on Havana Syndrome, in Benjamin Franklin Room of State Department, in Washington, DC, November 5, 2021 (Reuters/ Andrew Caballero-Reynolds)

Havana Syndrome
Directed Attack or Cricket Noise?

By Jerry L. Mothershead, Zygmunt F. Dembek, Todd A. Hann, Christopher G. Owens, and Aiguo Wu

In late 2016, 21 American and Canadian diplomatic personnel stationed in Havana, Cuba, experienced unusual and unexplained health problems. Although symptoms varied among those affected, the onset of illness was generally described as starting with hearing strange grating noises and feeling pressure in the ears coming from a specific direction and lasting less than 30 seconds. Other people nearby did not report any symptoms. Although most of those affected recovered with no residual symptoms, some had prolonged effects including hearing loss, memory loss, and nausea, and at least one individual now requires hearing aids. The etiology of the illnesses was undetermined, but speculation at the time centered on the possibility that these health effects resulted from a directed attack by means of either sonic or radio frequency energy. While not accusing the Cuban government of intentionally causing these "attacks"—intentionality even today remains unproved—both the U.S. and Canadian governments reduced embassy staffing to essential personnel only.

The constellation of symptoms has been referred to as "Havana syndrome"

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because of the location of the original events, but subsequent attacks on U.S. personnel have been reported in locations around the world, including Austria, Australia, Colombia, Georgia, Kyrgyzstan, Poland, Russia, Serbia, Taiwan, and Uzbekistan. Also characterized as "anomalous health incidents" (AHI), at least two cases were identified in the United States—one involving a White House official while walking near her home in Northern Virginia, and one near the Ellipse in the District of Columbia, adjacent to the White House. Dozens more cases were reported among U.S. personnel in Vienna and Hungary in early 2021, and several cases were also reported in Vietnam, India, Germany, and in London. Hundreds more such events had been reported as of late 2022. After rigorous review, some of the reported illnesses were determined not to fit the defined criteria for this syndrome. Those cases remaining were almost exclusively among U.S. Central Intelligence Agency (CIA), Department of Defense (DOD), and Department of State personnel and their family members, some of whom have left government service due to health complications attributed to the syndrome.[1]

Havana syndrome cases have been investigated by the CIA, the State Department Medical Branch, the National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), and DOD, among others.[2] For various reasons, there has been less than total information-sharing across the agencies involved. Physical health evaluations of those affected were performed at several locations and by means of different modalities, and there was little standardization across investigatory bodies.

Backstory: Once Upon a Time in Moscow

Microwaves were targeted against the U.S. Embassy in Moscow from 1953 until early 1976. Lilienfeld et al. conducted a biostatistical epidemiological study, published in 1978, which revealed that microwaves were directed at the upper half of the U.S. Embassy's Chancery Building from 1953 to 1975 at a dose of 5 μW/cm^2 for 9 hours a day. From June 1975 to February 1976, another area of the building received triple that dose (15 μW/cm^2) for 18 hours daily. More than 1,800 employees at this Embassy were exposed to these microwaves. Lilienfeld et al. compared these exposed employees to a comparison group of more than 2,500 employees at other Eastern European posts, including in Belgrade, Budapest, Leningrad, Prague, Sofia, Warsaw, and Zagreb. That study concluded that no notable difference in mortality was observed between these two groups.[3] A subsequent analysis by Lilienfeld noted the difficulties of such prospective studies, including poor study participation and small sample size.[4] More recent analysis has supported Lilienfeld's initial conclusions, while acknowledging that others have offered alternative interpretations for the findings.[5]

A 1976 study (now declassified) of State Department employees who worked in the Moscow embassy compared their hematological test results with those of a similar group in Washington, DC.[6] Differences between the two groups were noted for most blood cell components examined and were statistically significant, with important changes over time having occurred in the Moscow group. However, this information has never appeared in the peer-reviewed medical literature, and it is unknown if these two sets of samples taken in different locations were analyzed by the same or different laboratories or by means of the same standardized analytical methods.[7]

The International Agency for Research on Cancer (IARC) has since categorized radiofrequency electromagnetic fields as a possible carcinogen (Group 2B),[8] and some have suggested that this designation is not restrictive enough.[9] The cancer risks from such exposures may include gliomas, but the risk is unproved.[10] Power densities measured at the Moscow embassy at that time were of the same order of magnitude as expected from living near a cellular device base station.[11]

These incidents from 40 to 70 years ago with subsequent investigations yielded overall inconclusive findings, just like the current incidents suspected of precipitating Havana syndrome. Experimental evidence at the time indicated that intense microwave doses could cause malignancies, neurological effects, and cataracts. Given the lack of evidence of increased cancer, neurological disorders, or loss of vision, Lilienfeld stated in 1978, "There is no convincing evidence to implicate the exposure of these people to microwave radiation and the onset of adverse health effects."[12] Furthermore, the rise in white blood cell count found in the hematological tests and the subjects' complaints of headaches, memory problems, and sleep loss were attributed to common infectious diseases and psychosomatic effects of the adverse publicity at the time. Lilienfeld recommended that "this recent group of 400 people" who had worked at the embassy during the period of most intense radiation "be followed and examined every two years for the next 10 years." His recommendation does not appear to have been followed.

Havana Syndrome Defined

In 2017, the State Department requested that CDC evaluate all information related to the initial cases in Havana. In response, a team of experts reviewed available medical records of individuals who had been affected while in Cuba or shortly after departure and who were subsequently evaluated at the University of Pennsylvania Medical Center or the University of Miami. As part of its final report, CDC developed a case definition for this subset of the universe of persons affected.[13]

A presumptive case included any individual who had developed a biphasic constellation of symptoms, with at least one of the following symptoms appearing while in Cuba or within 2 weeks of leaving Cuba, with no other explanation: head pressure, disorientation, nausea, headache, vestibular (balance and coordination) disturbances, auditory symptoms, and vision changes; the second phase had to have occurred weeks to months after the original symptoms and included vestibular disturbances and/or cognitive

deficits (memory, concentration). A possible case included any individual who had developed one or more first-phase symptoms but had not subsequently developed second-phase symptoms.

An elite advisory group of science consultants advising the U.S. Government known as JASON was also contracted to determine the cause and nature of Havana syndrome.[14] The JASON team concluded that the sounds recorded in Havana "are mechanical or biological in origin, rather than electronic. The most likely source is the Indies short-tailed cricket, *Anurogryllis celerinictus*." Furthermore, "The recorded audio signal is, with high confidence, not produced by the nonlinear detection of high-power radiofrequency or ultrasound pulses. . . . We judge as highly unlikely the notion that pulsed RF [radio frequency] mimics acoustic signals in both the brain (via the Frey effect) and in electronics (through RF interference/pickup)." JASON therefore attributed 8 of the original 21 cases of the syndrome to hearing cricket noises.[15] Needless to say, this explanation was not well received by some, particularly when those affected had chronic health outcomes because of their experiences.

The National Academies of Science, Engineering, and Medicine (NAS) was also commissioned by the State Department to review the cases, their clinical features and management, epidemiologic investigations, and the scientific evidence in support of possible causes. This review was challenging because of incompleteness of records or withholding of information because of national security issues. Nonetheless, the NAS committee developed a report. NAS agreed with CDC's description of a biphasic course of illness.[16] The most distinctive clinical aspects of the illnesses were the nature of the onset and the initial features: the sudden onset of a perceived loud sound, a sensation of intense pressure or vibration in the head, and pain in the ear or more diffusely in the head. Chronic symptoms, if present, suggested problems with vestibular processing and cognition as well as insomnia and headache. However, no consistent picture of brain injury emerged from laboratory-based tests of vestibular function.

Although not performed on all personnel, complete physical and health evaluations including toxicology screenings, other blood tests, and neuroimaging studies (magnetic resonance imaging [MRI]) were performed on some personnel from the initial affected group with presumptive Havana syndrome.[17] Specifically, MRI studies were performed at the University of Pennsylvania Medical Center on 40 personnel and the results were compared with those of a demographically similar control group.[18] The studies identified no gross abnormalities or significant differences between the affected population and controls. Subsequent findings by the University of Pennsylvania team found that, compared with a healthy control group, the diplomatic personnel who had reported injury had experienced brain trauma. Advanced MRI scans (specifically, resting-state functional MRI, multimodal MRI, and diffusion MRI) revealed "differences in whole brain white matter volume, regional gray and white matter volume, cerebellar microstructural integrity, and functional connectivity in the auditory and visuospatial subnetworks but not in the executive control subnetwork" (executive brain functions are mental skills that include working memory, flexible thinking, and self-control). To add to this information, a study of 24 Canadian diplomats and their families affected by the syndrome documented brain white matter injury significantly correlated with clinical symptoms.[19] Finally, a recently published prospective study of 45 U.S. diplomats injured during work assignment in Cuba found that their exposure resulted in prolonged illness with cognitive impairment and other clinical manifestations.[20]

In summary, the preponderance of documented symptoms, diagnostic evaluations, and laboratory studies indicates that injuries were suffered by those complaining of symptoms described, and these injuries are most consistent with what might be seen with a persistent concussion, but without evidence of physical trauma.

Mechanism of Injury

The NAS committee also explored potential causes for the injuries described and test results. These potential causes included poisoning, especially with organophosphate or other insecticides; infectious agents, such as Zika virus; and psychosocial conditions. No medical condition like Havana syndrome has previously been described in the literature. There was no evidence of chemicals or infectious agents in environmental samples collected months after the incidence of illness and no evidence of previous psychological issues with any of those evaluated. However, it was considered that some of the complaints that accompanied the chronic issues plaguing those affected could have a psychological component.

Scientific literature notes an auditory effect of microwaves or ultrasonic energy, called the Frey effect. Beginning in 1961, with the original description by Frey, numerous articles have been published concerning the neural effect of microwave energy.[21] The NAS committee concluded that directed pulsed RF energy (defined as 30 KHz to 300 GHz, including microwave radiation of 300 MHz to 300 GHz) appears to be the most plausible mechanism for Havana syndrome symptoms, especially in those with the distinct early manifestations. But the chronic symptoms reported in the affected individuals are the sort often seen in patients after head trauma or chemical exposure or because of infectious diseases or stress in a hostile environment. Finally, there is no documented evidence in the open-source literature of a weaponized RF emitter used against any affected individual, although it is understood that several countries, including Russia, have researched directed-energy weapons in recent years.[22]

James Giordano, chief of the Neuroethics Studies Program at Georgetown University, stated that "the most likely culprit . . . would be some form of electromagnetic-pulse generation and/or hypersonic generation that would then utilize the architecture of the skull to . . . induce the constellation of signs and symptoms we're seeing in these patients."[23] Microwave energy in

Hotel Nacional, in Havana, Cuba (Courtesy nurzumspass)

the low-gigawatt range could evoke disruptions in neurological networks of the brain that could lead to functional disruption and durable impairment of cognition and behavior. Additionally, a laser component could be used for aiming or combined with electromagnetic or sonic energy to increase effectiveness against targeted individuals. Research in the use of directed energies for commercial and military applications has been conducted by Russia and China, and the United States has engaged in research on ranged acoustic, ultrasonic devices, and scalable microwave devices.[24]

There is no accepted therapy to alleviate the symptoms of the Frey effect. One odd research paper indicates that a researcher self-medicated himself for purported symptoms caused by the Frey effect by use of the adrenergic vasoconstrictor naphazoline nitrate,[25] most used as a decongestant.[26] Another case study of a single Havana syndrome patient suggested that a 5-day multimodal program of neurological exercises provided in 10 one-hour treatment sessions improved that patient's symptom severity score by >36 percent and their stability score by about 125 percent, but left stability "still severely compromised."[27]

The Future?

On October 8, 2021, the Helping American Victims Afflicted by Neurological Attacks (HAVANA) Act was signed into law by President Joe Biden. Public Law 117-46 authorizes "payment to personnel of the Central Intelligence Agency who incur qualifying injuries to the brain [and] payment to personnel of the Department of State who incur similar injuries." As of August 2022, initial payments of up to $187,300 have been authorized for those State Department employees affected by AHI/Havana syndrome.[28]

Although this law admirably addresses potential compensation to U.S. Government personnel affected by Havana syndrome, a definitive determination of the cause of this syndrome remains elusive 6 years after its first occurrence. As noted, cases have continued during recent years. Hostile governments have previously subjected American Embassy buildings to microwave radiation, demonstrating a willingness to subject U.S. personnel to surreptitious energy sources that may cause deleterious health effects. Until there is consensus as to the precise cause of and methods to prevent or treat Havana syndrome, it will likely remain an enigma and health concern for diplomatic, intelligence, and military personnel globally.

We have progressed considerably from attributing AHI/Havana syndrome to noises caused by indigenous crickets. Yet the problems of identifying its origin and possible perpetrator(s) remain unsolved. Until answers are found, it remains undetermined if foreign actors have developed an ingenious method for hampering our overseas diplomatic

missions, or if perhaps foreign postings in and of themselves contribute to the cause. Clarity on the cause of and treatments for the syndrome is now a U.S. Government priority. As Secretary of State Antony Blinken has stated, "We will get to the bottom of this, and meanwhile we will do everything we can to care for our people."[29] **JFQ**

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Air Force aircrew assigned to 492nd Fighter Squadron at Royal Air Force Lakenheath, England, perform preflight checks before forward deploying to Łask Air Base, Poland, to support North Atlantic Treaty Organization air shielding efforts, August 5, 2022 (U.S. Air Force/Seleena Muhammad-Ali)

The Narrative Policy Framework in Military Planning

By Brent A. Lawniczak

It has been stated that in the modern operating environment, whose *narrative* wins is more important than whose *army* wins.[1] Additionally, it is posited that now, more than in the past, and especially since the end of the Cold War, "political struggles occur over the creation and destruction of credibility."[2] If these claims are true, how do planners understand, analyze, and derive successful narratives and incorporate them into military plans?

Military planners have learned and adopted concepts from the social sciences. One obvious example of this learning is operational design. Operational design has been informed by the concept of "wicked problems"—ill-structured problems requiring the derivation of simultaneous definition and solutions—that originated in the social sciences.[3] Because military operations must always be tied to a policy goal, it is likely that military planning may also be informed by existing theories of policymaking. One of these theories of the policymaking process is the Narrative Policy Framework (NPF), which provides a method that can be incorporated into the doctrinal planning process, as part of operational design, to enable better leveraging of information as a joint function through the understanding of narratives.

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Honduran army Lieutenant Kevin Calix, 120th Infantry Brigade, prepares his team to conduct site assessment at Ostuman, in Copán, Honduras, during cultural heritage protection exchange with U.S. military experts, March 10, 2022 (U.S. Army/Maria Pinel)

The Role of DOD in Understanding and Forming Narratives

The joint force, in conjunction with the interagency, allies, and partners, will develop and communicate a consistent, credible, and compelling narrative to relevant actors.[4]

—From *Joint Concept for Operations in the Information Environment*

Although the Department of Defense (DOD) as a part of the U.S. Government is not responsible for strategic communications, it has been asked to play a significant role in the formation of narratives and themes. The Department of State is the government lead for strategic communications, yet it has been proposed that "the joint force must work with partners to develop and strengthen beneficial narratives and provide alternatives to counter detrimental ones."[5] Joint doctrine notes, "Commanders should shape narratives as they plan and conduct other aspects of operations."[6]

Additionally, the joint force must be able to "analyze and understand the landscape of relevant narratives" and use relevant actor narratives to inform operational design—but has been provided little guidance or processes on how to do so.[7] As part of the commander's communication synchronization, DOD coordinates and synchronizes "narratives, themes, messages, images, operations, and actions to ensure their integrity and consistency down to the lowest tactical level across all relevant communication activities."[8] Additionally, "the communication strategy for an operation contains at least the narrative, themes, messages, visual products, supporting activities, and key audiences."[9] Thus, it is imperative that commanders, staffs, and planners, though not expected to be experts in crafting narratives, should have the requisite knowledge to analyze and understand relevant actor narratives as part of operations in the information environment (OIE).

The Significance of the Narrative in Military Operations

We have seen value in [combatant command] *and operational-level* [headquarters] *developing compelling narratives, themes, and messages fully nested with the strategic narrative to advance the legitimacy of the mission while countering that of the adversary. A compelling narrative guides planning, targeting, and execution, and can help prevent the "say-do" gap in which our actions and words conflict in the eyes of the audience.*[10]

—From Deployable Training Division, Joint Staff J7, *Communication Strategy and Synchronization*

Joint doctrine recognizes narratives as a critical aspect of all military operations.

It has also been recognized that the United States as a whole, and the military specifically, has fallen short in leveraging the narrative to achieve success in military operations.[11] According to the *Joint Concept for Operations in the Information Environment* (JCOIE), "The joint force has lacked emphasis, policy, resources, training, and education to address the full power of information," including a "limited ability to recognize and understand narratives, [and is] often ineffective in applying and aligning the narrative to goals and desired end states."[12]

Much has been posited about winning the narrative in competition and armed conflict. At the strategic and operational levels, "the commander may choose to amplify or mute narrative elements to support his intent to influence individuals and groups for a purpose supporting joint force objectives."[13] However, without a method through which to study a narrative, the joint force is often shooting in the dark. Deriving and promulgating compelling narratives, and making them plausible, is assumed to be a key facet of U.S. military operations. Yet the planning process does not include a method for analyzing narratives that allows for the seamless integration of information into military plans.

Even after it was established as the seventh joint function, the description of information in joint doctrine is largely a rehash of major portions of the joint information operations publication.[14] What makes information as a joint function different from information operations as traditionally understood? Just as subject matter experts have training and methodologies for incorporating information into operations, staff, planners, and commanders must also have tools to understand and better incorporate information—the narrative—into operations. Without a process that adds rigor to analysis, the effective use of information will continue to elude U.S. military planners and policymakers in their attempts to influence target audiences by means of the narrative. Borrowing from the social sciences, the NPF offers a method of studying narratives—and may offer important processes that can become part of the larger military planning process.

The NPF in Planning

Every [headquarters] *is engaged in an ongoing "Battle of the Narrative."*[15]

—From Deployable Training Division, Joint Staff J7, *Communication Strategy and Synchronization*

The NPF offers a potentially useful path for the examination and formulation of powerful narratives that will enhance the use of information in all military operations, from security cooperation to humanitarian assistance, and from counterinsurgency to major combat operations. The NPF does not rely on manipulation or psychological operations to mislead audiences, though it may be used to do so. The study of narratives has been used in marketing, psychology, and health care. Because the United States must match words with deeds to avoid being viewed as hypocritical, the quest for a powerful and effective narrative is often elusive.[16] This may be more difficult for the United States as the sole superpower because any use of its power may at times be construed as hypocritical by a target audience.[17] Often, adversaries will attempt to intentionally misconstrue and spin narratives to their advantage.

The NPF allows planners and analysts to break down existing narratives to gain a better understanding of the operating environment and potentially to reverse engineer new narratives that will better align words with deeds. More important, understanding the facets of the narrative will lead to more successful use of information in military operations.

Narratives are more than stories and have been defined in the following ways:[18]

- as "a basis for unified communication and understanding that creates meaning through a system of story formats, which draws upon local history, culture, and religion to frame and affect the perceptions of specific actions"
- as "an explanation of events in line with an ideology, theory, or belief, and one that points the way to future actions [to] make sense of the world, put things in their place according to our experience, and then tell us what to do"
- as "powerful stories that make sense of the past and project to the future."

Joint doctrine simply defines the narrative as "a short story used to underpin operations and to provide greater understanding and context to an operation or situation."[19] Yet even with a common understanding of what a narrative is, leveraging narratives during military operations across the competition continuum will be difficult, if not impossible, without a clear methodology to study, understand, and develop narratives. The proposed method can be used from the national strategic to the tactical level during planning.

A narrative *is* a story. Each story has a "temporal sequence of events, unfolding in a plot populated by dramatic moments, symbols, and archetypal characters that culminates in a moral to the story."[20] It is more than a message or theme, which is where many military planners land when thinking about operations in the information environment.[21]

Joint Publication 5-0, *Joint Planning*, suggests several questions planners may need to answer regarding information during PMESII (political, military, economic, social, information, and infrastructure) analysis of the operational environment (OE). How information moves in the OE, how it is received and processed, by whom, and for what purposes are central questions. Additionally, identifying relevant actors, their roles, their decisionmaking processes, and the information systems they use is important to understanding the OE.[22] The closest doctrine gets to asking this sort of question about narratives is including as part of OE analysis considerations of how relevant actors perceive and assign meaning to joint force activities and the behaviors that may result from those perceptions.[23] These are all valuable questions; however, more detail is necessary regarding existing narratives and the narratives that both an adversary and the joint force may want to promulgate. How the narrative is promulgated is important, but it is necessary to address the

specific components and content of the narrative to leverage information successfully during operations.

It is essential planners understand that for a narrative to function, it must have certain qualities or parts. It has been suggested that there are four necessary parts of a narrative. First, it must have a setting or context. Second, closely linked with the setting, is a plot with a temporal element—the story has a beginning, middle, and end—and the plot provides the relationships between the setting and characters. Third, the story consists of heroes who are fixers of the problem, villains who are causers of the problem, and victims who are harmed by the problem. Fourth, there is a solution to the problem that is offered within the narrative.[24]

Elizabeth Shanahan, Michael Jones, and Mark McBeth posit that "the portrayal of policy narrative characters (heroes, victims, and villains) has higher levels of influence on opinion and preferences of citizens, elected officials, and elites than scientific or technical information."[25] Thus, when seeking to leverage the narrative in military operations, planners should carefully examine which character types will resound best with the target audience. A good example to consider is Osama bin Laden, who was a villain to many but a hero to some. Understanding the tension between various perceptions when planning is essential to the development of successful narratives, but such understanding will come only through an intensive study of all relevant characters and target audiences. This will not be an easy undertaking, but it is essential.

Additionally, understanding how actors perceive their own standing is important. Whether groups or actors see themselves as winning or losing on a policy issue will often determine the intent of their narrative. If a group perceives itself as losing, it will craft narratives with the intent to expand its influence, in terms of either public opinion or, possibly, active support. If a group perceives itself as winning, it will likely create a narrative with the intent to contain involvement by a larger segment of the public.[26]

Closely associated with the character aspect of the narrative is the concept of the "devil shift." Here, opposing actors

attempt to disparage their adversaries by exaggerating the "malicious motives, behaviors, and influence of opponents."[27] Potential U.S. adversaries may have an advantage in using this devil shift against the United States because of the country's unique position as the sole post–Cold War global superpower.

U.S. adversaries may be successful in their attempts to employ the devil shift against the United States—especially if or when U.S. policy actions do not align with its policy statements. It is easy for lesser powers, both state and nonstate actors, to portray themselves as the hapless victims of a hypocritical hegemon. For its part, the United States will need to be careful in attempting to craft narratives that use the devil shift against its adversaries. The use of the devil shift, it has been observed, can often lead to intractability. This intractability, particularly in stability and counterinsurgency operations, is precisely what the United States military wants to avoid; it is often central to the problem planners are trying to solve.

Furthermore, granting the opposition the status of "devil" runs the risk that the adversary is portrayed as more powerful than it in fact is. It has been suggested, for example, that the use of information in the form of a narrative to portray China as a malign actor in the South China Sea and in other disputed areas is the best way to counter Chinese coercion.[28] But care should be taken not to attribute to even such a powerful potential adversary greater influence than the United States would like it to have. Doing so might create a self-fulfilling prophecy—crediting China with power and an obligation to react to allied attempts to thwart the very malign actions the United States wants to stop.[29] This does not mean that the United States and its allies should completely avoid calling out China's actions on the world stage. It does point to the fact that, rather than merely recognizing the significance of information and winning narratives, planners and decisionmakers must gain a greater understanding of the means to produce an *effective* narrative. Simply recognizing that the narrative is important is far from adequate. More important, even though it may be easier to form narratives using

F/A-18F Super Hornet, from "Mighty Shrikes" of Strike Fighter Squadron 94, launches off flight deck of aircraft carrier USS *Nimitz*, South China Sea, February 9, 2021 (U.S. Navy/Charles DeParlier)

the devil shift, it has been found that hero stories are more compelling to target audiences.

Another vital aspect of the narrative is the narrative strategy of "causal mechanisms," that is, assigning responsibility or blame for a problem on certain actors. Causes of problems can be intentional, inadvertent, accidental, or mechanical.[30] The categorization of problems and the assignment of blame or credit are important aspects of the narrative. Understanding the causal mechanism—or how an audience perceives that mechanism—leads to better understanding of the narrative and how it may be leveraged or changed to achieve joint force objectives and, subsequently, policy goals.

NPF theorists also offer several postulates that military planners should be aware of as they examine and create narratives:

- Bounded rationality: Individuals make decisions with limited information in a limited time frame. Because of these limits, they simply settle for the most satisfying alternative.
- Heuristics: Because rationality is bounded, individuals rely on shortcuts to process information and make decisions. Heuristics are in part based on "information available at the time, past experiences, expertise and training, and biological biases."
- Primacy of affect: Emotions play a key role in focusing attention and thus help to set priorities in decisionmaking. Research shows that emotion-based (affective) reasoning occurs a fraction of a second before true cognition.
- Two kinds of cognition: System 1 is an involuntary and unconscious cognition. System 2 cognition engages only after System 1 alerts the system via affective cues. System 2 focuses attention on cognitively more complicated tasks than can be handled by System 1. More than one System 2 activity cannot be conducted simultaneously. Therefore, System 1 is the default for much of human decisionmaking, and it is resistant to change.
- Hot cognition: Individuals confronted with an unfamiliar concept will perform a search in their minds to assign emotion (affect) to the new concept that accords with their existing understanding of the world.
- Confirmation (and disconfirmation) bias: This occurs when individuals treat evidence that agrees with prior beliefs as more accurate than incongruent evidence; individuals process congruent information faster.
- Selective exposure: Individuals will select information and sources of information that are congruent with their existing beliefs.
- Identity-protective cognition: Individuals with stronger prior attitudes "employ what they know to protect" their prior beliefs using selective exposure and confirmation and disconfirmation bias.
- Primacy of groups and networks: Groups and networks that individuals are associated with play a role in helping them assign affect to concepts. "Individuals do not process information in a vacuum."
- Narrative cognition: The narrative is the primary means by which individuals make sense of the world. Thus, the "narrative is the preferred heuristic employed by all for the purpose of making sense of the world because it provides essential linkages between System 1 and System 2 cognition."[31]

Thus, narratives do not merely relay the facts; they tell the meaning of the facts.[32] The bottom line, theorists note, is one that is obvious to most: people tell and remember stories.[33] This fact is reflected in the significance the military has placed on information as a joint function and the need to operate effectively in the information environment. The NPF provides the methodology to do so during planning.

Conclusion and Recommendations

It may be possible to identify sources of misinformation and disinformation coming from adversaries—which is immensely important but is only the beginning.[34] Breaking down the adversary's narrative into its parts, just as planners might do for an enemy system using systems analysis such as PMESII, will aid in the development of better narratives and counternarratives. It is not enough to simply acknowledge an adversary message or theme and then attempt to counter it; a deeper analysis is necessary. This is possible only through analyzing the narrative's component parts.

Again, according to the JCOIE, "All military actions generate observable or discoverable information that produces effects on perceptions, attitudes, and other elements that ultimately drive behavior."[35] Thus, narratives are as important in today's military operations as any weapon system. Particularly in the age of the "competition continuum," competing narratives are not merely a part of the operating environment but may be the "key terrain" that determines whether policy goals are achieved or not.

Although this short article introduces only the key facets of the NPF to a larger audience, the role the NPF can take in the planning process should not be underestimated. Adding a methodology for the specific examination of friendly and adversarial narratives, as well as the narratives of other actors, may be as important as analyzing centers of gravity, setting objectives, and conducting a systems analysis on relevant actors. In fact, it may be discovered that the narrative—at any level of warfare—may be the center of gravity or a critical factor. If that is the case, the narrative cannot necessarily be countered with greater military power—unless that military power is to properly exploit information in the form of its own narrative.

The NPF offers specific components of the narrative that planners can examine, create, implement, and assess during the planning and execution of military operations across the competition continuum. To do so, planners must move beyond simply planning the "message" or considering information operations as an afterthought. Each part of a narrative is necessary for both friendly and adversarial actors. Affecting facets of an adversary's narrative—characters, plot, or moral—as well as creating and protecting

Village nurses from integrated health center discuss village's medical concerns with Soldiers from Army's 404th Civil Affairs Battalion, assigned to 409th Air Expeditionary Group, in Azel Ecole, Niger, May 11, 2022 (U.S. Air National Guard/Chloe Ochs)

the friendly narrative, can be accomplished only if each part of the narrative is well understood.

The NPF should be incorporated into operational design as part of the understanding of the strategic and operational environment. One group of authors has suggested that a narrative element of operational design be added to doctrine.[36] That addition would be a good start, as would be ensuring the incorporation of OIE planners into the design team. These OIE planners would bring to the planning team a higher level of expertise and the ability not only to analyze narratives but also to understand and incorporate informational considerations at large within the operating environment.

Additionally, the friendly narrative should be a key part of the operational approach itself and incorporated into a commander's guidance and intent in the earliest stages of the planning process. As detailed planning continues through the steps of the planning process, the narrative—both friendly and adversarial—should remain a central focus for planners during action development, as are centers of gravity. During action analysis and wargaming, the narratives should remain central. It is essential by this point in the planning process that the narrative(s) be carefully aligned with other actions to avoid the trap of hypocrisy.

Furthermore, a red cell, supported by members of the J39 (Deputy Director Global Operations), should evaluate and leverage weaknesses in the friendly narrative through the examination of the facets offered by the NPF, such as specific characters (heroes, victims, villains), plot points, timelines, and solutions, to strengthen and refine the narrative. Simply alluding to a nebulous narrative put forth in vague terms will only give the illusion of operating effectively in the information environment. Analysis of the setting, timeline, plot, characters, and solution in each narrative is essential to effective information operations.

Beyond the red cell, which may currently lack the subject matter experts and tools to conduct narrative analysis, psychological operations' target audience analysis (TAA) may provide insight into the multiple narratives in the information environment.[37] Through TAA, a greater understanding of target audiences can be a first step in how that audience may "be influenced by an appropriately conceived and deployed message campaign."[38] TAA allows bottom-up message development derived from reliable knowledge of specific target audiences rather than top-down approaches in which messages are developed for "mass audiences in the hope that they will resonate with some portions of that audience."[39] Although TAA addresses the *target* of narratives, not necessarily all

facets of all relevant actor narratives in a given information environment, it could provide a good starting point to ensure that narratives are integrated into planning from start to finish.

The average military planner lacks the training and experience to plan and implement narratives but should be cognizant of narratives and their component parts to ensure their proper integration into operational design and joint plans. Just as planning groups include a host of subject matter experts for the development of specialized portions of operational design and plans, planning groups should include staff members with specialized skill sets to provide informed recommendations in support of achieving military objectives. Members of the J5, J9, J3IO, Public Affairs, and Political Advisor, at a minimum, should be trained to expertly analyze and develop narratives.[40]

While likely unable to produce this level of expertise, joint professional military education (JPME) could provide an introductory level of knowledge of and experience with narrative analysis. JPME institutions rely heavily on case study analysis, and the opportunity costs of expanding the examination of historical cases to include the facets of the narrative as outlined by the NPF are likely quite low. Leveraging existing curricula with an emphasis toward understanding the narratives that influenced or were influenced by operations will help to keep them low.

The goal is not to turn military planners into social scientists. Conflict, however, is a human endeavor, and narratives will always be a central facet of any military operation. Doctrine has borrowed from and should continue to be informed by relevant social theories. The NPF provides a path for a better understanding of the use of information in military operations. **JFQ**

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Marine Corps 1st Lieutenant Kristen Dang, platoon commander with Combat Logistics Company Alpha, Combat Logistics Battalion 3, Combat Logistics Regiment 3, discusses plan during Jungle Warfare Exercise 22, at Landing Zone Dodo, Okinawa, Japan, February 16, 2022 (U.S. Marine Corps/Federico Marquez)

Choosing Your Problems

By Michael A. Baker

Complex problem-solving has long played a central role in the military tradition. As with most traditions, problem-solving approaches tend to evolve slowly even under environmental pressure. Whether in governance, the military, or industry, every practitioner responsible for complex planning and decisionmaking faces increasingly intense peer competition, accelerating innovation, and asymmetric threats. Winning in the complex competitive environment requires reexamining weaknesses and limitations in conventional practice. Recent U.S. military decisionmaking best practice examples, including Army design methodology and the joint competition continuum, represent progress in the face of competition and environmental complexity.[1] Unfortunately, current approaches inadvertently

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propagate idealized traditional notions about intensely complex problems, with potentially disastrous consequences.

Planning and decisionmaking best practices targeting the complex competitive environment continue to promote a traditional "problem-elimination" mindset, leading practitioners to design and pursue idealized problem-free endstates.[2] That mindset exacerbates cognitive bias and introduces risk by failing to distinguish vision from concrete goals. This critique targets the way practitioners design and consider objectives or goals, not the tremendous and crucial effort practitioners put into identifying, understanding, and managing risks, problems, or contingencies.

The proposed alternative to problem elimination—problem selection—encourages practitioners to identify and pursue a future state for the relative desirability of its anticipated problems. Under any resource, knowledge, and capability constraint, organizations will manage certain problems more successfully than others. Practitioners must consider preferred, even desirable, problems while avoiding singular focus on eliminating undesirable ones.

The sections below lay out how a shift toward problem-selection thinking and away from problem-elimination thinking will help practitioners pursue vision and mitigate cognitive bias to better influence the future in the complex competitive environment. The expensive U.S. failure to adequately plan for the postwar aftermath in Iraq and enormously unproductive pendulum swings common in strategic policy and organizational problem-solving decisions provide historical context and evidence for the value of problem-selection over problem-elimination thinking.

The Challenge: End State Versus Vision in Military Best Practices

Changing the problem-elimination mindset begins with the way practitioners learn to frame their goals. Army Techniques Publication 5-0.1, *Army Design Methodology*, which explicitly instructs leaders on "critical and creative thinking abilities . . . to understand and solve problems," includes the phrase "end state" at least 90 times. The publication characterizes an endstate as the commander's desired future—the "desired end state"—providing a model example for practitioners:[3]

The country of Newland is a friendly democracy that no longer oppresses its people, threatens its neighbors, or provides sanctuary for criminal and terrorist organizations. The society has replaced the Newland defense force as the source of power for the democratic government. The Newland defense force is replaced with an army and navy that serve the society and protect the country from external aggression. Local and national police forces serve the population by providing law and order for society. World democracies support the new government by providing legitimacy and capabilities to the government of Newland and the society. In turn, the new government of Newland supports the rule of law among nations and human rights.[4]

Newland represents a theoretical placeholder for any destination to which the training audience might deploy, whether heading to the Middle East or the next fight. Notably, this model endstate does not include any notion of problems. By highlighting an endstate without problems, practitioners learn to conflate achievable operational outcomes with something more akin to vision. Is the example's endstate actually achievable? Although the distinction between endstate and vision appears semantic, it has important implications for understanding and addressing problem-elimination pitfalls.

Complex problem-solving frameworks must promote a distinction between concrete goals and vision. Whereas vision captures distant, aspirational, and ideal future conditions, concrete goals—as explicitly intended with endstates in doctrine—must be achievable and less distant. A great vision statement serves as a call to action, an animating force leveraged through inspired leadership, and a guidepost for initiative. Great vision statements almost never literally describe a future environmental state.[5] Failure to distinguish between idealized vision and concrete goals leads practitioners into a cognitive trap as they visualize and plan with future problems obscured.[6]

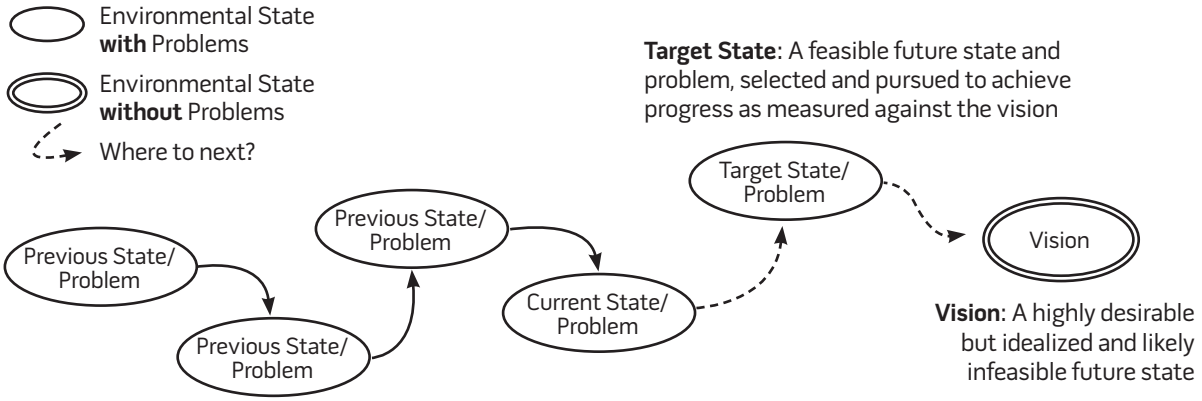
Although the 2019 Joint Doctrine Note 1-19, *Competition Continuum*, helps discourage problem-elimination thinking by downplaying endstates as "unhelpful in the context of enduring competitions for strategic advantage," the term still finds its way into the guidance.[7] Despite asserting that "campaigning through cooperation is usually an enduring activity with no discrete start or end point," the guidance goes on to state:

Commanders and staffs must have an understanding of the environment . . . to derive a range of feasible and productive military options that lead to sustainable and acceptable outcomes *for the U.S. and its partner.*[8]

Calling on practitioners to pursue "sustainable and acceptable outcomes" contradicts the document's attempts to deemphasize endstates as unhelpful. The implication of an enduring outcome additionally undermines the document's principal notion of campaigning under "evolving strategic conditions," which defines the competition continuum itself.[9] Like design methodology, competition continuum accidentally nudges practitioners toward idealized notions about endstates while simultaneously overlooking the importance of vision. The document unintentionally promotes a classically optimistic problem-elimination mindset embracing traditional endstates over its expressly intended message of campaigning.

Promoting abstract or idealized thinking about objectives limits practitioners' imagination when it comes to both next steps and inspired leadership. Aaron Rapport demonstrates that more abstract or distant thinking about goals amplifies cognitive bias toward focusing on desired outcomes, while ignoring potential problems. Decisionmakers must push back against the notion of endstates when framing outcomes and instead separately embrace two important and distinct concepts encapsulated within

Figure 1. The Path Toward Vision



The path toward vision, distinguishing target states with problems from the idealized vision. The path is invariably characterized at each step by problems in the complex competitive environment.

it—realistically achievable "target states," which include anticipated problems, and a more forward-looking idealized vision. Concretely framed realistic target states help avoid what Rapport calls abstract construal bias. Practitioners will tend to focus on feasibility, not desirability, when pursuing objectives, while still leveraging idealized goals as vision (figure 1).[10]

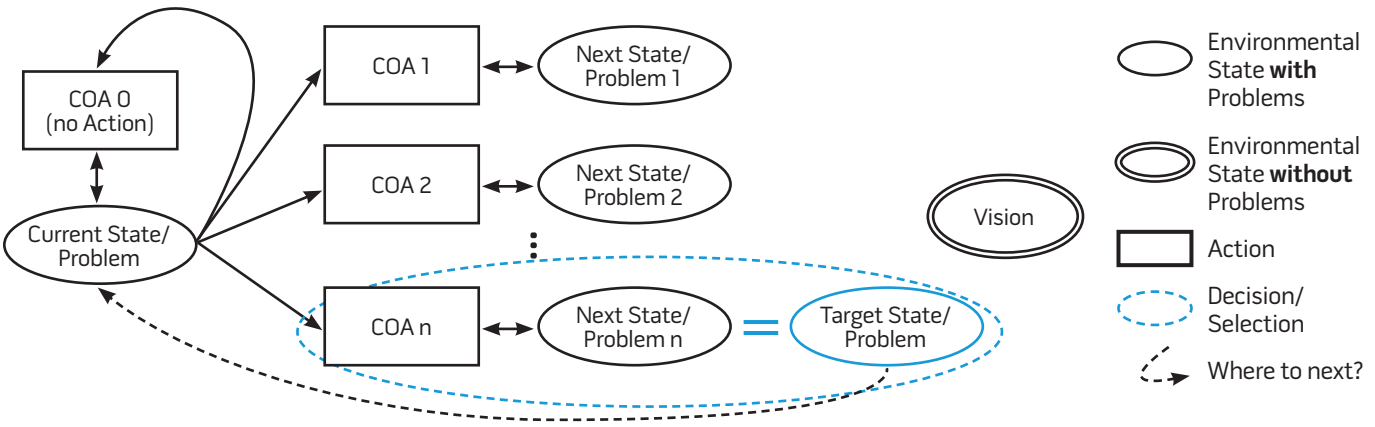
Choose Your Problems

To distance practitioners from problem elimination and better align complex decisionmaking with the complex competitive environment, practitioners should strive to frame decisions as exercises in problem selection. Rather than designing courses of action (COAs) to eliminate current problems in pursuit of idealized endstates, practitioners should leverage idealized vision as a guidepost for designing desirable but achievable target states while energetically forecasting and embracing future problems.

Starting with understanding the current state and its problems, practitioners should investigate potential future states and problems—the "Next State" in figure 2—along with potential COAs for achieving those states, along with the problems those COAs entail. While traditional criteria for evaluating COAs and risks remain valid, the relative value of each next state also depends on its relevance to progress toward the vision and the desirability of its problems. The decisionmaker selects a COA along with its anticipated next state/problem, designating a target state/problem. Throughout the process, decisionmakers steer the environment toward their vision by designing and selecting actions and target states with problems.

At immediate and very local levels of action and decisionmaking, problem elimination does meaningfully apply. Problem elimination clearly serves as a valid tool in circumstances such as eliminating an immediate existential threat, repairing a piece of equipment, or delivering urgently needed supplies. However, when more distant and increasingly complex horizons dominate, practitioners must include problem selection when framing next states because any

Figure 2. Problem-Selection Planning and Decisionmaking



Target State/Problem becomes Current State/Problem in selecting next action

Operations Specialist 2nd Class Daisy Alvarado performs radio talker duties during simulated naval surface fire support drill in combat information center aboard guided-missile destroyer USS *Higgins*, South China Sea, October 13, 2022 (U.S. Navy/Donavan K. Patubo)

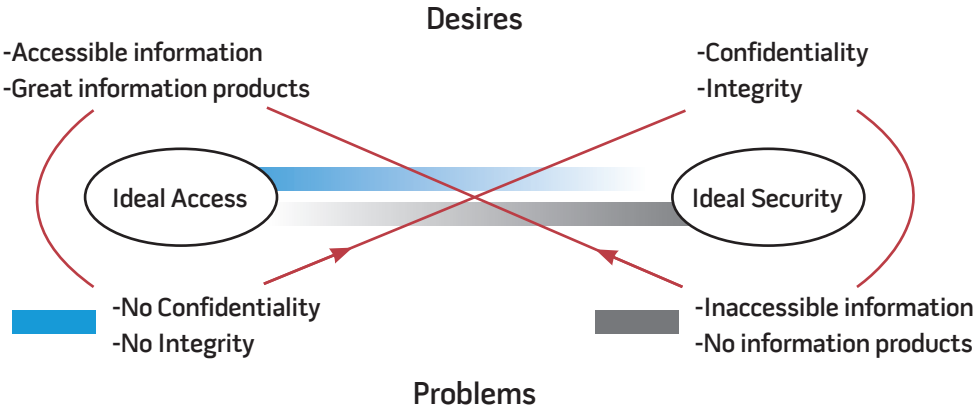
intervention in the complex competitive environment guarantees new problems. The idealized endstate is inappropriate for decisionmaking in complex competitive environments for this reason.

Polarities, Problems, and Structure. Meaningfully anticipating problems in response to actions in the complex competitive environment is much easier said than done, but even highly complex and chaotic environments exhibit cyclical patterns, trends, and observable actions and reactions. Economies have boom-and-bust cycles, coalitions form to overcome common threats, and divergent perceptions of intractable problems drive recognizable divisions across the political divide.[11] Structural patterns provide a foothold for analysis that can potentially facilitate decisionmakers' option and goal framing, such as forecasting adversarial responses and weighing the costs of reacting to a provocation. Such patterns also help illustrate serious pitfalls with problem elimination.

With environmental structures exhibiting polarity, eliminating the current problem introduces a structurally inevitable companion problem that problem-elimination thinking obscures. In contrast, polarity highlights the strength of problem selection. By deliberately choosing expected problems, problem-selection practitioners will likely anticipate the companion problem and deliberately pursue the problem they can expect to best manage.

Polarities. Barry Johnson defines a *polarity* as a system with characteristics that drive enduring and unsolvable problems for decisionmakers.[12] A polarity is a pair of structural elements—two poles—with ever-present tension. In Wendy Smith and Marianne Lewis's paradox theory of management, "contradictory yet interrelated elements" of the environment inherently generate real and enduring tensions as with quality versus cost, stability versus change, or flexibility versus structure. Smith and Lewis describe them as "elements that seem logical individually but inconsistent and even absurd when juxtaposed."[13] Each pole exhibits interrelated problems and desirable properties such that, paradoxically, eliminating the problems of one pole introduces the problems of the other. The paradox traps decisionmakers

Figure 3. Information Systems Polarity



The two poles, access and security, are characterized by specific desired attributes and problems in tension. Problem elimination drives practitioners away from problems and toward solutions, frequently triggering cyclic behavior. Barry Johnson's polarity management illustrations take this form without the problem spectrum.*

* Based on Barry Johnson, "Reflections: A Perspective on Paradox and Its Application to Modern Management," *The Journal of Applied Behavioral Science* 50, no. 2 (May 2014).

relying on problem-elimination thinking. It also drives destructive cyclic behavior as the problems from one element repeatedly drive the decisionmaker to the opposite pole for a solution.

Johnson recalls a well-known information systems example from his consultation for the Department of Defense Chief Information Officer (DOD CIO). Figure 3 illustrates the inherent polarity between information access and information security. Achieving the ideal from one perspective—information consumers gaining perfect access to information—invariably exposes problems compelling movement toward the other—security managers eliminating access to address vulnerabilities. In Johnson's account, the individuals at DOD CIO working this problem from opposite perspectives each sought diligently to protect the Nation, but they found they were having to protect it from one another.[14] By recognizing the need for enduring problem management versus problem elimination, practitioners can avoid the polarity trap and instead pursue a middle course, balancing desired system characteristics against desired problems.

Problem Elimination Versus Problem Selection in Polarities. With problem-elimination thinking, polarities represent dangerous traps perpetually plaguing decisionmaking, policy, and organizational design in complex environments. For Johnson, if the challenge "is a polarity you must manage, applying traditional problem-solving skills will increase the problem rather than help it."[15] Decisionmakers must recognize that they are dealing with a polarity to manage, not a problem they can solve to achieve an ideal endstate. Johnson perfectly summarizes problem-elimination's vulnerability:

Whenever there is a push for a shift from one pole of a polarity to the other, it is because those pushing are:

1) Experiencing or anticipating the downsides of the present pole which they identify as the "problem," and,

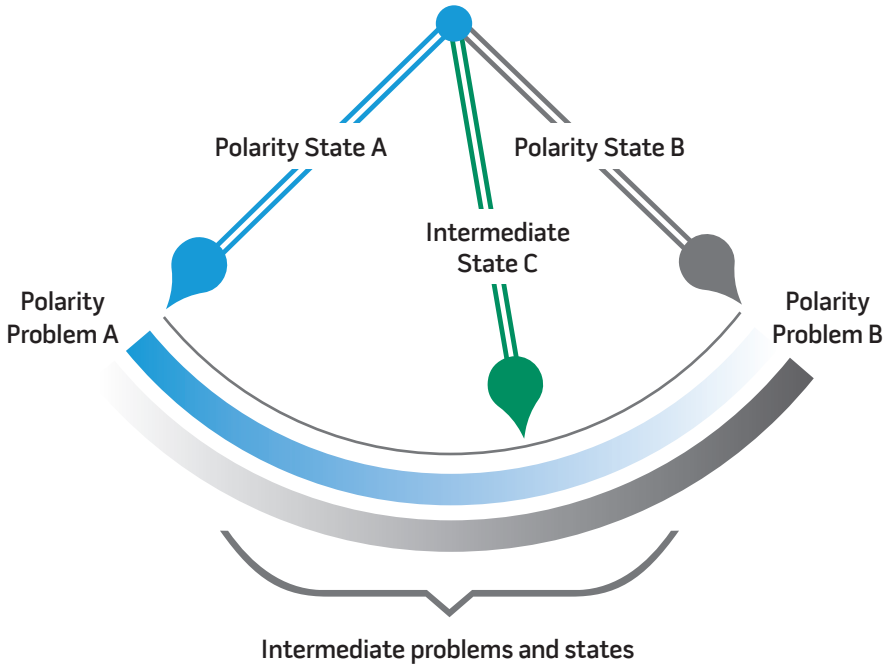
2) They are attracted to the upsides of the other pole which they identify as the "solution."[16]

Johnson notes that viewing polarities "as 'problems to solve' radically undermines our ability to [execute]. We define the problem as what we are going 'from' and the solutions as what we are going 'to.'"[17] Problem-elimination thinking drives organizations into destructive pendulum swings oscillating between two idealized endstates. Practitioners' core failure in this situation is an inability to recognize the requirement to move toward problems and solutions, not solutions alone.

Figure 4 illustrates the pendulum swinging between two poles, A and B, representing environmental states with problems. The intermediate state, C, represents conditions in the system where both elements of the polarity are present along with some degree of their associated problems. With problem-elimination thinking, decisionmakers in state A never consider state C, because failing to eliminate current problems contradicts the idealized endstate at B. In fact, problem-elimination thinking can encourage only COAs that achieve the state at the opposite extreme of the pendulum. While in reality possible COAs and intermediate challenges are limitless, the decisionmaker can envision and therefore only consider one next state—a structurally predefined endstate eliminating the current problem.

When framing instead with problem-selection thinking, state C represents just one of three next state alternatives illustrated in the figure. Because COA selection is deliberately informed by both potential next states and next problems, the decisionmaker can decide in this case between retaining the current problem, pursuing the problem at the opposite side of the polarity, or any

Figure 4. Intermediate Problems and States



Problem-elimination framing drives pendulum swings between states A and B because each eliminates the problems of the other. State C represents an intermediate state with intermediate problems. State C is ignored in problem-elimination thinking because it does not completely eliminate the problem.

number of intermediate problems from which to determine the target state. The fundamental distinction between problem-elimination and problem-selection thinking is how practitioners frame what they are driving toward. Problem-elimination thinking moves toward a solution as a means to eliminate a problem without also considering the problems introduced by the solution. Problem-selection thinking moves toward a set of problems informed by vision and ability to manage problems.

Polarity in Defense Acquisition. Department of Defense acquisition notoriously exhibits characteristics of the problem-elimination pendulum. As characterized by Joseph Pegnato, "The procurement pendulum has always swung between two extreme poles. At one extreme the procurement system is being reformed generally to ease the purchase of war munitions. At the other extreme procurement system controls are tightened due to a scandal largely caused by the reforms or previously relaxed rules."[18]

The Defense Acquisition System rides a pendulum influenced significantly by the political nature of acquisition policy in the steady presence of media sensationalism.[19] Still, problem-selection framing encourages thinking to dampen the cycle. By self-consciously selecting materiel desires in a way that leads to desired problems, leadership can drive the pendulum toward problems the organization seeks to manage and avoid the problem-elimination carnival ride.

Problem Selection in the Complex Competitive Environment. Army design methodology and the competition continuum serve to update best practices that previously contributed to expensive failures, such as the chaos following the toppling of Saddam Hussein. The updates attempt to address problem-framing challenges by eliminating the operational phasing construct, which led to postconflict problems by encouraging abstract framing about target states. However, in conflating endstate with vision, current guidelines cannot address Rapport's cognitive bias and the tendency to underestimate costs of postconflict operations. In Rapport's words, by realistically framing target states, "the details and feasibility of initial military operations will be salient, and policymakers will be more conscientious about guiding the development of combat plans and estimating their potential costs."[20]

Problem selection would have contributed to better decisionmaking in the immediate aftermath of hostile activities during the Iraq War. The postconflict phase in Iraq was a "debacle that was foreseeable and indeed foreseen by most experts."[21] Still, Donald Rumsfeld and General Tommy Franks effectively selected that problem—the tenuous security and stability of postconflict Iraq—over an alternative—the political and resource costs of a large troop presence to follow the operational endstate. The secretary of defense and U.S. Central Command commander made the decision to halt the continued flow of troops into theater, for which planners had clearly anticipated a need.[22] They based the decision on the desirability of drawing down troops along with overly optimistic and abstract thinking about Iraqi stability, apparently without concern or ownership of widely expected consequences.[23] Under problem-selection thinking, decisionmakers would necessarily evaluate the two problems against each other, illuminating alternatives or at a minimum embracing ownership of expected problems resulting from the selection.

Michael Mazarr comments on widespread confusion and limitations in current best practices for considering risk in the development of strategy for complex competitive environments. He distinguishes "classic, data-driven risk analysis . . . promising a degree of mathematical reliability it could never deliver" with an improved but not-yet-defined model addressing the challenge of "decision makers simply [refusing] to take seriously the potential consequences of their hoped-for plan."[24] He uses four basic elements to characterize any improved approach to risk in such environments, asserting the risk process should not become too technical or detached from the process of developing strategy, should generate the right dialogues, should be grounded in the right organizational

Lieutenant Colonel Joshua Brown, commander of 1st Squadron, 91st Cavalry Regiment, 173rd Airborne Brigade, discusses and plans upcoming operations alongside company commanders and officers of 2nd Battalion, 12th Brigade Polish army in Hohenfels Training Area, Germany, during Saber Junction 19, September 27, 2019 (U.S. Army/Ryan Lucas)

culture, and should be framed in terms of managing uncertainty.[25] Problem-selection provides an applicable frame for integrating Mazarr's criteria.

Problem-selection thinking promotes dialogue around expected problems and requires a cultural shift away from problem-elimination thinking toward embracing problems. Working to identify preferred problems serves to steer practitioners away from abstract construal bias and improves uncertainty management by broadening the search space for options and including preferred problems within target states. In effect, problem-selection thinking enhances practitioners' understanding of future problems. Whereas decisionmaking and problem-framing practices traditionally emphasize risks as problems to eliminate or avoid, emphasizing pursuit of certain problems as preferable and inherent to the environment might revolutionize preparedness in the face of uncertainty.

Conclusion

Current best practices motivate decisionmakers and planners facing complex competitive environments to focus energetically on problem elimination. Practitioners are inadvertently encouraged to frame their goal as an endstate—a set of desired conditions without problems—and to conflate endstate with vision. This problem-elimination thinking creates a situation where real outcomes are confused with idealistic vision. Such framing contributes to cognitive bias, prioritizing desirability over feasibility when designing outcomes while also blinding practitioners to future problems.[26] The problem-elimination

mindset further encourages consideration of limited objectives by predefining the goal as the present state minus the present problem.

In contrast, thinking in terms of problem selection reinforces desirable debiasing behaviors in the context of decisionmaking. It discourages approaches in which practitioners imagine strategic action literally culminating in an idealized endstate. In reality, any action drives environmental responses and new problems.[27] Problem-selection thinking promotes framing concrete rather than abstract targets for which practitioners naturally perform better feasibility analysis and preparation while also elevating leadership with genuine vision.[28] Problem-selection thinking encourages consideration of multiple competing objectives in decisionmaking, expanding the search space for both actions and goals.[29] Ultimately, forecasting and choosing problems within objectives encourages reframing as the environment evolves.

While practitioners work toward improved planning and decisionmaking practices for the complex competitive environment's intractable challenges, cultural bias toward problem elimination and idealized endstates represents a counterweight to progress. Shining light on cognitive bias in decisionmaking and pushing back against problem-elimination thinking may help decisionmakers avoid the costly decisions and unproductive pendulum swings famously plaguing strategic and policy decisions. Focusing practitioners on concrete objectives as stepping stones toward clear ideal vision—overtly embracing problems in contrast to singularly moving away from them—will mitigate cognitive bias and elevate visionary leadership. Getting there requires discussion around this challenge, additional analysis into its effectiveness in application, and the desire to move the cultural mindset beyond endstates. **JFQ**

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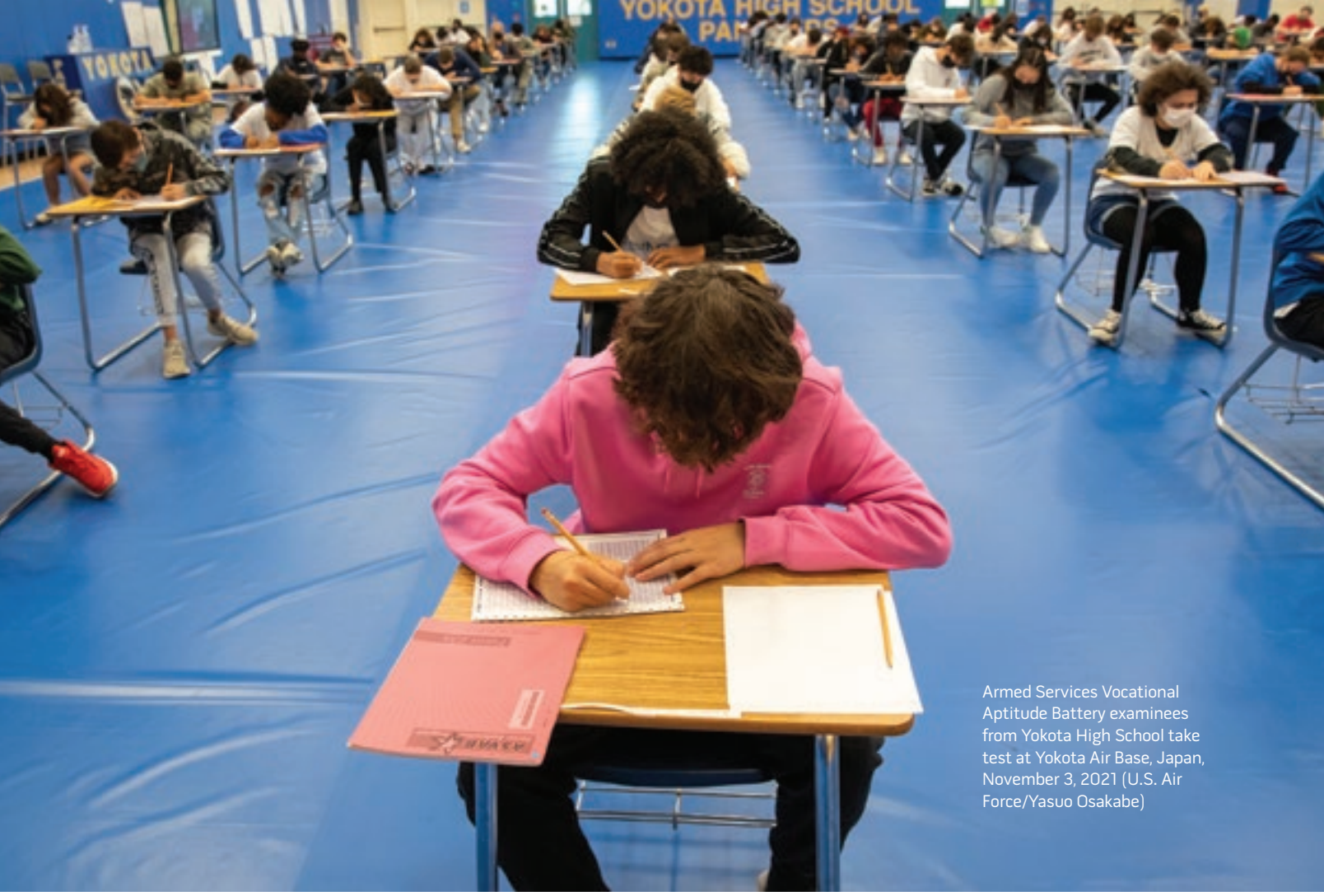

Armed Services Vocational Aptitude Battery examinees from Yokota High School take test at Yokota Air Base, Japan, November 3, 2021 (U.S. Air Force/Yasuo Osakabe)

Cultural Change, Tuition-Free College, and Comprehensive Health Care

Emerging Challenges to National Defense?

By Chad Peltier, Grace Hand, Nathaniel Peterson, Louis Deflice, Kyle Smith, and Justin Handy

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Since the inception of the all-volunteer military in 1973, recruiting has been an essential task in maintaining U.S. military staffing. Although recruiting efforts—including social media campaigns, television advertisements, and visits

Army National Guard Sergeant Stephanie Hoang, recruiter based out of Rutgers University Army Reserve Officer Training Corps facility, paints Rutgers logo in basement of Reserve Officers' Training Corps building in New Brunswick, New Jersey, March 3, 2020 (U.S. Air National Guard/Matt Hecht)

by recruiters to schools—have kept staffing on pace with requirements, overall interest in joining the military is decreasing, potentially because of military and societal values becoming less aligned. Despite increasing recruitment budgets,[1] the number of enlisted applicants has dropped steadily, from 800,103 in 1981 to just 247,785 in 2017—a 69 percent decrease—while new accessions dropped from 304,506 in 1981 to 159,583 in 2017—a 48 percent decrease.[2] The number of applicants has decreased faster than military staffing needs, resulting in the military's accepting 64 percent of those who apply today, versus 38 percent in the past. This higher acceptance rate potentially indicates that the military is less able to be selective in whom it allows to enlist. Maintaining a robust and ready military is critical for the United States to be able to provide constant protection to its people and interests while maintaining military superiority over its rivals and navigating global threats. Here we will outline factors that may have contributed to a decline in the number of people attempting to enlist, the increasingly strong appeal of education and health benefits to potential recruits, the impact that the loss of these unique incentives may have on military readiness, and proposed solutions to mitigate the potential loss of these incentives and the general decreased interest in service.

Military Recruiting: Current and Future Challenges

Structural Barriers to Enlistment. Approximately three-quarters of America's 17- to 24-year-olds are not eligible to serve in the military based on current standards of health, fitness, education, criminal history, and cognitive

abilities, reducing the pool of applicants from which the military can access new recruits.3 The most common exclusionary criteria are health, fitness, and education. About one-quarter of young Americans are ineligible to serve because of health problems, which range from vision deficits to mental health issues.4 Another quarter of young people were too overweight to enlist in 2009, and this problem has likely only worsened as Americans continue to become more overweight.5 The third largest disqualifier for service is the lack of high school diploma or general educational development (GED) certification, accounting for another 12 percent of 18- to 24-year-olds.6 With structural barriers to entry keeping so many young Americans from being able to serve, even if willing, the military should be concerned with factors such as cultural change that may make military service less desirable for those who do meet its standards.

Societal and Cultural Changes. In addition to decreasing eligibility, military enlistment may also be less appealing today than it has been in years past because of differences between military and civilian cultures, a topic that is receiving increased attention. These differences in culture include mental health awareness and treatment, sexual assault awareness, political affiliation, and tolerance of cannabis use.

While broader society has become more aware and accepting of mental health problems, mental illness remains a highly stigmatized topic in the military. For instance, one sample found that less than 40 percent of Servicemembers with mental health problems use mental health services.[7] Furthermore, there is evidence to suggest that Servicemembers who admit to problems are more likely to face personal and professional repercussions,[8] a potential driving factor contributing to the elevated risk of suicide in Servicemembers relative to their civilian peers.[9]

Similarly, during a time of increased sexual assault awareness, the military—an organization in which women already experience higher rates of sexual assaults than their civilian counterparts[10]—reported a 38 percent increase in sexual assaults between 2016 and 2018.[11] Events of note include high-profile incidents such as the circulation of a "rape list" aboard the USS *Florida*[12] and the release of the Fort Hood independent review following the murder of Private First Class Vanessa Guillen, which stated that Fort Hood had a permissive environment for sexual assault and harassment and found evidence suggesting these violations were underreported for years.[13] The frequency and severity of these incidents may further dissuade women, already a minority in the military, from joining.

As political polarization is increasing, political affiliations may play a larger role in determining whether someone is interested in military service.[14] Today's young adults increasingly identify as politically liberal; only 45 percent of 18- to 30-year-olds identified as liberal in 1990, compared with 62 percent of 18- to 30-year-olds in 2010.[15] This trend is notable given that those who identify as liberal are half as likely as those who identify as conservative to have the propensity to serve.[16]

Finally, cannabis consumption has increased in those 21 years and older following the legalization of recreational use in some localities, but the standards for enlistment follow Federal regulations regarding the legality and impermissibility of the drug.[17]

With these issues only becoming more pronounced over time, the number of high-quality enlisted applications may decrease, in turn reducing the effectiveness of the military. These potential downward trends in military interest are countered by two incentives that are increasing in value over time: educational benefits—specifically, the Post-9/11 GI Bill and Tuition Assistance—and health care—namely, TRICARE.

Educational Benefits

For those who are financially motivated, there is a strong incentive to get a college education. Those with bachelor's degrees have more employment opportunities and have been estimated to earn 60 percent more per year than those with only high school diplomas.[18] However, the cost of college tuition has increased by approximately 3 percent per year over and above the inflation rate since 1985, making it increasingly difficult for those who are not from a prosperous background to afford college without the threat of long-term debt.[19] Given the high potential value but great expense of attending college, the military's Post-9/11 GI Bill and Tuition Assistance have offered strong incentives to enlist, with 84 percent of new enlistees stating that money for education was a primary motivator to join.[20] For the most part, these recruits follow through: approximately 60 percent of those who qualify to use the GI Bill do use it.[21]

Because new enlisted Servicemembers earn, on average, well under $200,000 cumulatively during a 5-year commitment, the GI Bill could nearly double their compensation package; its estimated value is $130,000, accounting for eight semesters of in-state tuition, supply costs, and housing allowance at a public institution. Beyond the general recruiting power of the GI Bill, it is also a major draw for many high-aptitude enlistees. According to one study, those with cognitive abilities above the 71st percentile (as measured by the Armed Services Vocational Aptitude Battery [ASVAB]) are less likely to enlist when alternative options to finance a college education are available.[22] That is, when need- or merit-based scholarships are available, many high-aptitude individuals opt for college instead of the military. On a broader scale, this suggests that if college is affordable through means other than the military, higher-quality prospective recruits may lean toward choosing college over the military, potentially depriving the military of valuable talent. A similar finding shows those with cognitive abilities at or above the 80th percentile (as measured by the ASVAB) are less likely to join the military than those between the 40th and 79th percentiles.[23] These findings are especially concerning for mission-critical positions, where high scores on the ASVAB are a requirement, such as the already undermanned cyber and nuclear

job specialties in the Navy.[24] If the military does not address the potential impact of individuals no longer needing to enlist to receive a free college education, then recruitment levels, particularly for those with high aptitude, may be in jeopardy.

Though these laws have not been enacted, many Democrats in recent years have publicly stated their support for, or submitted bills in support of, reducing or eliminating the costs of college tuition, potentially reducing the utility of the GI Bill in recruiting. The 2022 budget proposal,[25] which has since been voted down, included a measure to provide for free community college tuition, as did the America's College Promise Act of 2021.[26] Senator Bernie Sanders (I-VT), who has previously campaigned on a platform advocating for tuition-free college, submitted the College for All Act of 2021 to make college tuition-free for many Americans.[27] In addition, President Joe Biden has publicly discussed reducing college loan debt, while another group of Democrats has introduced the Debt-Free College Act to reduce student loans.[28] Though college tuition costs and debt remain, proposals aiming to reduce their burden have increased in number relative to past decades, making college tuition reduction or elimination increasingly likely.

Health Care

On a similar note, healthcare costs for the average civilian consumer have significantly increased over time, making TRICARE's comprehensive coverage for Servicemembers, Reservists, retirees, and their families, with zero out-of-pocket costs, another strong recruiting and retention tool. A 2005 RAND study indicated that the monetary savings of TRICARE for one Servicemember with a family is approximately $5,000 per year versus the costs of a similar benefits package offered by a civilian employer.[29] This saving is an underestimate, given that the cost of civilian health care has only increased since then.[30] As with educational benefits, evidence indicates that healthcare coverage provided by the military is an important factor in the decision to join and stay in the military. One study attributed 3 percent of Army separations after a first enlistment to the implementation of the Affordable Care Act alone, suggesting that the presence of publicly available and free health care, were it to be implemented, could have an even more pronounced negative impact on military retention and recruiting.[31]

As with education reform, proposals and support to increase healthcare coverage and/or decrease healthcare costs are increasing. The Affordable Care Act of 2010 increased coverage for those who were uninsured and was responsible for increasing Army separations. To complement the Affordable Care Act, Senator Sanders introduced the American Health Security Act in 2011, which would grant comprehensive health coverage to all citizens with no cost sharing. More recently, Senator Sanders introduced the Medicare for All Act of 2019, and Representative Pramila Jayapal (D-WA) introduced the 2021 Medicare for All Bill.[32] There are also several bills at the state level proposing the adoption of some form of single-payer health care. Again, though these bills have not passed, their level of support has increased over time, with 137 combined House and Senate sponsors of single-payer healthcare bills in 2017—more than at any other point in the previous 50 years.[33] This trend suggests a single-payer health care model, which could make TRICARE a less attractive incentive to join the military, is increasingly likely.

Given the vital importance of tuition and healthcare benefits to military staffing, any threat to devalue them would require the military to develop alternative recruitment strategies and/or incentives. Although broad changes to the general civilian education and healthcare system are not likely to occur in the immediate future, their eventual enactment appears increasingly probable. Polls show that public support for tuition-free college grew from 47 percent in 2016 to 63 percent in 2019, while support for government-sponsored health care for all has increased since 2008, with many Americans supporting its implementation today.[34] If college and health care were to become free, then those who contemplate military service to obtain these benefits would have a lowered incentive to serve.

One may contend that beginning to plan for such changes to healthcare and education policies is premature, but the general decrease in interest in military service, the broad scope of these changes, and the deliberate pace of government reform imply that the time to plan is now. The GI Bill funding illustrates the importance of advance planning. The GI Bill, though it serves as a recruiting incentive and retention tool, is classified as a veteran benefit and does not fall under Department of Defense (DOD) appropriations. If the GI Bill funding were dismantled, its funds would not necessarily be available for DOD to repurpose for other incentive needs as it saw fit. The same may also be true of TRICARE; if TRICARE were no longer necessary in its current form, it would not necessarily mean that its funding would be available for the military to repurpose. To be able to divert this money to other recruiting and retention incentives, DOD may need to start planning and lobbying years in advance of any potential elimination of the GI Bill and/or TRICARE.

Potential Recruiting Solutions

A failure to develop new tools to incentivize enlistment and retention in the military could cause decreased staffing and/or loss of technical expertise if fewer seasoned Servicemembers were willing to stay in the military without comparatively strong benefits. Even now, military recruitment is largely dependent on the civilian economy; recruiting decreases when civilian job opportunities go up, implying that many already view the military as a secondary opportunity.[35] In anticipation of the growing challenges associated with maintaining staffing and experience as interest in military service declines, and particularly of a situation in which two of the most valuable recruiting incentives would lose value, we outline several potential solutions, including mandatory service, repurposing the

Fairgoer performs pull-up at Washington County Fair in Greenwich, New York, August 28, 2022, as part of New York Army National Guard recruitment display (U.S. Army National Guard/Matthew Gunther)

education and healthcare funds for higher pay/bonuses, greater investment and reliance in automation, and relaxing or eliminating eligibility criteria around fitness levels and marijuana use.

Mandatory Service. Since the U.S. military became an all-volunteer force, recruiting costs have become an essential part of meeting personnel requirements. Between 1980 and 2017, the total dollars spent on recruiting increased by more than 50 percent, from $1.8 billion to $2.9 billion (in 2018 dollars), while at the same time, the number of applicants dropped by more than 50 percent, from 768,523 to 333,663.[36] This trend, of a decrease in the number of applicants despite more money being spent to encourage applications, raises concerns about the expense and effectiveness of using current recruiting practices to maintain personnel requirements into the future—particularly given the widening gaps between civilian and military cultures noted. Given the necessity of meeting military personnel requirements, alternative methods of increasing service participation may be needed.

Inspired to Serve, a report submitted to the President and Congress by the National Commission on Military, National, and Public Service in 2020, reviewed challenges and potential solutions to increase participation in public service.[37] Although the commission formally recommended that there be no mandatory public service, it did suggest that the Selective Service could be modified so that all young men and women would need to register for potential national service.

Given the concerns of the commission regarding the decreasing eligibility for and interest in military service, we suggest that a form of mandatory service

may be necessary if current personnel requirements are maintained and recruiting challenges remain. Military recruitment losses could be minimized by the implementation of mandatory national service to begin following high school graduation. Such a program could offer the option of military service alongside other service programs (for example, volunteering with AmeriCorps, Teach for America, the Boys & Girls Clubs of America, the American Red Cross, the National Park Service, or Habitat for Humanity). The less demanding services (such as the Reserves) would require longer contracts, whereas more demanding Active-duty service would require shorter contracts to ensure a more balanced commitment between options from young adults. The main benefit of this solution would be that the military would have a larger pool from which to choose the most effective recruits. Other potential benefits include promoting national unity, providing useful skills and knowledge to younger generations, and building work experience among these Servicemembers before investing years in college education.

Some may argue against mandatory national service on the grounds that it is a violation of free will or that it may produce poor performance because it would not be a completely volunteer force and that, therefore, those who joined might not have the dedication and commitment necessary for a ready and effective force. Allowing multiple mandatory service options to choose from could reduce, though not eliminate, this concern; those who joined the military would still have chosen it over the alternatives. Although mandatory national service may seem implausible in the United States, between 2003 and 2015 at least four bills advocating for mandatory national service, sponsored by former Congressman Charles Rangel (D-NY), were put before Congress. President Barack Obama, General Stanley McChrystal, and former Senator Chris Dodd (D-CT), among others, have all expressed support for expanded community service opportunities for young people.[38] The benefits to the Nation from national service could also help offset the costs of providing a college education to those who complete the service. Although mandatory national service is highly controversial, it could provide many potential benefits that extend beyond the military, including on-the-job training for youth, increased service for underserved communities, and the fostering of cooperation among people from diverse backgrounds.

Repurposing Funds. If the military and Department of Veterans Affairs no longer required funding for the GI Bill, tuition assistance, or health care, a massive surplus of funds would be available to be repurposed for modernizing incentives. Each year, about $11 billion is spent on Servicemembers' educations through the GI Bill or tuition assistance and another $52 billion[39] is spent on TRICARE, amounting to an average of approximately $48,000 spent per Servicemember per year (divided by the approximately 1.3 million Active-duty Servicemembers).[40] Bonuses and raises have been strong incentives for recruitment and retention in the past, so increasing them appropriately to reflect this new surplus of funds might be an effective method to improve recruitment and retention. For instance, a 2010 study showed that a one-time bonus of $45,000 per recruit increased high-quality Army enlistments by 20 percent. Similarly, the study showed that offering a reenlistment bonus increases reenlistment probability by 8 percent and that this probability increases when larger bonuses are offered. These data suggest that the $48,000 savings per year per recruit from reapportioning education and healthcare benefits could be effectively used to improve recruiting and retention if a portion of those funds were used for bonuses, while still leaving a large remainder of funds to support other military goals. Alternatively, the education funds could be minimally changed to allow for complete tuition assistance for private education and/or medical or law schools that might not be covered by taxpayer-funded education plans. The military and government should consider repurposing these potential surplus funds into measures that are likely to increase recruitment, such as more competitive salaries, increased bonuses, and expanded educational opportunities.

Automation. The total annual expense of maintaining an Active-duty Servicemember increased by approximately 20 percent between 2002 and 2016 (after accounting for inflation), despite no real increase in pay.[41] The costs per Servicemember, particularly health care and retirement, will likely continue to rise as life expectancy and healthcare costs continue to increase. The military is required to cover these costs for those injured in service and for retirees and their families. Although the military should and must continue to cover these expenses for current Servicemembers and veterans, one way to slow and eventually reverse the rising cost trend is by focusing on workforce reductions by investing more in automation. Militaries around the world have increasingly been working on developing defense automation. One study estimates that one-quarter of military personnel (for example, accountants, culinary specialists, and data transcribers) have jobs with a high probability of becoming automated over the next two decades.[42] Automated vehicles are more cost-efficient than current vehicles, with the added ability to embark on dangerous missions without risking the lives of the crew. The military budget for unmanned systems and associated technologies grew more than 28 percent in the last year, and further investment in automation now could reduce the costs of staffing in the future, to say nothing of the rewards this investment would reap in the saving of lives, decrease in medical costs due to fewer combat injuries, and increase in strategic warfare options.[43]

Revised Fitness Criteria. Whereas each branch of the military requires its Servicemembers to meet slightly different physical fitness standards, the general idea is the same. Servicemembers are required to be below a given body mass index or waist/neck circumference, depending on their age and sex; be able to run at a certain pace; and be able to complete a certain number of pushups, sit-ups, and/or pull-ups. (Physical fitness tests are being revised at this time, and the specific activities may be changing.)

These requirements have disqualified an increasing number of applicants as America's teen obesity rate has tripled from 7 percent in 1971 to 21 percent as of 2016.[44] Although physical fitness may be a necessity in some jobs, particularly among Servicemembers who deploy in combat roles, the military may need to question the relevance and recruiting problems associated with current standards when searching for applicants to fill noncombat roles, such as in health care, research, administration, or human resources. As support staff in the U.S. military outnumber combat specialists by approximately four to one, relaxed (not eliminated) standards for those applying to these roles could drastically increase the pool from which the military accesses applicants.[45] At the same time, military-mandated physical training after they became Active duty could improve these individuals' long-term health and fitness.

Revised Zero-Tolerance Marijuana Policy. Marijuana is becoming legal for recreational use in more states, even as Members of Congress introduce bills to legalize it at the Federal level, yet the military maintains a zero-tolerance policy for those who test positive for marijuana use. Simultaneously, alcohol, a drug that results in more harm to its users, remains a common part of military culture.[46] By removing the zero-tolerance policy toward marijuana, the military could save money by eliminating random testing for its use; open new and promising treatment options for Servicemembers with post-traumatic stress disorder, anxiety, chronic pain, or other ailments; cease separating Servicemembers who use the drug safely; and allow otherwise qualified users to apply.[47] This measure could save money while also improving health, retention, and recruiting.

We contend that the military should consider these proposed recruiting solutions for three reasons. First, even if tuition-free college and single-payer health care are not enacted soon, or are not enacted at all, the military is still facing decreased interest in joining from potential recruits. Second, the potential consequences of being caught unprepared for these changes would be much greater than the costs associated with developing contingency plans that are not put into practice. And third, preparing for such massive changes to military strategy, recruiting, and culture will take years, indicating that the time for such planning is now. We are not advocating for any plan listed here. Instead, we view it as a responsibility of our stations to open this dialogue before it is too late to develop a strategy to respond to these impending changes. Military leadership must acknowledge these possibilities and not only prepare to mitigate any negative consequences but also use these changes as an opportunity to improve the military. **JFQ**

Notes

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Coast Guardsmen assigned to Tactical Law Enforcement Team 109, Cape Cod Maritime Safety Security Team, and Sailors assigned to USS *Sioux City*, participate in noncompliant vessel pursuit tactics exercise in rigid-hull inflatable boat, Atlantic Ocean, April 1, 2021 (U.S. Navy/Marianne Guemo)

Security Cooperation for Coastal Forces Needs U.S. Coast Guard Leadership

By Daniel E. Ward

The third decade of the 21st century has opened with an array of potential maritime threats laid out against the United States and its allies, including near-peer-level competition with China and Russia and regional hotspots in almost every navigable waterway of the world. U.S. maritime forces must effectively and efficiently utilize the tools at hand and place the best assets in areas that they are best suited for. This confluence of events provides the U.S. Coast Guard (USCG) a unique opportunity to define a specific role within the defense mission set and to fill a critical niche that is currently devoid of leadership. The USCG is the best asset to take point as the U.S. maritime leader for coastal force security cooperation.

The USCG has unique capabilities and skills that do not exist anywhere else in the U.S. military system, given its nature as a constabulary-style force that blends military, law enforcement, compliance, inspection, and safety missions into one Service. This force is uniquely capable of interacting with similar organizations operated by other nations, many of which are forces that have virtually no compatibility with blue-water assets but instead operate multi-mission coastal patrol forces with many

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similarities to the USCG. However, the USCG's skills and opportunities are not being fully exploited.

The two issues that must be addressed are a foundational acceptance of the Coast Guard into the operational fold of the total naval force with its Department of Defense (DOD) brethren and strong USCG leadership to direct and organize its forces into a construct that can meet this mission head on. Pulse operations, cutter visits, and short-term (that is, 1 to 2 weeks) mobile training are not sufficient. Successful security cooperation requires a dedicated presence over an extended time frame. Although such a presence does exist in select areas, it is generally at a more strategic versus operational or tactical level. The USCG must reestablish capacity for long-term deployments for international engagement and training and be willing to maintain a steady state where needed, through the rotation of teams to designated nations requiring a sustained advisory presence.

Current strategic policy—including *Advantage at Sea*, the new tri-Service maritime strategy, and the *Coast Guard Strategic Plan 2018–2022*—and doctrine—in the form of Joint Publication (JP) 3-20, *Security Cooperation*, JP 3-22, *Foreign Internal Defense*, and JP 3-57, *Civil-Military Operations*—are replete with the fact that the U.S. naval force—considered here as the aggregate of the Navy, Marine Corps, and Coast Guard—must engage with international partners to promote security and stability, providing a bulwark against regional conflict and serving as a pillar of strength in competition with near peers. Explicit to the tri-Service strategy is using each Service's unique capabilities where and when they are most advantageous for the entire naval force. *Advantage at Sea* unequivocally states that the "Coast Guard's mission profile makes it the preferred maritime security partner for many nations vulnerable to coercion" and that integrating its unique authorities "expands the options we provide to joint force commanders for cooperation and competition."[1] The USCG should serve as the naval force leader for security cooperation with coastal patrol forces globally. To achieve this aim, the USCG must be willing to dedicate resources to long-term international engagement. The current construct focuses on short-term mobile training teams as well as exchanges during cutter patrols and visits to partner nations. Aside from a few Embassy-level positions, the USCG does not currently deploy teams or personnel to spend lengthy periods embedded with host-nation forces for dedicated cooperation and support. Establishing a cadre to work alongside foreign partners for longer durations would provide long-lasting dividends; embedded advisory personnel could better assist and train local forces. To meet this objective, the USCG should adapt existing assets such as Deployable Specialized Forces (DSF) and the International Mobile Training Branch (MTB) into a more cohesive structure that can utilize existing resources to conduct long-term deployments and embed personnel with partner-nation forces. This structure would provide enhanced cooperation that could benefit both the host nation and the United States.

Policy for a Joint Naval Service

Many U.S. maritime missions involve a critical need to control littorals and maritime borders. Such control in turn provides exponential returns on the security conditions in each region, even without extensive blue-water deployments. The key element to such engagement is prolonged relationships, which create long-term stability and partnerships. The United States needs to increase its hands-on approach to engagement with coastal forces to leverage partner nations in service of security and stability. While command- and Embassy-level coordination is important, personnel must work alongside their host-nation counterparts at operational and tactical levels to build trust and true cohesiveness. The Coast Guard itself has acknowledged this need within the past decade, noting that, among other things, "more in-country presence and more long-term mentorship are a formula for more impact and greater regional cooperation."[2]

No DOD construct that can fit this requirement currently exists. The one with the closest mission, the Navy's Maritime Civil Affairs and Security Training (MCAST) Command, was decommissioned in 2014. Its general purpose was to provide deployable teams to conduct maritime civil affairs and security force assistance operations. Interestingly, even during its existence, the MCAST mission to work with coastal forces almost exclusively fell into parameters that could best be defined as USCG skill sets, including areas such as maritime security, port operations, small boat maintenance, and marine resource regulation. This demonstrates the reason MCAST, or another similar unit under Navy or Marine Corps leadership, would not be best positioned for success in security cooperation with coastal forces.

If the naval force is to conduct cooperative missions with other nations' coastal forces, which are focused largely on the Coast Guard's areas of expertise, then the USCG should, logically, be placed in charge. Such tasking would place the USCG as the lead element for maritime security cooperation with coastal forces of partner nations, including aspects such as security force assistance and civil-military affairs. As noted in analysis of the new tri-Service strategy, "Total naval services cultural integration . . . would greatly benefit not just the nation, but the Coast Guard particularly, which sometimes finds itself on the outside looking in with respect to major DOD muscle movements."[3] This construct would leverage the best-suited components and capabilities of the naval force for this need.

Enhancing international tasking with the USCG is critical, and integration into the DOD framework with Navy and Marine Corps policy and doctrine must reflect this importance. As outlined in the 2021 Government Accountability Office report *Coast Guard: Information on Defense Readiness Mission Deployments, Expenses, and Funding*, there are limited resources dedicated to USCG defense readiness missions, such as joint military training, domestic support to DOD, and provisions to assist with multiple

Lieutenant (junior grade) Jacob Behne, assistant operations officer on USCGC *Midgett*, talks about Coast Guard missions with Lieutenant Joshua Mavin and Warrant Officer Jason McGraw, members of Australian Navy, during visit to *Midgett* in Honolulu, Hawaii, July 9, 2022 (U.S. Coast Guard/Taylor Bacon)

regional conflicts. However, the report also outlines how essential USCG roles with DOD often fall under the Global Force Management process, in which the USCG supports geographic combatant commands through its statutory missions. Examples include working with partner nations in the Pacific to combat illegal fishing, working with African nations to battle illicit maritime activity, and conducting robust drug-interdiction patrols.[4] Although enhanced international engagement would incur costs and funding is not expected to increase, through the use of existing forces and missions that are already funded, the naval force as a whole could efficiently refocus assets toward deployments that derive the greatest benefit versus asking to fund a new enterprise. The alignment of international engagement with both national and departmental priorities objectively means that the USCG must "orient time and resources toward international activities that maximize return on investment to national and Coast Guard priorities" and "[f]oster international capacity-building efforts."[5] The answer lies in existing doctrine, which already acknowledges the need for USCG involvement.

JP 3-20, *Security Cooperation*, JP 3-22, *Foreign Internal Defense*, and JP 3-57, *Civil-Military Operations*, all delineate recognition for the Coast Guard as the leader for engagement with coastal forces. The next step is to put this designation into practice. JP 3-20 notes:

Security cooperation . . . encompasses all . . . DOD interactions, programs, and activities with foreign security forces . . . and their institutions to build relationships that help promote U.S. interests . . . and/or to build and apply [partner nations'] *capacity and capabilities consistent with U.S. defense objectives.*[6]

This enormous undertaking can involve tasking such as foreign internal defense, counterinsurgency, counterterrorism, counter-drug operations, stability activities, foreign humanitarian assistance, civil-military operations, and countering threat networks. These areas all are defined as USCG missions or noted within DOD publications as areas in which the USCG can serve as a maritime leader.

When discussing security force assistance activities, and specifically force selection, JP 3-20 states, "USCG training teams, personnel, and platforms are well suited to support the development of stable, multi-mission maritime forces to respond to many transnational threats."[7] JP 3-22 further highlights the unique

USCGC *Oliver Henry* crew arrives in Port Moresby for port visit on August 23, 2022, following patrol in parts of Coral Sea, and Solomon Islands and Papua New Guinea exclusive economic zones (U.S. Coast Guard/Karl Wethe)

advantages of the Coast Guard over its naval force associates in these constructs, stating that "a common constabulary and multi-mission nature promotes instant understanding and interoperability and makes USCG a valued partner for many naval and maritime forces."[8] In addition, "USCG [foreign internal defense] activities reach beyond normal military-to-military relations to a broader [host nation] maritime audience."[9] Therefore, the doctrine exists to place the USCG as the lead Service for security cooperation with coastal forces. The next logical step is to fully implement these concepts.

The new tri-Service strategy gives the Coast Guard an opening into an era of foundational engagement, with a concrete understanding that "maritime security capacity building with like-minded partner nations and allies" focuses largely on the partners, most of which "are not particularly interested in U.S. Navy–like force projection, but are instead concerned about being able to effectively govern and protect their own maritime borders."[10] It is imperative to assist these partners with missions that are solidly in the USCG wheelhouse to create a broadband maritime posture. The tri-Service strategy concepts must be backed with rubber-meets-the-road action. The doctrinal focus exists and has been highlighted with the new strategy, so there is a strong foundation to build on. Current USCG engagement posture focuses on liaison officers and attachés coordinating at command and strategic levels, the USCG MTB conducting short-term training evolutions alongside tactical-level personnel, and even recent developments such as the exercise of ship rider provisions to place USCG personnel onboard foreign platforms. What is missing?

Long-Term Focus: Programs and Ideas

The Coast Guard has the tools in its proverbial arsenal to dedicate resources to long-term advisory deployments. The DSF include subject matter experts in areas critical to international engagement, and the MTB has extensive short-term deployment experience that could be expanded to operations outside the mobile training footprint. To effectively train, collaborate with, and coordinate with partner nation forces, U.S. advisors and trainers must be given the opportunity to spend extended amounts of time alongside their counterparts, both in the schoolhouse and in the field, to build lasting relationships with permanence rather than simply acquaintanceship. The shared experiences derived from long-term work together is the grease that allows smooth interchanges at the operational and tactical levels. Although Embassy- and command-level diplomacy and interaction are necessary, it is the daily toil of training and joint operations that in many cases of maritime coordination is a gaping void. The USCG could serve as the expedient multi-tool that has the expertise and subject matter knowledge to fill this function among partner-nation maritime forces, many of which mirror the USCG in their multi-mission duality as military and security/law enforcement services.

How could such a force be organized, taking into consideration existing forces and the reality of limited new resources and personnel? The backbone of knowledge for such a mission resides in both the DSF and the MTB. Rather than standing up a new command, reworking the current MTB footprint—including long-term regional deployments to support naval force needs while creating a

direct link by placing it organizationally in line with DSF—would be a first step to formalizing these functions. Whereas many DOD commands have USCG personnel attached, this structure calls for a USCG command with a detailed presence from Navy and Marine Corps counterparts. Attaching those personnel to this USCG structure would cement the recognition of such a unit as the leader for coastal force engagement and assist with obtaining DOD resources and funding, as needed, to complete its missions. The capacity would allow the USCG to lead joint naval force teams for engagement. USCG control of such a unit would also address shortages for this specific niche in the existing civil affairs community—an acknowledgment that the needs for coastal force and maritime specialties are greater than current ad hoc efforts can meet.[11]

One general construct would be to make the MTB the command hub for international coastal security cooperation, folding tasks such as civil affairs, internal defense, and force assistance under its umbrella. Liaisons from the Navy and Marine Corps could constitute a small footprint of senior noncommissioned officers and junior officers. The Coast Guard could place regional managers at the unit to oversee geographical areas, likely with particular focus on the commanders of U.S. Indo-Pacific Command, U.S. Southern Command, and U.S. Africa Command. Leadership of the unit at the O6 level would be on par with necessary coordination. Then Coast Guard, Navy, and Marine Corps coordinators would have reachback beyond the core team of USCG personnel at MTB, pulling from USCG's DSF and similar Navy and Marine Corps units for needed manpower and resources.

Deployments of such an organization could not only take advantage of USCG expertise but also mesh it with Navy and Marine Corps skills. The attached personnel could essentially serve as coordinators to their branches to augment and blend advisory teams constituted based on partner-nations' needs. This command would also give the USCG reachback for inclusion in DOD resource allotment. *Advantage at Sea* notes that the naval force will "explore different combinations of existing forces to improve our operational effectiveness" and "test new tailorable formations designed to optimize influence."[12] No better example exists than placing the Coast Guard at the forefront of security cooperation to coastal maritime forces that are similar in structure to the USCG. Conducting advisory missions "provides a low-cost investment with enormous leverage that can positively influence and shape the pre-conflict phase in threatened states."[13] Importantly, such missions "are most effective when conducted by carefully selected, properly trained, and well experienced personnel."[14] The sharing of blood, sweat, and tears builds such bonds, which in turn benefit the Coast Guard and provide backing for foreign partners to grow and develop. If we want the best "bang for the buck," then put the USCG in charge of coastal force security cooperation.

What is the goal of security cooperation with partner-nations' coastal forces? The answer is to provide those nations with the best possible training and coordination to benefit both the host nation and the United States as well as to promote enhanced stability and security. The key factors are to use the best tool available to the naval force for such cooperation and to organize those assets in an efficient and effective manner. To achieve success with partner nations, the U.S. Coast Guard must integrate with other members of the naval force while retaining its own unique capabilities to best use its skills toward accomplishing international goals. Historical USCG advisory experience tempers these ideas with the knowledge that we must make changes with strong doctrinal foundation and support from the total naval force. We must seek long-term international engagement, while ensuring that our efforts marry with national and USCG goals and objectives and meet criteria that are acceptable to leadership. Applying these concepts globally to coastal environments along the entire Coast Guard mission spectrum can place the USCG at the tip of the coastal force engagement spear and pay dividends for the entire U.S. naval force. **JFQ**

Notes

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[7] Ibid., B-11.

[8] JP 3-22, *Foreign Internal Defense* (Washington, DC: The Joint Staff, February 2, 2021), IV-20, available at <https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_22.pdf?ver=2018-10-10-112450-103>.

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[10] Sinclair, McHaty, and Herzinger, *Implications of the Tri-Service Maritime Strategy*, 1–2.

[11] Paul W. Taylor, "Maritime Civil Affairs," *Small Wars Journal*, March 8, 2017, available at <www.smallwarsjournal.com/jrnl/art/maritime-civil-affairs>.

[12] *Advantage at Sea*, 19.

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Navy SEALs conduct High Altitude Low Opening airborne operation in support of exercise Arctic Edge 2022, in Deadhorse, Alaska, March 4, 2022 (U.S. Navy)

America's Special Operations Problem

By R.D. Hooker, Jr.

Since the failure of the Iran hostage rescue mission in 1980, U.S. special operations forces (SOF) have come into their own as the most high-profile community in the Armed Forces. Originally quite small and highly selective, they have exploded in size, taking center stage in the war on terror. Well-resourced and able to draw on the best of the military's talent pool, SOF are today the face of the U.S. military. The iconic muddy trooper of yesteryear has been replaced by a bearded, heavily tattooed commando, wearing a baseball cap backward and festooned with exotic kit. Most commentary about SOF is admiring, if not adulatory. But there is more to the story.

Undeniably, SOF have a key role to play in national security. In the unique circumstances of the post-9/11 era, they saw dramatic growth, more than doubling in size.[1] A fourth battalion was added to each Special Forces group, and a Special Troops Battalion and Military Intelligence battalion was added to the

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75th Ranger Regiment, which also added a fourth rifle company and a support company to each battalion. The Air Force Special Operations community today includes more SOF wings than USAF bomber wings and more aircraft and Airmen than many nations, while the Navy Special Warfare Community now boasts around 4,000 SEALS, ten times as many as at the height of the Cold War. Even the Marine Corps, famously resistant to such specialization, was forced to stand up an entire "Raider" regiment, whose mission set closely resembles that of the Army's 75th Ranger Regiment. Today, the U.S. Special Operations community is larger than the entire German army.[2] In 2021, U.S. Special Operations Command (USSOCOM)'s budget request was larger than the entire defense budget of Poland, one of the North Atlantic Treaty Organization's largest and strongest militaries—although much of SOF funding is provided by the Services themselves or drawn from overseas contingency funds.[3]

Following the end of large-scale operations in Iraq and Afghanistan and the winding down of the campaign to counter the so-called Islamic State, this growth has continued, even as the conventional force has been reduced. Indeed, as these conflicts ended, USSOCOM requested further increases. As SOF are optimized for the low end of the conflict spectrum, being very light and limited in firepower, such a heavy investment is at odds with the National Security, National Defense, and National Military strategies, which explicitly prioritize Great Power and near-peer competition, not counterterrorism, counterinsurgency, unconventional warfare, or security assistance.

This growth is not confined to operational units. Today, USSOCOM is far larger than the Army staff, which oversees a force that is seven times larger.[4] Today, Army Special Forces consists of five Active-component groups and one training group, each commanded by a colonel—and 19 generals. The Navy Special Warfare community, with fewer than 10,000 Sailors, boasts 13 admirals. The push to super-empower the SOF community is seen clearly in recent efforts to elevate the Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict to Service secretary status.[5] This massive overhead does not encourage agility and rapidity of thought and action. Rather, it equips U.S. SOF to fight and win in the inter-Service, intergovernmental scramble for funding and authorities.

The expansion of SOF and their prioritization since 9/11 have also led to overlap and redundancy, blurring the distinctions between them. For example, Army Special Forces ("white SOF") were founded and organized principally to train and lead indigenous forces in unconventional warfare. The community fields a remarkable number—378—of 12-man A detachments (Active- and Reserve-component), each capable of training and leading a battalion of indigenous fighters. Nevertheless, Army Special Forces largely neglected that mission during the war on terror (except for Iraqi and Afghan commandos) in favor of direct action, also the favored mission for Army Rangers, Navy SEALs, Marine Raiders, and Army and Navy special mission units.[6] Each likes to stress its "unique" capability, but for most of the war on terror, each was used more or less interchangeably as raid forces on land—not to train and advise and not in maritime environments.

This explosive growth comes at a steep price. First, the drain on the conventional force is extraordinary but underreported. Particularly in the Army, conventional units are regularly stripped of quality young leaders for service in the Rangers and Special Forces. An example of its effect is seen in the case of a rifle platoon from the 82nd Airborne Division's Ready Brigade, which deployed "no-notice" to Kuwait in early January 2020 following the death of Qassim Soleimani with none of the E-6 squad leaders authorized. (The 82nd is supposedly maintained at the highest readiness of any Army division.) The same unit experienced a turnover of four platoon leaders in a single platoon in one calendar year, as junior officers departed for the SOF community.[7] Increasingly, service in the Rangers is seen as essential for career progression by Army infantry leaders, as battalion command positions are increasingly monopolized by Ranger alumni.

This drain of quality leaders from the conventional force and into SOF had been flagged as a serious concern as far back as World War II, when many such units were formed. On this point Field Marshal William Slim, arguably the most successful British commander in that war, is worth quoting: "These formations, trained, equipped, and mentally adjusted for one kind of operation only, were wasteful. They did not give, militarily, a worthwhile return for the resources in men, material, and time that they absorbed."[8] Moreover, Slim stated:

The result of these methods was undoubtedly to lower the quality of the rest of the Army, especially of the infantry, not only by skimming the cream off it, but by encouraging the idea that certain of the normal operations of war were so difficult that only specially equipped corps d'elite *could be expected to undertake them. Armies do not win wars by means of a few bodies of supersoldiers but by the average quality of their standard units.*[9]

Paradoxically, though SOF units are expected to conduct operations with the highest levels of discipline and discretion, in fact a disproportionate number of the most egregious mishaps in the war on terror befell them. These include a Special Forces raid near Hazar Qadam in Afghanistan in January 2002 that resulted in 16 civilian deaths,[10] an errant AC-130 attack on friendly forces during Operation *Anaconda* in March 2002 that killed or wounded more than a dozen U.S. and Afghan soldiers,[11] and the "Roberts Ridge" disaster in the same battle, resulting in the loss of an MH-47 Chinook and the death of seven U.S. special operations troops.[12] The Pat Tillman fratricide imbroglio in 2004 needs no elaboration; its echoes continue today.[13] In 2005, an SOF element entered a village outside Baghdad at night and arrested Mohsen Abdul-Hamid and his sons. Hamid was head of Iraq's largest Sunni Arab political party and former president of the U.S.-backed

Iraqi Governing Council.[14] His arrest provoked a storm of criticism, landing on the front page of the *Washington Post*. A similar SOF operation mistakenly detained the son of Abdul Aziz Hakim, head of Iraq's strongest Shia party in 2007 and a recent visitor to the Oval Office, provoking another political controversy.[15]

There are many other examples. Operation *Red Wings* in 2005 resulted in the death of 19 special operations personnel and the loss of another Chinook;[16] the March 2007 incident in Shinwar District in Afghanistan involved the death or injury of dozens of civilians; an AC-130 strike in Azizabad, Pakistan, in August 2008, killed a reported 91 civilians;[17] the August 2011 Chinook shootdown in the Tangi Valley in Afghanistan killed 30 U.S. Servicemembers, including 15 Navy SEALs;[18] the November 2011 attack near Salala, inside Pakistan, killed 26 Pakistani soldiers, wounded 11, and caused a crisis in diplomatic relations;[19] and the October 2015 AC-130 strike on a Médecins sans Frontières hospital in Kunduz killed 42 civilians and wounded more than 30.[20]

A particularly painful incident occurred in February 2010 near Gardez in Afghanistan, when Navy SEALs entered a compound in search of a high-value target. The target was absent, but the occupant—a local and friendly official—was killed, along with his brother, two other men, and three women, two pregnant. At the time, the raiders claimed that the women had been killed before their arrival in an honor killing—a deliberate falsehood that later collapsed under investigation.[21] In recent years, allegations of war crimes, drug use, and even homicide have dogged the elite SEAL community.[22] Despite their branding as the "Quiet Professionals," SOF have figured prominently in many military disasters and scandals since 9/11.[23] Under congressional pressure, and citing "incidents of misconduct and unethical behavior [that] threatened public trust," the USSOCOM commander accordingly directed a comprehensive review of the community in 2019.[24] That review uncovered "not only potential cracks in the SOF foundations at the individual and team level, but also through the chain of command, specifically in the core tenets of leadership, discipline and accountability."

A common explanation for these behaviors is an excessively high operations tempo, leading to burnout. In fact, for most of the war on terror, Tier 1 special mission units typically deployed for only 3 months at a time, while others, such as Army Special Forces, served 6-month tours. Conventional units during this period served repetitive 12- (and in some cases 15-) month tours. For many years, the conventional force maintained a 1:1 ratio between time in garrison and time deployed, while the SOF community was able to maintain a more sustainable 2:1 ratio featuring much shorter tours. Operations tempo should not be ignored, but it obscures deeper and more compelling factors.

An obvious issue is a drop in quality. The expansion of SOF since 9/11 has inevitably diluted the force by increasing the demand for more special operations candidates, creating pressure for lowered standards and driving commanders at times to overlook behaviors that previously demanded elimination.[25] A corollary is that commissioned officers often have less authority in SOF units than in the conventional force.[26] Unlike enlisted leaders, they tend to come and go in SOF assignments, rotating between operational and staff postings. Often, they must acquiesce to the informal leadership of senior enlisted leaders who have far longer tenure and greater actual influence. (Special operations units are characterized by the presence of very senior enlisted leaders [E8 and E9] at very low levels.) Officers who insist on strict standards of accountability and conduct are not always welcome and may be removed and reassigned, as happened to future USSOCOM commander Admiral William McRaven earlier in his SEAL career. Lieutenants and captains in the 75th Ranger Regiment or Army Special Forces who do not conform to informal enlisted norms similarly risk reassignment.

Another contributing factor is the tendency to wall off or stovepipe SOF. SOF operations are typically poorly coordinated with conventional battlespace owners—a chronic problem exacerbated by the tendency to employ SOF outside of the normal chain of command. Even in extremis, conventional units cannot expect assistance from nearby SOF assets such as the AC-130 gunship or uncrewed aerial vehicles, as seen in the epic battles at Wanat, COP Keating, and the Ganjgal in Afghanistan. A glaring example was seen in both Iraq and Afghanistan, where special mission units ("black SOF") were not task-organized under theater joint force commanders but instead reported to the combatant commander in Tampa. (By doctrine, theater special operations commands reported to U.S. Central Command in Tampa, not to theater joint force commanders such as the International Security Assistance Force commander in Afghanistan or Multi-National Force–I in Iraq.[27]) Given the lack of tactical focus at such high levels, visibility and supervision of daily SOF operations were not realistic.

This issue played out in theater and campaign strategy. For years, the SOF community pursued "raiding" strategies in Iraq and Afghanistan, ostensibly aimed at destroying terrorist and insurgent networks through continuous night raids.[28] Though many people were killed, enemy networks showed remarkable resilience, while the animosity engendered by constant violence in local communities worked against campaign objectives by intensifying local hatreds.[29] Too often, the innocent were targeted while the enemy escaped. The result was independent operations that often worked *against* campaign objectives by alienating the very populations the coalition sought to protect and win over. Conventional commanders were often unaware that raids and other special operations were taking place in their areas, although they were required by default to deal with the painful aftermath. Protected by a large special operations headquarters in theater and the even larger USSOCOM, the special operations community operated with freedom of action throughout the war on terror.

These behaviors comport with an iron rule of bureaucratic politics; namely, to maximize one's own organization's autonomy and share of resources. SOF's high degree of independence was

Army Green Berets assigned to 1st Battalion, 1st Special Forces Group (Airborne), observe target for Navy Sikorsky HH-60 helicopter with Helicopter Sea Combat Squadron 85 during close air support training, Okinawa, Japan, May 13, 2021 (U.S. Army/Caleb Woodburn)

compounded by short tours, leading to a lack of the situational awareness that comes only from a sustained presence in operations. Exemption from Service regulations and standards of conduct accentuated the intentional contrast between the SOF and conventional communities, causing friction and generating distrust. These trends were complicated by a lack of interoperability with conventional forces, which generally do not share secure communications with SOF units. These units almost never train with conventional counterparts in peacetime, do not collocate their headquarters in wartime, and, as a rule, do not routinely exchange intelligence.

As the war on terror waned, Great Power competition returned to the forefront, and the SOF community began to reorient. There is surely an important place for special operations at the high end of the spectrum of conflict, as the magnificent performance of Ukrainian SOF in the recent Russian invasion has demonstrated.[30] The move to refocus SOF is both necessary and appropriate, and, if they are properly integrated with theater and campaign plans, SOF can contribute in major ways to campaign success.

But the United States does not win wars with commandos. While versatile and high-quality, lightly armed SOF formations cannot take and hold ground and do not, whatever their proponents may say, deliver decisive strategic results. Neither are they true economy-of-force assets; as we have seen, they come at a price in funding and manpower that does not square with their actual contributions to campaign success. Soldier for soldier, they are far more expensive to recruit, train, equip, and retain. Perhaps most important, their operations are often poorly coordinated, even as they drain an inordinate amount of leadership talent and quality from the conventional force. These disabilities must be addressed as the joint force prepares to fight and win against Great Powers.

Fortunately, solutions to these problems are readily at hand. When

Army Ranger with 2nd Battalion, 75th Ranger Regiment, aims rifle during Military Operations in Urban Terrain training, Marine Corps Training Area Bellows, Marine Corps Base Hawaii, June 10, 2022 (U.S. Marine Corps/Brandon Aultman)

right-sized, properly supervised, and appropriately integrated into joint operations, SOF can better fulfill their intended roles. This suggests a sharp reduction in size, to pre-9/11 numbers, beginning with cuts to the excessively large staffs. SOF units, like all others, must be subordinated to designated joint force commanders in the theater of operations and not allowed to operate autonomously. Detailed coordination with battlespace owners, fused intelligence, interoperable communications, and a genuine and shared commitment to joint and combined operations are the ideal. Above all, a return to a disciplined and ethical foundation is crucial. The Quiet Professional was a worthy sobriquet. It can be again.

This review may provoke commentary and even controversy, but the discussion needs to take place. From modest beginnings, the SOF community has become a juggernaut, operating largely independently and consuming resources disproportionate to its strategic contributions. Accordingly, national leaders should rigorously assess current investments in SOF and rationalize these decisions against other important priorities. There is an important, and indeed essential, place for SOF in the national military establishment that must be preserved. But strategic balance must ever be the goal. Today, that means a streamlined SOF, less bloated and more responsive to joint force commanders and better integrated with the entire joint force. **JFQ**

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Marine Corps Lance Corporal Munachimso Metu, aviation ordnance technician with Marine Fighter Attack Squadron 242, prepares ordnance at Royal Australian Air Force Base Tindal, Australia, August 12, 2022 (U.S. Marine Corps/ Jackson Ricker)

Beyond a Credible Deterrent

Optimizing the Joint Force for Great Power Competition

By Curt Butler, Phillip Henrikson, Lisa Reyn Mann, and Palmer Roberts

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The surest way to prevent a war is to be prepared to win it; however, the military's role in Great Power competition (GPC) must be more than just serving as a credible deterrent.[1] Having roughly 10 times the Department of State's annual budget and more than 30 times the personnel, the military plays an integral role as a global counterbalance to the People's Republic of China (PRC), the pacing threat.[2] China's strategy is to defeat the U.S. military by other means, to win without fighting. As Sun Tzu counseled, "To fight and conquer in all your battles is not supreme excellence; supreme excellence consists in breaking the enemy's resistance without fighting."[3] Current Department of Defense (DOD) strategy defines success in competition as deterring conflict on favorable terms, limiting adversaries' actions to expand the competitive space short of armed conflict, and enabling the rapid transition to armed conflict should deterrence fail.[4] The problem

is that DOD's current preparation for conflict centers on outdated premonitions of war, with adversaries exploiting fundamental U.S. misconstructions to their advantage. As Lieutenant General H.R. McMaster, USA (Ret.), stated, there are two ways to fight the United States: asymmetrically or stupidly.[5] In the era of GPC, there will be no neatly declared war between nation-states, and all hybrid conflicts will range from violence by proxy to the use of conventional forces. Moreover, DOD is facing fundamental changes to the character of war with technological advances in precision munitions, information technology, hypersonics, cyber warfare, robotics, and artificial intelligence. The country that masters new technology and considers ethical implications for proper legal authority will have a decisive advantage—at least initially—for all future conflicts.[6]

Part of regaining the initiative is a recognition of this change in the operating environment; however, the joint force must do more to prepare for its role in GPC beyond deterrence.

Ruthless Prioritization: The Joint Force Dilemma

To analyze this problem, it is useful to consider joint force gaps and solutions within the doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) framework, starting with doctrine and policy. First and foremost, DOD must clearly outline and advertise its role in GPC. The Defense Department is just beginning to understand strategic competition, and current doctrine fails to define the military role beyond deterrence. This uncertainty has led to a conflation of terminology, disharmonious DOD effort, and a lack of distinct objectives that would drive reporting and assessments. Optimizing the joint force for competition will require a change in mindset and a careful analysis of each military Service. While DOD's main priority is stopping the erosion of conventional deterrence, it also requires the dexterity to win in the competition phase.

Doctrinal revisions will drive other changes across the joint force. As outlined in the following sections, the Army must equip itself for urbanized operations. The Air Force must modernize to achieve a blend of fourth- and fifth-generation aircraft and modernize with sixth-generation unmanned systems. The Space Force requires updates to organizational, policy, and partnership efforts to prevail. The Navy must grow its fleet. In a zero or negative growth environment, optimizing for the era of GPC will require trade-offs; however, all Services must coordinate divestiture of mission sets to ensure coverage of required capability in the joint force.

Army

The Army has elevated "competition" beyond mere preparation for war and "shaping the theater" to its *primary* mission. Still, the corresponding Training and Doctrine Command (TRADOC) pamphlet, *The U.S. Army in Multi-Domain Operations 2028*, is inadequate in defining the specifics of its role in GPC.[7] The 2021 Index of U.S. Military Strength assessed the Army as "marginal," with forces not modernized for GPC and programs in their infancy.[8] The Army routinely approves force design updates and acquisitions that support successful Combat Training Center (CTC) rotations without serious consideration of forces required for competition and future conflict.[9] It has used echelon-above-brigade (EAB) units and capability as bill-payers for additional personnel concealed in brigade combat teams (BCTs). For example, it is difficult to imagine any future conflict where the adversary has not recognized the asymmetric advantage of improved explosive devices (IEDs); however, CTCs facilitate less-plausible combined arms breaches and unit defenses instead of route clearance missions that detect IEDs. Consequently, the Army has cut route clearance equipment and units to enlarge BCT forces.

In terms of acquisition, the artificiality of CTCs (like thousands of prepositioned pieces) has led to the development of equipment with limited utility in the Indo-Pacific region. CTCs represent the permissive, expansive terrain the Army wishes it could fight in, but future conflict is most likely to be fought in highly urbanized areas with severely restricted mobility corridors. An estimated 60 percent of the world's population currently resides in urban areas, and a recent United Nations (UN) study projects that figure to increase to 68 percent by 2050.[10] Additionally, developing countries lack the infrastructure required for heavy mobility. In 2017, the Asian Development Bank estimated that the Indo-Pacific region needs an estimated $8.4 trillion to meet the transportation infrastructure gap.[11]

Instead of smartly planning for the limitation, the Army's next generation of tanks got bigger. The new Abrams tank (M1A2 System Enhancement Program Version 3) is not transportable by current recovery vehicles, tactical bridges, or heavy equipment transporters.[12] The Army also lacks a credible deterrence for fires.

The Army's acquisition challenges come at a pivotal time. Through Force Design 2030, the Marine Corps plans to divest equipment suited for sustained ground combat, including tanks, artillery, military police battalions, and bridging units.[13] In addition to accounting for any corresponding shortfalls in joint force capability, the Army must consider updates to training and doctrine if Marine Corps ground forces require maneuver and fire augmentation to extend combat power beyond the littorals in future conflict.[14]

In a departure from the BCT construct, the Army has developed and exercised a Multi-Domain Task Force (MDTF) that provides long-range precision fires and intelligence, information operations, cyber, electronic warfare, and space assets.[15] The Indo-Pacific Deterrence Initiative, which identified the specific resources required to enhance U.S. deterrence of China, included $41 million for at least one MDTF, and the Army now plans to align two to the Indo-Pacific region.[16] The MDTF seems similar to the emerging Marine Littoral Regiment (MLR) concept, tailored explicitly for island hopping in the Indo-Pacific.

With heavy integration into the 7th Fleet, III Marine Expeditionary Force stood up a pilot MLR earlier this year.[17]

Despite the apparent lack of coordination across the joint force, the MDTF is progress toward long-term strategic objectives. The BCT is the foundational unit in the current Army organizational structure, but it lacks the flexibility and agility required to compete below the conflict threshold or win in a large-scale ground combat fight. Instead of adding more BCTs, the Army should build EAB capability and expand the BCT's myopically focused training aperture. The Army must provide combatant commanders with consistently available, scalable, regionally savvy forces to support theater security cooperation. To improve the legacy Regionally Aligned Forces concept, the new Regionally Aligned Readiness and Modernization Model (ReARMM) is a more flexible force generation process that will align Army units against regional priorities and reorganize the Army's construct from the BCT to something more relevant by 2028.[18]

Through the Total Army Analysis and ReARMM processes, the Army must reimagine a construct for an organization that will compete and win in future conflicts.[19] Wary of getting caught between GPC rivals, Indo-Pacific countries may not be able to host a BCT in the same way as technical experts from nonstandard units like the U.S. Army Corps of Engineers (USACE), Civic Action Teams, and Security Force Assistance Brigades (SFABs). The USACE International Interagency Support program provides reimbursable and nonreimbursable engineering services across the region that support U.S. Indo-Pacific Command (USINDOPACOM) and interagency strategic objectives and National Security Strategy goals. The USACE provides DOD presence in less-accessible countries, such as Burma, Nepal, Laos, Malaysia, Sri Lanka, and Mongolia. In a region with the South China Sea's strategic equivalence, Mekong riparian countries have welcomed USACE as a counterbalance to PRC hydropower development.[20]

Civic Action Teams are small, rotational units operating in the Indo-Pacific region for decades in developing countries such as Palau. In addition to running medical clinics, these teams execute apprenticeship programs that build capacity. Former Secretary of Defense Mark Esper called for more Civic Action Teams throughout the Indo-Pacific. Almost simultaneously, the Army approved a cut in engineer construction capability.[21]

In 2016, the Army introduced SFABs with the primary mission of training, advising, liaising, and enabling allied and partnered nations. This volunteer unit's core component is a 12-member, relatively autonomous team that is readily employable and tailorable to assist with the host-nation's needs.[22] These units provide continuous forward presence and free up special operations forces for more highly specialized missions.

SFABs are not big enough to carry an entire load of building partners and allies. In addition to building EAB capacity, the Army must ensure that BCTs embrace the dexterity required for GPC and any future conflict. While building readiness to serve as a credible deterrent, BCTs must also execute joint and combined exercises and live fires, humanitarian assistance/disaster response missions, cultural training, security cooperation, and other competition-centric tasks. With a legacy mindset, commanders view these tasks as a distraction from traditional warfighting tasks. TRADOC should relieve the tension between readiness and Regionally Aligned Forces requirements by revising Mission Essential Task Lists (METLs) to reflect maneuver more accurately in modern warfare and increased relevance in GPC. Paraphrasing the Irregular Warfare Annex to the National Defense Strategy, all BCTs must train and institutionalize irregular warfare tasks and enabling activities.[23] Irregular warfare, like GPC, is a struggle to influence populations and affect legitimacy.[24]

Future METLs should include other competition-centric tasks such as joint and combined interoperability, building partner capacity, and information operations. While information is one of the eight combat power elements and one of the four forthcoming Joint Warfighting Concepts, it is not an Army warfighting function. In stark comparison, the Chinese believe information transforms into realistic combat capabilities and is the first element of operational power listed in Chinese military doctrine, ahead of firepower and maneuver.[25]

Perhaps in recognition of this need for smarter, collective investments, the Army initiated Project Convergence—a "campaign of learning" that integrates technology, tactics, and organization across multiple domains.[26] The first iteration combined scientists and Soldiers at the tactical level to reduce targeting time. The 2021 iteration of Project Convergence analyzed the problem of Joint All-Domain Command and Control against high-end adversaries.[27] In addition to working more closely with the other Services, future rounds of Project Convergence should address interagency participation, specifically in the Indo-Pacific region. This is where the ground forces will genuinely begin to optimize for competition and future conflict.

Air Force

The Air Force is at a strategic inflection point with materiel and personnel issues due to the rise of GPC and the budget woes of attempting to modernize a force after two decades focused on counterterrorism. The creation of the Space Force accounts for the USAF's shrinking budget, which has also relieved the Air Force of a proportional amount of responsibility.[28] The other issues are a mix of the Air Force's own making and legislation's impact on national security. To shift from 20 years of counterterrorism and present a credible deterrent to our adversaries, the USAF will have to make some uncomfortable decisions. The Air Force must modernize its current fleet, procure new assets, and sustain personnel required to operate the force to present a credible deterrent.

Shortly after taking office, the 22nd Chief of Staff of the Air Force, Charles Q. Brown, Jr., announced the requirement to divest or terminate all once-promising programs that were no longer affordable or failed to "deliver needed capabilities on competition-relevant timelines."[29] The

First Lieutenant Claire Waldo, 12th Missile Squadron missile combat crew commander, conducts dry run for intercontinental ballistic missile test launch in Launch Control Center, February 3, 2020, at Vandenberg Air Force Base, California (U.S. Air Force/Aubree Milks)

Air Force Special Operations Command (AFSOC) commander followed suit and announced the Major Command would divest itself of niche and redundant platforms, systems, and missions to create the "AFSOC we will need."[30] The comments suggest future force structure modifications that will exchange legacy capacity for additional manpower and capabilities required for future high-intensity, near-peer conflict.[31] As stated by Chief of Staff Brown, "unless we accelerate the changes we need, the U.S. Air Force will be ill-prepared to compete, deter, and win."[32]

Deterrence is an effort to stop or prevent an adversary from conducting an armed attack, and it is only as effective as the threat of force is credible.[33] Currently, 17 percent of the force is survivable within antiaccess/area denial (A2/AD) environments, limiting credibility and deterrent value.[34] Sustainability efforts for aging aircraft are insufficient because they do not achieve survivability in an A2/AD environment. Each year after an aircraft's 15th year of service, its maintenance costs increase by 3 to 7 percent.[35] By the time the B-52 retires in 2050, it will be nearly 100 years old. In comparison, if the B-17 were retired on the same timeline, it would be flying for another 19 years. However, the 2021 National Defense Authorization Act mandates that the Air Force maintain over 100 aircraft it had hoped to retire.[36] Unable to make choices to optimize the fleet smartly, the Air Force is saddled with increasing sustainment costs and the inability to procure the required numbers of sixth-generation aircraft.

The proper mix of aircraft to form a credible deterrence will blend fourth- and fifth-generation platforms with yet-to-come advanced, unmanned sixth-generation fighters. These sixth-generation fighters must be unmanned or optionally manned due to the physical limitations a human imposes on aerial combat. Recent successes have shown that human pilots are no longer a match for trained artificial intelligence systems in aerial combat. If the Air Force

Servicemember looks up at starry sky from Ka'ena Point Space Force Station, Hawaii, November 2, 2022 (U.S. Space Force/Jared Bunn)

develops a fighter requiring human occupancy, it will be outdated before completion, only suitable for lower end fights, and will not serve as a peer deterrent. Nevertheless, a fully modernized Air Force fleet is still not a credible deterrent without skilled personnel. AFSOC recognizes the importance of investing in human capital by stating in strategic guidance that "human capital is our competitive advantage."[37]

The COVID-19 pandemic has afforded reprieve to the Air Force's typical pilot retention issue. Because of the prolonged travel recession, airlines are not hiring, and pilots stayed in the Air Force. But for the airline market, what goes down must come up. As market analyst James Cramer has predicted, pent-up demand will serve as a great benefit to the airline industry once travel restrictions begin to lift. The airline industry's return will likely cause over a year's worth of delayed force separations to happen quickly. This unprecedented, worldwide demand will prompt airlines to hire and offer bonuses like never before, causing unforeseen pilot shortages leading to a short-term reduction in our deterrence credibility. In addition to the pending mass exodus of pilots to commercial airlines, the Air Force provided most personnel transfers to the Space Force's formation, approximately 6,000 thus far.

The Space Force

The Space Force faces the unique challenge of building a new military Service while simultaneously optimizing for competition. Improvements to the Space Force organization and national space policy will allow it and U.S. Space Command (USSPACECOM) to work with allies and partners to integrate timely and relevant space power into the joint force in support of GPC.

Military space power refers to three segments—terrestrial, link, and space—that enable freedom of action, lethality, and joint force effectiveness.[38] Terrestrial refers to the equipment needed to operate spacecraft, such as user equipment, control and tracking stations, and launch sites. Space includes spacecraft in orbit beyond the atmosphere of Earth. The link segment is the portion of the electromagnetic spectrum that connects the terrestrial and the space segment.[39] The U.S.-China Economic and Security Review

Commission calls for a whole-of-government strategy to mitigate China's rise, including ensuring that USSPACECOM is responsible for safeguarding freedom of navigation and keeping all three segments of the space domain safe and secure.40 The Space Force must work to improve its organizational structure, support enduring U.S. space policy, and pursue beneficial partnerships to execute its part of the joint mission.

Space Force Organization. The Space Force was established as the sixth branch of the U.S. military in December of 2019, and in its first year the new Service focused on organization, creating doctrine, and carving the initial cadre and capabilities out of existing Service budgets and personnel.[41] The Space Force is structured to be a lean, agile organization with an end strength of approximately 16,000 personnel.[42] The Space Force and the Space Combatant Command were established within 4 months of one another. The Service's role is to organize, train, and equip Space Force Guardians for global space operations. The USSPACECOM mission is to deter conflict, defeat aggression, and deliver combat power for space. USSPACECOM receives the preponderance of forces from the Space Force and is the lead for security in the space domain.

The Unified Command Plan designates USSPACECOM as the single point of contact to governmental, commercial, and international agencies for military space operations. It directs USSPACECOM to plan and execute global space operations, including support to other combatant commands.[43] Both Space Force personnel and equipment are low-density assets in the short term (next 20 years), and the Space Force is still negotiating with other Services and agencies to consolidate space assets and increase interoperability of combat capabilities. The Space Force must work with USSPACECOM to tailor its force presentation for effectiveness and unity of effort until the number of space forces available to the joint force increases and other geographic combatant commands (GCCs) establish command authorities for space operations.

DOD policy directs that the Army, Navy, Air Force, and Space Force separately provide space forces to joint commands.[44] A Space Force Service component may be stood up later this year in USINDOPACOM to provide operational-level integration of space capabilities as well as the required administrative linkage to the Space Force Service headquarters.[45] The Space Force has the responsibility to provide USINDOPACOM with a command and control element to conduct planning and integration activities for space effects. The Space Force should conduct a full mission analysis and consider leveraging liaison elements from the other Service components to augment the space component. The Space Force may present forces to USINDOPACOM in the future for space control, theater missile warning, or other missions. However, the Space Force is not currently resourced to simultaneously create a new Service and provide the full complement of joint force operations, logistics, planning, security cooperation, international engagement, and coordination across Services and functional components that are expected of an USINDOPACOM component command.

The Space Force has established one Service component within U.S. Space Command that accounts for most Space Force operational personnel and capabilities. Even with the preponderance of Space Force operations capability, U.S. Space Command is operating at an initial operational capability as of August 2021, with no definitive projection of full operational capability.[46] The Space Force is most likely years away from offering sufficient space forces to other combatant commands. USSPACECOM has the most extensive planning staff and integrated access to intelligence relevant to space operations.[47] Other GCCs have limited numbers, if any, space forces assigned, so USSPACECOM has co-located planning elements that integrate and synchronize worldwide effects to support joint force commander missions.[48] The most effective way for combatant commands to reliably plan for, execute, and deconflict joint space operations in the next few years is to leverage USSPACECOM forces, authorities, and relationships that extend to other Services and agencies with space equities while continuing to foster the growth of Space Force Service component capability.

Space Policy. The 2010 National Space Policy was the first to champion the establishment of international norms as a part of U.S. strategy, and the current space strategy reinforces this notion. Still, there are no definitive agreements on the standards of military use of space.[49] The Outer Space Treaty of 1967, the most crucial landmark in the international space agreement, prohibits mass destruction weapons in space and establishing military bases, conducting maneuvers, or testing weapons on the moon and other celestial bodies.[50] Notably, it does not ban the weaponization of space, and there are no widely accepted guiding principles for military activity in space.[51] For comparison, the Military Maritime Consultative Agreement provides a forum for the United States and China to discuss flight and navigational safety to establish norms that decrease misunderstanding and increase overall security.[52] The United States should pursue similar accords to increase security dialogue in the space domain.

The UN Office for Outer Space Affairs just completed the 65th session of the Committee on the Peaceful Uses of Outer Space, aimed at helping member states establish regulatory frameworks for space activities and developing space capacity. There are 95 members on the committee out of the 193 UN member states, including 9 Indo-Pacific nations in which the United States is actively competing for influence. Indonesia, for example, has shown interest in development of a regulatory framework for the extraction of materials from space for economic benefit like the frameworks created in the United States, Luxembourg, and the United Arab Emirates. Space Force needs to pursue cooperative activities that support the United States taking a leadership role in addressing responsible behaviors in space and the need for sustainable international space policy.

Space Partnerships. Alliances and partnerships offer an asymmetrical advantage to the joint force in GPC, and one of U.S. Space Command's top priorities is to strengthen and attract partners that can share responsibilities for leadership and bolster resiliency.[53] The Space Force has increased its focus on maintaining and developing international relationships since 2021.[54] The Air Force had historically focused on satellite communications agreements with its most advanced partners in space, and the Space Force is continuing that work and expanding into other mission areas such as missile warning, weather, and electro-optical sensing.[55] In addition to these activities, the Space Force should invest more in partnerships and security cooperation by expanding the scope of activity beyond high-end, on-orbit capabilities and including emerging space partners such as India, Indonesia, the Philippines, and Singapore. These partnerships should also include international organizations and commercial entities.

The Space Force is actively working with USSPACECOM to collaborate with key allies, including Australia and New Zealand, on space domain awareness, force support, contingency operations, and strategic messaging. It is working to increase the frequency of combined operations, exercises, and training with Australia, Japan, New Zealand, the Republic of Korea, and Thailand. Space Force experts are helping USSPACECOM advance space operations center interoperability and improve regional space domain awareness with existing partners. The Space Force should expand its activities to include working with partners to develop commercial options for space weather, remote sensing, and satellite communications for both civil and military applications.

Space capabilities are becoming increasingly important within the national policy of almost every country in the Indo-Pacific. Regional security experts have started exploring the benefit that nonspace-faring nations in Oceania could have to build a broader base of like-minded partners with shared strategic interests.[56] Some nations may not be able to sustain naval vessels or aircraft that have traditionally contributed to maritime domain awareness. The United States should work with these partners to develop commercial or military capacity for maritime domain awareness and space-based intelligence, surveillance, and reconnaissance (ISR) that can be applied to maritime security and humanitarian assistance and disaster response initiatives. The Space Force and USSPACECOM need to cultivate these relationships to meet the needs of critical partners and secure an advantage in the space domain to improve collective security in the Pacific.

The Navy

America's newest Service is not alone as it navigates the leviathan DOD bureaucracy to fully resource its force. The Navy has long-standing challenges of the same sort. Of great concern for the Navy is its acquisition, maintenance, and materiel modernization difficulty in achieving an overmatch in Indo-Pacific GPC. In this context, the Navy defines materiel as the ships, submarines, portable support equipment, and other hardware needed to operate. Unlike the other Services, the Navy has sought significant materiel expansion.

The Navy had over 6,700 ships at the end of World War II. Throughout the Cold War, it maintained a 600-ship fleet.[57] In fiscal year (FY) 2023, the procurement and construction of 9 new warships should begin, along with studies to determine the feasibility of over 400 unmanned vessels by FY 2052. In 2019, the Navy was carrying out a new force structure assessment to adjust the long-term plan for a 355-ship combat fleet. This effort collapsed because of prohibitive costs and the need to incorporate recent technologies, such as unmanned systems.[58] In its place is the recently introduced 30-year shipbuilding plan, which only repackages and restructures the path to the same 355-ship goal. Ship numbers matter for planning due to the operational tempo for crisis response, allied and partner engagement, and ongoing regional conflicts. The Chairman of the Joint Chiefs of Staff is on the record that a 500-ship Navy is probably the "entrance ticket" for deterring Great Power war,[59] with more than one-quarter consisting of unmanned vehicles, robotic ships, and up to 90 submarines.[60]

Any significant addition of ships will come with a price tag, and the United States has been slow to respond to China's comparatively rapid growth in defense expenditures. A recent Australian defense study found that

> *using "Purchase Power Parity" calculations, China's defense spending rises to about 70 percent that of the* [United States]. *If, in addition, adjustments are made for the real level of Chinese defense spending (as against the official figure) and the markedly lower costs of Chinese personnel, the figure rises further, to between 90 and 120 percent of the U.S. defense budget.*[61]

This spending overmatch should stand as a clear warning to Congress that if military budgets stagnate or shrink in the coming years, GPC will become significantly unbalanced.

Optimizing for competition may also require that the Navy, like the other Services, divest themselves of redundant capability that other Services are better suited to own. The Navy's *Navigation Plan 2021* describes divesting experimental littoral combat ships, legacy cruisers, and dock landing ships and "non-core Navy missions" such as Aegis Ashore.[62] Therefore, it is not enough to simply build more; the Navy must adjust the current order of battle by adding and taking away where it makes the most sense.

The Navy must also gravitate toward "tomorrow's fight," which is primarily in the East and South China seas, Oceania, and the Polar Silk Road (part of the Belt and Road Initiative) in the Arctic. The Navy recently released its updated Arctic strategy, *A Blue Arctic*, which calls for sustained presence and partnership in the Arctic. The PRC is investing in its icebreaker fleet, and it commissioned the first Chinese-manufactured icebreaker, the *Xuelong 2*, in 2019.[63]

Facilities

While geography provides the backdrop, the critical issue within the DOTMLPF-P construct is the number of facilities present in ally and partner nations. Facilities can range from simple maritime piers, anchorage expansions, and multidomain training ranges to elaborate and expensive fuel depots such as the one planned for Darwin, Australia, within the next 5 years. With most of the U.S. Indo-Pacific Command area of operations bordering water, the joint force needs infrastructure that facilitates access, basing, and overflight, both inside and outside China's People's Liberation Army Navy threat ranges, which becomes a crucial element to success in both competition and conflict. To that end, facilities and the U.S. ties to allies and partners are inextricably linked.

In FY 2019, the United States invested in infrastructure in Australia and Papua New Guinea.[64] The FY 2022 National Defense Authorization Act authorized $7.1 billion as the basis for the Indo-Pacific Deterrence Initiative to—among other things—optimize U.S. military presence and improve infrastructure in the region, strategic moves that mirror China's.[65] The U.S. and PRC strategies for construction are similar in that they involve dual-purpose facilities in most cases. The PRC formalized this in its 14th Five Year Plan, which stipulates that all commercial activities must serve and advance military purposes.[66] Civil construction projects aid host nations in their commerce, health, education, and overall development. These significantly contribute to winning hearts and minds during competition. However, it should be apparent to any strategist that location is as essential as the facility itself. Military applications in times of crisis transform partner-nation facilities into enablers or even force multipliers depending on the capacity and geographical location within the scenario's context. Therefore, realizing and mitigating facility shortfalls in the Indo-Pacific area of operations must be at the forefront of strategic thinking.

The most notable locations where dual-purpose U.S. facilities would be

Fast combat support ship USNS *Supply* (left) and the Royal Navy frigate HMS *Kent* conduct replenishment-at-sea in Barents Sea while training in Arctic Circle, May 3, 2020 (U.S. Navy/Lauren Spaziano)

Air Force KC-135 Stratotanker in-flight refueling operator and pilot, assigned to 340th Expeditionary Air Refueling Squadron, observe refueling of B-52 Stratofortress assigned to 2nd Bomb Wing during multiday bomber task force mission over Southwest Asia, December 10, 2020 (U.S Air Force/Trevor T. McBride)

advantageous to our partner nations, while also facilitating our strategic leverage, are along the Second Island Chain: Papua New Guinea, Palau, Yap, and Tinian are logical candidates to expand port, airfield, warehouse, and medical facilities. This would begin bridging the gap between U.S. and PRC strategic real estate. Because civil-military fusion is the law in the PRC, significant Belt and Road Initiative projects, particularly the ports and the digital Silk Road, are designed with dual-use features that bolster a range of potential military and intelligence capabilities.[67] At worst, the PRC tends to build overt military facilities, such as those on the Spratly Islands. At best, they thinly veil the balance of dual-purpose, with most of their sites still having a heavy emphasis on ISR and potential lodgment.

The Defense Department will need to demonstrate dexterity to maintain readiness as a "credible deterrent" in a prolonged competition phase, while also optimizing the force to compete and win in large-scale, multidomain combat. This requires careful consideration of the DOD role in GPC and joint force optimization across the DOTMLPF-P spectrum. The consensus definition of power is to mean raw capability; it would be impractical to build the force structure to match China's sheer size. Fortunately, in competition, the joint force can apply asymmetric strengths and "win" with more fiscal responsibility. The Army will need to work closely with the Marine Corps to ensure a credible ground force. The Air Force requires congressional flexibility to modernize its fleet. The Space Force requires appropriately delegated authorities and an effective organizational structure to bring space effects to bear. And the United States must accelerate shipbuilding to restore the Navy's fleet to a respectable number of manned and unmanned ships. As Sir Winston Churchill stated, "We have run out of money; now we have to think."[68] **JFQ**

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Army Stryker infantry carrier vehicle rolls off C-17 cargo plane in India, February 1, 2021, in preparation for Yudh Abhyas, bilateral military exercise involving approximately 500 soldiers from Indian and U.S. armies (U.S. Army/Joseph Tolliver)

Army Sustainment Capabilities

Instrumental to the Joint Force in the Indo-Pacific Region

By David Wilson

In an era of Great Power competition, it is critical that we be prepared for large-scale combat operations (LSCO) and joint all-domain operations (JADO), where a joint integrated force is necessary to achieve assured victory against a peer or near-peer adversary. The U.S. Army's mission and role in the Pacific are commonly misunderstood by those outside the area of responsibility (AOR); however, the Theater Army provides a full range of unique capabilities that enables joint force operations throughout the Indo-Pacific region during LSCO and JADO.

The Department of Defense (DOD) continues to reinforce global posture through joint and combined training exercises, security cooperation activities,

Major General David Wilson, USA, is the Commanding General of 8th Theater Sustainment Command.

Army paratroopers with 3rd Battalion, 509th Parachute Infantry Regiment, 4th Infantry Brigade Combat Team (Airborne), 25th Infantry Division, jump onto Kangaroo Drop Zone as part of simulated Joint Forcible Entry Operation during exercise Talisman Sabre 21, in Charters Towers, Queensland, Australia, July 28, 2021 (U.S. Marine Corps/Alyssa Chuluda)

and collaboration on transnational threats. Interstate strategic competition is the greatest risk to U.S. national security. While focusing on the Middle East for over 20 years, the U.S. military has lost its competitive edge over near-peer threats such as China and Russia due to their rapid military modernization across all domains. Secretary of Defense Lloyd J. Austin III recently called for "integrated deterrence; coordinated operations on land, in air, on sea, in space and in cyberspace to regain our competitive advantage."[1] World War II taught us that no one Service can win a war by itself. In fact, the last war fought in the Pacific required not only maritime capability but also air and land power. As DOD looks at foreseeable conflict in the Pacific, the United States will require a joint and combined force to win a joint multi-domain battle. When thinking of the Pacific, the image of water implies movement and sustainment operations conducted in that domain. However, the capabilities required to open, set, and sustain the theater occur on land and are key to enabling the joint force to compete and win in the Indo-Pacific region. These required capabilities reside in the Theater Army, and this mission set is executed by the Theater Sustainment Command (TSC) along with joint logistics enterprise partners. Warfighters and enablers alike might be transported by air and maritime means, but even vessels and aircraft must stop on land to be fueled, armed, and supported. Maintenance and personnel support occur on the land; it is from the land domain that we will sustain and directly enable the joint force.

Indo-Pacific Region

It is evident that competition activities are persistent across all domains in the Indo-Pacific, and the efforts of China and Russia have had a disruptive effect on the region. Despite these efforts, U.S. Indo-Pacific Command (USINDOPACOM) remains engaged with U.S. allies and partners in the region to set conditions for joint and diplomatic efforts. During his change of command in April 2021, the USINDOPACOM

commander, Admiral John Aquilino, stated, "The Indo-Pacific is the most consequential region for America's future and the priority theater for the Department of Defense." USINDOPACOM is a highly complex AOR and presents a multilayered problem set when it comes to national security, with four of five national security threats—including China, Russia, North Korea, and violent extremist organizations—in the region. The USINDOPACOM AOR encompasses 36 nations, 5 of which are U.S. allied nations. USINDOPACOM, one of six geographical combatant commands, integrates five subordinate component commands—U.S. Army Pacific (USARPAC); U.S. Marine Corps Forces, Pacific; U.S. Pacific Fleet; Pacific Air Forces; and Special Operations Command Pacific—as well as subunified commands in Korea and Japan into a joint integrated force to achieve national security objectives and protect national interests in the Indo-Pacific region. In an area that comprises approximately 90 percent sea and ocean, the Navy and Air Force stand out as obvious forces required for strategic success in the Pacific. However, the capabilities the Army provides to the joint force should never be underestimated, especially with the persistent potential for ground combat operations on the Korean Peninsula.[2]

U.S. Army Pacific

The Army is no stranger to the Pacific region; it has fought more campaigns in the Pacific than in any other theater of operations. Over 70 percent of personnel who served during World War II in the Pacific belonged to the Army.[3] A centerpiece of the joint force in the Pacific is the Theater Army, whose role is to serve as the Army Service Component Command to the geographic combatant commander (GCC). As the USINDOPACOM's Theater Army, USARPAC executes four functions: execute the combatant commander's daily operational requirements, set the theater, set the joint operations area (JOA), and execute mission command of Army forces. In 2019, USARPAC was certified by USINDOPACOM as a "4-Star Capable Joint Task Force Headquarters" for immediate response and small-scale operations.[4] Approximately 80,000 Soldiers currently support the Theater Army in the Indo-Pacific region in multiple locations including Washington state, Alaska, Japan, Korea, and Hawaii. The Army provides over 50 percent of foundational capabilities to the GCC. The capabilities delivered through Army support to other Services under the command of the Theater Sustainment Command include:

- land-based air missile defense
- fire support
- base defense
- transportation
- fuel distribution
- general engineering
- intra-theater medical evacuation
- logistics management
- communications
- chemical, biological, radiological, and nuclear defense
- explosive ordnance disposal.[5]

The integrated and coordinated capabilities the Army provides across commands and Services enable a joint integrated force ready to respond to crisis, compete, and win in conflict within the USINDOPACOM AOR. The TSC directly supports one of the four functions executed by the Army Service Component Command in the Indo-Pacific; the command's ability to set the theater is critical due to its mission to provide mission command for Army and joint operational sustainment organizations and integration and synchronization of strategic sustainment capabilities during joint all-domain operations. Doctrinally, the TSC is responsible for theater opening, distribution, and sustainment, which enable the operational reach, endurance, and freedom of action of the joint force.

Set the Theater

The Theater Army will play a pivotal role if the United States finds itself in conflict in the Pacific. Central to this effort will be 8th Theater Sustainment Command's (8TSC's) ability to assist USINDOPACOM in setting the theater. In doing so, the establishment of bilateral and multilateral agreements will be an essential task.[6] Given the tyranny of distance, this will be an absolute must if the joint force is required to extend its operational reach, prolong endurance, and ensure freedom of action. Distance posed a challenge for both U.S. and Japanese forces during World War II and remains a challenge for forces and operations throughout the Indo-Pacific. Distances between islands throughout the Indo-Pacific create a problem set for the flow of logistics, the rapid projection of forces, and the sustainment of operations. The Theater Army's activities across the competition continuum and all phases of operations highlight the TSC as a critical player in the joint force. The Theater Army's execution of theater security cooperation activities and integration of operational contract support address and minimize some challenges associated with the tyranny of distance.

The Army is unique in that it is the Service with the capability and capacity to provide the combatant commander with the most support capability, including expeditionary contract support, for setting the theater.[7] Shaping and setting the theater are continuous processes that begin at the national level and require activity by the whole of government and beyond the Army and the joint force. The Army and joint logistics enterprise (JLENT) partners play a major role in the mobilization and movement of forces, the posture of Army prepositioned stocks, and the enabling of rapid force projection in time of crisis, competition, or conflict. The Theater Sustainment Command is the principal agent for sustainment in the Theater Army and the only standing two-star logistics headquarters, responsible for theater opening, theater sustainment, and theater distribution in support of the Army and the joint force.

The JADO in the Pacific will require sustained operational momentum, a resilient and flexible distribution network, and forward-postured and forward-distributed sustainment forces and materiel. These requirements are all enabled

through an integrated and synchronized joint sustainment network provided by the Army in support of the combatant commander. The TSC executes theater security cooperation activities throughout the Indo-Pacific region in support of their mission to set the theater. This mission is to promote U.S. interests and enable partner-nation capacity to provide U.S. access to infrastructure and information. Theater security activities are executed through senior leader engagements and the deployment of Soldiers in support of multinational and bilateral operations across the region. The execution of each activity establishes trust, fosters mutual understanding, and helps build partner capacity, all while shaping the theater for future operations.

Additionally, each activity assists in the development of bilateral and multilateral diplomatic agreements, which enable the access the joint force requires to set the theater. In 2014, General Vincent Brooks developed the Pacific Pathways program, which combines a series of partner-nation exercises into an integrated operation to build partnership capacity and readiness throughout the Pacific.[8] Pacific Pathways is composed of annual Army partner exercises within the Pacific to include Khaan Quest, Cobra Gold, Keris Strike, Talisman Saber, Orient Shield, Hanuman Guardian, Salaknib, Yudh Abhyas, and the U.S.-China Disaster Management Exchange. These exercises increase multinational interoperability, assist in the development of a regional sustainment network, enable experimentation with new Army capabilities, and support the rebalance of forces forward in the Pacific. As Pacific Pathways evolves, the Army is preparing for persistent forward presence in the Pacific across all domains.[9] We continue to leverage these engagements at all levels to build trust, identify common solutions to shared problems, and gain a richer understanding of our allies' and partners' initiatives as well as concerns.

In support of setting the Pacific theater, the 8TSC provides operational contract support (OCS) throughout the Indo-Pacific region, providing solutions to critical logistic requirements. OCS is an Army capability that delivers services and logistics when and where they are needed to support missions across the theater when requirements either exceed the sustainment capability on ground or when sustainment support has not been established. OCS provides supplies, services, and construction from commercial sources in support of joint operations. OCS supplies and services include:

- all classes of supply
- labor
- mortuary services
- laundry/showers/sanitation
- dining facility services
- transportation
- port operations
- billeting
- maintenance and repair.[10]

The 8TSC provides expeditionary and operational contract support as well. This capability is a combat multiplier for humanitarian relief operations, natural disaster response missions, combat operations, and other contingency operations. The use of expeditionary contract support expedites the delivery of services and supplies to the forces within the AOR yet also enables the joint force to use local facilities, resources, equipment, and labor; increases intra-theater responsiveness; and reduces strategic lift requirements.[11] This unique capability is enabled by contracting support brigades that deploy contracting teams across the theater that are under the operational control of the TSC.

Army Watercraft Systems

The 8TSC maintains organic logistics supply vessels as part of the overall capability. This unique, often overlooked capability expands movement and maneuver within the littorals and enables the joint force to operate through fixed, degraded, and austere ports. Landing craft provide inter- and intra-theater transportation of personnel and materiel, delivering cargo from advanced bases and deep-draft ships to harbors, inland waterways, remote beaches, and unimproved coastlines. Joint logistics over-the-shore enablers discharge strategic sealift shifts when suitable ports are unavailable, while tugs aid in the safe maneuvering of vessels at ports, ocean and port/harbor towing, and salvage operations.

Set the Joint Operations Areas

As forces are projected and equipment is moved forward, the Army provides the GCC with a range of capabilities to set and support the JOA. In collaboration with joint partners, allies, and partner nations, the Army executes theater/port opening, terminal operations, and joint reception, staging, onward movement, and integration (JRSOI) through the TSC. Setting the theater requires establishment and operation of ports of debarkation (PODs), aerial ports of debarkation, intermediate staging bases, and the theater distribution network, all of which enable the strategic flow of forces and sustainment into the combatant command AOR. The 8TSC works with units such as the 311th Signal Command to enable DOD network operations as well as network extension and reach-back for the entire joint force.

In the early days of World War II, supplies and commodities were moved across underdeveloped ports and shores, infrastructure was poor, equipment was aged, roads were unpaved, and there was no means to offload commodities on arrival at ports.[12] In 1943, the Basic Logistical Plan for Command Areas was developed by the Army and Navy and served as the plan for how to support joint forces in the Pacific, including the establishment of bases, seaports, and airfields.[13] Additionally, in 1943, General Douglas MacArthur received engineer amphibian brigades and used them to move personnel, equipment, and supplies within Australia and to build ports throughout the Pacific.[14] Because of their efficiency, the engineer amphibian brigades also assisted with port operations in the Southwest Pacific, executing 380 shore-to-shore and ship-to-shore operations and 148 joint and multinational combat landings.[15]

The numerous amphibious operations conducted during World War II by the Army highlight the capability that today's Army watercraft system provides the joint force in setting the JOA through the projection of forces and equipment. In

World War II, Army amphibious operations were responsible for the transport of 4.5 million personnel and 3 million tons of commodities across the Pacific.[16] Lessons from World War II have resulted in the Army's rapid port opening element capability, which can serve as the initial theater opening capability for the joint force for up to 60 days until relieved by follow-on forces. This capability is part of the Joint Task Force Port Opening described in Army Techniques Publication 3-93, *Theater Army*.[17]

The TSC plays a critical role in port opening, an essential task to set and open the theater. The TSC continuously synchronizes and integrates with strategic partners and host nations to identify existing infrastructure that can be used to facilitate theater opening in the event of crisis or conflict. Dive detachments organic to the TSC are used to conduct port surveys to determine the suitability of ports in preparation for port opening. Once a port is deemed suitable, the TSC employs its operational contract and engineer capabilities to procure, construct,

Army Soldiers, assigned to 1-21st Infantry Battalion, 2nd Infantry Brigade Combat Team, 25th Infantry Division, conduct battalion air assault exercise for platoon situational training exercise, on Oahu, Hawaii, May 24, 2022 (U.S. Army/Gary Singleton)

Marine Corps Corporal Cole Strain, High Mobility Artillery Rocket Systems launcher chief with HIMARS platoon, Marine Rotational Force—Darwin, loads Guided Multiple Launch Rocket System into launcher before emergency fire mission during Exercise Koolendong, at Bradshaw Field Training Area, Northern Territory, Australia, August 29, 2021 (U.S. Marine Corps/Colton K. Garrett)

and repair required infrastructure when a host nation lacks appropriate resources to facilitate theater opening.

The 8TSC recently demonstrated this unique capability with the successful execution of the Army Prepositioned Stocks (APS) 3 Fix Forward operation at Subic Bay. APS gives the Army the capability to rapidly deploy and respond to any worldwide contingency by maintaining combat and combat support equipment and essential supply commodities aboard ship for rapid download and handoff to a unit on order of the Secretary of Defense. It allows the 8TSC to plan, integrate, and synchronize the storing of equipment around the globe to enable interoperability and strategic operations. By storing equipment to enable joint interoperability, APS reduces deployment timelines and improves sustainment capacity and capabilities while also increasing combat power to support contingency operations worldwide.

APS further enables the Theater Army's ability to rapidly deliver combat power over the shore, ensuring readiness and relevance in competition throughout the theater. The Theater Army and joint force use unique intra-theater sealift capabilities to move personnel, equipment, and supplies to the desired location via the littorals, inland waterways, and rivers. This capability extends operational reach and supports freedom of action to decisive action during unified land operations in the USINDOPACOM AOR.

The logistics civil augmentation program is the primary means to resource contracted sustainment support for joint operations.[18] The TSC works in concert with U.S. Transportation Command to manage and operate all PODs.[19] Military police and explosive ordnance detachments assigned to the TSC provide protection following the establishment of ports to ensure all PODs and lines of communication remain functional to support the setting of the JOA. Since Pacific theater sustainment is a joint effort, agencies such as the Defense Logistics Agency, Surface Deployment and Distribution

Command, the 402nd Army Field Support Brigade, and the U.S. Marine Corps, Navy, and Air Force provide joint sustainment assets to support operations that enable land forces, as well as our allies and partners. One agency cannot solve the joint logistics competitive space in the Indo-Pacific AOR; it takes a joint logistics enterprise to build and stabilize the theater sustainment posture globally, as the Army is postured to support its allies and is ready to defend the freedom of the people with combat platforms postured in strategic areas.

Once ports are established and secured, the TSC facilitates JRSOI through the establishment of the theater gateway, which is established by human resource professionals known as the Theater Gateway Personnel Accountability Team. This team leverages several systems to manage accountability of personnel to ensure commanders maintain an accurate picture of force flow and combat power. The Deployed Theater Accountability System tracks the movement of military personnel throughout the theater to include entry, transit, and departure.[20] The Synchronized Predeployment and Operational Tracker maintains personnel accountability and visibility of all forward-deployed contractors authorized to accompany the force in real time. The TSC's role in port opening and theater gateway operations facilitates JRSOI and enables the rapid projection of the joint force into theater to respond to crisis or conflict. All of this happens through land-based operations executed by the TSC.

While JRSOI may seem like a minuscule task, the arrival, protection, accountability, flow, and support of personnel, equipment, and materiel throughout the Pacific are critical tasks executed by the TSC to ensure the GCC's operational requirements are met on time. Following the attack on Pearl Harbor, the United States developed a strategy to set the theater for future operations; however, transportation distribution resources were limited, there was a lack of appropriate facilities, and mountains of supplies were received and not prioritized or organized for distribution.[21] These lessons from World War II continue to illustrate the importance of a unity of effort during JRSOI in the region, which ensures the central coordination of the entire process.

Although JRSOI begins when personnel and equipment arrive at the POD, the theater must be set prior to JRSOI to ensure the distribution network, facilities, and support are in place to support the arrival of forces, equipment, and materiel. The TSC executes the following during JRSOI:

- establishes theater lines of communication and nodes
- identifies, assesses, and provides transportation
- controls facilities and infrastructure
- coordinates use of land transportation and DOD-controlled facilities
- synchronizes transportation reception activities
- executes common user land transportation responsibilities for peacetime land transportation
- executes movement control as designated by the GCC.[22]

Through the execution of JRSOI, the TSC ensures the joint force has the required forces, equipment, and materiel at the right time and the right place in alignment with the GCC's operational requirements.

Sustainment Preparation

A key aspect of sustainment preparation of the theater is the theater logistics analysis as described by doctrine or the Theater Sustainment Posture Review (TSPR) developed by USARPAC for the Indo-Pacific region. The TSPR is the culmination of 7 months of analysis conducted by the 8TSC that enabled a granular review and analysis of sustainment across the Pacific to identify threats, capabilities, agreements, and gaps that would impact sustainment of the joint force, including alternatives and mitigating measures to counter potential risks to sustainment. The TSPR revealed several sustainment gaps that could potentially prevent the joint force from extending operational reach, endurance, and freedom of action during conflict. Subsequently, the information provided by the TSPR has led to an integrated effort by the JLENT to develop a focused plan to ensure sustainment of joint force operations as a part of the joint concept for contested logistics throughout the Indo-Pacific.

Sustainment Support Within the Theater

Sustainment support across the theater requires the integration and synchronization of all Services, multinational partners, host nations, and governmental and nongovernmental agencies. The partnerships strengthened through bilateral and multilateral exercises become imperative to the successful execution of support. We work together to execute sustainment and distribution within the theater alongside the expeditionary sustainment commands, sustainment brigades, combat sustainment support battalions, and JLENT partners.

The Theater Army is frequently tasked by the GCC to provide common-user logistics (CUL) and support to other Services. CUL are materials or service support shared with or provided by two or more Services, DOD agencies, or multinational partners to another Service, DOD agency, non-DOD agency, and/or multinational partner in an operation.[23] CUL generates significant sustainment support and eliminates redundant sustainment capability among multiple agencies through the assignment of CUL responsibility to the TSC. The TSC is often tasked with providing the following CUL:

- wartime classes I, II, III (B), IV, and IX in-theater receipt, storage, and issue
- medical evacuation
- transportation engineering
- financial management
- chemical ammunition support
- airdrop equipment/systems
- billeting, medical, and food service support.[24]

The TSC is responsible for the theater distribution network that enables joint force operations. The distribution network is composed of four separate

networks including physical, informational, financial, and communications. The theater distribution network is the center of gravity for joint force operations and is managed by the distribution management center within the TSC. The TSC serves as the distribution manager for the intra-theater segment of the distribution network and is typically assigned executive agency for surface distribution in the theater segment. The establishment of the distribution network is accomplished through parallel and collaborative planning and decentralized execution at echelon. During competition, the distribution network enables operational reach, endurance, and freedom of action and builds combat power. It is how sustainment is moved throughout the theater to meet the combatant commander's priorities and requirements. The management and operation of the distribution network require joint integration to ensure maximized throughput, optimized infrastructure, and centralized management.[25] It is critical that the TSC works closely with strategic enablers to ensure the synchronization and seamless flow of sustainment from the strategic support area into theater. The establishment and operation of the intra-theater distribution network may be one of the TSC's most critical roles during competition due to the requirement to sustain the joint force during joint all-domain operations.

Conclusion

As we assess the state of the world and consider the uniqueness of the mission in the Indo-Pacific theater, and the Army continues to modernize in preparation for the next global war, the Theater Army continues to set the groundwork for future conflict in the Indo-Pacific through continuous operations, activities, and investments. It is crucial to remember and understand that the Theater Army provides a full range of unique capabilities that enables joint force operations throughout the Indo-Pacific during LSCO and JADO.

The Army's greatest strength in the AOR is its long history in the Pacific. In a 1948 speech to the House of Commons, Winston Churchill paraphrased Santayana when he said, "Those who fail to learn from history are condemned to repeat it." Throughout World War II, the Army learned several hard lessons, including the power of integration, access, posture, and presence in the Pacific. The U.S. military must continue to execute joint operations in the Pacific to understand how the capabilities of each Service can be integrated to achieve strategic advantages against near-peer competitors.

The TSC will remain critical to the support of the Theater Army and the joint force throughout the Pacific as it leverages theater security cooperation activities to gain access throughout the AOR to project and posture combat power forward to deter aggression and respond to conflict or crisis when the time arises. Although the next Indo-Pacific conflict may begin in the air or at sea, the importance of land power can never be minimized. To win the war, eventually we will have to own the land and put boots on the ground. The Theater Joint Force Land Component Command will be ready and postured for this mission, and the TSC will provide the unique foundational capabilities that the joint force will need to win in future LSCO and joint all-domain operations. **JFQ**

Notes

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President Joe Biden delivers remarks on war in Ukraine, Saturday, March 26, 2022, at Royal Castel in Warsaw, Poland (The White House/Cameron Smith)

America Must Engage in the Fight for Strategic Cognitive Terrain

By Daniel S. Hall

The role of nonmilitary means of achieving political and strategic goals has grown, and, in many cases, they have exceeded the power of force of weapons in their effectiveness. . . . The information space opens wide asymmetric opportunities to reduce the combat potential of the enemy.

—Valery Gerasimov
Chief of the General Staff of the Russian Armed Forces[1]

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In February 2017, rumors of a Lithuanian girl's rape by German soldiers belonging to a North Atlantic Treaty Organization (NATO) battlegroup rapidly spread on social media. The allegations evoked visceral

German film director Leni Riefenstahl looks through large camera with cinematographer Sepp Allgeier during Nazi Party Congress in Nuremberg, September 5–8, 1934, while filming *Triumph of the Will* (Everett Collection)

reminders of Nazi occupation during World War II. Despite the Lithuanian government's insistence that the rape never occurred, the persistent rumor jeopardized Germany's participation in NATO's Enhanced Forward Presence mission. NATO suspected that the rumor originated in a Russian propaganda source. The rumor was eventually quieted, with NATO commanders stressing that defending against false narratives is essential for sustaining the Alliance's cohesion.[2] Modern societies live in an information-saturated age, in which manipulators take advantage of environmental and human factors to make it difficult for people to distinguish truth from fiction. This opening vignette serves as a rudimentary example of how propagandists exploit these factors to weaponize information to advance their political agenda.

Strategic competitors seek influence over geopolitical relationships to balance against the United States. However, they generally deem direct military confrontation too risky to achieve their strategic aims. Therefore, instead of a purely forceful approach, they may seek opportunities to employ psychological, ideological, and informational approaches waged within gray zones to unbalance U.S. hegemony.[3] The term *gray zone* is commonly associated with military operations that blur the lines between war and peace. However, *gray zone* in the context of this article is used to describe the application of nonmilitary means that couple advancements in psychosocial science with cutting-edge information technology in psychological capitulation strategies intended to erode the West's will to resist. The manipulation of strategic cognitive terrain via gray competition zones characterizes modern warfare, serving as an example of an attack on the people's "passion" part of Carl von Clausewitz's "paradoxical trinity."

Clausewitz emphasized in his unfinished manuscript *On War* that war's nature requires the continual balancing of passion, chance, and reason.[4] Imbalance between the trinity can tip significant strategic advantages to an opponent. The irreversible psychological momentum (that is, reason) that North Vietnam gained once American societal support (passion) eroded following the 1968 Tet Offensive (chance) exemplifies the strategic repercussions that can occur when the paradoxical trinity is disturbed.

Many experts agree that U.S. national security is increasingly threatened as opponents push anti-West information toward the center of conflict.[5] However, few publications offer recommendations for ways the U.S. military can defend against perceptual manipulation. Countering weaponized information

with military means is problematic, because liberal societies value well-intentioned, credible information. Additionally, political scientist Joseph Nye counsels that informational credibility prospers in uncensored and critical civil societies, whereas government-subsidized information is perceived as "rarely credible."[6] Thus, the U.S. aversion to government-sponsored ideological messages hampers the military's ability to counter threat narratives.

Given the relative ease with which adversaries conduct perceptual manipulation operations that dominate strategic cognitive terrain, inaction is no longer a viable option. This article therefore seeks to arm the Department of Defense (DOD) with ways to close exploitable cognitive gaps where malignant information thrives. Cognitive dissonance theory and interrelated psychodynamic concepts are introduced to illustrate the relative ease with which societal perceptions are manipulated. These concepts are applied to Russia's fight for strategic cognitive terrain to demonstrate how rivals manipulate societies to realize their national security aims. Recommendations are also provided to help the U.S. military operationalize global integrated plans that protect the strategic cognitive domain against societal perceptual manipulation.

Shades of Propaganda

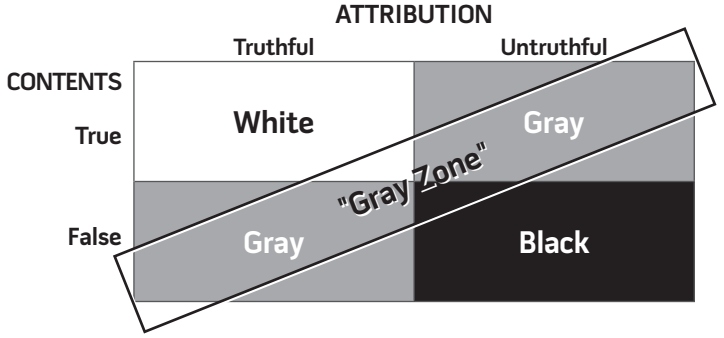
In the article "Propaganda: Can a Word Decide a War?" Dennis Murphy and James White reference the Joint Chiefs of Staff definition of "propaganda": "any form of communication in support of national objectives designed to influence the opinions, emotions, attitudes, or behavior of any group in order to benefit the sponsor, either directly or indirectly."[7] Propagandists have historically combined compelling images with manipulated narratives to sway human affect. Consider the film *Triumph of the Will*, intended to legitimize Adolf Hitler's Nazi ideology, which demonstrates the power of connecting dazzling imagery with messaging to influence opinion. At the time, such far-reaching propaganda campaigns could be lengthy and expensive undertakings. In contrast, modern communications afford states relatively cheap means by which to transmit appealing messages at a ceaseless pace. Contemporary societies are bombarded by captivating stimuli as a result. Tidal waves of information make it nearly impossible to sift through terabytes of data to identify the discrete bits that reveal truth. Protecting populations against propaganda is difficult because individual personality traits affect each person's susceptibility to manipulation. Modern communication's ease at transmitting information therefore opens endless opportunities for adversaries to broadcast ever more dangerous genres of propaganda.

Strategic communications expert Donald Bishop classified people's individual information vulnerabilities into black, white, and gray zones (see figure 1).[8] The willingly deceived reside in the black zone social space. Their rejection of universally accepted explanations makes them unreliable collaborators; all sides can easily mislead them. Equally in the minority are those in the white zone, whose high standard for determining truth makes them hard to fool. Most of the strategic cognitive terrain is the gray zone, occupied by people who are influenced by catchy headlines and other forms of "click bait" and form their judgments in part on that basis. Such consumers of information are usually not happily deceived. However, whereas information is plentiful, human attentional resources are extremely limited. Human task-shedding tendencies to alleviate cognitive load lower the threshold for determining truth. Gray zone propaganda therefore constitutes the most dangerous form of propaganda, because these time-saving measures often lead to misjudgments by people in the gray zone.

It is important to study the mechanisms of gray propaganda to lay a foundation for understanding how exploiters compete for attention. Unlike black propaganda, which attributes the origins of dishonest information to false sources, gray propaganda conceals the origins of semi-plausible information with unattributable sources.[9] Because strategic competitors typically seek positive global opinions, the use of black propaganda is counterproductive; it is easily invalidated. Gray propaganda is better suited to delivering the desired perceptual effects; it is difficult to disprove.[10] Strategic competitors have therefore invested heavily in social and mass media outlets to extend their strategic communications reach to broader audiences.

Investments in information technology alone are not sufficient to destabilize liberal democratic systems. The psychological efficacy of information is the most critical aspect of realizing a strategic vision. Thus, successful information operations stimulate human behaviors toward desired perceptual objectives.[11] Understanding how exploiters manipulate complex human perceptual processes is fundamental when designing counterpropaganda operations to protect societies from malign information campaigns.

Figure 1. Propaganda Zones



Source: Donald Bishop, "Elements of U.S. Informational Power," lecture to Joint Advanced Warfighting class, Joint Forces Staff College, Norfolk, Virginia, October 11, 2019.

Manipulating Perceptual Constructs

Many information experts concur that strategic competitors are pushing societal perceptions toward the center of conflict.[12] Yet few publications provide explanations on how competitors can successfully leverage perceptual manipulation to achieve political objectives. Dennis Murphy and Daniel Kuehl touched on cognitive dissonance theory as means for "seeking a synergistic balance between securing connectivity and exploiting content to achieve cognitive dissonance leading to behavioral change."[13] But they offered no insights into how cognitive dissonance can be leveraged to spark desired behavioral change within whole societies. Incomplete literature on perceptual manipulation led communications expert Jess Nerren to advocate for renewed investigation into the theory; she writes that "the rise of fake news and the drive for greater media literacy" have opened new opportunities to explore "cognitive dissonance and [its] effects on behaviors."[14] Therefore, the present article discusses how cognitive dissonance theory, which is noted for its scientific reliability in terms of explaining behavioral change, is a good starting point for exploring how manipulators can create gray propaganda that achieves its intended strategic effects.

Cognitions are ideas, attitudes, and beliefs that form the constructs of human perception.[15] Cognitive theory holds that people strive to maintain coherence between cognitions. Inconsistent cognitions initiate anxiety, which causes a person to rebalance cognitions and thereby relieve internal tension.[16] Studies on dissonance show that even simple inconsistencies, such as failure to signal when changing lanes in busy traffic, can induce discomfort that a person must harmonize.[17] The reduction mechanisms available for people to diminish dissonance (combined below with examples from the lane-changing situation) include (see figure 2):[18]

- terminating inconsistent cognitions (always signal when changing lanes)
- changing original cognitions to match new cognitions (never signal when changing lanes)
- trivializing cognitions (others do not signal when changing lanes)
- considering new factors to balance cognitions (removing hands from the steering wheel to signal can jeopardize vehicular control).

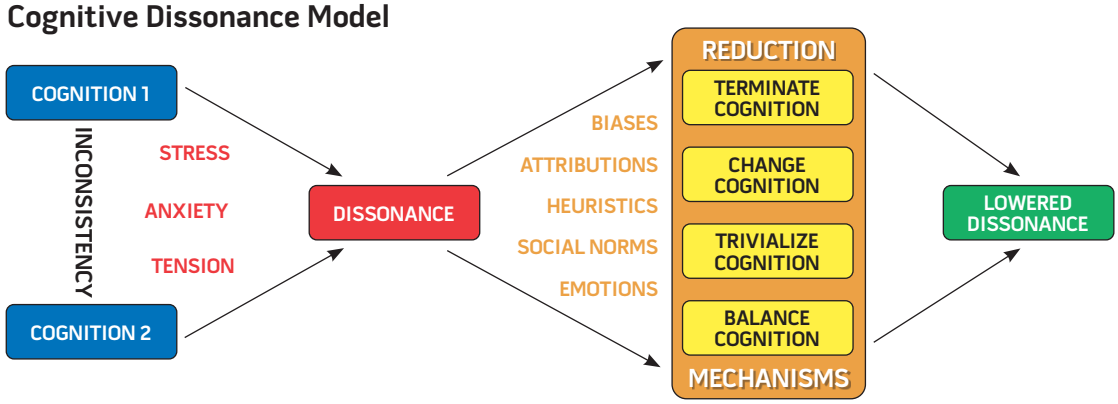
It is important to note that the dissonance reduction mechanisms available to humans are subconscious processes. Innate limitations on self-awareness make humans extremely susceptible to manipulation. The complex psychodynamic processes that humans employ to diminish dissonance provide propagandists several avenues by which to steer perceptions toward the center of conflict.

Understanding the power that beliefs hold over one's psyche—and how reduction mechanisms are susceptible to manipulation—is critical. The persistent effects of beliefs on human perception are so influential that they cause people to automatically dismiss counterinformation,[19] and human preference for being right activates heuristics that bar critical thinking. These cognitive barriers lead to biases that focus efforts on identifying evidence that only supports one's own conclusions. Exploiters take advantage of these human tendencies to fabricate propaganda that influences people to not consider even more plausible explanations for events.

Anxiety's principal role in cognitive dissonance places emotions as the fundamental force behind perceptual change.[20] Strong emotions are difficult to ignore, whereas weaker emotions quickly subside. Studies of online content "virality" discovered that anger- or fear-inducing narratives travel faster, reach more audiences, and persist longer than positive-arousing narratives.[21] Exploiters harness prolonged periods of strong negative emotions to change people's cognitions to the benefit of the antagonist's agenda. Recall the furor described in the opening vignette when a horrifying rumor caused Lithuanian citizens to disfavor a recently heralded national security policy.

Though humans dislike anxiety, people regularly commit behaviors dissonant with their stated beliefs. A recent study found that peer group social norms and locus of control are powerful psychosocial constructs that allow people to commit dissonant behaviors without feeling guilty.[22] Those who exhibit high external locus of control are more likely to assign blame to others for their own actions. Additionally, a person is more likely to perform dissonant acts that conform to a peer group's social norms. Exploiters manufacture peer group environments that influence people to trivialize inconsistent cognitions and commit dissonant

Figure 2. Cognitive Dissonance Model



Army Soldiers from 350th Tactical Psychological Operations, 10th Mountain Division, conduct leaflet drop in several villages surrounding Hawijah, to reinforce need for self-government in Kirkuk Province, Iraq, March 6, 2008 (U.S. Air Force/Samuel Bendet)

behaviors that advance the exploiters' malign agendas. Furthermore, manufactured environments that assign scapegoats for peer groups to blame as the cause of their behaviors are exponentially more effective at instigating people to trivialize inconsistent cognitions.

Understanding the framework on which propagandists create environments that stimulate human affect via dissonance reduction manipulation enriches our understanding of how entire societies may be influenced to commit self-destructive behaviors. The good news is dissonance reduction manipulation alone will not permit exploiters to create narratives that sell to mass audiences. Exploiters must adeptly combine the art of persuasion with cognitive dissonance and other interrelated psychosocial constructs to develop gray propaganda that propels behaviors toward their desired objectives.

Attracting Strategic Audiences

Joseph Nye argued that government-controlled information cannot deliver desired strategic effects because its disingenuousness makes it unattractive to broad audiences. He reinforced this perspective by arguing that Chinese attempts to charm international audiences have produced limited returns.[23] As stated above, gray propaganda is not necessarily entirely untruthful; it is semi-plausible. However, recent changes in longstanding geopolitical alignments, such as Asia's Regional Comprehensive Economic Partnership's invitation for Chinese Belt and Road extension beyond the nine-dash line, suggest that asymmetric narratives such as China's can affect global audiences.

Robert Cialdini calls asymmetric narratives that deliberately mislead a recipient's behavior toward the benefit of the sender *weapons of influence* and asserts that weapons of influence are so persuasive that it is difficult for people to resist their attractive power. Cialdini notes that creating weapons of influence is simple because they require only psychological triggers to propel human behaviors toward intended perceptual objectives.[24] It is at this juncture that psychodynamic constructs become useful tools for propagandists. When injected into messages that grab attention, are simple to understand, and resonate with the receiver, manipulated dissonance reduction mechanisms constitute weapons of influence that persuade even the most skeptical consumers of information.[25]

However, manipulating the opinions of whole societies requires exploiters to design narratives that conform with targeted audience cultural and linguistic frames. Commonly held ideas passed through the generations guide societal behaviors; it is impossible to create a

Three Air Force F-22 Raptor aircraft assigned to 90th Fighter Squadron, Joint Base Elmendorf–Richardson, Alaska, fly alongside Air Force KC-135 Stratotanker aircraft assigned to 100th Air Refueling Wing at Royal Air Force Mildenhall, England, over Poland, August 10, 2022 (U.S. Air Force/Kevin Long)

one-size-fits-all narrative that can corral a unitary perspective on an issue.[26] Attempts to do so can result in targeted audiences forming interpretations that conflict with the sender's intent; this variable makes it difficult for propagandists to calculate whether audiences will form desired perceptions. However, as Clausewitz notes, people's passion can cause societal forces to act contrary to rational cultural norms.[27] Manipulated dissonance reduction mechanisms imbedded within culturally relevant narratives create psychological triggers that can thrust irrational societal tendencies to the forefront. These dynamics make it possible for societies to fall victim to gray propaganda.

To be successful, adversaries tailor gray propaganda toward aligned, neutral, and opposed actors who revolve around distinct perceptual centers of gravity (see figure 3).[28] Aligned actors champion the adversary's foreign policies; propagandists propel these actors toward perceptual objectives that advance their security agenda. Since neutral actors have geopolitical alternatives, propagandists exert more energy to propel them toward perceptual objectives that expand their security agenda. Whereas aligned and neutral actor orbits tend to act as if propelled by centripetal force, opposed actor disagreement acts as if propelled by centrifugal force against the adversary's perceptual center of gravity. Propagandists apply pressure to propel opposed actor perceptions toward increased ambivalence.

Psychological distance is more important than physical distance when classifying strategic actors. For example, though the Baltic nations share physical borders with Russia, they oppose the Kremlin's foreign policies. Wary of NATO's response when Russia is engaging opposed Western actors, Valery Gerasimov, chief of the general staff of the Russian military, acknowledged that modern information networks provided asymmetric advantages that can create permanent "long-distance, contactless actions" within opposing states.[29] Accordingly, exploration into how the Kremlin competes for strategic cognitive terrain within Russia's near abroad provides military analysts with a model to examine how adversaries employ psychological capitulation strategies.

Russia's Fight for Strategic Cognitive Terrain

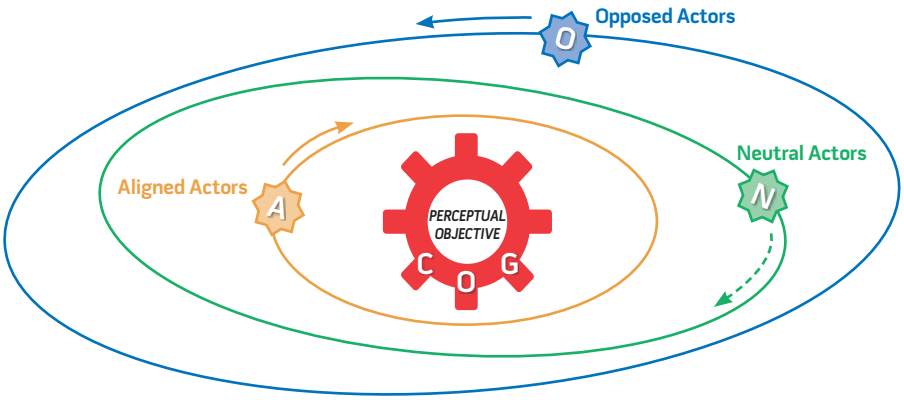
Geography shapes Russian perspectives on national security. Fears caused by numerous invasions[30] have etched an extreme paranoia of external powers in, to use the term of psychoanalyst Carl Jung, the *collective unconscious* of the Russian psyche. Maintaining a zone of influence along its borders therefore dominates the Kremlin's strategic culture. NATO's enlargement, as well as perceived U.S. backing of color revolutions in Georgia (2003), Ukraine (2004), and Kyrgyzstan (2005), has created the belief that an arc of crisis exists around Russia.[31] These beliefs intensify Russian paranoia and heighten desires to expand security zones.

Russian president Vladimir Putin aspires to stabilize the arc of crisis. Putin's "sovereign democratic" construct is therefore specifically designed to counter the West's encroachment in Russia's near abroad. Putin's sovereign democratic structure envisions the amalgamation of friendly neighbors who exercise complete control over their economies and maintain strong militaries to oppose liberal democratic influence.[32] Putin's goals are to secure Russia's borders and fracture NATO. However, certain that NATO will honor pledges to defend its members, Putin prefers indirect approaches over direct military confrontation. The Russian military's initiation of the so-called "special military operation" in Ukraine on February 24, 2022, exemplifies the Kremlin's operationalization of Putin's vision. The invasion of Ukraine ultimately seeks to secure what Putin perceives as the most vulnerable region for continued NATO encroachment along his near abroad, while simultaneously employing information campaigns that test NATO's unity and the West's will to resist Russian security objectives.

In 2013, Gerasimov challenged state apparatuses to not only learn the lessons of the nontraditional military means employed during the Arab Spring and the so-called color revolutions, but also to get ahead of the curve and figure out how the Russian military can apply them. Chief among his thoughts was the use of information warfare to reduce the combat potential of superior forces.[33] Gerasimov's thoughts on 21st-century warfare prompted the Russian General Staff to discover indirect approaches that place human perception at the center of gravity and open societal fault lines that turn liberal democratic norms and institutions against themselves.[34]

Two prominent examples—the Russian onslaught of gray propaganda that widened preexisting Ukrainian societal fissures to set conditions for the annexation of Crimea, and the introduction of "little green men" in the Donbas following Kyiv's 2013 Euromaidan demonstration—highlight the Kremlin's growing expertise at manipulating perceptions. Though this military intervention

Figure 3. Strategic Actor Model



President-elect Donald J. Trump stands on platform of Capitol during 58th Presidential Inauguration in Washington, DC, January 20, 2017 (DOD/Marianique Santos)

dampened Ukraine's budding relationship with the European Union, the Kremlin realized that it cannot achieve Putin's revanchist aims while NATO remains in its near abroad. Thus, lessons from Russia's 2014 intervention in the Donbas most likely led to Putin's 2022 decision to invade Ukraine, thereby permanently removing it from NATO's influence, while also continuing to employ gray propaganda against opposed Western strategic actors to secure territorial gains.

Putin must retain aligned actor support to counter further liberal democratic encroachment within Russian zones of influence. Continuous news coverage of U.S. activities in the Balkans and Central Asia reinforces domestic audience biases that the United States surrounds Russia to retain global hegemony. The Kremlin points to the nearly $500 billion annual discrepancy between U.S. and Russian defense spending to reinforce beliefs of the U.S. resolve to contain Russia.[35] Additionally, reminders of how NATO took advantage of Russia's weakness following the Soviet Union's fall have stimulated strong negative emotions that affect Russian society's inconsistent cognitions between authoritarianism and liberal democracy. Finally, Putin's nonstop assertions that Russia is ultimately fighting U.S.-backed Western proxies during the war in Ukraine illustrates the Kremlin's current use of propaganda to retain aligned actors.

Russia aggressively pursues neutral actor movement toward sovereign democratic architectures to balance against the West. The Kremlin exploits pan-Slavic identities in the Commonwealth of Independent States to tightly couple neighboring nations with Russia. Kremlin-funded language, youth education, and Russian Orthodox Church programs create "vertically integrated propaganda networks" that stretch across Eurasia.[36] Constant depictions of Western aggression against Serbia, Libya, Syria, and Afghanistan have incited perceptions of liberal democratic conspiracies to destabilize non-Western states and have nurtured confirmation biases that a resurgent Russia is needed to counter the United States.

Russian gray propaganda fosters opposed actor ambivalence toward its efforts to undermine the West's collective capacity to refute Putin's foreign policy agenda. The Kremlin masterfully exploited the 2015–2016 refugee crisis to swell fear throughout the European community.[37] The European Union's insistence that members maintain open borders caused a crisis of solidarity among national leaders. The crisis spurred the rise of populist governments in NATO members Poland, the Czech Republic, Hungary, and Turkey. Prime Minister Viktor Orban's advocacy of sovereign democracy as "a new model of governance for Hungary to follow" illustrates the success of Russian gray propaganda in cultivating strong negative emotions that led to societies' questioning of whether liberal governments could provide security.[38]

The United States is not immune to Russian manipulation. Avalanches of Kremlin gray propaganda during the 2016 U.S. national elections in an influence campaign intended to make voters trivialize inconsistent cognitions between

U.S. Servicemember and Slovak soldier discuss tactics during NATO exercise Strong Cohesion 2022, in Slovakia, September 22, 2022 (NATO)

liberal and populist agendas. A 2017 intelligence community assessment found that Putin personally initiated the information campaign preferencing Donald Trump's election.[39] Russian state-sponsored news outlet Russia Today (RT) broadcast hundreds of pro-Trump news stories to nearly 85 million American viewers. RT-produced pro-Trump YouTube videos received nearly 1 million more views per day than pro–Hillary Clinton advertisements. Moreover, the assessment concluded that Russian trolls created more than 50,000 Facebook and 400,000 Twitter accounts whose daily pro-Trump posts were shared millions of times.[40]

When asked why Putin would prefer him in the Oval Office, Trump responded, "Because I'm a great guy."[41] Or did Putin simply aid the candidate who claimed that NATO was obsolete in getting elected to the U.S. Presidency? Though a 2020 survey's finding that most people considered Putin more trustworthy than Trump indicates that the United States is losing the cognitive fight, the following recommendations discuss ways to win the battle.[42]

Recommendations and Conclusions

Information experts routinely advocate for increased intellectual property protection, election hardening, and education of citizens to identify "fake news" as ways to protect the United States against asymmetric narratives.[43] These proposals require legislative measures that do not leverage military capabilities to defend the Nation against perceptual manipulation. Politicians must also enact laws that allow DOD to incorporate the psychosocial methods discussed throughout this article into developing global campaign plans to counter gray propaganda.

The U.S. military should codify a cognitive warfighting domain. Current joint doctrine emphasizes understanding information's pervasiveness to determine effects on relevant actors and military operations.[44] However, Joint Publication 3-13, *Information Operations*, does not discuss how to shape target audience perceptions for desired strategic effects. Thus, the Joint Staff should formalize the cognitive warfighting domain to provide the military enterprise with the ways and means to prevail on the cognitive battlefield. This recommendation does not advocate for the creation of another combatant command but is intended to encourage the Joint Staff to consider reflagging U.S. Cyber Command and consolidating cyber, electronic warfare, military information support operations, civil affairs, and all other joint information functions under a U.S. Cognitive Dominance Command.[45] Furthermore, this recommendation is not intended to replace cyber operations with information operations. Rather, it is intended to

emplace the entire information spectrum as *the* joint warfighting integrator when competing for highly contested strategic cognitive terrain.

The U.S. military should also institute occupational specialists trained to scour the Web and social media platforms for gray propaganda. These "Cyber Scouts" would surveil gray zone social spaces where trolls lurk. Their reconnaissance objective would be the identification of asymmetric narratives requiring immediate refutation. Armed with artificial intelligence (AI) algorithms, Cyber Scouts could work with foreign agents operating within the virtual battlefield. AI data could then be fed to joint targeting operations that would expose and abolish troll farms, "sock puppets," and other exploiters as part of dismantling networks that propagate gray propaganda.

Updating Murphy and Kuehl's "3C" information power model of connectivity, content, and cognition to include "compete" and "comprehend" will assist military planners with operationalizing counterpropaganda plans.[46] Competition prioritizes getting it right over being right. Lessons learned from the 2008 Russia-Georgia war found that clarity and consistency are more important than micromanaging messages in a 24/7 news cycle.[47] The contrast principle holds that initiating messages are more persuasive than responding messages.[48] Joint commands should therefore adhere to that principle and broadcast messages that immediately control narratives.

The downing of Malaysian flight MH17 over eastern Ukraine in 2014 highlights the importance of the contrast principle. Anticipating blowback, the Kremlin immediately blamed Ukraine for shooting down MH17. By the time investigators had proved that a Russian-supplied surface-to-air missile had downed the airliner, the news cycle had already moved on to other headlines. Thus, staff fighting for cognitive terrain should not waste time responding to every piece of mis- and disinformation; their sheer volume prevents it. They must instead immediately provide commanders with clear statements when fleeting opportunities arise to erode an adversary's credibility.

Joint commands should incorporate professionals who are fluent in target audience cultural frames. Linguistics, anthropological, and other cultural experts will enhance the planning staff's ability to determine what may resonate with specific populations. Staff can use cultural frames consisting of rituals, symbols, and legends to develop a society's "collective unconscious profile." Consider the "Century of Humiliation" as it pertains to China's collective unconscious and how it influences the country's fervor for supplanting U.S. hegemony in the Pacific. Collective unconscious profiles would help planners harvest narrative potential for targeted audiences.

Joint commands should incorporate psychologists and sociologists to turn collective unconscious profiles into persuasive content. Planners could also leverage graphic artists and advertising specialists to transform messages into influential memes and videos that would immediately grab the receiver's attention, be simple to understand, and resonate. Military planners would need to share proposed themes and messages with U.S. Embassy public affairs offices in strategic actor nations to gain concurrence on unified messaging approaches. This step would ensure that the right message went to the right audience at the right time.

Joint commands must increase their connectivity to mainstream communications to reach target audiences. Collaborating with preexisting partners would be an inexpensive way to increase capacity. For example, European Combatant Command planners could collaborate with the NATO Strategic Communication Center of Excellence to exploit popular social media platforms. Planners could also leverage Special Operation Command's WebOps experts to develop influential memes and videos to refute gray propaganda.

Cognition is where the human mind comprehends information. Successful information operations must stimulate human affect toward intended perceptual objectives. Psychologists can provide dissonance reduction approaches for inclusion within culturally framed messages to produce desired perceptual effects. Planners can use connectivity capabilities to collect the numbers of retweets, shares, and likes to measure message proliferation, persistence, and strategic actor responses. The most important measure is the shrinking of malign actor presence within the strategic cognitive terrain.

Combining cutting-edge communications with psychosocial science to employ psychological capitulation strategies has changed the character of modern war. Adversaries combine half-truths with psychodynamic behavioral constructs to compete for strategic cognitive terrain. The U.S. military currently lacks the authorizations and capabilities required to protect societies against gray propaganda. Peter Singer and Emerson Brooking quoted an unattributed U.S. Army officer as saying, "Today we go in with the assumption that we'll *lose* the battle of the narrative."[49] The United States can no longer accept loss in the information fight. As Dennis Murphy and James White cautioned, "Failure to . . . react to propaganda cedes the international information environment to the enemy"[50] and allows adversaries to continuously outflank us on the cognitive battlefield. **JFQ**

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Lord Nelson at the Battle of Trafalgar, by Hendrik Frans Schaefels, 1878, oil on canvas (Palais Dorotheum)

British Successes in 19th-Century Great Power Competition

Lessons for Today's Joint Force

By Isaac Johnson, Erik Lampe, and Keith Wilson

History lights the often dark path ahead; even if it's a dim light, it's better than none.

—James Mattis[1]

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It is no accident that many of our nation's finest military minds—George Patton, Douglas MacArthur, Dwight Eisenhower—were avid readers of history. Former Secretary of Defense James N. Mattis's suggestion that "history lights the . . . path ahead" has proved accurate time and again. As the U.S. security establishment pivots from a focus on counterterrorism to one of countering peer adversaries in new domains of conflict, history may again serve as a guide. As this pivot is under way, the country finds it is no longer the clear global hegemon but rather is operating in a multipolar global power

structure. How do we navigate this transition? In the decades after the American Revolution, Britain not only maintained its vital interests despite the loss of the American colonies, but it also successfully navigated a multipolar power structure to strengthen its position in the international community. This article explores 19th-century British strategies to maintain and expand global power that might offer helpful insight to today's joint force.

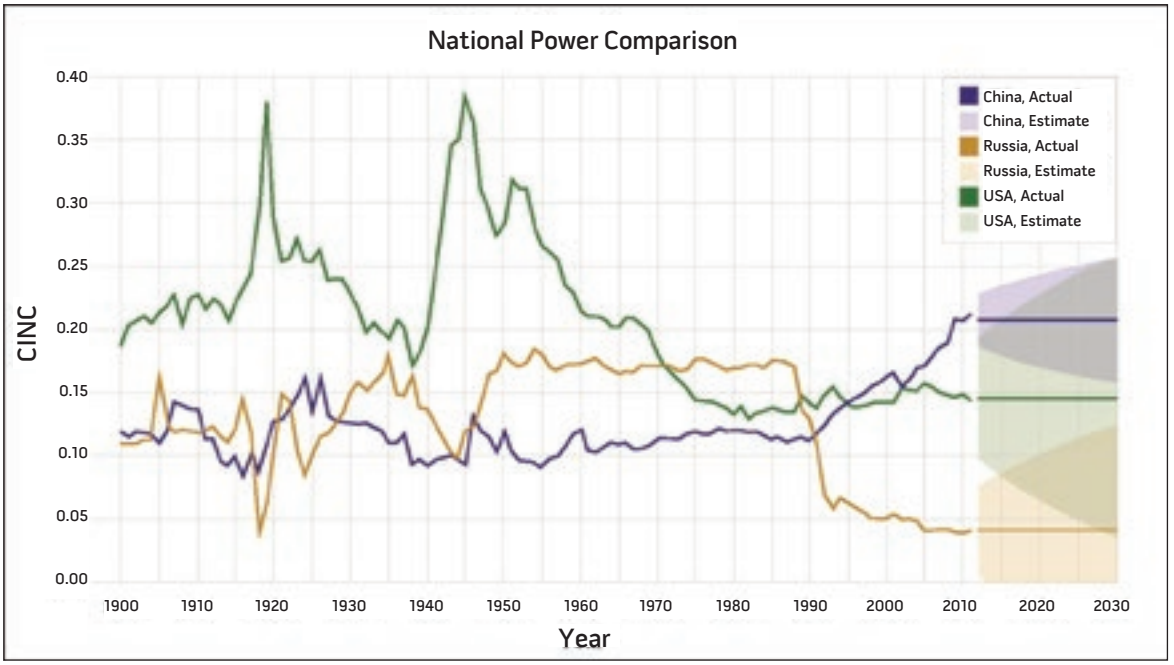
Britain's success was owed in large part to the employment of strategic agility. According to the Center for Management and Organization Effectiveness, strategic agility is "the ability for organizations to see shifts inside the . . . environment in which they operate. [It is] about staying competitive by recognizing and capitalizing on opportunities as well as identifying potential threats and mitigating or preventing them."[2] The British undertook both a reprioritization of global interests and a military rightsizing; pivoted to a new economic model that entailed a modified approach to key international relationships; and embraced new technology, applying a public-private approach in doing so. The modifications made by Britain apply in meaningful ways to the challenges presented to the joint force today. For example, the concept of global integration offers both strategic opportunity and risks, with relatively scarce resources requiring clear and consistent prioritization to avoid overcommitment.[3] This article begins with pertinent geopolitical and historical context, transitions to presenting specific evidence of British strategic agility, and concludes with recommended applications of these observations for the joint force.

Background

The relative position of the United States in the global distribution of power since the Cold War has received considerable academic attention. Political scientists commonly accept that the fall of the Soviet Union marked the transition from a bipolar world to one in which the United States enjoyed global hegemony. However, 1991 was some time ago, and the United States has faced enormous challenges to its supremacy over the past 30 years. Political science offers a compelling theoretical basis for the transitory nature of hegemony, and security scholars have studied the topic of American unipolarity and prospective decline for the past several decades.[4] While some current works suggest the United States remains the sole global superpower, more argue it either is at risk of losing or has already lost its status as hegemon.[5] Much of the variance in perspective centers around the devices employed to measure relative power.

Perhaps the most applied data set on power is the Correlates of War project, which uses a composite index of national capability measurements to compare total power and sources of power between states over time.[6] The figure depicts the findings from these data that highlight a surge in relative power by China and a plateauing of U.S. power, offering strong evidence the United States now operates in a multipolar environment and perhaps has since the earliest days of its counterterrorism fight after September 11, 2001.

Figure. Composite Index of National Capability Comparison with Forecast (China, Russia, United States, 1900–2030)



Source: Based on J. David Singer, "Reconstructing the Correlates of War Dataset on Material Capabilities of States, 1816–1985," *International Interactions* 14, no. 2 (1988).

Chromolithograph of William Simpson's *India: Ancient and Modern*, illustrates return visit made by Viceroy Lord Canning to Maharaja Ranbir Singh of Jammu and Kashmir, on March 9, 1860, during viceroy's progress through upper India (British Library)

While U.S. decline may be a matter of debate, comparative gains by China make evident that, at the very least, the United States is no longer the world's hegemon.

Britain's shifting place in the world in the mid-18th through 19th centuries serves as a helpful comparison for the evolution of the political and economic position of the United States over the past 30 years. In 1763, Britain emerged from the Seven Years' War as the dominant global power, having secured North America and India from France and Spain.[7] According to James Holmes, Britain presumed that such a complete victory put an end to Great Power competition, so it allowed its military—and especially its navy—to stagnate.[8] France and Spain, however, spent 20 years reconstituting their forces, determined to rebound from their losses in 1763.[9] Meanwhile, increasing instability across the British Empire and a growing resistance movement in the American colonies forced the British military to shift to internal defense and counterinsurgency operations.

By 1775, Britain was fully engaged against a revolutionary insurgency in North America that eventually expanded into another global war with a resurgent France and Spain. With the conclusion of hostilities in 1783 under somewhat unfavorable terms, Britain lost its status as the unopposed hegemon to become an incumbent competitor vying for position in an evolving multipolar political environment.[10] Having aided substantially in the American military victory during the war, France gained ascendancy and began establishing norms regarding free trade to exploit as economic leverage, while French revolutionary idealism gained influence over Britain's war-weary people.[11] To further complicate matters, the British government had to cope with a significant blow to its international reputation, pay down an enormous national debt, and manage an internal political crisis between increasingly antagonistic parliamentary factions that destabilized the government and weakened its legitimacy among the British population.[12]

Britain learned a valuable lesson from the American Revolution: it cannot afford to sacrifice strategic flexibility to maintain combat power in a single peripheral theater to the detriment of vital

national concerns—for example, more economically essential colonies such as the Caribbean or even the homeland.[13] From the end of the war and through the 19th century, Britain shaped its decision-making from its wartime experience and a renewed fear of losing further global influence to the French.[14]

Much like Britain following the Revolutionary War, the United States finds itself in transition. British success in the Seven Years' War and U.S. success in the Cold War lulled both great powers into a false sense of security regarding the durability of their dominance on the world stage, enabling challengers to reestablish capabilities and influence relatively unopposed. Like Britain in 1783, the United States is emerging from 20 years of counterinsurgency operations into an environment in which advances in capability and world influence by global competitors challenge its position on the world stage.[15] The United States now faces ascendant and resurgent competitors in Russia and China, a public tired of war, a reshuffling of financial priorities, internal political tensions, and enduring worldwide political and military commitments.[16]

As the United States increasingly operates within multipolarity, the presence of stronger strategic challengers renders the pursuit of national interests more difficult. It is only natural to ask how the United States might best compete in this environment. Nineteenth-century Britain's example in successfully applying strategic agility to gain and maintain influence in a multipolar environment suggests an important lesson for U.S. decisionmakers and the joint force. The following three sections offer evidence of British strategic agility across three pillars—strategic prioritization, a whole-of-government pivot, and incorporation of key technologies—each of which provides lessons for the joint force today.

Britain's Strategic Prioritization

The end of the American Revolutionary War represented a reflection point for British leadership. Amid squabbling over who was to blame for the loss of the American colonies, attention quickly shifted to what mattered most: Britain's remaining security obligations and the required size of force to address these priorities. In a notably proactive step, Britain undertook a deliberate reprioritization of strategic interests and then rightsized its force to address these interests. The British realized they could not be everywhere at once and do everything they might like. They had to make difficult choices about where to apply scarce resources and which critical gaps to fill. Taking this step was not automatic, but they saw that the consequences of not reprioritizing were likely to be a rapid decline of the empire as overcommitment further set in. Therefore, establishing clear priorities and properly resourcing them was the first and most important example of British strategic agility.

Following the surrender of Lord Cornwallis in Yorktown in 1781, well before the war had ended, the British decided to prioritize interests in the

Aircraft from United Kingdom's carrier strike group led by HMS *Queen Elizabeth*, and U.S. Navy carrier strike groups led by flagships USS *Ronald Reagan* and USS *Carl Vinson*, fly in formation during carrier strike group operations in Philippine Sea, October 3, 2021 (U.S. Navy/Gray Gibson)

Caribbean, maritime Europe, and the Indian Ocean over its American colonies.[17] Continued pressure from strategic adversaries France and Spain in new combat theaters and challenges to Britain's expeditionary force caused Britain to relegate the Americas to a secondary interest to preserve strength elsewhere. Britain placed the defense of its claims in the Caribbean Islands above all other strategic priorities, risking even invasion of the homeland, believing the loss of the sugar islands would have catastrophic consequences to its greater imperial goals.[18] By this time, the plantation system in the British West Indies was the British economic center of gravity, which financed the empire's global reach.[19] In particular, Britain drew considerable wealth from Jamaica, making it the most valuable island in the most valuable colony, the loss of which the British could least afford.[20]

Next, Britain prioritized defense of its homeland through the preservation of primacy in maritime Europe, as it remained engaged in Great Power competition with France, Spain, and the Dutch Republic over a range of colonial and commercial issues. Britain stood largely alone fighting an extensive global land and naval conflict, while invasion of the homeland by European antagonists remained a serious concern. France aimed to gain equal status to Britain's and threatened to invade territorial Britain to achieve this goal.[21] Meanwhile, losses mounted in the western Mediterranean region in addition to those in the Americas. For example, a French and Spanish fleet retook Minorca—a strategic deep-water port—from the British in August 1781, putting the British fortress at Gibraltar at risk and threatening further to degrade Britain's position near its home waters.[22] Britain, therefore, prioritized the active defense of local and regional maritime interests as a principal means of defending the homeland.

Third, the British prioritized interests in India for its natural resources, market opportunity, and geographic positioning. Britain came to rely on the vast amounts of commodities available on the Indian subcontinent, including cotton, silk, porcelain, spices, tea, and coffee. Many of these resources were extracted, returned home for production, and then sold back to or through India. India also represented a gateway to China—yet another market to sustain Britain's global empire.[23]

Britain's decision to downgrade its American colonies in priority required overcoming considerable thinking associated with sunk costs.[24] Ultimately, Britain did not possess sufficient assets to protect all its interests, forcing a difficult decision about where its interests were most at stake. The American campaign, therefore, was reduced to a secondary interest. Additionally, Britain took to rightsizing its force. In the 30 years following the American Revolution, the British army grew from roughly 40,000 to 250,000 men for war with France from 1803 to 1814.[25] This increase in ground forces allowed the British to fight successfully across a range of fronts during the Napoleonic Wars, culminating

in the Battle of Waterloo.[26] Meanwhile, strategic reprioritization allowed Britain to concentrate its naval forces to defend itself at sea, both at home and across major trading routes.[27]

Efficiencies achieved by applying resources to clear priorities led to the consolidation of the Royal Navy's advantage over other powers, perhaps best reflected during this period by the defeat of French and Spanish fleets at the Battle of Trafalgar.[28] After these wars, Britain significantly reduced the size of its ground forces to more sustainable levels.[29] By the mid-19th century, the process of consolidating interests, setting clear priorities, and then adjusting the force to meet the needs presented by these priorities proved instrumental in Britain's rise to global hegemon during the later Victorian era.

Whole-of-Government Pivot

Following defeat in the American Revolutionary War and the signing of the Treaty of Paris in 1783, Britain faced multiple challenges: an oversize debt load from the previous two wars, a navy requiring expansion, and challenges from France and other colonial powers.[30] Britain realized its interaction with its colonies had to change lest it risk their loss from demands of self-governance or another colonial war.[31] Britain addressed this issue through a whole-of-government approach to change its economic model, increase utilization of treaties and agreements, and engage in coalition-building with partners to counter French expansion. This initial approach to contain France's ascendancy would serve as a blueprint for future British policies.

Britain had already started the move from mercantilism toward free trade economics prior to the Revolutionary War. As part of its diplomatic strategy, it attempted to engage France in trade, leading to a "most favored nation"–type treaty in 1786 between France and Britain.[32] This treaty would end with the French Revolution in 1789, forcing a change in Britain's engagement strategy with the new revolutionary French government and leading Britain to further embrace free trade across its colonies and with a growing number of neutral nations.[33] While mercantilism and protectionist policies would endure for several decades, the increased economic gain from free trade and manufacturing progress aided Britain in servicing debt, building coalitions, and expanding military capability and control.[34] Britain continued expanding free trade policies throughout the 19th century, including the 1843–1849 laws ending tariffs on imported grains and further agreements in 1860 to reduce tariffs between France and Britain.[35] As an island nation, Britain had to maintain the ability to project naval power and secure its global trade enterprise, which fed the British economic engine and sustained its expeditionary military capability.

Britain also employed laws, treaties, and agreements to stabilize theaters of operations while enabling moral and legal justification for action. The Jay Treaty of 1794 is one example of the British ensuring economic growth, enabling reprioritization of military resources, and securing U.S. neutrality.[36] The treaty gave the United States most favored trade status while leaving Britain free to embargo French trade and continue to impress foreign sailors, providing a source of labor critical to British naval strength.[37] Similarly, the Slave Trade Act of 1807 further justified British naval actions against slave-trading competitors and undermined a vital source of labor for France and its colonies.[38]

To further contain French expansion that threatened British interests, Britain formed or joined seven international coalitions between 1792 and 1815, allying with more than 20 nations, including Spain, Russia, and Austria.[39] Enhanced by its significant trade and manufacturing capabilities, the British subsidized allies within these coalitions to provide economic and military means to contain French influence.[40] Britain's ability to utilize a whole-of-government approach to building an economic and military defense structure, supported by a rapidly advancing joint force to enforce and protect these structures, was critical to containing France and establishing the foundation for reasserting British influence and global leadership.

Incorporation of Key Technologies

From 1760 through the end of the 19th century, Britain enjoyed successive industrial revolutions that helped advance its national interests. Although not all the advances during this era originated in Britain, the Industrial Revolution as a transformative process began in Britain and was British-led, and the results were exploited for British benefit to a greater extent than in other European powers of the time.[41] Several international relations theories assert that technological innovation is a critical variable in establishing political and economic system dominance.[42] A full description of the relationship between technology and Britain's 19th-century rise would fill its own essay. Still, the criticality of certain technological developments to Britain's attainment of its strategic goals warrants a brief treatment here.

As British international trade expanded throughout the 19th century, increased economic opportunity shrank the available labor pool from which the military could recruit.[43] This trend, compounded by a significant military reduction after the Napoleonic Wars and the continuing challenge of maintaining a global empire, required the British military to develop modern technologies to augment its limited manpower. As historian John Shy points out, European armies operated from the same technological base for more than a century, until the explosion of technology in the early 1800s radically advanced the conduct of warfare.[44] The British military's most notable advances developed or adopted by 1850 to exploit this expansion included the steam engine, the locomotive, interchangeable parts, the percussion ignition system, and the rifle.[45]

As noted, British naval capability lagged relative to that of other powers before the American Revolution, primarily because of attempts to reduce costs and increase efficiency in peacetime, which rendered them unprepared for the wars that would come.[46] After the American Revolution, the British admiralty endeavored to reinvigorate the navy; it had

made significant headway in increasing the number and quality of ships and regained dominance by the Napoleonic Wars.[47] Continued development in the 19th century of steam-powered ships and the incorporation of the first screw propeller in 1837 drastically increased the speed and agility of British warships while allowing them to maintain a full complement of weapons.[48] These new steam-powered ships, sustained by Britain's global supply network, served as the foundation of a new maritime force able to project power across the empire.[49]

On land, as on the seas, the steam engine enabled the development of transnational and transcontinental rail systems, which the British built across the empire to increase the speed and capacity of colonial export shipments during peace and to serve as a military transportation system during war.[50] Ironically, the expansion of rail infrastructure across the European continent reduced the

United Kingdom Royal Marines from 45 Commando and U.S. Army Green Berets from 10th Special Forces Group (Airborne) provide security before entering building during close quarter battle training at Grafenwöhr Training Area, Germany, September 22, 2022 (U.S. Army/Mercedes Johnson)

efficacy of British naval power—Britain's traditional source of strategic leverage—by reducing European vulnerability to blockades and increasing the speed and responsiveness of land forces to territorial threats.[51] Thus, Britain needed to make further advances in land power to maintain a competitive edge.[52]

Progress in industrial manufacturing and machining also allowed the mass production of advanced weapons technology. For example, the faster and more reliable percussion ignition system in firearms, standardized firearm components, and eventually breech-loading mechanisms elevated the rifle from a niche support weapon to the infantry's primary armament, significantly increasing the range and lethality of the core of the British army.[53] In addition, Britain used its significant manufacturing capacity to generate income and build coalitions across Europe to compete with France.[54] Although the British did not invent all these technologies, Britain's strategic flexibility in embracing scientific innovations from across Europe, its willingness to experiment with new tools and techniques, and its prioritization of funding for promising technologies kept it at the forefront of military advancement throughout the 19th century.

What Can We Learn?

The 2018 National Defense Strategy (NDS) describes a strategic environment rich with complexity, in which Great Power competition, rogue regimes, a weakening post–World War II international order, terror groups, and transnational crime threaten U.S. interests. The convergence of these threats is occurring as technology changes the character of war and conflict operates across domains with increasing speed and reach.[55] President Joseph Biden's 2021 Interim National Security Strategic Guidance (INSSG) continues to emphasize these themes, citing a revolution in technology, threats that defy borders, and a changing distribution of power across the world.[56] It would not be difficult to conclude from this description of our global environment that the United States must engage everywhere—and the NDS and subsequent guidance illustrate a prescription for doing so.

The concept of global integration highlights the interwoven nature of the threat environment, prompting commanders across the globe to recognize equities they have in challenges historically treated as beyond their responsibility. The United States, however, cannot sufficiently address all that threatens its interests. Instead, it must put consistent effort toward the highest strategic priorities, much as Great Britain did following the loss of the American colonies in 1781. Substantive differences exist between the U.S. operating environment and that of the British in the late 18th century. The American colonies were not an existential threat to Britain, so King George III could afford to relegate the Americas to a secondary interest without considerable risk. In contrast, much of what the United States treats as a lesser priority possesses the ability to cause significant harm to U.S. interests. For example, violent extremism is considered the fifth-most-important security threat today, following China, Russia, North Korea, and Iran. However, extremist organizations in several parts of the world possess the ability and intent to attack U.S. forces and their allies, if not threaten the homeland. No such risk attached to Britain in forgoing the American colonies.

Despite these differences, the critical parallel between British behavior in the late 18th century and the conditions in which U.S. joint force operates today remains: the necessity of clear prioritization of effort in a resource-constrained environment. We must be clear-eyed about the depth of challenges associated with the strategic environment; however, we must also be clear about where precisely we are focused and where we are assuming risk. And as the United States responds to a shifting environment with prospective new threats and activity from lower priorities, we must consider the risks of adjusting course too often. In addition to adhering to clear priorities, we must also secure a force size and structure able to meet those priorities.

Like Britain in the 18th century, the United States is engaged globally, depends on the sea, and operates with constrained resources and worldwide obligations, which require the joint force to partner across the whole of government to ensure U.S. interests are secured. The joint force must be able to defend trade routes and accesses that are critical to national economic growth. It must partner effectively not only across the whole of government but also with allied nations to ensure access and capability in the growing domains of cyber and space, each of which plays a key role in driving economic growth and enabling the force projection essential to protecting U.S. interests worldwide.[57] The United States must continue to use existing alliances, such as the North Atlantic Treaty Organization, while adapting its role for a multipolar world, and it must develop new military and economic coalitions to ensure freedom of trade.

Britain's 19th-century technological development provides two lessons for the modern U.S. joint force. First, the United States must aggressively experiment with, adapt, and adopt promising new technologies developed through public-private partnerships to maintain an edge against global competitors. Today's fourth industrial revolution offers a significant opportunity for the U.S. military to exert influence through technological innovation in various fields, including quantum computing, robotics, artificial intelligence, and biotechnology.[58] Examples abound of the U.S. military's current efforts to modernize, including a global defense network linking all military platforms into a digital nervous system as well as numerous projects by the Defense Advanced Research Projects Agency and various think tanks.[59] However, the U.S. military must resist the temptation to expend precious resources on new projects on the basis of the allure of novel technologies. It must first determine the strategic value of potential technologies, then pursue opportunities for developing the most promising ones through collaboration with like-minded private businesses.

Second, the United States must use the development and propagation of

novel technologies to strategic advantage by presenting allies and partners with alternatives to the technology and equipment offered by strategic competitors. As the INSSG attests, the United States amplifies its power by strengthening its partnerships. That strengthening should include mutual technological advancement, as the British realized nearly two centuries ago.[60]

Conclusion

The United States faces a moment of not only strategic complexity but also considerable opportunity. This article adds a voice to the discussion of how the United States should maintain and advance its interests in the coming years. The lessons derived from the British experience of the 18th and 19th centuries can help the United States navigate an increasingly multipolar security environment to advance its interests and to maximize its strategic position. The joint force will play a key role in operationalizing the three pillars of strategic agility: reprioritizing global interests and military right-sizing, contributing to a whole-of-government approach to international engagement, and embracing new technology through public-private collaboration. The United States should adhere to these three pillars to optimize its scarce resources, directing them toward priority threats and opportunities in the modern operating environment. The risk incurred in deviating from high priorities and the risk accepted on lower priorities must also be clear.

The United States will need to adjust its force size and structure to meet its priorities. The joint force will succeed only by fostering effective partnerships across the interagency community and with foreign nations. Although each of the pillars identified above warrants considerably more attention than space allows, the process of distilling complex history into lessons most worth learning is one of great value to decisionmakers. As an example of such distillation, this article serves as the basis for the joint force to identify the most crucial variables to reestablish the U.S. power advantages and think through the military's role in national power. With more to do than we have the resources to accomplish, history must light the path ahead. **JFQ**

Notes

[1] Jim Mattis and Bing West, *Call Sign Chaos: Learning to Lead* (New York: Random House, 2019), 237.

[2] "Strategic Agility," Center for Management and Organization Effectiveness, available at <https://cmoe.com/glossary/strategic-agility>.

[3] *Global integration* is defined as the arrangement of cohesive military actions in time, space, and purpose, executed to address transregional, all-domain, and multifunctional challenges. See Chairman of the Joint Chiefs of Staff Instruction 3050.01, *Implementing Global Integration* (Washington, DC: The Joint Staff, December 31, 2018), A-1.

[4] Hegemonic stability, power transition, relative power cycle, and leadership long cycle models studied by scholars such as Robert Gilpin, A.F.K. Organski, Charles Doran, George Modelski, and William Thompson emphasize the world's leading position as transitory, with powers rising, plateauing, and then declining. Other examples of studies on this topic include Michael Mastanduno, "Preserving the Unipolar Moment: Realist Theories and U.S. Grand Strategy After the Cold War," *International Security* 21, no. 4 (Spring 1997), 49–88; Michael Cox, "Whatever Happened to American Decline? International Relations and the New United States Hegemony," *New Political Economy* 6, no. 3 (November 2001), 311–340; Immanuel Wallerstein, *The Decline of American Power: The U.S. in a Chaotic World* (New York: The New Press, 2003); Stephen G. Brooks and William C. Wohlforth, *World Out of Balance: International Relations and the Challenge of American Primacy* (Princeton: Princeton University Press, 2008); Christopher Layne, "The Waning of U.S. Hegemony—Myth or Reality? A Review Essay," *International Security* 34, no. 1 (Summer 2009).

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[7] John Burrow, "British Imperialism in the Age of William Pitt the Younger, 1783–1793" (master's thesis, Murray State University, 2014), 23.

[8] James R. Holmes, "Lessons From George III," *Naval History Magazine* 32, no. 4 (August 2018), available at <https://www.usni.org/magazines/naval-history-magazine/2018/august/lessons-george-iii>.

[9] Ibid.

[10] Burrow, "British Imperialism in the Age of William Pitt the Younger, 1783–1793," 27.

[11] Thomas F. Lynch III and Frank Hoffman, "Past Eras of Great Power Competition: Historical Insights and Implications," in *Strategic Assessment 2020: Into a New Era of Great Power Competition*, ed. Thomas F. Lynch III (Washington, DC: NDU Press, 2020), available at <https://ndupress.ndu.edu/Media/News/News-Article-View/Article/2404297/2-past-eras-of-great-power-competition-historical-insights-and-implications/>; Oscar Browning, "The Treaty of Commerce Between England and France in 1786," *Transactions of the Royal Historical Society* 2, no. 4 (1885), 349–364; "Peace of Paris," *Britannica*, available at <https://www.britannica.com/event/Peace-of-Paris-1783>.

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[13] Holmes, "Lessons From George III."

[14] Burrow, "British Imperialism in the Age of William Pitt the Younger, 1783–1793," 29.

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[24] The term *sunk costs* refers to loss aversion and the failure to renormalize the reference point after losses. See Jack S. Levy, "Loss Aversion, Framing, and Bargaining: The Implications of Prospect Theory for International Conflict," *International Political Science Review* 17, no. 2 (April 1996), 179–195.

[25] David G. Chandler and Ian Beckett, eds., *The Oxford History of the British Army* (New York: Oxford University Press, 2002).

[26] British engagements stretching across the French revolutionary and Napoleonic wars included Mysore, Toulon, Flanders, West Indies, Muizenberg and Ceylon, Ireland, Mysore (again), Holland, Egypt, Maratha, West Indies (again), Hanover, Naples, Sicily and the Mediterranean, South Africa and the Plate, Denmark, Alexandria, Walcheren, Indian Ocean and East Indies, Holland (again), North America, and Waterloo.

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[36] Anuj Kumar Vaksha, "Jay Treaty 1794: The Treasure Trove for Principles of International Law on Protection of Foreign Investments," *U.S.-China Law Review* 16, no. 7 (July 2019), 281–292.

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[39] Édouard Driault, "The Coalition of Europe Against Napoleon," *The American Historical Review* 24, no. 4 (July 1919), 603–624.

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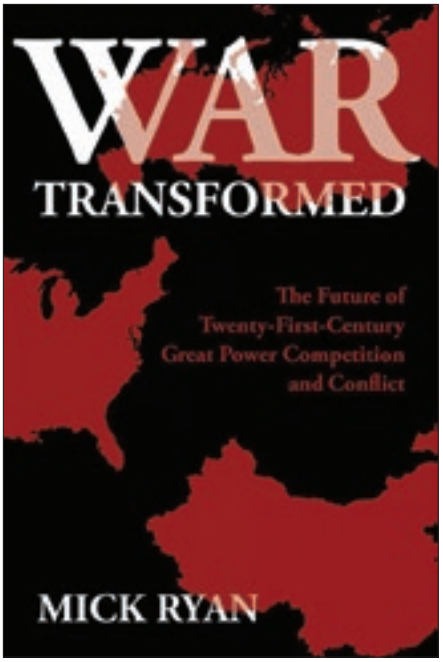

War Transformed: The Future of Twenty-First-Century Great Power Competition and Conflict
By Mick Ryan
Naval Institute Press, 2022
312 pp. $39.95
ISBN: 9781682477410

Reviewed by Francis G. Hoffman

Thinking about future wars and how to best posture tomorrow's joint force is an exercise in intelligent speculation. Certainty about the future is a luxury we do not enjoy. We must accept what the late Colin Gray called the "inescapable opacity" of the future. Peering into this dimly lit future and determining just how warfare is adapting—and evaluating what today's armed forces must do to recast their doctrine and equipment for future challenges—remains a complex challenge.

War Transformed: The Future of Twenty-First-Century Great Power Competition and Conflict offers keen insights into that question as well as some answers on how both individuals and security institutions should adapt to the changes. Author Mick Ryan is an experienced Australian Army major general who recently retired after leading the Australian Defence College. He has written about this topic in these pages before (*JFQ* 96, 1st Quarter 2020), postulating the need for an *intellectual edge* as a source of advantage in a dynamic era. In this, his first book, he builds on that theme to examine the potential impact of the ongoing fourth industrial revolution and of several key technologies, and how they will influence societies, states, and their security institutions.

Serious students of war will find this book to be a valuable synthesis of the many issues our profession faces. Using an old metaphor from Sir Michael Howard, Ryan calls for our current leaders to become "intelligent surf riders" and ride the waves of an ongoing tide instead of ignoring the building momentum of the changes driven by what Klaus Schwab, head of the World Economic Forum, described as the fourth industrial revolution.

Ryan places the issue within its historical context and provides examples from the three prior industrial revolutions. The rigorous study of the past is a valuable tool for the joint force to use to temper dangerous speculation about the future. This cognitive task must be continually renewed to help the force discern how wars of the future might differ from previous conflicts given changes in technology and weaponry, as well as other shifts in the security environment. As the author stresses, we live in an age where many environmental conditions are in flux. Breakthroughs in computer science, quantum computing, artificial intelligence, bio-enhancement, and hypervelocity missiles may alter the offense/defense balance in different competitions and may allow for combinations and cross-domain applications that may surprise us. Understanding not just the technologies involved but the organizational and conceptual reframing required to leverage them is crucial.

There are various visions about revolutionary changes in warfare and an array of disruptive technologies in the offing. Technology will undoubtedly play a role, but weapons and information systems are simply tools—means, not ends in themselves. Ryan's emphasis on human and cognitive factors is a refreshing perspective compared with the technocentric orientation frequently stressed in U.S. defense debates. That said, the author's insights on the applications of artificial intelligence and man-machine integration are forward leaning.

We must also remain open-minded and critical about change to be intelligent "surf riders" in what the author calls "the Age of Acceleration." As Ryan demonstrates, the past reveals eternal themes and recurring consequences for poor navigation or sloppy thinking. We have to recognize the enduring continuities of human agency, the pervasive uncertainty, and the primordial forces that come into play in warfare. Critical thinking and a culture that embraces objective experimentation separate the diligent victors from the complacent losers of military history. "For those military institutions that are quick to anticipate, recognize opportunity, learn, and adapt," Ryan concludes, "it will be an era of opportunity, prosperity, and security." Those who shirk this intellectual task are more likely to find themselves in perilous situations. The price of complacency in this era could be disastrous. Chapter 4 of *War Transformed* raises issues about adapting military institutions, which could be useful for capstone courses for senior officers rising to prominent roles in their armed forces. That chapter also offers material for civilian leaders at the Pentagon as they think about what needs to be done at the policy level to mold tomorrow's strategies and resources.

Ryan's push for the institutional imperative to generate an intellectual edge is one of his major themes and clearly draws on his last post, at the Australian Defence College. He defined this as "an organization's capacity to effectively nurture and exploit the disparate intellectual talents of its individuals to solve complex institutional problems." Without such a capacity, the author questions where the challenges of future force design, creative operational concepts, and the integration of both kinetic and nonkinetic capabilities could be successfully solved. He offers a suite of initiatives involving continuous learning programs, technological

education, guided self-development, technology-abetted educational tools, and specialized elite programs to generate this edge. The themes he identified resonate with the Joint Chiefs' vision for professional military education and talent management and should be of interest to the Office of the Secretary of Defense and the Joint Staff, as well as the Service Chiefs and their learning institutions.

War Transformed is a rather ambitious project that asks the right questions, and Ryan offers numerous answers and recommendations as well. They are stated in generic terms, appropriate for a global audience, leaving the readers to apply the proposals to their own specific national contexts. Readers may not agree with all of Ryan's recommendations, yet he invariably frames the most critical issues and provokes his audience to join the debate. He offers a sober glimpse into the future, which will most certainly be a challenging era for the profession of arms.

War Transformed is strongly recommended as a guide to improve one's ability to navigate our uncertain future. Not everyone is a "surf rider," but this book will stretch minds and force readers to reassess longstanding assumptions and dated ideas. Its strength is in its synthesis of the ideas of many others, which makes *War Transformed* comprehensive and an excellent foundation for a security studies course. Supplemented by key articles for greater depth on competing ideas or specific technologies, it would be a superb text for a class on the changing character of warfare at either the undergraduate or graduate level. The issues collectively raised in *War Transformed* represent the cognitive challenge of our times, highlighting the need to change and to wisely assess the options before us. **JFQ**

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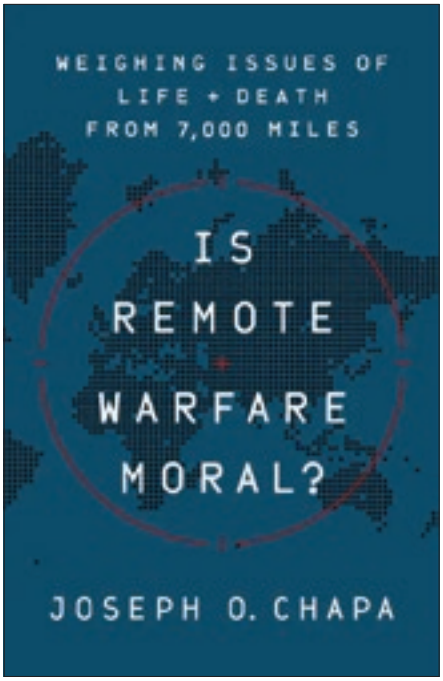

Is Remote Warfare Moral? Weighing Issues of Life and Death From 7,000 Miles

By Joseph O. Chapa
PublicAffairs, 2022
288 pp. $29.00
ISBN: 9781541774452

Reviewed by Christopher Kuennen

When I explain the difference between the Services to new Air Force officer candidates, I occasionally joke that, if it came down to it, the Army could do its job with rocks, but the Air Force could not. My point is to emphasize the essential role of modern technology in the air domain, to overcome both the force of gravity and tyranny of physical distance. Warfare from a distance, of course, is not the exclusive purview of any single Service. And likewise, the lessons of Joseph O. Chapa's *Is Remote Warfare Moral? Weighing Issues of Life and Death From 7,000 Miles* are applicable beyond the remotely piloted aircraft (RPA) community upon which he focuses most of his attention. For a joint force charged with fighting from a distance—competing across oceans, planning against adversaries' anti-access/area-denial threats, and employing artificial intelligence (AI) to make rapid sense of complex situations a world away—Chapa's book constitutes an important advance in the professional ethics of remote warfighting.

Is Remote Warfare Moral? is unique among comparable works in that its author is both a trained philosopher and a veteran of remote combat. Lieutenant Colonel Chapa, currently an Air Staff officer at the Pentagon, is also a rated RPA pilot and holds a Ph.D. from the University of Oxford. Chapa's unique perspective is inextricable from his exploration of the ethics of modern remote warfare. Indeed, his book often reads as a defense of the moral capacity of RPA operators, who have been alternatingly stereotyped as treating war like a video game or else suffering from crippling post-traumatic stress disorder. Ultimately, however, Chapa's firsthand professional experience and subject matter expertise help him draw ethical insights from our nation's use of the MQ-1 Predator and MQ-9 Reaper that are relevant to broader questions about the role of human judgment in all forms of remote warfare, from missile defense to offensive cyber operations.

The first of these insights is presented as a response to claims that remote violence is incompatible with just war and thus that the idea of a professional "remote warrior" is oxymoronic. Chapa insists on defining war as a sometimes justified, though always tragic, defense of some political community. The moral uprightness of responding to an unjust threat lends license for lethal force to certain members of the community. It follows that the qualities that make these individuals good warriors should be defined by whatever the defense of the common good demands. The martial virtues — traditionally identified with courage, loyalty, and honor — thus rightly differ in practice between the Union infantryman at Gettysburg and today's MQ-9 sensor operator, even as both fight justly against an unjust threat.

The second major insight in *Is Remote Warfare Moral?* is Chapa's development of what he calls the *judgment*

gap: "the distance between the point of application of human judgment and the effects of that judgment." Remote warfare has been criticized for distorting situational awareness and imprudently placing life-and-death choices in the hands of decisionmakers far from the nuanced subtleties of any combat zone. While Chapa acknowledges the inherent limitations of ordering kinetic effects from the other side of the world, he also points out that RPA operators have some important decisionmaking advantages over fellow combatants. For one thing, operating with reduced personal risk could actually make it easier to weigh the demands of a tactical situation against ethical norms and strategic priorities. For another, modern RPA operations give crews not only intimate awareness of the battlespace, but also the final decision about employing lethal force in that battlespace—all in virtually real time. That is, although the physical distance between RPA crews and their targets is large, the judgment gap is small.

Chapa offers multiple examples of RPA operators relying on their unique perspective and ultimate decisionmaking responsibility to push back against morally (and strategically) questionable requests from supported units on the battlefield or behind desks in an operations center. Although these examples may surprise those who consciously or subconsciously think of remote warriors as mere "gamers" or disempowered cogs in a machine, others will find Chapa's description of the judgment gap to be a helpful hermeneutic for conceptualizing the value of in-depth operator situational awareness. The major insights of *Is Remote Warfare Moral?* can help us appreciate Chapa's RPA anecdotes beyond their individual particularities, as highlighting the criticality of informed human judgment in distributed, technologically mediated warfighting.

In his final chapter, Chapa addresses the ethical outlook for future remote warfare and notes how AI-powered semiautonomous systems could widen warfighting judgment gaps. This is an issue begging to be explored in more detail. If *Is Remote Warfare Moral?* has any notable weakness, it is its often narrow focus on looking back at ethical lessons learned over two decades of Air Force RPA employment at the expense of considering in more depth how these lessons might be applied across the spectrum of remote warfare. Chapa imagines a future conflict in which "cyber warfare operators might engage the adversary from Fort Meade . . . bomber crews will use standoff weapons—AI-enabled, air-launched cruise missiles—rather than penetrating heavily defended enemy airspace . . . [or] perhaps fighter pilots will remain at a safe distance while sending swarms of autonomous loyal wingmen, or drones, forward to conduct the air-to-air fighting." Although Chapa's insights about the martial virtues and judgment gap are well articulated and sufficiently generalizable, it might have been worthwhile to explore how, for example, a cyber operator would perform the kind of moral deliberation Chapa describes RPA operators performing today.

Under the assumption that such explorations will be carried on elsewhere, let me then reaffirm here what Chapa does have to say about the future. The martial virtues are whatever qualities of character empower Servicemembers to effectively combat unjust threats to the political community. At the same time, remote warfare need not impose a major judgment gap on human decisionmaking in conflict. As our military relies more and more on AI to confront the challenges of fighting from a distance, Servicemembers must be prepared—technically and ethically—to make their judgments count.

They might start by asking, *Is remote warfare moral?* **JFQ**

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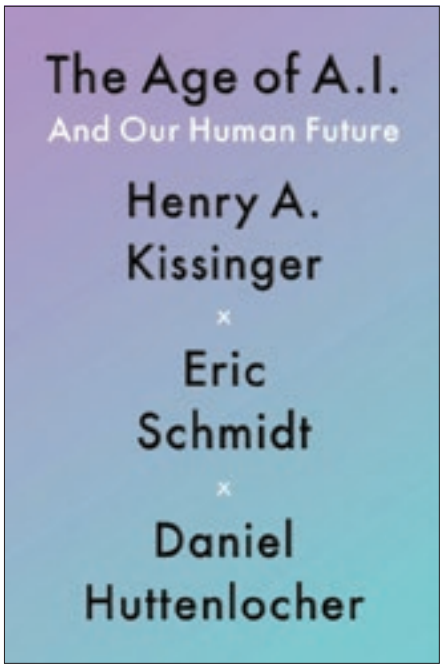

The Age of AI: And Our Human Future

By Henry A. Kissinger, Eric Schmidt, and Daniel Huttenlocher
Little, Brown and Company, 2021
272 pp. $30.00
ISBN: 9780316273800

Reviewed by John W. Sutherlin

To fully appreciate *The Age of AI: And Our Human Future*, one must overlook its nebulous description of a decades-old issue and suspend any expectations for a well-researched and thorough account of this vital topic. The authors, who represent major policy, industry, and academic heavyweights, stumble in their attempt to raise awareness and often fail to provide meaningful insights. The analysis and research manifested here leave so many things unanswered. In the end, many will ask themselves why they selected this book out of the choices currently available. This is not a typical Kissinger work spanning 800 or more pages with thousands of sources and infinitely quotable passages exhibiting personal perceptions and a vast foreign policy knowledge. Further, this is not a Schmidt work of

pithy industry-level expertise with keen insights or observations about Google software packages. Perhaps the authors were less interested in an exhaustive treatment of artificial intelligence (AI) and more captivated with making a simple declaration, a clarion call to arms. However, even with this notion as the focal point, the reader may be left wanting more. Still, the book is not without merit; some may find it a good starting point for a deeper dive into the subject of AI and public policy.

Each chapter begins much the same, as philosophers and authors of antiquity are used to lay a foundation for banal statements regarding policy concerns about machines making human decisions. Descartes, Spinoza, and, of course, Kant are paraded before the reader, creating intellectual mediocrity and a confusion of cerebral demands. Perhaps these authors really believe that St. Thomas Aquinas and TikTok can elevate our ethical discourse. Maybe there will be some readers that find incorporating Clausewitz and Gutenberg into the tussle is essential. I did not find it to be particularly helpful.

If the authors want readers to think about the postmodern world where computers make decisions, then why revisit the Middle Ages? What the readers get are often ambiguous or obvious statements. This book would have been more relevant if it had been written 15 years ago. "AIs chiefly use data to perform tasks such as discovering trends, identifying images, and making predictions." And? Does the process of shifting from physical maps to "network platforms using algorithms" really represent a paradigm shift that requires another book to document the eroding of human values and input? Hardly.

This effort falls somewhere between a book and a journal article. If the reader thinks of *The Age of AI* as a policy briefing, then most frustrations, disappointments, and regrets will vanish. The book is worth reading if for only one set of questions asked: "Are humans and AI approaching the same reality from different standpoints, with complementary strengths? Or do we perceive two different, partially overlapping realities: one that humans can elaborate through reason and another that AI can elaborate through algorithms?" Regardless of the policy area—that is, national security, health care, or commercial interactions—AI is still growing fast, with few human restraints and little thought about its potential repercussions for moral decisionmaking.

The authors insist that "governments, universities, and private-sector innovators should aim to establish limits." I guess the question is "How?" AI has already proved it can beat the socks off human chess players. Is it too late to install safeguards that prevent AI from making fatal decisions where humans are the means to a silicon end? The authors point out that Alan Turing showed acumen in the 1950s and that GPT-3 (third generation generative pre-trained transformer) technology today is closely approaching what AI would define as "consciousness." What is next? Algorithms fashioning popular music for us to purchase? AI making cost-benefit analysis for rationing medicine? Or deciding which cities to bomb?

Oops! Too late. The authors, correctly, find that the AI Rubicon has been crossed.

AI "permits us to aggregate and analyze data" more quickly and without any messy human emotions and biased reasoning. But this also means no human morals and ethics. This could have been the place for the discussion to begin about our human future. The authors ask us to consider an ethical construct as "paramount," allowing political leaders an opportunity to engage with humanity. Without sufficient human (or governmental) limits, nations may simply default to AI for, inter alia, national policy decisionmaking.

Yet I wonder. What would happen to the nation that forwent its reliance on high-speed computers that evolve into AI, instead embracing human fallibility and the sluggish analysis of complex data? Would anyone burn the calculators in favor of the abacus? The need for humans to incorporate ethics into their tools has been around since at least Galileo.

The AI ship has sailed. Now, humans must constantly integrate their flawed beliefs into both social and silicon systems. AI consciousness may be only another terabyte away, so the authors are correct there. GPT-3, for example, lacks the ability to act independently . . . for now.

A better analysis on artificial intelligence and political power is Michael Kanaan's book *T-Minus AI: Humanity's Countdown to Artificial Intelligence and the New Pursuit of Global Power* (BenBella Books, 2020). Schmidt even praises Kanaan's work as an excellent source of analysis. For those more interested in the nexus between AI and the military, Christian Brose's *The Kill Chain: Defending America in the Future of High-Tech Warfare* (Hachette Books, 2020) is a better researched call to arms. **JFQ**

Dr. John W. Sutherlin is a Professor of Political Science and Chief Innovation and Research Officer at the University of Louisiana Monroe.

U.S. Air Force 23rd Bomb Squadron B-52H Stratofortress, two German air force Panavia Tornados followed by two German Air Force Eurofighter Typhoons, and one Belgian air force F-16 Fighting Falcon, fly in formation over Germany during Bomber Task Force mission, August 24, 2022 (U.S. Air Force/Michael A. Richmond)

The Joint Force Remains Ill-Prepared to Consolidate Gains

By Thomas Theodore Putnam

The President can no longer just look for a good fighter to plot the operational scheme that leads to victory in arms. He must also find a person who can reconstruct a society.

—Anthony Zinni[1]

Lieutenant Colonel Thomas Theodore Putnam, USA, is the Deputy Commanding Officer of the 1st Security Force Assistance Brigade. He is a Distinguished Graduate of the U.S. Army War College, and a graduate of the U.S. Navy's Maritime Advanced Warfighting School.

A popular policy myth remains rooted in the U.S. mindset: that the military's mission in combat is complete when the coalition is militarily successful in large-scale combat operations (LSCO) and that once the former regime's forces have left the battlefield, civilian agencies can immediately move in and begin leading the difficult task of stabilizing

the defeated nation. A study of history demonstrates the fallacy of this myth. Yet national policy and joint doctrine enable it to endure.

The time frame immediately following active armed conflict is particularly demanding and critical for the military. It embodies *consolidation of gains*, or taking advantage of the fleeting opportunity to translate operational successes into long-term strategic victory. To achieve consolidation of gains, the military needs to have a new operational emphasis and to pursue greater sustained interaction with civilian leaders, enabling the broader policy aims critical to strategic victory.

Militaries consolidate gains by undertaking activities to turn their temporary operational successes into lasting conditions that eventually allow legitimate civilian authorities to assume control under favorable circumstances.[2] Consolidation-of-gains activities focus predominantly on establishing security and providing minimum essential stability activities, such as immediate humanitarian assistance and restoration of key infrastructure.[3] In its entirety, consolidating gains includes establishing territorial security, denying adversaries influence over the occupied population, setting a sound footing for future governance and economic viability for the nation, developing conditions for better relations between the conquered and the coalition governments, and setting the conditions for ongoing regional stability. The successful consolidation of gains is a whole-of-government mission because effective execution requires expertise residing outside the military.

In recent years, the importance of consolidating gains has grown in the joint force. The 2018 *Joint Concept for Integrated Campaigning* (JCIC) acknowledges the need to "follow through" after armed conflict and highlights the importance of interorganizational cooperation.[4] Although this is a very positive development, updates to core joint publications (JPs) have not incorporated consolidation of gains.[5]

Until joint doctrine incorporates consolidation of gains, the joint force will remain ill-prepared to translate fleeting military successes into long-term U.S. strategic victories. Preparing the joint force for consolidation of gains requires three changes. First, JP 3-0, *Joint Operations*, and JP 5-0, *Joint Planning*, must include detailed guidance covering specific consolidation-of-gains requirements and unified action-planning considerations. Second, the joint force must mandate unit preparation for the inherent complexities of consolidating gains. Third, the Department of Defense (DOD) must pursue a policy of operational control over U.S. Government participation during the consolidation of gains.

Nadia Schadlow's 2017 *War and the Art of Governance: Consolidating Combat Success into Political Victory* delivers a powerful historical analysis on the efficacy of government efforts to translate combat successes into strategic political victories favorable to the United States.[6] Her analysis spans from the Mexican-American War to contemporary efforts in the U.S. war on terrorism. Her analysis found the United States ill-prepared for consolidation of gains. It is still unprepared.

Analyzing joint doctrine against Schadlow's model yields specific recommendations that offer low-cost implementation options for DOD policymakers to ensure better joint force readiness for consolidating gains. Although these recommendations will support any consolidation-of-gains scenario, for ease of discussion this article concentrates on postconflict termination.[7]

What Is Consolidation of Gains?

For proper discussion of consolidation of gains, a clear definition is necessary. Schadlow does not explicitly define the term in *War and the Art of Governance*. However, her definition can be inferred: military-led actions to control territory and establish the functioning local government institutions necessary to reconstitute a favorable political order.[8] This idea closely matches the definition in Army Field Manual (FM) 3-0, *Operations*: "the activities to make enduring any temporary operational success and set the conditions for a stable environment allowing for a transition of control to legitimate authorities."[9] Whereas Schadlow's definition works for her intended audience—strategic-level leaders—it is too ambiguous for operational-level military leaders.

Unfortunately, consolidation of gains is essentially nonexistent in joint doctrine. The JCIC offers the only existing definition of "consolidation": "continual and deliberate actions to secure gains and translate military success into the aims of policy."[10] Even with the JCIC's contextual elaborations, this definition is too abstract to be useful. A deeper look into core joint publications, specifically JP 3-0 or JP 5-0, yields even less insight.[11]

Army doctrine, on the other hand, is more useful. FM 3-0, *Operations*, dedicates an entire chapter to consolidation of gains and provides additional context to better understand the subject. It states, "Operations to consolidate gains require the *dynamic execution of area security and stability tasks* based on the desired operational end state that supports the strategic objective of the campaign" (emphasis added).[12] Although FM 3-0 provides the best definition, it fails to address consolidation's purpose and requires pairing with the activities list. Furthermore, Army doctrine is myopic and does not consider interagency effort outside their support of military operations.

A better definition of "consolidation of gains" should incorporate the defining characteristics of its long-term purpose, which is: the establishment of security and the resumption of governance beneficial to the victor. I propose the following as a more appropriate definition for consolidation of gains:

Following armed conflict, the dynamic and simultaneous execution of the necessary offensive, defensive, and stability activities to secure an area and reestablish governance operations to set the conditions for sustainable strategic objectives, allowing for a transition of control to other legitimate authorities.

This definition reinforces the necessity of blending multiple activities and the need to directly contribute to strategic objectives from the outset of planning.

Furthermore, the definition is sufficient in situations where the military is supporting a unified action partner.

The Schadlow Consolidation-of-Gains Model

Schadlow concludes that the government's inability to prepare for consolidation of gains stems from an "American denial syndrome."[13] This syndrome originates from the American desire for civilian leadership of anything related to governance and an avoidance of any colonialism stigma. The consequence is a consistent avoidance of institutionalizing and preparing the military for political activities associated with the restoration of governance following combat operations.[14] These relevant activities generally encompass reestablishing territorial security, denying the adversary any influence, and generating a political order favorable to the United States and its allies.

Schadlow provides five recommendations to improve the efficacy of future consolidating gains, but, for the purposes of this paper, her fourth recommendation regarding the use of technological solutions to enable political objectives does not apply.

Although Schadlow's recommendations are intended for senior policymakers in the national security system, they are also applicable to the military. Pursuing these recommendations will generate a joint force capable of securing political conditions favorable to the United States and its allies.

Recommendation 1: Policymakers Must Accept the Political Dimension Across the Spectrum of War. Schadlow reinforces the need to account for political requirements in the entire arc of warfare, from initial preparations to war termination. She believes all policymakers must "appreciate the complexity of politics" in war and recognize that governance requirements interlink with "conventional combat."[15] To successfully translate military gains into strategic victory, the joint force must align all its activities with political requirements. This process starts with national policymakers establishing the strategic policy aims. Because of

Air Force Senior Airman Isabelle Friedt, munitions systems specialist assigned to 122nd Fighter Wing, Indiana Air National Guard, builds GBU-38 joint direct attack munitions during large-scale readiness exercise at Alpena Combat Readiness Training Center, Michigan, July 10, 2022 (U.S. Air National Guard/Kathleen LaCorte)

Warrant Officer Adaliz Pagan, with Puerto Rico Army National Guard Aviation, performs preflight inspection on UH-60 helicopter before departing to Port-au-Prince, Haiti, August 27, 2021, as part of humanitarian mission (U.S. Army National Guard/Agustin Montanez)

its inevitable involvement in securing political requirements, the military must pursue discussions that specifically resolve the issues of "what to demand politically, and how far to go militarily."[16]

To ensure that suitable political outcomes are achieved, best military advice must encompass the entire arc of warfare and not concentrate only on combat operations.[17] From the outset of any discussion of war, acknowledging that "victory and conflict termination are two distinct and sometimes mutually antagonistic concepts" ensures that postconflict termination requirements are incorporated into the strategic risk calculation.[18]

A frank discussion of the realities of postconflict termination exposes the inherent complications of the interagency's immediate assumption of responsibility for stabilization. Paralleling Schadlow's findings, Hooker and Collins's analysis of operations in Afghanistan and Iraq, *Lessons Encountered*, found that a failure to adequately plan resulted in the prolonged involvement of the military and the inability to consolidate gains.[19] Although it could be argued these populations never wanted liberal democracy, the ineffective synchronization during consolidation could never have set the conditions for sustainable, strategic outcomes favorable to the U.S. coalition.

Prior to conflict, the military and interagency must work with political leaders to identify all required conditions to fulfill strategic aims and understand how they nest with one another. This enables the whole-of-government alignment of ends, ways, and means to accurately assess risk before the leadership's focus is consumed by combat operations. Not only does this kind of discussion enable the creation of assessment criteria to accurately identify strategic victory conditions, but it also ensures that the government acknowledges all postconflict termination activities. Whereas advice provided to civilian policymakers might be ignored, the military is professionally obligated to plan on executing consolidation-of-gains activities to secure strategic victory.

Recommendations 2 and 3: Normalize Unity of Command with Army Operational Control of Agencies in War. Schadlow's analysis discusses the flawed yet persistent belief among policymakers that consolidation of gains is not an integral part of war. A "divide and fail" model results in separate commands competing over the conduct of governance.[20] At best this results in delayed consolidation of gains. While the decisions and final shape of the units conducting military governance in the aftermath of World War II yielded "liberally oriented political and economic systems" in Italy, Korea, Japan, and Germany, delays and costs were incurred.[21] At worst, competition for control on consolidation results in a protracted experience, such as Operation *Iraqi Freedom* (OIF). Schadlow's "divide and fail" model is reinforced by Hooker and Collins's findings that an "inability to integrate, direct, prioritize, and apply capabilities in the optimal manner diminished success as much as any faulty strategy or campaign plan."[22]

War and the Art of Governance exposes a persistent U.S. belief wherein the military leads LSCO when combat operations are the focus, and civilians lead stabilization when governance and rebuilding are the focus. This belief infers a clean break in leadership responsibility at conflict termination, a perception reinforced by Department of Defense Directive (DODD) 3000.05, *Stabilization*, which unequivocally cedes any claim for leadership responsibility of the stabilization phase to the Department of State.[23] Although DOD's explicit support of a lead Federal agency is noble, regrettably this support obscures the necessity to blend security and stability activities across the transition between LSCO and stabilization in both time and space.

This obscuration predisposes the military to be insensitive to postconflict termination requirements and to toss the proverbial hot potato to an interagency unable to assume responsibility.[24] Ambiguity in stabilization's leadership responsibility is amplified amid ongoing combat operations and may result in leaders losing sight of the necessity to blend security and stability activities to consolidate gains.

Furthermore, a clean-break perception muddles the inherent complexity in the military-to-civilian transitions of responsibility in a postconflict termination environment. "Transitions, seams, and boundaries introduce inherent risk into an operation" that become further amplified when integrating elements outside a unified command structure.[25] Conrad Crane and W. Andrew Terrill's prescient warnings on postconflict termination preparations included the inevitability of transitions in an environment fraught with political and security uncertainty.[26] The analysis of OIF indicates the United States did not effectively create unified action to enable these transitions.

While joint doctrine stresses a desire for unified action, unity of effort is extremely difficult to accomplish within the current U.S. interagency framework. JP 3-08, *Interorganizational Cooperation*, is replete with warnings about the difficulties and significant challenges in synchronization stemming from policy differences. Even when specific goals are agreed upon, the joint force commander must recognize an actual plan is necessary because these goals may be interpreted differently.[27] This doctrinal forewarning is confirmed in Hooker and Collins's analysis that found the United States was ineffective in internal synchronization during OIF.[28]

Recommendation 5: The U.S. Government, Especially the Military, Must Have Some Standing Capabilities and Organizations Prepared to Conduct Key Governance Tasks. The U.S. military's inevitable participation in consolidation of gains has not changed since World War II. As noted in FM 3-0, the Army has been involved in consolidating gains of every conflict since the Indian Wars of the late 1800s, whether it predicted participation beforehand or not.[29] As part of a Goldwater-Nichols military, the Army's experiences apply to the joint force. Yet outside the passing mention in the JCIC, planning for this inevitable participation is nowhere to be found in core joint doctrine.

In the successful consolidation-of-gains experiences of World War II, the Army did not vie for its leadership position.[30] The Army became the lead agency because it was the only coherent institution with the structure, sustainment capability, and personnel capable of implementing consolidation over large geographic areas.[31] Reinforcing this perspective is the decision of John McCloy, the U.S. High Commissioner for Germany in 1949, who, when first approached in 1945 to lead consolidation of gains, rejected the position because he felt the military was in the best position.[32] McCloy's sentiments echo those made by Secretary of State James Byrnes toward the beginning of World War II.[33] It is important to note that to be effective, the military was heavily reliant on outside expertise provided by civilians.

Reinforcing the joint force's need to embrace a leadership role during consolidation is the interagency's inability to satisfy expectations of leadership during consolidation of gains. A RAND study found the United States struggled in generating the necessary civilian workforce during OIF. Not only did this study note the difficulty in recruiting experienced personnel within the DOD, State Department, and U.S. Agency for International Development, but it revealed that the joint force filled these positions.[34] The complications inherent in deploying civilians to an active combat

zone highlight the need for military capabilities to fill these requirements.

Schadlow challenges the Army to recognize its past "efforts to escape" consolidation responsibilities, which failed and "only served to make those tasks more difficult."[35] The former commanding general of the U.S. Army's Combined Arms Center, Lieutenant General Mike Lundy, reinforces this sentiment in "Three Perspectives on Consolidating Gains." The inescapable requirement to execute military governance, combined with the interagency's inability to meet desired participation levels, means the military must embrace a mission it will be assigned by default.[36]

The requirement to prepare for consolidation of gains is not solely an Army responsibility. Joint task force (JTF) staff must possess a deep understanding of consolidating gains requirements because JTFs integrate all component plans and resource the land component's inevitable consolidation mission.

Recommendations to Improve the Joint Force

JP 3-0 and JP 5-0 Must Include Detailed Guidance Covering Specific Consolidation-of-Gains Requirements and Unified Action Planning Considerations. As Clausewitz states throughout *On War*, politics and military operations are inseparable.[37] Regrettably, joint doctrine and policy largely ignore consolidation of gains, increasing the risk of failing to achieve strategic victory. If joint doctrine continues to ignore consolidation of gains, achievement of policy aims will remain in jeopardy. Incorporation into doctrine will better position the United States for effective consolidation of gains.

The JCIC states that "the Joint Force must view military operations and the follow-through to secure policy aims as an integrated whole."[38] It also recognizes a crucial reality—that the translation of military success into sustainable outcomes remains "one of the most difficult elements of campaigning."[39] Enabling successful follow-through implies the need for a close, continuing relationship with interagency partners to ensure military operations establish viable conditions for interagency authorities to assume leadership responsibility. Furthermore, the JCIC reinforces that governance tasks are directly connected to conventional warfare.

These critical aspects of warfare are absent from joint doctrine. Core joint doctrine does not contain definitive guidance on expected activities to guide practitioners. Nor do these publications contain substantive guidance on navigating the necessary interagency-military relationship to achieve unified action.

Without clearly articulating the consolidation of gains as a vital transition in doctrine, the joint force will remain ill-prepared to provide policymakers the best military advice on the most efficient means for securing strategic aims. While the current strategic military leaders with operational experience in Afghanistan and Iraq still have opportunities to pass on essential knowledge, capturing this understanding in joint doctrine can ensure these hard-fought lessons are not simply lessons encountered.

Incorporating two specific areas from recent operational experience will generate a significant return on investment that will greatly benefit future generations. First, identify how operational-level military objectives are established. Second, include a realistic point of departure for expected military activities during consolidation of gains.

Clearly, operational-level military objectives are set within military channels. But a deeper examination of doctrine reveals two fundamental yet unaddressed questions about establishing military objectives. First, what factors influence the substance of military objectives to ensure military successes effectively contribute to strategic victory? Second, how much interagency participation is necessary to effectively link military successes to the eventual transition to civilian authorities?

In the arc of military operations, the military eventually transfers responsibility to a civilian authority, whether to the U.S. interagency or directly to a host nation element. Until operational environment conditions, which are dependent on and unique to each conflict, are met, this civilian authority is incapable of leadership. Current joint planning considerations ignore civilian authority requirements that would enable transition of responsibility.

Military objectives must positively contribute to the achievement of strategic aims. However, joint doctrine currently enables divergence to occur because no mandate exists for the joint force to nest military objectives directly into the interagency's starting point requirements. Specifying the necessity to align military objectives with interagency postconflict termination starting points would ensure that the arc of military operations leads directly to the desired political outcomes.

Worse yet, joint publications lead practitioners to believe that only the military's concerns matter. Joint doctrine is replete with examples of how the interagency supports the joint force, with no discussion of how their goals and objectives are synchronized. Interagency interactions in JP 3-0 concentrate on the truism of unified action, providing guidance to conduct "synchronization, coordination, and integration" with the interagency.[40] In JP 5-0, interagency discussions concentrate exclusively on deriving requirements to support the joint force, simply keeping the interagency informed about military operations, and attempting to obtain information about interagency activity.[41] Furthermore, doctrine fails to discuss transitions of responsibility to legitimate civilian authority to enable military redeployment.[42]

Practitioners may believe JP 3-08 could be a useful source for interagency-military synchronization. Regrettably, its guidance mirrors that of JP 5-0. The only significant instance on synchronizing objectives is found in the section on theater campaign plans. This guidance emphasizes obtaining interagency participation at the earliest phases to identify decision points that enable DOD to transition to a supporting role.[43] Unfortunately, most contingency planners will likely overlook this section.

Understanding interagency starting point requirements reinforces the need to maintain an active dialogue to ensure alignment of military objectives. The conceptualized war outcomes are unlikely to

Marine attached to 3rd Battalion, 6th Marine Regiment, 2nd Marine Division, scans for targets for Fire Support Coordination exercise prior to exercise Cold Response 22, in Setermoen, Norway, March 7, 2022 (U.S. Marine Corps/William Chockey)

exist at conflict termination due to war's elements of uncertainty and chance.[44] Maintaining focus on interagency-military transitions in doctrine reminds planners to account for the inevitable transitions of responsibility.

Interagency-military tensions are likely to arise because unity of command is not inherent in the government's culture.[45] JP 3-08 recommends producing a shared interagency-military plan.[46] However, although JP 3-08 provides a descriptive list of helpful "hallmarks" of harmonious interagency coordination, it fails to address ways to overcome interagency impasses in either planning or execution.[47] Doctrine must capture proven methods to overcome disagreements from recent government experiences. Providing established frameworks or recommendations in core doctrine allows future planners to capitalize on hard-learned lessons of recent experiences.

A viable post-consolidation-of-gains hand-off requires interagency-military integration early in the planning process. Although core joint publications contain some instances of guidance to begin planning postconflict activities and set conditions for stability activities well before the outset of armed conflict, advice on ways to do so is significantly lacking.[48] Integrating specific requirements to begin collaborative planning prior to conflict increases the likelihood of strategic victory.

Joint doctrine stresses the requirement to secure a stable postconflict termination environment to enable redeployment. The Army's consolidation-of-gains doctrine may be useful to a joint staff, but it is tightly focused on security activity to prevent resurgence of the enemy.[49] As Schadlow notes, the military also needs better guidance on military governance to set conditions for strategic victory. Explaining what specific activities need to be addressed and how to achieve integration with the interagency will improve efforts to consolidate gains.

The achievement of desired political objectives does not automatically result from successful execution of "dominating activities."[50] Regrettably, joint doctrine provides only generalized guidance on stability activities, and this information is not placed in the context of consolidation

Marine Captain Austin Branch, left, and Navy Lieutenant Dillon Duke, both assigned to Marine Corps Fifth Air Naval Gun Liaison Company, conduct Naval Surface Fire Support communication drills with Japanese Ground Self-Defense Force in Combat Information Center aboard USS *Dewey* while participating in bilateral advanced warfare training, Pacific Ocean, March 1, 2022 (U.S. Navy/Benjamin Lewis)

of gains. JP 5-0's December 2020 update was extremely disappointing; it did not codify the JCIC into doctrine and thus delayed the joint force's comprehension and embrace of consolidating gains concepts.

Acknowledging postconflict termination activities that enable "war-winning" will facilitate an understanding of the requirement to plan and support more than security activities.[51] Incorporating this information provides a frame of reference to understand operational requirements. Furthermore, it codifies standard requirements to expedite the next generation's understanding of consolidating gains.

If capturing the experiences of current strategic leaders with operational experience in Afghanistan and Iraq cannot be done in a timely manner, available options come from the works of military scholars. These include historical analysis, such as Nadia Schadlow, Charles Barry, and Richard Lacquement's "A Return to the Army's Roots," which provides a strong starting point for inclusion in core joint doctrine.[52] Another option is to derive validated principles from scholarly hypotheses. Conrad Crane and W. Andrew Terrill's *Reconstructing Iraq* is one of several options available for doctrine writers.[53]

The Joint Force Must Mandate Unit Preparation for the Inherent Complexities of Consolidating Gains. Although the United States desires civilian leadership of stabilization to begin immediately following conflict termination, previous conflicts demonstrate that the joint force will be required to execute governance for consolidation to be successful. Both Schadlow and Lundy concur, stating that the military always finds itself governing out of necessity both during and after conflicts.[54] To ensure military preparedness, Lundy insists consolidation of gains "deserves the same,

or perhaps greater, level of professional forethought than combat operations."[55] This forethought requires intellectual preparation for the requirements and complexities of consolidating gains.

As DOD prioritizes joint all-domain operations (JADO) readiness, introducing consolidation-of-gains requirements places tension on its most precious resource: time. However, ignoring consolidation of gains places hard-fought JADO-based military successes at risk of becoming meaningless when the winning coalition struggles to secure strategic victory. To reduce such risk, the joint force must ensure officers are trained to consolidate gains. Understanding why the operation's context changes following conflict termination, and interagency-military integration, is critical to strategic success.

Preparing for the power vacuum following successful combat operations requires embracing and understanding consolidation-of-gains requirements. Two simple, cost-effective avenues already exist for advancing unit preparation: first, incorporating a more definitive exploration of postconflict termination during professional military education (PME), and second, implementing mandatory execution of consolidating gains during joint training exercises.

PME will be indispensable for educating leaders on the intellectual framework necessary to surmount the complexities surrounding consolidation of gains.[56] The most difficult skillset requiring military proficiency will be conditions-setting activities: planning, synchronizing, and resourcing. PME provides the ideal setting to standardize "the thoughtful reflection and study of how we consolidate gains on the battlefield."[57] Promulgation through PME will provide JTF staff with a deep bench capable of enabling the successful follow-through to generate strategic victories.

A focus on "war-winning" activities in PME will better prepare the joint force to instinctively align "warfighting" activities to achieve strategic objectives.[58] While PME includes some instruction on how stability operations support strategic objectives, the preponderance of PME material focuses on warfighting. Explanations of how to set postconflict termination objectives that achieve national security objectives, and how the military operates in a whole-of-government environment, are insufficiently covered. This shortfall is reinforced by joint doctrine's lack of detail on war-winning considerations. Creating time for war-winning-focused education is possible by compressing instruction on planning processes that most students already understand, while still maintaining Goldwater-Nichols Act requirements.

Training exercises offer the best venue to maintain competency in the difficult task of translating military success into strategic victory. As the U.S. experience in Iraq and Afghanistan evinces, consolidating gains is far more difficult and complex than executing LSCO. The requirements to effectively, and successfully, operate within a large staff cannot be replicated in PME. Not only do training exercises oblige the staff to understand the internal processes, but the interagency liaisons within the headquarters also provide realistic and invaluable insight into execution.[59] Additionally, these exercises expose higher headquarters staff members evaluating the exercise to the requirements of war-winning.

DOD Should Pursue a Policy of Operational Control Over Government Participation During the Consolidation of Gains. The U.S. Government relies on consensus-building to achieve unity of effort. In Iraq and Afghanistan, the lack of strategic-level oversight and of in-theater coordinating authority resulted in the United States's being "often unable to knit its vast interagency capabilities together for best effect" to achieve consolidation.[60] President Joseph Biden's National Security Council framework has not drastically changed the U.S. national security architecture. Until stovepiping and differing cultures can be altered, unity of effort will remain elusive.[61]

The joint force's receipt of operational control of government participation during consolidation of gains will enable success. Accepting military leadership does not entail accepting military leadership without civilian oversight or assistance; this is anathema to U.S. values. Schadlow's analysis demonstrates that military leadership is not impossible. During World War II, military governance, not State Department–led governance, consolidated gains in Italy, Germany, Korea, and Japan.[62] Military officers synchronized security and governance activities within a joint force–type structure.[63] The military lacks all the required expertise to successfully consolidate gains independently. Interagency participation and support from unified action partners is sine qua non to successful consolidation. By preparing for military leadership of consolidation, the national security system acknowledges the pragmatic reality of a postconflict environment: the interagency framework is not constructed to execute consolidation of gains.

Without a U.S. Government culture change, interagency partners will remain unlikely to accept the military as lead Federal agency during the tenuous transition to stabilization. To prevent future unity-of-effort issues, DOD should seek approval for operational-level unity of command of all government consolidation participation. Schadlow's analysis demonstrates that the military is capable of leading military governance and other activities to consolidate gains. This policy change will not be easy to accomplish. Unless a catastrophic event or congressional action demands reform, this policy change will take several years, if not decades, because of the different stakeholders and the national security structure's engrained culture. But the cost of blood and treasure spent in misplaced efforts makes it worthwhile to start changing now.

As a start point for this change, while DODD 3000.05 remains policy, the military should nest completion of consolidating gains as the endstate of the dominate phase. Because the military leads LSCO, nesting in this manner directly links military objectives to interagency starting-point requirements and alleviates any confusion about ownership of consolidation activities.

Some would argue there is no need to highlight consolidation of gains in JP 3-0 or JP 5-0. They would direct practitioners

to JP 3-31, *Joint Land Operations*, which does cover some important consolidation-of-gains considerations. JP 3-31 states that the goal of major operations and campaigns is to prevail and consolidate gains quickly to "establish conditions favorable to the population and the U.S. and its international partners."[64] To do so, the joint force must begin postconflict termination planning at the initiation of joint planning and continually update its plans.[65] In the dominate phase, JP 3-31 warns, an "isolated focus on offense and defensive operations" risks overlooking the "need to establish or restore security and provide humanitarian relief."[66] Acknowledging that other agencies may not be immediately available following LSCO, JP 3-31 informs military planners to be prepared to lead stability efforts.[67] Finally, JP 3-31 states that effective stabilization requires integration of nonmilitary plans and efforts.[68]

At face value, this appears to be great advice. However, relying upon JP 3-31 risks relearning lessons encountered in previous efforts of consolidating gains. Although JP 3-31 contains great truisms, it is unhelpful to planners without significant experience or training in consolidating gains. Possessing only generalities, it does not explain how to anticipate, resource, or support joint force land component command requirements. The JTF must understand consolidating gains to effectively translate strategic requirements into operational objectives. Relying on JP 3-31 leaves the JTF with an inadequate understanding of how to incorporate consolidation-of-gains requirements into a coherent overarching plan that synchronizes all JTF component activities.

Conclusion

William Flavin, a peacekeeping expert, reminds practitioners that "conflict termination is the formal end of fighting, not the end of conflict."[69] And, as FM 3-0 notes, "Consolidation of gains is integral to winning armed conflict and achieving enduring success" because it directly bridges combat success to strategic victory.[70] If consolidation is done well, friendly forces will retain the initiative. Stabilization will run smoothly because the adversary's means and will to resist are no longer present. If consolidation of gains is not properly considered, or is executed without operational environment considerations, the conflict will likely persist and require the military to provide further assistance to enable stabilization.

DOD can enact internal improvements now to better prepare for consolidation of gains. Incorporating consolidation of gains into joint doctrine is the first step. The next step is training the joint force to plan, build, and implement consolidation of gains in a unified action environment. At the same time as these internal improvements are being implemented, DOD should pursue policy and cultural changes within the national security structure to acquire the unity of command necessary to effectively consolidate gains.

In his influential *On the Origins of War and the Preservation of Peace*, Donald Kagan cautions leaders to place the same amount of planning effort and resources into the preservation of peace as they do for armed combat.[71] In providing equal effort, countries will avoid the persistent errors of the past. Consolidation of gains sets the conditions for achieving policy goals and building a lasting peace. If the joint force does not emphasize its inherent role during this critical transition, it will remain ill-prepared to effectively achieve strategic objectives and will unnecessarily prolong armed conflict. **JFQ**

Notes

[1] Tony Zinni and Tony Koltz, *Before the First Shots Are Fired: How America Can Win or Lose Off the Battlefield* (New York: Palgrave Macmillan, 2014), 172.

[2] Field Manual (FM) 3-0, *Operations* (Washington, DC: Headquarters Department of the Army, October 6, 2017, Incorporating Change 1, December 6, 2017), 8-1, available at <https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN6687_FM%203-0%20C1%20Inc%20FINAL%20WEB.pdf>.

[3] As a term referring to the translation of military successes into lasting conditions, *consolidation of gains* is interchangeable with *gains consolidation* or *consolidate gains*. These should not be confused with the tactical task of *consolidation* used for "organizing and strengthening a newly captured position so that it can be used against the enemy." See FM 3-90-1, *Offense and Defense*, vol. 1 (Washington, DC: Headquarters Department of the Army, March 2013).

[4] The 2018 *Joint Concept for Integrated Campaigning* emphasizes the requirement to secure gains, referred to with the term *follow-through*. Follow-through is achieved by the military synchronizing with other elements of national power as armed conflict ends to enable consolidation of gains and a return to competition. See *Joint Concept for Integrated Campaigning* (Washington, DC: The Joint Staff, March 16, 2018), available at <https://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joint_concept_integrated_campaign.pdf?ver=2018-03-28-102833-257>.

[5] Core joint publications (JPs) include JP 1, *Doctrine for the Armed Forces of the United States* (Washington, DC: The Joint Staff, March 25, 2013, Incorporating Change 1 from July 2017); JP 3-0, *Joint Operations* (Washington, DC: The Joint Staff, January 17, 2017, Incorporating Change 1 from October 22, 2018); and JP 5-0, *Joint Planning* (Washington, DC: The Joint Staff, December 1, 2020).

[6] Dr. Nadia Schadlow is an American academic with service in multiple high-level, defense-related government positions. Most significantly, she served as the Deputy National Security Advisor for Strategy in the Donald Trump administration, in which position she was the primary author of the 2017 National Security Strategy. She is a full member of the Council on Foreign Relations with articles in several well-respected national security–related publications.

[7] A term for the cessation of active armed combat is not specifically defined in doctrine. William Flavin notes, "Conflict termination is the formal end of fighting [in large-scale combat operations (LSCO)], not the end of conflict." Conflict termination should not be confused with *termination criteria* from JP 3-0. Termination criteria are specific standards that enable the military's redeployment. For a definitive exploration of conflict termination, see William Flavin, "Planning for Conflict Termination and Post-Conflict Success," *Parameters* 33, no. 3 (Autumn 2003), 96, available at <https://press.armywarcollege.edu/parameters/vol33/iss3/9/>. Additionally, although Army doctrine recognizes consolidation of gains in situations other than LSCO, the preponderance of literature covers the postconflict termination period following LSCO. Army doctrine recognizes that consolidation of gains might begin in the consolidation area—the area passed by the Army as it continues fighting to achieve military objectives. Consolidation of gains can also occur in other operations such

as peacekeeping or peace enforcement. For specific insight, see chapter 8, "Operations to Consolidate Gains," in FM 3-0.

[8] This definition is derived primarily from the opening lines of *War and the Art of Governance*: "Success in war ultimately depends on the consolidation of political order, which requires control over territory and the hard work of building local governmental institutions." See Nadia Schadlow, *War and the Art of Governance: Consolidating Combat Success into Political Victory* (Washington, DC: Georgetown University Press, 2017), 1.

[9] FM 3-0, 8-1.

[10] *Joint Concept for Integrated Campaigning*, 33.

[11] The closest approximation to consolidating gains within joint doctrine is "stability activities." Although these are activities inherent to consolidating gains, their use in doctrine is wholly under the umbrella of activities in the dominate or stabilize phases; they do not incorporate the functions required for them to be considered consolidation of gains.

[12] Note the intentional use of "dynamic" to reinforce the interplay between security and stability tasks. See FM 3-0, 8-2.

[13] For additional insight into the factors and themes generating the "American denial syndrome," see chapter 1, "American Denial Syndrome: Failing to Learn From the Past," in Schadlow, *War and the Art of Governance*, 22.

[14] Schadlow, *War and the Art of Governance*, 14.

[15] Ibid., 273.

[16] Bradford A. Lee, "Winning the War but Losing the Peace? The United States and the Strategic Issues of War Termination," in *Strategic Logic and Political Rationality: Essays in Honor of Michael L. Handel*, eds. Bradford A. Lee and Karl F. Walling (London: Routledge, 2003), 250.

[17] Fred Charles Iklé is one of several authors who forewarn practitioners of the likely hyper focus on combat operations once hostilities begin. See chapter 1, "The Purpose of Fighting," in Fred Charles Iklé, *Every War Must End*, rev. ed. (New York: Columbia University Press, 1991), 2.

[18] J. Boone Bartholomees, "Theory of Victory," *Parameters* 38, no. 2 (Summer 2008), 29, available at <https://press.armywarcollege.edu/parameters/vol38/iss2/7/>.

[19] Richard D. Hooker, Jr., and Joseph J. Collins, *Lessons Encountered: Learning from the Long War* (Washington, DC: NDU Press, September 2015), 406, available at <https://ndupress.ndu.edu/Publications/Books/Lessons-Encountered/>.

[20] Schadlow, *War and the Art of Governance*, 274.

[21] See chapter 3, "World War II: Building an Organization," in Schadlow, *War and the Art of Governance*, for an in-depth analysis on the evolutions of the U.S. governance structures during World War II.

[22] Hooker and Collins, *Lessons Encountered*, 10.

[23] The directive clearly states, "The Department of State is the overall lead federal agency for U.S. stabilization efforts; the U.S. Agency for International Development is the lead implementing agency for non-security U.S. stabilization assistance; and DOD [Department of Defense] is a supporting element, including providing requisite security and reinforcing civilian efforts." See DOD Directive 3000.05, *Stabilization* (Washington, DC: DOD, December 13, 2018), available at <https://irp.fas.org/doddir/dod/d3000_05.pdf>.

[24] Hooker and Collins's overarching conclusion that "the military was insensitive to needs of the post-conflict environment" agrees with Schadlow's findings that the military should maintain responsibility for all government contributions during consolidation of gains. For more, see Hooker and Collins, *Lessons Encountered*, 13.

[25] A timeless teaching point continually reinforced by Colonel Patrick Scott O'Neal, former commander, 2nd Armored Brigade Combat Team, 3rd Infantry Division, U.S. Army.

[26] Conrad C. Crane and W. Andrew Terrill, *Reconstructing Iraq: Insights, Challenges, and Missions for Military Forces in a Post-Conflict Scenario* (Carlisle, PA: U.S. Army War College Press, 2003), 46.

[27] JP 3-08, *Interorganizational Cooperation* (Washington, DC: The Joint Staff, October 12, 2016, Validated October 18, 2017), I-15, available at <https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_08.pdf?ver=CqudGqyJFga9GaACVxgaDQ%3d%3d>.

[28] Hooker and Collins, *Lessons Encountered*, 10.

[29] FM 3-0, 8-3.

[30] Schadlow, *War and the Art of Governance,* 146.

[31] Ibid.

[32] Ibid., 122.

[33] Ibid., 100.

[34] See Molly Dunigan et al., *Expeditionary Civilians: Creating a Viable Practice of Department of Defense Civilian Deployment* (Santa Monica, CA: RAND, 2016), 2, 4, 111, available at <https://www.rand.org/pubs/research_reports/RR975.html>.

[35] Schadlow, *War and the Art of Governance*, 278.

[36] Mike Lundy et al., "Three Perspectives on Consolidating Gains," *Military Review* (August 2019), 12, available at <https://www.armyupress.army.mil/Portals/7/Army-Press-Online-Journal/documents/2019/Lundy-OLE.pdf>.

[37] In one specific instance: "The political object is the goal, war is the means of achieving it, and means can never be considered in isolation from their purpose." See Carl von Clausewitz, *On War,* ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1984), 87.

[38] *Joint Concept for Integrated Campaigning*, 23.

[39] Ibid., 24.

[40] JP 3-0, I-8.

[41] See JP 5-0, the paragraph on "Interagency Considerations" in section I-25 and chapter 3, "Joint Planning Process."

[42] JP 5-0, III-22.

[43] JP 3-08, II-5.

[44] Clausewitz, *On War,* 104.

[45] JP 3-08, I-16.

[46] Ibid., I-15.

[47] The list is titled "Hallmarks of successful whole-of-government planning and operations." See 3-08, II-3.

[48] The JP 3-0 guidance on stability activities as part of LSCO is one of the few places that explicitly mentions collaborative planning to synchronize civilian-military efforts, but how to do this planning is not provided. JP 5-0 only implies a need to integrate interagency early, predominantly in the context of theater campaign plans. See JP 3-0, VIII-6, or JP 5-0.

[49] Army Doctrine Publication (ADP) 3-0, *Operations*, states: "Army forces consolidate gains through decisive action, executing offense, defense, and stability *to defeat enemy forces in detail and set security conditions* required for a desired end state" (emphasis added). And although chapter 8 of FM 3-0, "Operations to Consolidate Gains," mentions stability activities, the emphasis for military support is on security-related tasks. See ADP 3-0, *Operations* (Washington, DC: Headquarters Department of the Army, 2019), available at <https://armypubs.army.mil/epubs/DR_pubs/DR_a/ARN18010-ADP_3-0-000-WEB-2.pdf>; ADP 3-05, *Army Special Operations* (Washington, DC: Headquarters Department of the Army, 2019), available at <https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN18909_ADP%203-05%20C1%20FINAL%20WEB(2).pdf>; and chapter 8, "Operations to Consolidate Gains," in FM 3-0.

[50] ADP 3-05; *Joint Concept for Integrated Campaigning*, 2.

[51] Nadia Schadlow, Charles Barry, and Richard Lacquement, "A Return to the Army's Roots: Governance, Stabilization, and Reconstruction," in *The Future of the Army Profession*, 2nd ed., ed. Don M. Snider and Gayle L. Watkins (Boston: McGraw-Hill, 2005), 254.

[52] Ibid., 258.

[53] Crane and Terrill, *Reconstructing Iraq.*

[54] Lundy et al., "Three Perspectives on Consolidating Gains," 11.

[55] Ibid., 12.

[56] Not all joint headquarters staff officers are formally trained at a resident professional military education institution. However, the updates in doctrine will facilitate operational training and self-development.

[57] Lundy et al., "Three Perspectives on Consolidating Gains," 13.

[58] Schadlow et al., "A Return to the Army's Roots," 254.

[59] Joint headquarters, such as geographic combatant commands, are the most likely to have information assurance (IA) personnel, working in either a directorate or in a joint interagency coordination group. Joint interagency task forces will have various IA personnel, depending on their mission.

[60] Hooker and Collins, *Lessons Encountered*, 10.

[61] JP 3-08, I-4.

[62] For additional details, see chapter 3, "World War II: Building an Organization," in Schadlow, *War and the Art of Governance*.

[63] It is fair to note that the varying degrees of effectiveness were due to geographic and resourcing issues.

[64] JP 3-31, *Joint Land Operations* (Washington, DC: The Joint Staff, October 3, 2019, Incorporating Change 1, November 16, 2021), IV-2, available at <https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_31ch1.pdf?ver=SR6LgtBJ_JhcWK2MyJ-FWA%3D%3D>.

[65] JP 3-31, V-1.

[66] Ibid.

[67] Ibid., V-6.

[68] Ibid., V-9.

[69] Flavin, "Planning for Conflict Termination and Post-Conflict Success," 96.

[70] FM 3-0, 8-1.

[71] Donald Kagan, *On the Origins of War and the Preservation of Peace* (New York: Doubleday, 1995), 567.

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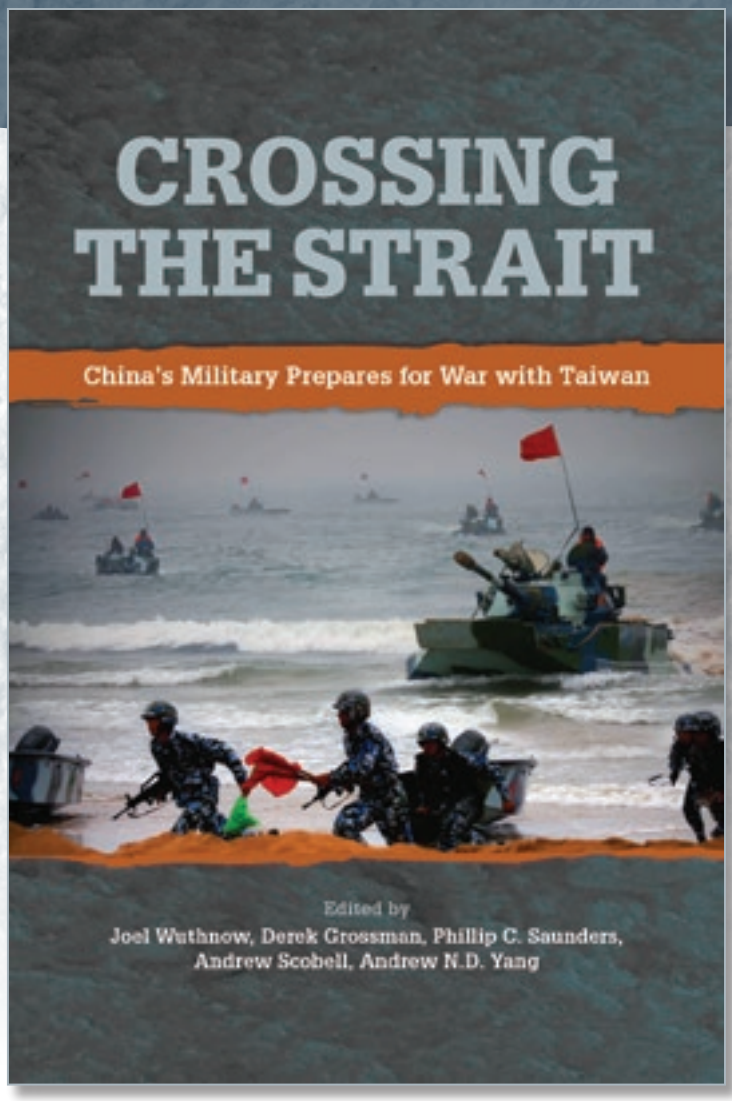

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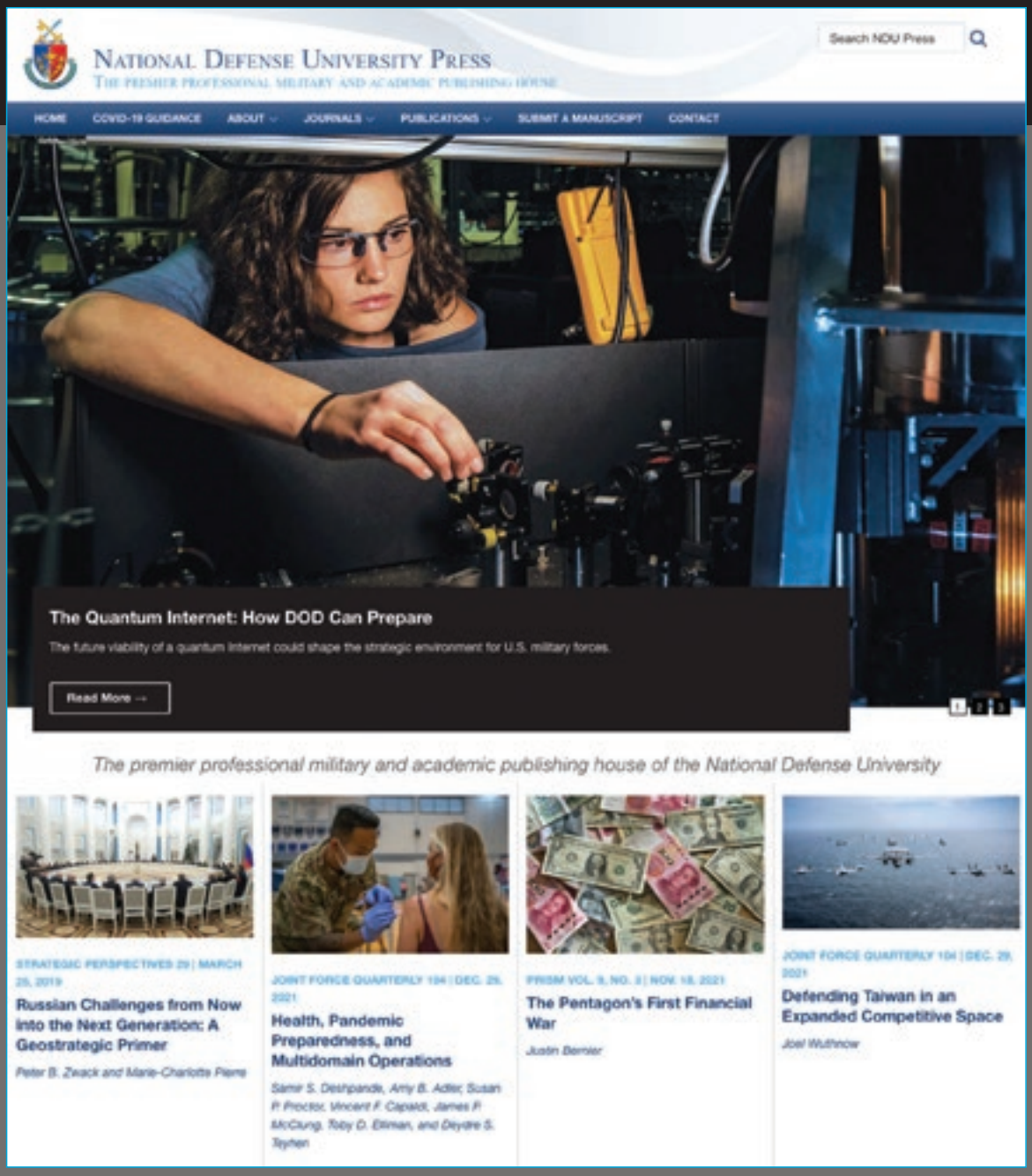

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