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Mark A. Milley—General, United States Army Chief of Staff

Official:

Gerald B. O'Keefe—Administrative Assistant to the Secretary of the Army

Cover photo: Polish soldiers of the 35th Air Defense Squadron
demonstrate the W125 launcher SC antimissile system 14 January
2016 for their U.S. counterparts from the 5th Battalion, 7th Defense Artillery Brigade during Panther Assurance, an interoperability
deployment readiness exercise conducted at Skwierzyna, Poland.
Panther Assurance provides an opportunity for U.S. and Polish forces
to increase allied air defense proficiency while improving the integration and interoperability between U.S. and Polish personnel and
systems. (Photo by Sgt. Paige Behringer, U.S. Army)

Next page: U.S. Army Drill Team members perform 14 June 2017
during an hourlong twilight tattoo military performance at Joint Base
Myer-Henderson Hall, Virginia. (Photo by Staff Sgt. Austin L. Thomas,
U.S. Army)
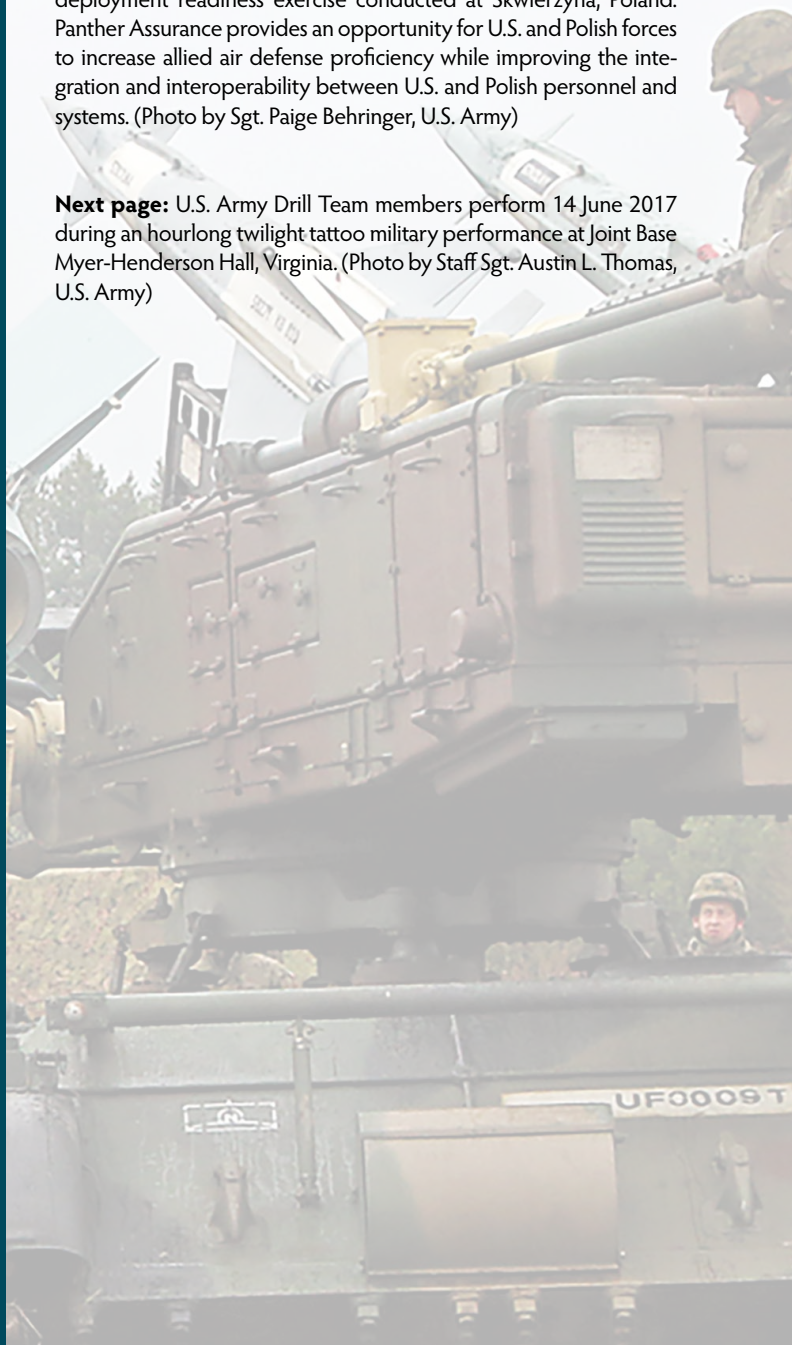
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3rd Place	$500 and consideration for publication in *Military Review*

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TABLE OF CONTENTS

LETTER TO THE EDITOR

NORSE

ATTACK ORIGINS

#		COUNTRY
799	🇨🇳	China
517	🇯🇵	Japan
401	🇺🇸	United States
258	🇵🇱	Poland
94	🇷🇺	Russia
90	🇸🇦	Saudi Arabia
87	🇩🇪	Germany
41	★	Mil/Gov
30	🇸🇪	Sweden
26	🇸🇬	Singapore

LIVE ATTACKS

TIMESTAMP	ATTACKER ORGANIZATION	LOCATION	IP	TARGET LOCATION	TYP SER
2015-03-23 02:56:41.07	China United Network	Beijing, China	61.240.144.64	Kirksville, United States	rfb
2015-03-23 02:56:41.08	China United Network	Beijing, China	61.240.144.64	Kirksville, United States	rfb
2015-03-23 02:56:41.09	China United Network	Beijing, China	61.240.144.64	Seattle, United States	rfb
2015-03-23 02:56:41.09	China United Network	Beijing, China	61.240.144.64	Seattle, United States	rfb
2015-03-23 02:56:41.10	China United Network	Beijing, China	61.240.144.64	Kirksville, United States	rfb
2015-03-23 02:56:41.98	Webhosting.Net	Miami, United States	173.230.231.210	Miami, United States	net
2015-03-23 02:56:41.99	China United Network	Beijing, China	61.240.144.64	Seattle, United States	rfb
2015-03-23 02:56:41.99	China United Network	Beijing, China	61.240.144.64	Seattle, United States	rfb

Geoeconomics

Col. John F. Troxell, U.S. Army, Retired

Editor's note: When Military Review asked Col. John Troxell from the Army War College to review the book War by Other Means: Geoeconomics and Statecraft by distinguished scholars Robert Blackwill and Jennifer Harris, the intent was to publish a book review essay evaluating the merits and relevance of the book. However, the project evolved from a mere book review into a detailed, full-length analysis that expanded in a kind of "variation on a theme" of the timely topics treated in the book. As a result, Military Review has elected to lead its January-February 2018 edition with this hybrid article: part book review, part independent research. The article is particularly salient because it is being published almost coincidentally with the publication of the new U.S. National Strategy, which identifies China and Russia as the greatest potential challengers to the United States, and close on the heels of discussion with regard to the changing nature of war being conducted at the highest levels of the Russian defense establishment. (See General of the Army Valery Gerasimov, Chief of the General Staff of the Russian Federation Armed Forces, "The Value of Science Is in the Foresight: New Challenges Demand Rethinking the Forms and Methods of Carrying out Combat Operations," Military Review 96, no. 1 [January-February 2016]: 23–29).
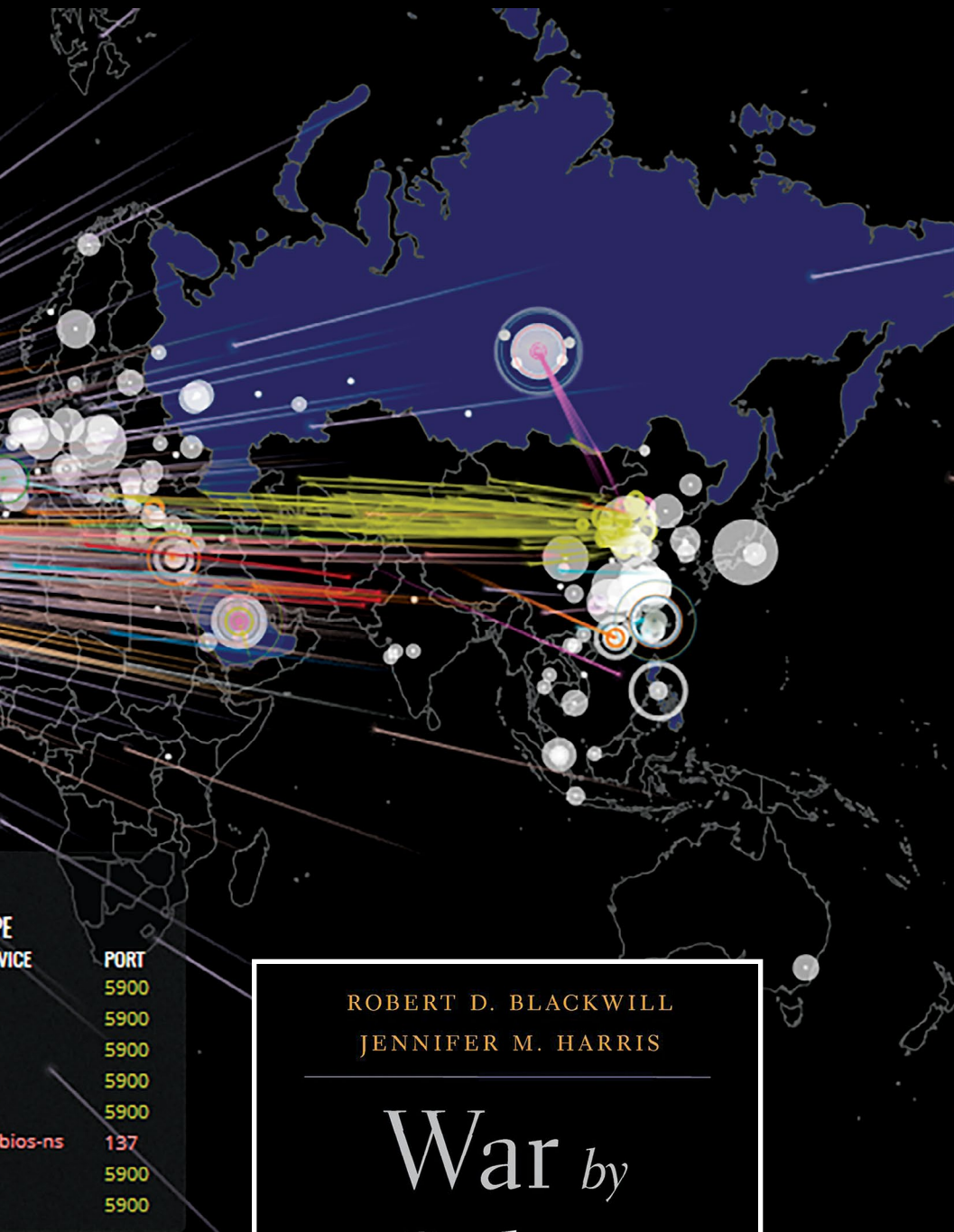
▼ ATTACK TARGETS

#	🏴	COUNTRY
2060	🇺🇸	United States
184	🇵🇭	Philippines
115	🇷🇺	Russia
111	🇸🇦	Saudi Arabia
67	🇹🇼	Taiwan
28	🇭🇰	Hong Kong
23	🇫🇷	France
22	🇨🇾	Cyprus
3	♟	Mil/Gov
2	🇦🇹	Austria

▼ ATTACK TYPES

#	● SERVICE	PORT
534	ssh	22
338	ms-wbt-server	3389
166	rfb	5900
153	telnet	23
125	domain	53
98	ddi-udp-1	8888
93	ms-sql-s	1433
75	netbios-dgm	138

PE		
VICE	PORT	
	5900	
	5900	
	5900	
	5900	
	5900	
bios-ns	137	
	5900	
	5900	

ROBERT D. BLACKWILL

JENNIFER M. HARRIS

War *by* Other Means

GEOECONOMICS AND STATECRAFT

Above: A screenshot from the Norse website, which monitors in real-time global efforts by hackers to break into international databases, highlights the cyber conflict between China and the United States. China-based hackers lead the world in numbers of attacks against other nations, including against the United States, which is the most frequent target of internet attacks. The vast majority of such attacks are aimed at economic and financial institutions, technology development firms, and government departments of administration. (Photo courtesy of Norse, http://www.norse-corp.com/)

Left: *War by Other Means: Geoeconomics and Statecraft,* Robert D. Blackwill and Jennifer M. Harris, Harvard University Press, Cambridge, Massachusetts, 2017, 384 pages

To subjugate the enemy's army without doing battle is the highest of excellence.

—Sun Tzu

A few years ago, in testimony before the Senate Foreign Affairs Committee, Henry Kissinger highlighted the frustration that America feels. Despite possessing the world's largest and most vibrant economy, and fielding the best and most capable military establishment, the international security environment is more troubling now than ever before. "The United States finds itself in a paradoxical situation. By any standard of national capacity, we are in a position to achieve our objectives and to shape international affairs. Yet, as we look around the world, we encounter upheaval and conflict. The United States has not faced a more diverse and complex array of crises since the end of the Second World War."[1]

Just a few months ago, Secretary of Defense James Mattis echoed the claim of a worsening global security situation: "Our challenge is characterized by a decline in the long-standing rules-based international order, bringing with it a more volatile security environment than any I have experienced during my four decades of military service."[2] Compounding this concern is that much of the geopolitical challenge buffeting the United States is facilitated by efforts and methods outside of the traditional political and military domains of geopolitical competition.

The most prominent of these domains impacting geopolitical competition are information, cyber, and economics. A 2017 report from the Center for American Progress focuses on the weaponization of information and claims, "Liberal democracies across the globe are under attack. They are being attacked not by traditional weapons of war but by disinformation—intentionally false or misleading information designed to deceive targeted audiences."[3] The U.S. political system remains in an uproar over the alleged Russian disinformation campaign associated with the 2016 election.[4] Cyber represents an even more threatening domain. Former Secretary of Defense Leon Panetta warned of a "cyber Pearl Harbor" that would shock and paralyze the Nation.[5] Director of National Intelligence Dan Coats, in 2017 testimony before the Senate, listed cyber as the top global threat and stated, "Our adversaries are becoming more adept at using cyberspace to threaten our interests and advance their own, and despite improving cyber defenses, nearly all information, communication networks, and systems will be at risk for years."[6]

Finally, the United States is confronting the consequences of a dramatic shift in relative economic power. China's rise since the initial reforms of Deng Xiaoping has been unprecedented; *The Economist* labeled it "the most dynamic burst of wealth creation in human history."[7] China has become the number one manufacturing and trading nation, and its gross domestic product is the second largest in the world, the largest if measured by purchasing power parity.[8] This economic shift in power has become even more ominous for the United States in light of the great financial crisis of 2008. Recovery from the crisis has been slow and steady, but the damage done to perceptions has greatly diminished the efficacy of U.S. relational power—the ability to command or co-opt.[9] China, on the other hand, has taken great advantage of these changed circumstances, and is described as the "leading practitioner of geoeconomics" and a "maestro" at playing the new economic game.[10]

Information warfare, cyberwarfare, and international economic competition are not necessarily new approaches or methods for states to pursue national security objectives, but the context in which they are being applied and the prominence that they have assumed is significantly new. Information communications technology and social media connections and the more thoroughly integrated and globalized economy, coupled with a desire to avoid existing U.S. asymmetric military power, have channeled revisionist and rejectionist opposition to the U.S. supported rules-based international order into these nontraditional domains.

Challengers to the existing order have taken Sun Tzu to heart and are attempting to win without fighting. They are operating in the now familiar gray zone—"the uncomfortable space between traditional conceptions of war and peace."[11]

A great deal of effort has been undertaken to examine and potentially counter the impact of information and cyber operations, but according to Robert Blackwill and Jennifer Harris in their 2016 book *War by Other Means: Geoeconomics and Statecraft*, the United States through "large-scale failure of collective strategic memory" has allowed the global geoeconomics playing field to tilt dangerously against it, and "unless

this is corrected, the price in blood and treasure for the United States will only grow."[12] The authors go on to claim that "[m]ore and more states are waging geopolitics with capital, attempting with sovereign checkbooks and other economic tools to achieve strategic objectives that in the past were often the stuff of military coercion or conquest."[13] Memory loss by the United States and a greater willingness by rising powers to utilize economic instruments to achieve geopolitical ends means that the United States must rethink and "reorient its foreign policy to succeed in an era importantly defined by the projection of economic power."[14]

Regardless of your response to the argument of this essay, all national security professionals should read *War by Other Means*. As Henry Kissinger notes on the back cover: "Robert Blackwill and Jennifer Harris do policymakers a service by reminding them of the importance of geoeconomics tools. In a world increasingly affected by economic power, their analysis deserves careful consideration."[15] One final encouragement for readers to broaden their understanding of the nexus between economics and national security is provided by Leslie Gelb:

> Most nations today beat their foreign policy drums largely to economic rhythms, but less so the United States. Most nations define their interests largely in economic terms and deal mostly in economic power, but less so the United States. Most nations have adjusted their national security strategies to focus on economic security, but less so the United States. Washington still principally thinks of its security in traditional military terms and responds to threats with military means. The main challenge for Washington, then, is to recompose its foreign policy with an economic theme, while countering threats in new and creative ways.[16]

The United States should focus on the opportunity presented by an increasingly interconnected global economy, ruled by institutions and rule sets we created, and in which the U.S. inherent economic strengths represent the strongest hand.[17]

Blackwill and Harris address four questions in their analysis, designed to enhance understanding of and thought about geoeconomics:

1. What is geoeconomics, and why is it growing in importance?
2. What are the instruments of geoeconomics?
3. How are China and the United States performing in this geoeconomics domain?
4. What is a more effective U.S. geoeconomics strategy?[18]

This essay will expand on their answer to the first; highlight a few salient points about the very thorough discussion of the geoeconomic instruments; summarize the discussion of China's geoeconomic prowess, with a few caveats, and take issue with the authors' critique of U.S. geoeconomic performance; and finally, challenge their concluding thoughts on geoeconomic strategy.

What is Geoeconomics?

Before focusing on the what, let us briefly consider why the concept has grown in importance. The shift in emphasis began as the Cold War was ending. During this time, Edward Luttwark was commenting on the waning importance of military power, observing that "the methods of commerce were displacing military methods—with disposable capital in lieu of firepower, civilian innovation in lieu of military-technical advancement, and market penetration in lieu of garrisons and bases."[19] Writing a few years later, Samuel Huntington argued to raise economic considerations to prominence in interstate relations: "Economic activity … is, indeed, probably the most important source of power, and in a world in which military conflict between major states is unlikely, economic power will be increasingly important in determining the primacy or subordination of states."[20] The emphasis on economic power is even more prevalent with today's rising powers, as noted by Blackwill and Harris: "Today's rising powers are increasingly drawn to economic instruments as their primary means of

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projecting influence and conducting geopolitical combat in the twenty-first century."[21] The first factor that accounts for the growing tendency to focus on economic instruments is the bleak alternative of challenging U.S. military primacy: "The logic of challenging the United States in a large-scale war is growing more remote."[22] The authors note the skeptics on this point and recognize China's ongoing military modernization program and Russia's challenge in the gray zone, but conclude that "none is even attempting to challenge American military primacy in a comprehensive way."[23]

A second factor is that many rising states have adopted degrees of state capitalism and thus have the economic means at their disposal to pursue geopolitical objectives and contest certain aspects of the existing international system. State capitalism represents a hybrid economic structure in which large segments of the economy are controlled by the state but operate side-by-side with a largely market-oriented private sector. China is the main practitioner, and according to *The Economist*, the Chinese "think they have redesigned capitalism to make it work better, and a growing number of emerging-world leaders agree with them."[24] State control is exercised through national oil and gas corporations, state-owned enterprises (SOEs), state-sponsored national champions, sovereign wealth funds (SWFs), and state-controlled banks. In contrast to states operating with a significant state-owned component of their economy, much of Western economic power is held by the private sector. Private sector profit and loss calculations driven by the market make it highly unlikely that these corporations will respond to national geopolitical objectives.

The final factor is the increasingly globally integrated economy. Despite the growing populist backlash against globalization, the twenty-first century version remains alive and well.[25] The underlying drivers of globalization are still extant: reduced transportation costs, the information technology revolution and increased interconnectedness, relaxed capital markets, the proliferation of free-trade agreements, and organizations that regulate international trade such as the World Trade Organization.[26] In fact, national economies are even more integrated as manufacturing has been disaggregated, commoditized, and reliant on integrated global supply chains of intermediate components.[27]

Increasing interdependence of national economies through globalization creates varying degrees of dependency and vulnerability and, according to Joseph Nye, "Manipulating the asymmetries of interdependence is an important dimension of economic power."[28] All of these factors work together to generate an increased proclivity for states to employ economic instruments of power as a first-choice option.

To capture this emerging tendency of state reliance on economic power, Luttwark first coined the term "geoeconomics" in his 1990 essay, "From Geopolitics to Geo-Economics." He states, "Geoeconomics … the best term I can think of to describe the admixture of the logic of conflict with the methods of commerce—or as Clausewitz would have written, the logic of war in the grammar of commerce."[29] The term has since become a bit muddled, and Blackwill and Harris wanted to clarify the concept and narrow its focus. Thus, they present the following definition:

> Geoeconomics: The use of economic instruments to promote and defend national interests, and to produce beneficial geopolitical results; and the effects of the other nations' economic actions on a country's geopolitical goals.[30]

The authors indicate that their analysis is focused on the second element of this definition, the use of economic instruments as means to achieve geopolitical ends. Before going deeper into their examination of the economic aspects of statecraft, it is important to consider at least briefly the full scope of the relationship between economic power and geopolitics. Three specific dimensions are relevant to this consideration: a nation's macroeconomic performance, international economic policy, and economic instruments applied in pursuit of geopolitical ends (the emphasis of *War by Other Means*).

Hal Brands notes in his essay "Rethinking America's Grand Strategy" that "grand strategy begins and ends with macroeconomics, and perhaps the single most important insight from the Cold War is that geopolitical success is a function of economic vitality."[31] The classic historical analysis on this principle is Paul Kennedy's *The Rise and Fall of Great Powers*, in which he concludes that a great power needs a "flourishing economic base."[32]

Both President Barack Obama, with his emphasis on nation building at home, and President Donald Trump's focus on "making America great again" recognize the need to sustain and build a strong domestic economy. Policies to generate economic growth are communicated through budget decisions directing

The economic development paradigm employed by China differs sharply from that employed by the United States, which relies on the concept of economic growth stemming primarily from private investment. In contrast, China operates as a corporate state and command economy that relies heavily on targeted state investment to manage the direction of economic growth and trade. Consequently, the Chinese government is directly involved in shaping strategic economic policies that treat economic competitors as virtual economic enemies. (Photo courtesy of Wikimedia Commons; graphic by Arin Burgess, *Military Review*)

revenue generation and resource allocation and sound financing of government activities.[33]

The three most recent chairmen of the Joint Chiefs of Staff have all expressed concern about these issues. Adm. Mike Mullen claimed that "our national debt is our biggest national security threat"; Gen. Martin Dempsey noted the emergence of economic issues as a major concern and perhaps a focus of his tenure at the Joint Chiefs; and Gen. Joseph Dunford has expressed his concern about the impact of future budget dynamics on resources for defense.[34] None of these concerns have been resolved as the Budget Control Act remains in effect and another debt extension debate is fast approaching.

The second dimension is international economic policy in which economic instruments are used in support of economic ends. The distinction between the pursuit of geopolitical and economic ends can sometimes be "fuzzy"; as Blackwill and Harris admit, "States can and often do design geoeconomic policies that simultaneously advance multiple interests—geopolitical, economic, and otherwise."[35] While some of the most contentious issues between the United States and China may have geopolitical overtones, they are really focused on economic outcomes. Two that immediately come to mind are the theft of intellectual property facilitated by cyber-enhanced economic

espionage, lack of enforcement of intellectual property rights (IPR), and heavy-handed technology transfer policies; and the closely related issue of industrial policy and the ongoing Chinese support for national champions.

Trump announced in 2017 a "zero-tolerance policy on intellectual-property theft and forced technology transfer," and directed an investigation of the impact of Chinese practices on U.S. commerce.[36] China, reportedly, accounts for most of the $600 billion a year intellectual-property theft costs to America.[37] The IPR and technology transfer issue bleed into China's very active industrial policy: "As the Chinese government tries to make China a world leader in technology-intensive industries like semiconductors, driverless cars, and biotechnology, the fear is that it will plunder its foreign partners' intellectual jewels, and then get rid of them."[38] Two years ago, China kicked off its newest industrial policy initiative, "Made in China 2025," that targets ten key industrial sectors with the goal of advancing these sectors to the highest parts of global production chains.[39]

A 2017 headline from the *Wall Street Journal* highlights the intensity of the subsequent global competition associated with China's industrial policy: "China Unleashes A Chip War: The Global Semiconductor Industry is Succumbing to Fierce Nationalistic Competition."[40] The Chinese are employing a government-backed fund, one of the typical geoeconomic assets mentioned above, in their efforts to dominate this critical industry.[41] Intensifying geopolitical competition fueled by economic means is being accompanied by just as intense economic competition fueled by those same means. As a prominent Australian think tank noted in a recent report, "if you want to try to understand many of the most important strategic developments facing the world over the next couple of decades, then you are going to need to devote a reasonable amount of time to thinking about what's going on in the international economy."[42]

	Positive	Negative
Trade	• Grant access • Free trade agreements • Government purchase • Licenses	• Sanctions—deny access • Embargo/boycott/quotas • Deny licenses • Subsidies • World Trade Organization dispute settlement
Finance	• International financial institution (IFI) contributions • Open capital markets • Bailout packages • Debt forgiveness	• Freeze assets • Capital controls • Currency manipulation • Financial sanctions —secondary sanctions • Sell foreign debt holdings
	Monetary policy	
Aid	• Official Development Assistance • Private contributions • Public health programs	• Conditional aid • Tied aid
Policy	Regulation	

(Graphic by author; IFI: International Monetary Fund, World Bank, Multinational Development Banks, etc.)

Figure. Economic Instruments

In a broader sense, economic power and geoeconomic instruments buttress a country's national security by contributing to a strong economy, enabling effective international economic policy, and returning to the authors' focus, the third dimension of geoeconomics, the application of economic statecraft to the accomplishment of geopolitical objectives.

Geoeconomic Statecraft

Statecraft refers to the means by which governments pursue foreign policy, and can be categorized into four primary instruments: diplomacy (negotiations and deals), information (words and propaganda), military force (weapons and violence), and economics (goods and money).[43] Then Secretary of State Hillary Rodham Clinton, in a series of speeches on the topic of economic statecraft, identified two parts, the first is "how we harness the forces and use the tools of global economics to strengthen

our diplomacy and presence abroad"—applying economic means to achieve geopolitical ends. The second part transformed the geopolitical ends into means to help accomplish the ends of domestic economic prosperity.[44]

Blackwill and Harris enumerate seven tools suitable for geopolitical application: trade policy, investment policy, economic and financial sanctions, financial and monetary policy, aid, cyber, and energy and commodities.[45] The first five tools are readily recognized as economic activities, and energy and commodities could just as easily be considered a subset of trade policy—representing perhaps a more critical category of tradeable goods. Cyber's inclusion as an economic instrument seems a bit problematic. The standard economic instruments are shown in the figure (on page 10), highlighting various applications typically designed to provide positive inducement (carrots) or negative actions (sticks). Negative actions are often referred to as coercive economic measures.[46]

Trade remains perhaps the most readily applied economic tool both as positive inducement through negotiated free-trade agreements and through normal trade relations granted by nearly universal membership in the World Trade Organization, and as a coercive instrument as sanctions denying the free flow of goods. Free-trade agreements continue to proliferate, both on a bilateral and regional basis, with objectives that are predominantly focused on economic issues, although the geopolitical residual effects of improved economic relations are always possible. Coercive sanctions imposing embargoes against the free flow of goods and services remain a centerpiece of economic statecraft, despite a strong consensus that they do not work. The negative humanitarian effects of the United Nations-imposed comprehensive sanctions against Iraq in the 1990s led to the development of targeted sanctions against specific individuals and groups. Targeted sanctions, also referred to as smart sanctions, included "asset freezes, travel bans, restrictions on luxury goods and arms embargoes."[47]

International investment flows now far surpass cross-border trade flows, and according to the United Nations, the global direct outward investment position was $26 trillion in 2016.[48] Developing countries that need capital for growth now turn to the international markets for the vast majority of their needs. Tom Friedman describes the combination of short-term investors and multinationals investing for the long term (foreign direct investment [FDI]) as the "electronic herd," and the

markets that broker these investments as the "supermarkets." He concludes that the "supermarkets have replaced the superpowers as sources of capital for growth."[49]

Most FDI is based on market-driven decisions, and thus, their only geopolitical consideration is the stability of the market they are entering. However, the advent of large and growing SOEs, SWFs, and internationally active state-owned banks has begun to tilt the playing field away from pure market-fundamentals decision-making. Blackwill and Harris note that "SOEs are far more politically pliant than most private firms," and geopolitical motives can also be operative with certain SWFs.[50]

Western firms and nations ask for transparency in financial decision-making to ensure investments are made on the "basis of economic, market-driven logic," and SWFs are supposed to comply with the Santiago Principles that are designed to "increase transparency and guard against political investments," but the level of state ownership in these institutions cannot help but "endow them with unique political levers."[51] In addition to the very real potential for geopolitical leverage associated with outbound investment, a country's control over inbound investment may act in a similar manner. A country could deny access to critical sectors, control the degree of foreign ownership allowed, or conduct case-by-case approval for foreign investments based on national security considerations, which could be real or contrived.[52]

Financial sanctions represent the next step in the evolution of sanctions regimes; they are designed to restrict access to the global banking system and international capital markets.[53] After 9/11, the United States conducted a concerted effort to go after terrorism financing and eventually convinced the Society for Worldwide Interbank Financial Telecommunications (SWIFT), which is a clearing house messaging system with a virtual monopoly as the switchboard of the international financial system, to cooperate. As Juan Zarate, in his excellent book *Treasury's War* notes, SWIFT and the ubiquity of the U.S. dollar in international markets became the "cornerstone of our ability to wage financial warfare more broadly."[54] This topic will be discussed in greater length in the next section.

Similar to the potency of financial sanctions based on the ubiquity of the U.S. dollar, the efficacy of financial and monetary policy as a tool of geoeconomics is largely dependent on the role of a country's currency

in the international monetary system. Currency wars are fought between central banks, either manipulating their currencies for competitive advantage or conducting unconventional domestic monetary policy by implementing quantitative easing programs.[55] Or, a central bank discussing the end of quantitative easing could cause emerging market interests rates to rise, resulting in debt roll-over issues.

A similar chain of events preceded the collapse of the Yanukovych government in Ukraine in 2014, resulting in the most serious geopolitical crisis in Europe since the end of the Cold War.[56]

This is an immensely important and complex topic. The current global footprint for the U.S. dollar completely underpins the strength of the U.S. economy and the ability of the U.S. government to sustain its growing national debt, and it enables significant U.S. application of geoeconomic tools. The Chinese renminbi (RMB) is perhaps an up-and-coming challenger, but the odds of its success are not in its favor. We will revisit the dollar and the RMB in the next section.[57]

Economic assistance consists of military aid, humanitarian aid, and bilateral economic development assistance, also referred to as official development assistance (ODA). It is fairly clear that there can be significant geopolitical strings attached to ODA, and in addition to China, other major geoeconomic players using this instrument include the Gulf Cooperation Council members and Japan. China has utilized ODA to gain adherents throughout Africa and Latin America for the one-China policy, and it is also known for providing conditions-free aid that does not impose burdensome good-governance considerations or requirements for progress on human rights. There are also a host of state-owned development banks that have begun to compete with the existing lineup of Western created and backed development banks.[58]

National policies governing energy and commodities could be considered an example of trade policy, but Blackwill and Harris choose to highlight these as a separate collective instrument. Energy resources in the form of oil and natural gas certainly represent critical resources needed to run the global economy, and ever since the creation of the Organization of Petroleum Exporting Countries (OPEC), the geopolitical implications of the energy trade have been abundantly clear. The key concern is energy security: availability at a reasonable price.[59] States dependent on imports seek to mitigate their vulnerability through diversification of both source and transit route.[60]

The biggest geopolitical actor in this sector is Russia, having engineered natural gas cutoffs several times at the beginning of this century.[61] But despite many geopolitical disputes that might seem prime candidates for geoeconomic actions, the robust globally integrated energy market, infused by increased supplies courtesy of the ongoing march of technology and innovation, seem to have given the market the upper hand.[62]

This does not mean that geopolitics is completely divorced from the energy sector, but major suppliers recognize their strong interest in demonstrating reliability to their customers, otherwise incentivizing the search for alternative sources. Blackwill and Harris devote an entire chapter to the "geoeconomics of North America's energy revolution" and conclude that the United States will be in a strong position to support allies and friends in countering geoeconomic pressure from adversaries, to engage with China and Asia in an expanded energy infrastructure featuring the export of liquefied natural gas and oil, and to sustain the global economy through the twenty-first century.[63]

The final instrument is cyber. The authors include an extensive section to discuss and offer recent examples of cyberattacks. They note that not all cyberattacks are geoeconomic and thus propose a very specific definition: "Geoeconomic cyberattacks are those making use of economic or financial market mechanisms and seeking to impose economic costs as part of a larger geopolitical agenda."[64]

This definition, however, seems to diverge from the narrower approach specified earlier: economic instruments as means to achieve geopolitical ends. Cyberattacks designed to cause economic harm that in turn may support a geopolitical objective sounds similar to an example cited earlier in their book that bombing a factory "should be excluded from any conception of geoeconomics."[65] A cyberattack against critical infrastructure can certainly harm an economy, but it is not the application of economic means to a geopolitical end.[66] The concern about the theft of IPR has already been discussed, but as mentioned, those attacks seem to be conducted for an economic end. Cyberattacks clearly represent a significant security threat, and in many cases, these attacks target critical components of economic infrastructure

> " China's export-driven economic miracle depends on imports. … China cannot cut off this flow, or risk disrupting it through conflict, without crippling its economy. "

and industry, but the examination of this aspect of statecraft should have its own platform and not necessarily be considered a geoeconomic event.

China and the United States in the Geoeconomic Arena

The next major section of *War by Other Means* examines the geoeconomic performance of China and the United States. It should be clear that there are a number of geoeconomic practitioners plying their trade (i.e., Russia and several members of the Gulf Cooperation Council), but focusing on China and the United States seems appropriate given that the relationship between these nations is likely to define the twenty-first century.

Since China finds itself less outmatched by the United States in the geoeconomics domain, the competition between these two nations will play out in the geoeconomic arena.[67] According to Blackwill and Harris, there are four structural features, or geoeconomic endowments, that dictate the effectiveness and degree of economic leverage that countries can achieve through the employment of geoeconomic instruments. The first is the ability to control outbound investment. Countries with large state-owned sectors (i.e., SOEs, SWFs, and state-owned banks) have a distinct advantage.[68] The second is the size and ability to control access to one's domestic market. All businesses want to be successful in the largest consumer markets and will often bend over backward to comply with government demands such as technology transfers, joint ventures, and establishing local research-and-development centers. The third is influence over commodity and energy flows, and the fourth is the global footprint of a country's currency.[69] As will be shown, China has some important advantages in the geoeconomic arena, but perhaps not as dominant as the authors claim.

Blackwill and Harris use six case studies to demonstrate China's geoeconomic prowess and to support their claim that "Beijing builds and exercises its power projection not primarily through the deployment of military assets (except in the South and East China Seas) but rather through coercive and incentivizing geoeconomic policies toward its neighbors."[70] The most interesting case concerns the territorial dispute with Japan over the Diaoyu/Senkaku Islands. This is particularly interesting as it pits the second and third largest economies against each other. In 2010, the Chinese responded to an at-sea collision by halting the export of rare earth metals to Japan. China claimed that it was merely a slowdown in processing export orders due to resource depletion and environmental concerns. At the time, China produced over 90 percent of the global supply.

Although this had an immediate cautionary effect on Japan and other consumers of rare earth metals, a resulting price increase unintentionally drove a revival of global rare-earths production, thus lessening China's monopoly power and geopolitical leverage. As a Council on Foreign Relations report noted, "Beijing all too often underestimates market forces."[71]

The second incident occurred two years later in 2012, when the Japanese government purchased one of the disputed islands, and China responded with nationalists' riots that boycotted Japanese products and forced the shutdown of Japanese manufacturers located in China. But as Richard Katz wrote in *Foreign Affairs*, the disruption in production was relatively short-lived before *mutual assured production* kicked in. China badly needed what Japan was selling because "China's export-driven economic miracle depends on imports. … China cannot cut off this flow, or risk disrupting it through conflict, without crippling its economy."[72] Economic interdependence can trump geopolitics.

China has also employed geoeconomic instruments in its standoff with Taiwan. It has used economic aid and investment to encircle Taiwan by enticing other nations to end diplomatic relations with the breakaway province and to support mainland positions in international institutions, further isolating Taiwan. It has also pursued penetration by liberalizing cross-strait relations to heighten Taiwan's economic dependence on China. However, there are limits to China's penetration

Military Review

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National Security Strategy

of the United States of America

DECEMBER 2017
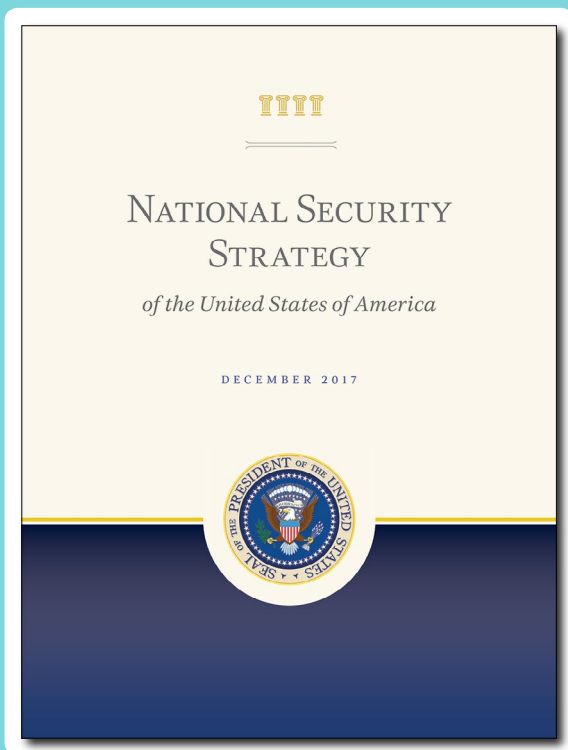
The strategy addresses key challenges and trends that affect our standing in the world, and singles out China as a particular threat. It notes, "China and Russia challenge American power, influence, and interests, attempting to erode American security and prosperity. They are determined to make economies less free and less fair, to grow their militaries, and to control information and data to repress their societies and expand their influence." It also asserts that these states "use technology, propaganda, and coercion to shape a world antithetical to our interests and values."

To view the complete *National Security Strategy of the United States of America*, please visit https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf.

as "Taiwanese citizens are becoming acutely aware of their deepening vulnerability to Chinese geoeconomic pressure." But despite this pushback, Blackwill and Harris conclude that, "Beijing will inevitably continue to use geoeconomic tools to influence Taipei," in its efforts to guide the island to eventual reunification.[73]

Geoeconomic inducements are also at work in support of the nine-dash line in the South China Sea (SCS). China has become the number one trading partner for all of the surrounding countries, in most cases displacing the United States. China's recent package of loans and investments offered to President Rodrigo Duterte of the Philippines is an excellent example of geoeconomics at work. China offered Manila more than $9 billion in low-interest loans for infrastructure and other projects; also completing economic agreements valued at an estimated $13.5 billion. In return, Duterte agreed to set aside the Permanent Court of Arbitration ruling on the SCS and claimed that the long-term U.S. defense alliance was at risk.[74]

David Shambaugh adds some perspective to China's geoeconomic position in the SCS: "Viewed more broadly, China's share of regional trade and investment is far from dominant. Beijing's investment in many Southeast Asian countries ranks below that of Japan, the European Union, or the United States, while its trade does not exceed 30 percent (usually 15 to 20 percent) of any individual Asian nation's total trade."[75] And, as John Ikenberry argues, there are limits to geoeconomic inducements: "Countries want the benefits that come from the rise of China. But, they also want to guard against Chinese domination of the region. This, in turn, is a major reason America's extended alliance system in the region is welcomed."[76]

The next case study concerns South Asia with a brief look at relations with India and Pakistan. Blackwill and Harris argue that China's desire to avoid escalating military tensions in this volatile region pushes them to focus more on geoeconomic tools. Chinese investment is the major tool in this region and its emphasis is on the China-Pakistan Economic Corridor as an important component of the One Belt One Road (OBOR) initiative.[77] An excellent summary of the OBOR initiative is provided by the Lowy Institute that concludes that the

> OBOR is President Xi's most ambitious foreign and economic policy initiative. … There is little doubt that the overarching

objective of the initiative is helping China to achieve geopolitical goals by economically binding China's neighboring countries more closely to Beijing. But there are many more concrete and economic objectives behind OBOR [as well].[78]

The China-Pakistan Economic Corridor calls for an investment of $46 billion, and the entire OBOR network will have projects worth more than $890 billion.[79] In addition to significant financing concerns, the "lack of political trust between China and some OBOR countries, as well as instability and security threats in others, are considerable obstacles."[80] Other countries have proposed similar infrastructure investment networks for the Asia-Pacific region, and India claims that OBOR "is a unilateral initiative" that it will not buy into "without significant consultation."[81] Blackwill and Harris suggest that the joint U.S.-India "Indo-Pacific Economic Corridor" could address India's wariness toward China's plans and constitute its own maritime silk road.[82]

Korea is the final case study. The current crisis, generated by the ultimate military weapon, has turned it into a geoeconomic battlefield. For a bit of context, China should have tremendous leverage over North Korea, as it accounts for nearly 85 percent of North Korea's total trade volume. Even more important is the stranglehold China has on over 90 percent of the North's energy imports.[83] Despite this nearly unsurmountable geoeconomic position, China claims it has no effective leverage. According to a Brookings Institution strategy paper, "China has no leverage to convince this foreign nation to stop its nuclear program."[84] From the U.S. perspective, Obama called North Korea the "most sanctioned" country in the world.[85]

Yet, most analysts conclude that sanctions will never succeed in getting North Korea to give up its nuclear weapons. The first round of the current geoeconomic battle was fired by the United States in the form of a grand bargain that proposed to go easy on trade with China in return for Chinese pressure against North Korea. Recently, having judged that effort to be lacking, the United States fired round two by initiating a trade investigation against Chinese technology transfer policies and theft of IPR.[86] In the meantime, South Korea agreed to the deployment of the Terminal High Altitude Area Defense (THAAD) system on its territory, and

it was time for China to fire a geoeconomic round. Government-controlled news media urged boycotts of South Korean products and mainland travel agencies canceled group trips to South Korea.[87] "The sales of Kia and its parent Hyundai Motors Co. in China fell 61 percent from March to June," and the plants are operating at only 30 percent capacity.[88] Once again, however, the geoeconomic effect missed the mark as the THAAD system is now completely operational and South Korean reaction to Chinese bullying has gone down badly. For the first time, opinion polls suggest they hold China in lower esteem than Japan.[89]

The United States is now expected to press for China to impose a complete oil embargo on North Korea.[90] To incentivize this request, the United States could impose secondary sanctions to "compel China to sever North Korea's international economic lifelines. This would involve threatening access to the U.S. financial system for foreign firms that do business" with North Korea.[91] Battles are always unpredictable, and thus it is uncertain how this geoeconomic battle will conclude, but this short account clearly demonstrates the tendency for the United States and China to resort to geoeconomic pressure.

U.S. Geoeconomic Statecraft

The preceding review of the standoff over North Korea's nuclear program indicates that, contrary to the authors' claims of U.S. hesitancy and ineffectiveness in the geoeconomic arena, the United States remains a very active contestant in this critical domain. U.S. outbound FDI is the largest in the world, and although not directed by the U.S. government for specific geoeconomic purposes, the global presence of U.S. corporations helps sustain relational and reputational power.[92] As an example, concern expressed about Chinese economic penetration into Latin America is countered by the fact that more than 53 percent of the total FDI in the region in 2016 came from the European Union, while 20 percent came from the United States. China, on the other hand, contributed only 1 percent.[93] The United States is also actively engaged in vetting inbound investments through the Committee on Foreign Investments in the United States (CFIUS).[94] The CFIUS is an interagency organization charged with reviewing foreign investments for national security implications. Because of the concern that the growing number of Chinese investments may be directed and subsidized by the Chinese government, to

include potential acquisitions associated with sensitive technologies, and due to a lack of reciprocity in allowing U.S. firms to freely invest in China, the CFIUS has significantly toughened the scrutiny of these deals.[95]

The United States is the number two trading nation in the world, and due to the size of its domestic consumer-based economy, it remains an extremely attractive market for global producers to engage. The Trump

> " The United States is the number-two trading nation in the world, and due to the size of its domestic consumer-based economy, it remains an extremely attractive market for global producers to engage. "

administration's populist-driven trade policies have sent a chill through free-trade enthusiasts around the world, and the withdrawal from the Trans-Pacific Partnership (TPP) trade agreement is viewed by many as an economic setback but even more of a geostrategic error. Blackwill and Harris include an extensive discussion of the TPP and argue that the TPP should have been negotiated with much more of a geopolitical focus.[96] But, they nevertheless conclude that "U.S. failure to conclude this deal is far more likely to be seen by our allies and non-allies alike as foremostly a geopolitical failure and a negative test of U.S. staying power in the region."[97]

A recent study on trade in the Asia-Pacific urged the United States to reconsider its position on the TPP, encouraged other countries to adhere to the high standards contained in the TPP, and welcomed other countries to try and bring the agreement into force, if necessary, without the United States.[98] The administration is actively engaged in various trade initiatives, and it remains to be seen if its current policy bent will moderate. The president has stated, "We are going to have a lot of trade deals."[99]

The carrot aspect of the trade instrument may be a bit blunted for the time being, but the stick is very active and increasingly effective. U.S. economic sanctions are now largely associated with financial sanctions. As mentioned above, these sanctions are focused on constraining access to the global banking system. The size of U.S. capital markets and the role of the U.S. dollar in international transactions mean the "United States has

had a near monopoly on the use of targeted financial pressure over the past ten years."[100] Financial sanctions have also created significant incentives for third parties (e.g., banks) to abide or risk severe consequences, both monetary and reputational.[101]

These sanctions, referred to as "secondary sanctions" or "extraterritorial sanctions" can be extended to foreign companies that continue to trade with the targeted country.[102] U.S. sanctions have recently been effectively employed against Iran and Russia.[103] The lack of sufficient impact to date against North Korea is based on overreliance on the minimally effective U.N. Security Council resolutions. As noted above in the discussion of the geoeconomic battlefield over the Korean peninsula, wide-ranging financial sanctions, to include secondary sanctions, may assist in getting favorable results.[104]

The prevalence and success of financial sanctions has generated important mitigation activities: banks are de-risking (terminating accounts, or pulling out of correspondent relationships in risky areas), and countries are developing alternatives to the dollar.[105] According to Blackwill and Harris, "Certain financial sanctions … are effective only because these entities deal in U.S. dollars. But stakes change if countries begin to settle transactions in … other currencies."[106]

In terms of the current focus on U.S. and Chinese geoeconomic prospects, this leads to the discussion about the role of the U.S. dollar and the Chinese RMB. The dollar has enjoyed a position of exorbitant privilege in the global economy based on its dominant use in international transactions and its service as the principle reserve currency.[107]

Dollar dominance is represented by the following circumstances: oil is priced in dollars; most commodities are priced in dollars; two-thirds of international bank loans are in dollars; 40 percent of international bonds are issued in dollars; and 60 percent of foreign exchange reserves are held in dollars.[108]

China, among other nations, chafes at the exorbitant privilege accorded to the dollar and the significant financial leverage that this confers on the United States, and it has thus embarked on a program to internationalize the RMB. Effective 1 October 2016, the International Monetary Fund included the Chinese RMB as one of the five currencies comprising its basket of reserve currencies. However, China continues to resist establishing a fully market-determined exchange rate, and it has not opened its capital account to allow free cross-border capital flows.[109] In a superb book on the Chinese currency, *Gaining Currency,* Eswar Prasad concludes, "the RMB is hitting constraints that result from the structure of its domestic economy and will limit its progress as a reserve currency. Moreover, given the nature of its political system, it is unlikely the RMB will attain the status of a safe-haven currency. Thus, although it is likely to continue its ascent, the notion that the RMB will become a dominant global reserve currency that rivals the dollar is far-fetched."[110] The U.S. ability to employ geoeconomic financial weapons seems safe, at least for the time being.

Before leaving this subject, there is one final issue to address that has implications for geoeconomic leverage, China's holdings of U.S. debt. China and Japan have been neck-and-neck as the top holders of U.S. Treasury securities, and in June 2017, China nudged out Japan as the top holder of U.S. Treasury securities at $1.1 trillion.[111] The typical scenario is that in a crisis China would attempt to send the dollar into a downward spiral through a sudden sell-off of U.S. treasuries. Blackwill and Harris note, however, that there is general agreement that due to the strength of the U.S. bond market and anticipated counterintervention by the U.S. Federal Reserve, the likely result of a sudden sell-off by China would be the significant depreciation of China's remaining holdings, thus "China's holdings are on balance a liability for Beijing."[112] This relationship is often referred to as *mutual assured financial destruction*—reminiscent of the Cold War term referring to the U.S. policy of mutual assured destruction that would involve a massive doomsday exchange of nuclear weapons attacks with the Soviet Union—and is somewhat akin to the earlier mention of mutual assured production. These concepts meld into the notion of mutual assured economic destruction that recognizes that increasingly interdependent economies tend to diminish geoeconomic leverage.[113]

Both China and the United States are active players in the geoeconomic arena, and each possesses some unique advantages. This review of cases and the application of various economic instruments validates the conclusion reached by Zarate in *Treasury's War*: "We have entered a new era of financial influence where financial and economic tools have taken pride of place as instruments of national security. The conflicts of this age are likely to be fought with markets, not just militaries, and in boardrooms, not just battlefields. Geopolitics is now a game best played with financial and commercial weapons."[114]

Geoeconomic Grand Strategy: Small Ball vs. Big Ball

Blackwill and Harris conclude their tour de force on geoeconomics by addressing the future of U.S. grand strategy. They argue that the United States needs to "use its geoeconomic power with much greater resolve and skill" to resist geoeconomic coercion being practiced by China and other like-minded states.[115] They claim that the United States has been too focused on the security dimension of American foreign policy and thus defaults to military and political instruments, rather than recognize that inherent economic strengths should be more readily employed in pursuit of geopolitical outcomes—adopting a more economics-centered foreign policy.[116] In addition, the United States is too wedded to the existing rules-based international order (RBIO), which tends to constrain its willingness to employ economic instruments in pursuit of geopolitical objectives for fear that "the mere invocation of threats to the existing rules-based order" will end the policy debate on the use of geoeconomic instruments.[117]

The United States has created and nurtured an international order based on commercial liberalism since the end of World War II, which called for the spread of capitalism and open markets. This global order generated global economic growth, prosperity, and economic interdependence, and was buttressed by the establishment of various institutions (the International Monetary Fund, World Bank, eventually the World Trade Organization) and their rules-based operational construct that facilitated cooperation and collective problem solving.[118]

The end of the Cold War greatly expanded the geographical application of the RBIO and even included the adoption of more prescriptive economic policies

that should be followed by each country, known as the Washington Consensus. These policies included sound macroeconomic policies, market-based domestic structures, and integrated and open trade and investment policies.[119] The RBIO and its economic components are based on the proposition that economics is a positive-sum game, as opposed to the zero-sum nature of geopolitics. But, that only holds if the role of the state in the economy is greatly reduced, laissez-faire liberalism is practiced, and geopolitical motivations are minimized when it comes to influencing economic policy.[120]

However, Blackwill and Harris argue against this principle. They contend that the RBIO is delivering less and less, and rising powers are undercutting it. The self-imposed constraints on the use of geoeconomic approaches means that "Washington will probably never be capable of using trade and investment tools to advance its foreign policy interests in many of the *short-term transactional* or coercive ways that suit other countries [emphasis added]."[121] To their credit, there is a great deal of discussion in the book on this point, and the authors do a commendable job in presenting both sides of the argument. They acknowledge that the United States "may well have a greater geopolitical interest than other states in keeping the geopolitically motivated uses of certain economic instruments to a minimum," and perhaps, "upholding the rules-based system still remains the best strategy for maximizing present U.S. geopolitical objectives."[122] But, they remain unconvinced and conclude, "so long as upholding the rules-based system is still seen as geopolitically advantageous for the United States, most forms of geoeconomic power will need to be at least neutral in their impacts on the rules-based system for them to pass muster. Adhering to this standard will constrain the United States far more than many other states, especially in more coercive, shorter-term cases."[123]

There are two problems with their conclusion. First, their purported "grand strategy" is to make greater use of economic instruments to achieve geopolitical objectives (geoeconomics) in support of U.S. national interests. The argument in the preceding paragraph captures the emphasis on short-term, tactical, and transactional uses of economic instruments. This is all about means, not strategic ends, and certainly not a grand strategic vision. The authors actually introduce the analogy of small ball (tactics) versus big ball (strategy).[124] It should not be a

big surprise to the reader that a book titled *War by Other Means* is focused on the means (small ball), not the ends. It represents an excellent review of the various economic instruments of statecraft and their application, but it adds little to considering how to employ these tools in support of an effective grand strategy. The second problem is that continued support of the RBIO remains the most appropriate grand strategy (big ball) for the United States. Economic instruments need to be employed occasionally in support of geopolitical objectives, but their use should take into consideration the potential negative impact it may have on the continued acceptance of the RBIO.

John Ikenberry, probably the most well-known scholar on the theory, origins, and current nature of the RBIO, makes several cogent arguments about the efficacy of the existing liberal international order. First, the components of this order—multilateral institutions, alliances, trade agreements, and political partnerships—have created the capacities and tools to win the twenty-first-century struggles with geopolitics. Second, China and Russia embrace the underlying logic of the RBIO. "Openness gives them access to trade, investment, and technology from other societies. Rules give them tools to protect their sovereignty and interests."[125] Consequently, the United States should pursue a grand strategy that "ties itself to the regions of the world through trade, alliances, multilateral institutions, and diplomacy. It is a strategy in which the United States establishes leadership not simply through the exercise of power but also through sustained efforts at global problem solving and rule making."[126]

Conclusion

The reader should take away three broad concepts from this article. First, the geoeconomic domain will quite likely be the most critical arena for nation-state competition in the decades to come. Thus, it is important to understand the economic instruments of statecraft and their employment in pursuit of geopolitical objectives, but also to remain cognizant of their limitations. Second, the United States should continue to support the post–World War II liberal institutional RBIO. As Cordell Hall, Franklin D. Roosevelt's secretary of state, reasoned at the end of World War II, "if we could increase commercial exchanges among nations over lowered trade and tariff barriers and remove unnatural obstructions to trade, we would go a long way toward eliminating war itself."[127] Finally, in

two concluding thoughts from Blackwill and Harris: "National power depends above all on the performance of the local domestic economy and the ability to mobilize its resources," and "Nothing would better promote America's geoeconomic agenda and strategic future than robust economic growth in the United States."[128] The U.S. position in the world is not dependent on what does or does not happen in China, it depends on the economic policies and direction we set for ourselves here in the United States. ∎

Notes

Epigraph. Sun Tzu, *The Art of War*, trans. The Sonshi Group, chap. 03.02, accessed 20 November 2017, https://www.sonshi.com/original-the-art-of-war-translation-not-giles.html.

1. *Global Challenges and U.S. National Security Strategy, Hearing Before the Senate Comm. on Armed Services*, 114th Cong. (29 January 2015) (testimony of Henry Kissinger).

2. *Department of Defense Budget Posture, Hearing Before the Senate Comm. on Armed Services*, 115th Cong. (13 June 2017) (testimony of James Mattis, Secretary of Defense of the United States).

3. Max Bergmann and Carolyn Kenney, "War by Other Means: Russian Active Measures and the Weaponization of Information" (Washington, DC: Center for American Progress, June 2017), accessed 8 November 2017, https://cdn.americanprogress.org/content/uploads/2017/06/08052859/RussiaDisinformation-report1.pdf.

4. The stories continue to be developed. For the most recent, refer to Scott Shane, "The Fake Americans Russia Created to Influence the Election," *The New York Times* (website), 7 September 2017, accessed 8 November 2017, https://www.nytimes.com/2017/09/07/us/politics/russia-facebook-twitter-election.html?ref=todayspaper&_r=0. This article claims that Russian information attacks created false accounts and identities on Facebook and Twitter, and turned these tools into engines of deception and propaganda.

5. Elisabeth Bumiller and Thom Shanker, "Panetta Warns of Dire Threat of Cyberattack on U.S.," *The New York Times* (website), 11 October 2012, accessed 8 November 2017, http://www.nytimes.com/2012/10/12/world/panetta-warns-of-dire-threat-of-cyberattack.html.

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7. "China's Growing Pains," *The Economist*, 19 August 2004, quoted in Ashley J. Tellis, "China's Grand Strategy: The Quest for Comprehensive National Power and its Consequences," in *The Rise of China: Essays on the Future Competition,* ed. Gary J. Schmitt (New York: Encounter Books, 2009), 25.

8. Graham Allison, in his new book, begins with a chapter that starkly relates the growth of China, particularly in relation to the United States. "The Biggest Player in the history of the World," chap. 1 in *Destined for War: Can America and China Escape Thucydides's Trap?* (New York: Houghton Mifflin Harcourt, 2017).

9. Joseph S. Nye Jr., *The Future of Power* (New York: PublicAffairs, 2011), 10–14.

10. Robert D. Blackwill and Jennifer M. Harris, *War by Other Means: Geoeconomics and Statecraft* (Cambridge, MA: The Belknap Press of Harvard University Press, 2016), 11; Leslie H. Gelb, "GDP Now Matters More Than Force: A U.S. Foreign Policy for the Age of Economic Power," *Foreign Affairs* 89, no.

6, (November/December 2010), accessed 8 November 2017, https://www.foreignaffairs.com/articles/united-states/2010-10-21/gdp-now-matters-more-force.

11. Nathan P. Freier et al., *Outplayed: Regaining Strategic Initiative in the Gray Zone* (Carlisle Barracks, PA: Strategic Studies Institute, June 2016), xiii.

12. Blackwill and Harris, *War by Other Means*, 1–2.

13. Ibid., 4.

14. Ibid., 7.

15. In addition to the excellent coverage of the topic in the body of the book, the extensive endnotes represent a wealth of material for those desiring to go deeper into the subject.

16. Gelb, "GDP Now Matters More Than Force," 35.

17. John F. Troxell, "Strategic Insights: Economic Power: Time to Double Down," Strategic Studies Institute (website), 29 September 2015, accessed 8 November 2017, http://ssi.armywarcollege.edu/index.cfm/articles/Economic-Power-Time-To-Double-Down/2015/09/29.

18. Blackwill and Harris, *War by Other Means*, 8.

19. Edward N. Luttwark, "From Geopolitics to Geo-Economics: Logic of Conflict, Grammar of Commerce," *The National Interest*, no. 20 (Summer 1990): 17. In a book published almost a decade later, Luttwark presents an excellent summary comparing the means and goals of power-politics to geoeconomics, along with some very prescient implications of the transition from one system to the other. Edward Luttwark, *Turbo-Capitalism: Winners and Losers in the Global Economy* (New York: HarperCollins, 1999), 134.

20. Samuel P. Huntington, "Why International Primacy Matters," *International Security* 17, no. 4 (Spring 1993): 72.

21. Blackwill and Harris, *War by Other Means*, 33–34. The most well-known grouping of rising powers is the BRICS—Brazil, Russia, India, China, and now South Africa. Additional conceptions include the MIKTs—Mexico, Indonesia, South Korea, and Turkey (created by Jim O'Neill of Goldman Sachs, who also created the term BRIC). Also refer to Raymond Ahearn, *Rising Economic Powers and U.S. Trade Policy* (Washington, DC: Congressional Research Service [CRS], 3 December 2012).

22. Blackwill and Harris, *War by Other Means*, 35.

23. Ibid.

24. "The Rise of State Capitalism," *The Economist* (website), 21 January 2012, accessed 21 November 2017, http://www.economist.com/node/21543160. With China as the primary practitioner and given its authoritarian government structure, state capitalism is also referred to as authoritarian capitalism. Many other practitioners of state capitalism have authoritarian leanings but not all. Norway, for example, owns the largest sovereign wealth fund.

25. "The Global Economy: An Open and Shut Case," *The Economist* (website), 1 October 2016, accessed 8 November 2017, https://

Military Review

WE RECOMMEND

Forgotten Decisive Victories

Edited by
Richard V. Barbuto and Jonathan M. House

US Army Command and General Staff College Press
US Army Combined Arms Center
Fort Leavenworth, KS
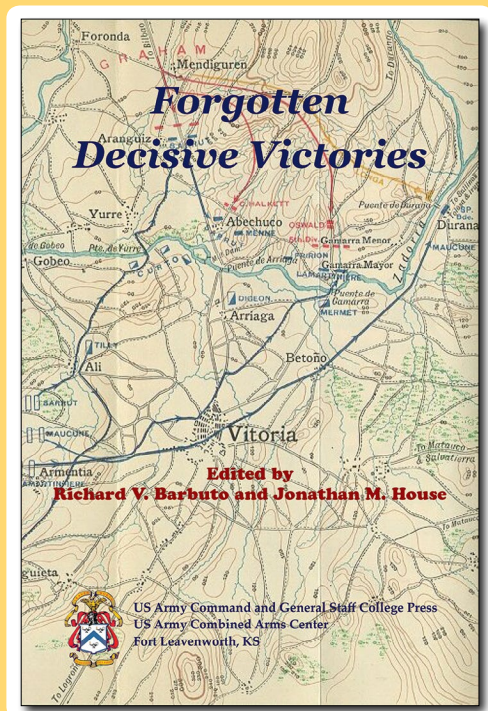
The Army University Press is pleased to announce the publishing of *Forgotten Decisive Victories* by the faculty of the Department of Military History, U.S. Army Command and General Staff College. This anthology is a collection of essays on understudied decisive battles in history, each of which altered the strategic balance between the belligerents in a lasting way. Although many of the battles described herein are less well known today even among scholars, their impact on the lives of the people, armies, and states involved ranged from significant (the Somme) to existential (Pusan Perimeter). The factors influencing the sequence and outcome of each battle are of course unique to each circumstance. It is applicable equally to the military professional, the interested layman, and the student of humanity. All seek better to understand the drivers of human conflict. The study of such conflicts from a wide swath of human history offers the best way to understand those drivers of conflict and thus offers us a chance to mitigate their influence on our world. (From the introduction by Dr. Thomas E. Hanson, Director, Department of Military History, U.S. Army Command and General Staff College.)

To view this publication, please visit http://www.armyupress.army.mil/Portals/7/combat-studies-institute/csi-books/forgotten-decisive-victories.pdf.

www.economist.com/news/special-report/21707833-consensus-favour-open-economies-cracking-says-john-osullivan.

26. Thomas L. Friedman, *The Lexus and the Olive Tree: Understanding Globalization* (New York: Anchor Books, 2000). A prolific author, this book remains the best description of the various elements of globalization and how they have impacted the international system.

27. Wayne Morrison, *China-U.S. Trade Issues* (Washington, DC: CRS, 24 April 2017), 14.

28. Nye, *The Future of Power*, 55.

29. Luttwak, "From Geopolitics to Geo-Economics," 19.

30. Blackwill and Harris, *War by Other Means*, 20.

31. Hal Brands, "Rethinking America's Grand Strategy: Insights from the Cold War," *Parameters* 45, no. 4 (Winter 2015-16): 9.

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Human Terrain System is Dead, Long Live … What?

Building and Sustaining Military Cultural Competence in the Aftermath of the Human Terrain System

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In 2009, I published an article for *Military Review* recommending the end of the human terrain system (HTS). In "All Our Eggs in a Broken Basket: How the Human Terrain System is Undermining Sustained Cultural Competence," I argued that the deployment of nonorganic cultural teams to Afghanistan and Iraq was unnecessary and counterproductive. I wrote, "When do the quick-fix solutions give way to long-term, doctrinally sound programs? It is time for HTS to give way."[1]

In my view, the logical alternative was to sharpen the skills of the soldiers and marines already tasked with advising the commander—foreign area, civil affairs, and intelligence experts—and put them in a position to help think through the maddening complexities of irregular war, meanwhile providing sufficient cultural training to deploying troops. Instead, HTS became the program of record for cultural capability. Five years and over $700 million later, HTS was effectively killed.[2] Plans to embed permanently human terrain teams (HTTs) with every infantry brigade and regiment were shelved. Promises of an integrated joint cultural database faded. As the smoke clears, it is time to revisit fundamental problems and to take inventory of remaining culture programs. It is equally important to think about an HTS redux: If we do this again, why and how do we do it?

Forget the he-said, she-said swirl of accusations, counteraccusations, and recriminations that dragged the debate over HTS into the muck. A sober retrospective suggests that everyone involved, from Montgomery McFate and Steve Fondacaro to the most fervent anti-HTS anthropologists, had good intentions.[3] As Christopher Sims argues in his scholarly assessment of the program, there are bigger issues at stake than the individual failures and success stories that have co-opted our attention.[4] The U.S. military needs to make some fundamental decisions about culture. If it fails to take action now, it will—as many experts have argued since at least 2003—see its capabilities fade as they did after the Vietnam War. I argue that despite some real progress, the fade is already well underway.

HTS and the Fundamental Split: Organic or External?

HTS came about primarily as a response to the improvised explosive device (IED) problem in Iraq. Tactical commanders were frustrated that they could not get into the heads of tribal leaders and insurgent foot soldiers to deter them from planting IEDs. At the same time, the Army, the Marine Corps, and the Department of Defense (DOD) were all struggling to find a way to insert cultural competence into training and education. The culture gap was yawning, and tactical failure stacked on failure as soldiers and marines struggled to figure out the fundamental nature of Iraq's insurgency. Anthropologist Montgomery McFate, a strong proponent of military cultural competence, stepped into the mix after hearing the heartfelt laments of several combat commanders. She linked up with Hriar S. Cabayan at DOD, and a program was born.

Several culture experts and program managers were engaged from the outset. Despite the tensions that later emerged, as early as 2003, a close and mostly collegial group of culture proponents had built a struggling ad hoc collective to come to terms with military cultural competence. We knew and respected one another, attended conferences and workshops, enthusiastically invited each other to speak, and openly shared information. Many of us participated in the earliest conversations about HTS and watched the concept expand from a few small teams to a massive, $700 million system. We all believed that something had to be done to improve cultural training, education, and intelligence. However, our paths diverged as we ran headfirst into the fundamental and still unresolved military culture argument: Should the military integrate cultural competence organically, or do the complexities of culture demand teams of external experts?

Many of us reasoned that developing organic capability was the right approach. We made three

Capt. Mark Moretti, commander of Company B, 2nd Battalion, 12th Infantry Regiment and village elder Haji Shamshir Khan hold hands and say goodbye 13 April 2010 as the two meet to discuss the unit's transition out on its last day in the Korengal Valley, Afghanistan. Though many in the West have difficulty accepting the custom, hand-holding among adult men in the manner depicted is widely practiced in the Middle East and central Asia in what is regarded as a manly expression of trust and close friendship among peers. (Photo by Spc. David Jackson, U.S. Army)

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A Russian Orthodox priest blesses an SU-27 SM fighter jet 26 November 2014 at the Belbek military airfield outside Sevastopol, Ukraine. Without detailed cultural awareness of the environment provided by cultural experts, the U.S. military will have great difficulties negotiating the increasingly complex environment in which they must operate. For example, a lack of appreciation for the profound influence the Russian Orthodox religion has on the motivations and activities of many Russian citizens and their leaders could lead to poor assumptions and miscalculations. (Photo by Yuri Lashov, Agence-France Presse)

arguments: (1) outsourcing cultural competence would ensure its inevitable disappearance and the equally inevitable path to grievous tactical errors in the next war, (2) training and educating everyone to a reasonable level was the only way to ensure the even and widespread cultural competence needed in a massive distributed counterinsurgency operation such as Iraq or Afghanistan, and (3) cultural information could be classified or unclassified, but it had to be integrated into a holistic intelligence understanding of the battlespace. As I describe below, we effectively lost the first argument, we made small gains with the second argument, and it appears that we made only temporary, uneven gains with the third argument. HTTs sortied into Iraq and Afghanistan to support brigade and regimental commanders. Meanwhile, the shadow effort to develop organic cultural capability chugged along, subsisting on the thin gruel of contingency and joint funds left over from HTS and some remnants squeezed from service budgets.

Five parallel narratives, or dyads, emerged over the lifespan of HTS. Foremost was the organic versus external debate. Equally important but less publicized were the sometimes polarizing differences between the Army and the Marine Corps, between language and culture, between intelligence experts focused on threats and killing and those focused on cultural understanding, and between the relevance of culture in irregular and conventional warfare. Each of these is central to the HTS period and important to determining the future of military cultural competence.

First Dyad: Organic versus External

While HTS won the organic versus external debate in 2007, the victory was partial and temporary. Organic programs were deprived of the hundreds of millions of dollars invested into HTS, but a handful of experts and leaders applied force of will to ensure

some capabilities emerged and survived. Army leaders created the Training and Doctrine Command Culture Center (TCC), which saw through the slow and often tense effort to integrate culture into some aspects of military training and education.[5] The Marine Corps created the Center for Advanced Operational Cultural Learning (CAOCL), which kick-started a parallel training and education effort.[6] Defense Language Institute (DLI) leaders oversaw an explosive growth in military linguist training.[7] Joint programs became loosely associated through the Defense Language and National Security Education Office.[8] Army civil affairs created the Civil Information Management database.[9] When HTS was dismantled, the Army built the Global Cultural and Knowledge Network, designed to centralize service sociocultural knowledge.[10] As of late 2017, all of these activities and several others have persisted beyond the demise of HTS.

One of our culture colleagues likes to say that we are stashing capabilities around the DOD so we do not lose everything when interest fades. This approach has prevented total loss. However, what remains is uneven, scattershot, mostly disconnected, and arguably inadequate to help build and sustain military cultural competence. For every minor success, there is a stagnating effort or an impending failure. My interviews with service culture experts suggest that cultural training and education are being slowly squeezed from curricula. Large-scale training exercises that once emphasized key leader engagements and cultural training are reallocating time to rebuild lost conventional warfare skills. These shifts were inevitable and predicted well in advance by almost everyone involved. The collective goal of our pre-HTS, ad hoc culture consortium was to normalize culture by focusing on basic, low-cost competence that would be relevant to any type of operation. As of late 2017, culture is still primarily a thing apart, an added burden for training and education, and therefore vulnerable to cuts.

Second Dyad: Army versus Marine Corps

Both the Air Force and the Navy have culture programs.[11] I focus on the Army and the Marine Corps because they are most dependent on cultural competence for day-to-day operations, and because together, they exemplify an important part of the cultural competence debate. From 2003 through 2017, Army and Marine

Corps leaders set up a limited but generally supportive link between the service culture training and education programs. However, the Army and the Marine Corps diverged over HTS. They did so for reasons that I believe justify a differentiated approach to service cultural competence but not to the point of eschewing joint leadership and some logical joint solutions.

HTS created distracting friction between the two services. Army leaders embraced HTS, arguing for its relevance and pushing DOD leaders to cement it as a program of record.[12] Marine leaders were happy to take the effectively free teams provided by the program, but they never made a formal joint commitment.[13] Instead, the Marine Corps put slightly more effort into building organic capability. It would be easy to chalk up this disagreement to petty service rivalry, but there are relevant services differences.

The sheer size of the Army and its emphasis on individual specialization make general cultural training and education difficult. Marines have (at the very least) a modest service tradition of cultural competence, while soldiers appear more likely to be skeptical of cultural training.[14] The original HTS website quoted several soldiers who argued that they were incapable of thinking about culture.[15] Army leaders were perhaps justifiably reluctant to enact a major, short-notice training and education shift across a skeptical force, and were therefore more willing than the Marine Corps to embrace an external solution like HTS. However, issues of scale and specialization should be less daunting to gradual, longer term, and more modest change.

Both the Army and Marine Corps continue to press for organic, service-wide cultural competence. Army culture experts have adapted to the challenge of scale by taking a consumer-driven approach to support rather than pursuing a top-down, force-fed, one-size-fits-all cultural program.[16] Staff at the TCC helps individual units and organizations tailor cultural competence training and education on a case-by-case basis, sending out mobile training teams as needed.[17] Taking advantage of the Marine Corps' smaller, more manageable size, the Marine Corps Combat Development Command created the Regional, Culture, and Language Familiarization program.[18] Under this program, new sergeants and officers are assigned a career-long learning program focused on regional expertise. TCC and CAOCL form a point of cross-service convergence; both provide tailored service

expertise. Differentiated service programming is a natural, effective—but incomplete and tenuous—evolutionary response to the culture gap. This parallel development should inform the way the DOD and Joint Staff think about cultural competence.

Third Dyad: Language versus Culture

Should the services and the joint force take a "Big L, Little C" (big language, little culture) or a "Big C, Little L" (big culture, little language) approach to cultural competence?[19] In cultural competence parlance, Big L, Little C is language in the lead. This has been the go-to approach to addressing cultural competence since the publication of the 2005 *Defense Language Transformation Roadmap*.[20] When the culture crisis arose in the early 2000s, language programs were already in place and ready to ramp up to meet new demand. The DLI rightfully thrived in response to the quantifiable need for trained linguists. However, some leaders took the Big L, Little C approach a step further. They believed that creating linguists would go a long way toward meeting the broader and more complex demands for culture competence and cultural information.[21] Investments in language training would pay off twice and avoid the messy complexity and added burdens of cultural training and education.

This is a debatable assumption. While language is an important part of improving cultural understanding, it is quite possible to read, listen to, and speak a foreign language while knowing almost nothing about the associated culture. The DLI saw this problem and increased the cultural component of its curriculum. But, language necessarily dominates in programs funded to generate linguists. Significant parts of language programs' cultural training events are conducted online rather than in the classroom or field environments. Most defense language programs are cemented as programs of record; they are large and well-funded, and they naturally dominate the comparatively puny service culture centers. The Defense Language and National Security Education Office is a clear exemplification of the Big L, Little C dynamic. It is effectively the one remaining DOD-wide cultural competence organization, but its title emphasizes language and does not mention culture.[22]

While the Army is the service proponent and manager for language programs, it describes its cultural competence program as CREL, for culture, regional expertise, and language.[23] In the provocative world of cultural competence lingo, where the words "human terrain" can set off an intense argument, these choices matter.[24] Despite some reluctance to embrace organic cultural solutions, the Army diverted from the more commonly used LREC (language, regional expertise, and culture) acronym and took a firm Big C, Little L stance. This is a practical approach. Soldiers can benefit tremendously from language training, but it is costly and time consuming. Language training will always be necessary for specialized tasks like intelligence collection and special operations, but it is less important to the larger force than basic cultural competence. Understanding why culture matters, how it matters, and having basic knowledge of the vagaries of human interaction are critical capabilities. Language is a lesser-included requirement for most soldiers and marines.

Fourth Dyad: Meat Eaters versus Leaf Eaters

Military intelligence staffs are supposed to build and maintain cultural competence, amass and analyze cultural information, and advise the commander on cultural issues.[25] As I argued in my 2009 article, the military intelligence community had effectively no capability to meet any of these requirements the earliest days of the Afghanistan and Iraq wars. Intelligence was tailored to warn of impending attacks and find enemy military formations. Over the next decade, irregular warfare requirements led to the development of high-value targeting capabilities. Intelligence was at the heart of the intensive, ongoing effort to find, fix, and finish insurgent and terrorist leaders, bomb makers, financiers, and even foot soldiers. At the surface level, the U.S. military eschewed body counts, the Vietnam experience could not be ignored. But, in practice, killing became an end unto itself.[26] High value kills could be quantified and tabulated to give at least the appearance of progress. Culture, on the other hand, was a squishy thing that generated no meaningful data. It never stood a chance in the battle for intelligence focus and funding.

Creation of the stability operations information centers (SOICs) in Afghanistan epitomized the problems with integrating culture into fused intelligence analysis. In 2010, then Maj. Gen. Michael Flynn directed the creation of the

A man armed with a hatchet threatens members of the press 17 April 2015 in Johannesburg after several shops and cars were torched the night prior in anti-immigrant attacks by locals. The circumstances of such unrest reflect the changing nature of security threats in an increasingly complex world. Burgeoning populations are expanding vicious competition for resources that is resulting in civil violence and the break down of national borders worldwide. Cultural understanding of the roots and character of such threats will be essential to mitigate them in the future. (Photo by Shiraaz Mohamed, Associated Press)

SOICs in response to the gaps he and his coauthors identified in "Fixing Intel: A Blueprint for Making Intelligence Relevant in Afghanistan."[27] The general idea was to build a cultural information clearinghouse to meet the pressing needs of commanders trying to understand Afghan culture, development programs, tribes, and other complex issues. In practice, the SOICs became a place to dump culture, segregating it from the intelligence fusion process.

Just as cultural engagement and assessment became something the HTTs did, in parts of Afghanistan cultural intelligence became something the SOICs did. Manned partly with Afghan nationals who had no security clearances, the SOICs were not even physically collocated with the intelligence staffs. The separation of culture from intelligence and the devaluation of cultural information were on literal, physical display. One SOIC leader called this a separation of the "fully vested meat eaters" from the "soft-power leaf eaters."[28] Even as some intelligence experts managed to work culture into their products, this greater-lesser dynamic replicated itself in other ad hoc cultural intelligence efforts across Afghanistan and in Iraq.

Widespread belief that cultural intelligence was a squishy, leaf-eating activity repeated in the intelligence community. In a mostly earnest and sometimes aggressive effort to improve cultural intelligence capabilities, some intelligence staffs worked to enhance cultural intelligence collection and analysis, to integrate culture into analytic products, and to build cultural databases. For at least the first decade after the invasion of Iraq, the undersecretary of defense for intelligence did its best to coordinate defense intelligence cultural activities, but full integration of cultural information into the all-source analysis process—in which all types and sources of information are supposed to be fused to generate holistic understanding—never really took hold. Instead of integration, cultural intelligence cells sprung up around the community. Some of these, like the Human Terrain Analysis Branch at U.S. Central

Command, were highly successful, but their tenure was often short and their contributions to holistic understanding of the environment were unclear.

As of late 2017, the defense intelligence enterprise's cultural capabilities are as scattered, dissociated, and tenuous as the cultural competence programs in the services.[29] Cultural intelligence is mostly a thing practiced in isolation. Cultural information collection, storage, and dissemination are still very much works in progress. More importantly, the revival of interest in conventional war in Europe and on the Korean Peninsula has reinforced specious yet longstanding counterarguments to culture proponents: culture is an irregular warfare thing; we do not do irregular warfare anymore; and this is a temporary distraction that will eventually go away.

Fifth Dyad: Irregular War versus Conventional War

Well before HTS was a rough napkin sketch, the ad hoc culture community reached two points of consensus. First, we had to be careful not to oversell culture. Our enthusiasm could easily be misread as a drive to make culture the dominant consideration in warfare. Some of us conflated culture with geographic terrain in order to communicate its relative importance to soldiers and marines. This analogy earned us groans from academia, but our point was that culture mattered as much and not more than anything else. Second, we had to emphasize that culture mattered across the entire spectrum of operations, from humanitarian assistance missions to counterinsurgency to conventional warfare. We found some traction with the first argument but never found a convincing voice on the second. This was a significant failure: culture was inaccurately and perhaps indelibly branded as an irregular warfare thing.

It is unsurprising that military leaders would perceive culture this way. Culture rarely appears in the literature or doctrine on conventional warfare, and it is most acutely excluded from tactical and operational narratives. Proponency only emerges when culture becomes a problem, and this usually occurs in irregular conflicts such as Vietnam, Afghanistan, and Iraq. Cultural competence training and cultural intelligence do not appear to offer any assistance in direct tactical combat, which happens to be the primary conventional war purpose of the military's combat arms. Following this line of thinking, if culture does not matter in conventional war then it can and should be shelved so the military can dedicate more time to combined arms training.

This thinking is shortsighted and anathema to the joint force understanding of warfare. It is shortsighted because it is impossible to generate rapidly real, service-wide cultural competence. Abandoning culture because it is perceived to be an irregular war consideration makes another deadly culture crisis inevitable. We would repeat the Vietnam War cycle: enter an irregular war; make terrible cultural errors; scramble to create cultural training, education, and intelligence; and then dump everything as we pivot back to the Russians. Parallels between the late-1970s and today are remarkable.

Separating culture from conventional war is unwise because the U.S. military views warfare as a fundamentally human endeavor. Joint Publication 1, *Doctrine for the Armed Forces of the United States*, the capstone doctrine for the U.S. Armed Forces, describes war as a complex human undertaking and a Clausewitzean contest of opposing, independent wills.[30] Both Army and Marine Corps doctrinal publications agree.[31] If this is true, then even tactical and operational combat require understanding human behavior, and human behavior is rooted in culture. How can the military identify and break the enemy's will to fight if it does not understand the things that motivate or weaken him? How can the military count on allies when it does not understand the factors that will keep them in the fight or send them running for home? Culture lies at the heart of conventional warfare.

Nevertheless, in practice, American military theory and doctrine have centered on the concrete and quantifiable factors of war at the expense of the human component. In 2016, the vice chairman of the Joint Chiefs of Staff wrote in the *Joint Concept for Human Aspects of Military Operations (JC-HAMO)* that the U.S. military does not understand ally and adversary will to fight.[32] Anthropomorphic thinking reached its zenith with the "revolution in military affairs," which sought to reduce the human element to a point of irrelevance.[33] Broad reluctance to embrace culture as a pervasive and inevitable part of all military operations is consistent with American reluctance to accept the uncertain and all too human nature of warfare.

Bracketing culture in a narrow, irregular warfare category imposes two additional restrictions. It all but prohibits the logical next step in cultural competence:

Haji Abdul Naza (*center*) of Janak Kala village speaks with Samuel Crist, a civilian with the human terrain system 4 January 2012 during an Operation Viper Dagger key leader engagement in Kandahar Province, Afghanistan. The purpose of the mission was to discourage the Taliban from using residents to hide contraband. (Photo by Spc. Crystal Davis, U.S. Army)

improved self-understanding of U.S. military culture. If the military can improve the tools, knowledge, and competence to understand adversaries, noncombatants, and allies, it can find a way to apply this cultural competence internally to help bolster resilience, improve leadership, and help prevent significant DOD-wide problems such as sexual harassment and assault. Limiting the scope of culture also reduces its value to understanding the so-called gray zone, or measures short of war conflicts such as the Russian intervention in Crimea. Accepting the broader value of culture can generate tangible and practical improvements across a wide array of policies.

Looking Forward: Human Terrain System, Cultural Competence, and Preventable Pain

As of late 2017 HTS is effectively dead; cultural competence and intelligence programs are limited, uneven, and under threat; and the strongest institutional proponents of cultural capability are edging toward retirement. Secretary of Defense James N. Mattis was one of the earliest advocates for cultural training. Mattis oversaw the creation of CAOCL and the integration of

cultural training and education into standing curricula, but he is certainly in his last Defense Department position. Colonels and sergeants major who once led companies in places such as Baghdad, Ramadi, Garmser, and Kandahar are at the top of the narrow promotion pyramid. Force of will generated by intense frustration drove many of these leaders to help institute cultural programs, including HTS, through the late 2000s. Once that experience is gone, with the military focused on conventional threats, what comes next for culture?

Thinking About a Resurrected Human Terrain System

HTS is effectively dead, but it may or may not live on as a ghosted program of record. Either way, it does

not exist in practice. There is periodic talk of bringing it back to life in order to meet demands in the ongoing wars in Iraq, Syria, and Afghanistan. Putting aside all of the aforementioned conceptual problems with outsourcing culture, it would certainly be possible to dust off the old training manuals, hire new team members, and have a viable nonorganic program up and running in fairly short order. It might take only half a year to have the first teams in the field. But, despite the best efforts of program managers, these teams would go through inevitable and painful learning periods. Civilian social scientists would have to acclimatize to the military culture, and some would inevitably fall short. If the DOD or a service sees the need for an HTS-like capability, the better alternative would be to create an organic HTS.

HTS had two primary components: the teams and the reach-back knowledge center. Teams could be easily generated from the foreign area officer, civil affairs, human intelligence, and special operations communities in the military. It is true that even foreign area officers with master's degrees often lack social science field skills. However, these could be taught by the many civilian social scientists now embedded throughout the military. This would be an ideal application of civilian social science capability. Since teams have no requirement to conduct complex general scientific research, training on tasks such as polling and interviewing could be executed quickly. Better yet, teams could be assembled and periodically exercised as part of routine training. Reservists with additional civilian specialties would be uniquely positioned to support an organic HTS.

These teams could be supported by holistic, culture-inclusive military intelligence analysis. Rather than create separate culture databases and analytic teams, intelligence leaders need to find a way to integrate routinely cultural information and considerations into the collection and all-source fusion processes. This has been done at the tactical level, and success can be replicated up. Integration will add minimal additional cost to the defense budget; defense intelligence already manages billions of dollars in data collection, storage, analysis, and dissemination assets, all of which are fully capable of handling and integrating cultural information.

I argue that broader cultural competence is preferable to the team of specialists approach, but if the DOD or the services decide that a team-based cultural system is necessary then it can and should be built from the inside. Organic capability will reduce costs, facilitate integration with operational units, and help ensure the longevity of the program.

Saving Culture

Even if HTS is revived, it will not solve the military's culture problem. In fact, it might be as distracting as it was in its first iteration. Cultural programs are fading now. The real solution to the culture gap is comprehensive, long-term, low-level, low-cost integration of cultural training, education, and intelligence across the DOD and the services. A thoughtful and sustainable program is within reach, but it needs a strong proponent.

It is time for the DOD to assign a powerful, central proponent for culture at the highest levels of the department. Specialist language programs are necessary and inherently sustainable. Culture programs have not yet proven their relevance and they are inherently vulnerable. The DOD needs to replace Big L, Little C with a culture-focused policy. Culture leaders should have directive and budgetary authority to drive home a comprehensive, long-term program. Each service should replicate this culture position to ensure thoughtful and differentiated service implementation. Absent full empowerment, we can expect cultural competence to go the way of HTS. The consequences are as easy to forecast as they should have been in 1975, and as they were to a handful of us in 2003. ∎

Notes

1. Ben Connable, "All Our Eggs in a Broken Basket: How the Human Terrain System is Undermining Sustained Cultural Competence," *Military Review* 89, no. 2 (March-April 2009): 64.

2. It reportedly remains a program under U.S. Army Training and Doctrine Command (TRADOC) G-2, and it is associated with the Global Cultural Knowledge Consortium. I did not receive a response to a request for a program update.

3. Montgomery McFate and Steve Fondacaro, "Reflections on the Human Terrain System during the First 4 Years," *Prism* 2, no. 4 (September 2011): 63–81; Maximilian Forte, "The End of Debates About the Human Terrain System?," Zero Anthropology (website), 17 February 2013, accessed 13 November 2017, https://zeroanthropology.net/2013/02/17/the-end-of-debates-about-the-human-terrain-system/; Roberto J. González, "Human Terrain: Past, Present, and Future

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4. Christopher Sims, *The Human Terrain System: Operationally Relevant Social Science Research in Iraq and Afghanistan* (Carlisle Barracks, PA: Strategic Studies Institute, December 2015); James Dao, "To Reach Out, Befriend and Kill When Necessary: An Even Trickier Terrain," review of *The Tender Soldier: A True Story of War and Sacrifice*, by Vanessa M. Gezari, *The New York Times* (website), 27 August 2013, Book of the Times, accessed 14 December 2017, http://www.nytimes.com/2013/08/28/books/the-tender-soldier-examines-the-us-counterinsurgency-strategy.html; Christopher J. Lamb, James Douglas Orton, Michael C. Davies, and Theodore T. Pikulsky, "The Way Ahead for Human Terrain Teams," *Joint Force Quarterly* 70 (3rd Quarter 2013): 21–29.

5. "TRADOC Culture Center (TCC)," U.S. Army Combined Arms Center (website), last reviewed 10 November 2016, accessed 13 November 2017, http://usacac.army.mil/organizations/cace/tcc.

6. "Center for Advanced Operational Culture Learning (CAOCL)," Marine Corps University (website), accessed 13 November 2017, https://www.usmcu.edu/caocl.

7. Defense Language Institute Foreign Language Center (website home page), accessed 13 November 2017, http://www.dliflc.edu/.

8. Defense Language and National Security Education Office (website home page), accessed 13 November 2017, https://dlnseo.org/.

9. Stephen Goto, "Civil Information: CA is Missing the Moment," Small Wars Journal (website), 22 September 2016, accessed 13 November 2017, http://smallwarsjournal.com/jrnl/art/civil-information-ca-is-missing-the-moment.

10. "Global Cultural and Knowledge Network," All Partners Access Network (website), accessed 13 November 2017, https://community.apan.org/wg/oekn/w/wiki/17790/global-cultural-knowledge-network/.

11. "AFCLC [Air Force Culture and Language Center] at Air University," U.S. Air Force (website), last updated 26 October 2017, accessed 13 November 2017, http://culture.af.mil/; "Center for Language, Regional Expertise, and Culture (CLREC)," U.S. Navy (website), accessed 13 November 2017, http://www.netc.navy.mil/centers/ciwt/clrec/.

12. *Role of the Social and Behavioral Sciences in National Security before House Armed Services Committee Terrorism and Unconventional Threats Subcommittee and the Research and Education Subcommittee of the Science and Technology Committee*, 110th Cong. (24 April 2008) (statement of Col. Martin P. Schweitzer, U.S. Army Commander, 4/82 Airborne Brigade Combat Team), accessed 14 December 2017, https://www.gpo.gov/fdsys/pkg/CHRG-110hhrg44412/pdf/CHRG-110hhrg44412.pdf.

13. I was the Marine Corps representative to the Department of Defense (DOD) board determining the joint nature of the program, and tracked Marine Corps involvement after departing that post.

14. I draw this conclusion about Army skepticism from the responses I received to my original article, to conversations with Army leaders in the ensuing nine years, and interviews with Army culture experts in 2017. For more on Marine Corps culture, see Ben Connable, "Culture Warriors: Marine Corps Organizational Culture and Adaptation to Cultural Terrain," Small Wars Journal (website), 7 February 2008, accessed 13 November 2017, http://smallwarsjournal.com/blog/journal/docs-temp/4-connable.pdf?q=mag/docs-temp/4-connable.pdf.

15. Connable, "All Our Eggs in a Broken Basket," 62.

16. U.S. Army cultural training leaders (anonymous), two telephone interviews with author, November 2017.

17. "Information Papers: Cultural and Foreign Language Capabilities," U.S. Army (website), accessed 14 November 2017, https://www.army.mil/aps/08/information_papers/transform/Cultural_and_Foreign_Language_Capabilities.html.

18. "Regional, Culture, and Language Familiarization," CAOCL (Marine Corps University website), accessed 14 November 2017, https://www.usmcu.edu/caocl/rclf.

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20. Under Secretary of Defense for Personnel and Readiness, *Defense Language Transformation Roadmap* (Washington, DC: DOD, January 2005), accessed 14 November 2017, http://www.dtic.mil/dtic/tr/fulltext/u2/b313370.pdf.

21. Subcommittee on Oversight and Investigations, *Building Language Skills and Cultural Competencies in the Military: DOD's Challenge in Today's Educational Environment* (Washington, DC: U.S. House of Representatives Committee on Armed Services, November 2008), accessed 14 November 2017, https://democrats-armedservices.house.gov/_cache/files/3/7/3737c7c1-efeb-4672-bc99-74b340faf0ba/540DE-3C82A9F532C584E402C683E8439.language-and-culture-report-11-08-vf.pdf.

22. This is a matter of emphasis only. The Defense Language and National Security Education Office is a proponent of cultural competence training and it has a subordinate cultural component.

23. "Culture, Regional Expertise and Language Management Office (CRELMO)," U.S. Army Combined Arms Center (website), last reviewed 27 March 2017, accessed 14 November 2017, http://usacac.army.mil/organizations/cace/lrec.

24. In the early 2010s, a major culture conference had to be called to a temporary halt after two senior leaders began yelling at each other over culture terminology. I was present for this event.

25. These requirements are replete throughout service and joint doctrine, and they have only grown denser since the publication of my original article in 2009.

26. Ben Connable, *Embracing the Fog of War: Assessment and Metrics in Counterinsurgency* (Santa Monica, CA: RAND Corporation, 2012).

27. Michael T. Flynn, Matt Pottinger, and Paul D. Batchelor, *Fixing Intel: A Blueprint for Making Intelligence Relevant in Afghanistan*, Center for a New American Security (website), January 2010, 19–20, accessed 14 November 2017, https://s3.amazonaws.com/files.cnas.org/documents/AfghanIntel_Flynn_Jan2010_code507_voices.pdf?mtime=20160906080416.

28. Ben Connable, *Military Intelligence Fusion for Complex Operations: A New Paradigm* (Santa Monica, CA: RAND Corporation, 2012), 15.

29. U.S. military cultural intelligence official (anonymous), telephone interview with author, November 2017.

30. Joint Publication 1, *Doctrine for the Armed Forces of the United States* (Washington, DC: U.S. Government Publishing Office [GPO], 20 March 2009), I-1.

31. U.S. Army Doctrine Publication 3-0, *Operations* (Washington, DC: U.S. GPO, November 2016); U.S. Marine Corps Doctrinal Publication 1, *Warfighting* (Washington, DC: Headquarters, U.S. Marine Corps, 1997).

32. U.S. Joint Staff, *Joint Concept for Human Aspects of Military Operations (JC-HAMO)* (Washington, DC: U.S. GPO, 19 October 2016), foreword.

33. H. R. McMaster, *Defense Transformation and the Underlying Assumption of Dominant Knowledge in Future War* (Carlisle Barracks, PA: Center for Strategic Leadership, U.S. Army War College, November 2003), accessed 14 November 2017, http://www.au.af.mil/au/awc/awcgate/army-usawc/mcmaster_foundation.pdf.

Pokot men forcibly lead a girl to be married to a member of their community 7 December 2014 after the group came to take her from her family home, about fifty miles from the town of Marigat, Kenya. As Pokot tradition dictates, the future husband arrived to her family home with a group of men to collect the girl and with the last settled dowry of livestock for the girl's family. In this case, twenty goats, three camels, and ten cows had been given during a period of several weeks, and ten more cows were to be given the morning the girl was taken to her new home. The girl was unaware of the marriage arrangements that her father had made; the family said that if they had told her in advance she might have run away from home. In the Pokot tradition, parents give their daughters as wives usually at the beginning of their adolescence, after an initiation ceremony marking their passing over into womanhood. (Photo by Siegfried Modola, Reuters)

The Neglected Role of Brideprice in Catalyzing Instability and Violent Conflict

Valerie M. Hudson, PhD

Hilary Matfess

Strapped to a gurney and visibly shaken by the bloodied bodies of his fellow terrorists strewn about him, Mohammed Ajmal Amir Kasab, aged twenty-one, begged his police interrogators to turn off their cameras. They refused, and Kasab's recorded confession provided the world with a glimpse into the motivations behind the four days of attacks in Mumbai, India, which claimed an estimated 164 lives and wounded more than three hundred in November 2008. Shedding light on the individual motivations of the young men behind the massacre, Kasab explained that he "joined the militant group Lashkar-e-Taiba only for money."[1] His was not solely an individual decision, however, and the money he earned from participating in the attacks was not intended to be discretionary income. According to Kasab, his father had urged him to join so that Kasab and his siblings could afford to marry.[2]

Ajmal Amir Kasab, shown here during the November 2008 attacks at the Chhatrapati Shivaji Terminus railway station in Mumbai, India. One of the ten terrorists involved in the attacks, Kasab was found guilty of eighty offenses in May 2010, including numerous counts of murder, waging war against India, and possessing explosives. For four of these counts, he was sentenced to death and was hanged in 2012. (Image from railway station security footage)

My father told me we are very poor. Then he intoduced me to LeT men.

Members of the Mumbai Police interrogate Ajmal Amir Kasab while he lies in a hospital bed immediately after his capture in 2008. During the interview, he reportedly stated that his father had essentially sold him to the Pakistan terrorist group Lashkar-e-Taiba to obtain money to support their family. (Screenshot from YouTube video)

Kasab recounted that his father had told him his participation would mean that the family would no longer be poor and that they would be able to pay the costs required to finalize a marriage contract. One of the police officers, seemingly ignoring Kasab's response, pressed, "So you came here for jihad? Is that right?" Crying, Kasab asks, "What jihad?" Lashkar deposited the promised money in his father's account after the successful attack; for his participation, Kasab was hanged in 2012 by the Indian government. Whether his siblings were subsequently able to contract marriages as a result of the funds provided by Lashkar-e-Taiba remains unknown.

In many ways, Kasab's story lends itself to the narrative that terrorist recruitment is more a function of poverty and a lack of opportunity for young men than ideology or religion. Indeed, Kasab joined Lashkar-e-Taiba's network while engaged in petty criminality and working as a laborer for a mere sixty cents a day. But poverty alone cannot explain participation in such organized groups because the vast majority of poor people do not turn to violence.[3] Rather, poverty and social marginalization must manifest themselves in particularly vexing ways for grievances to lead to such terrible violence.
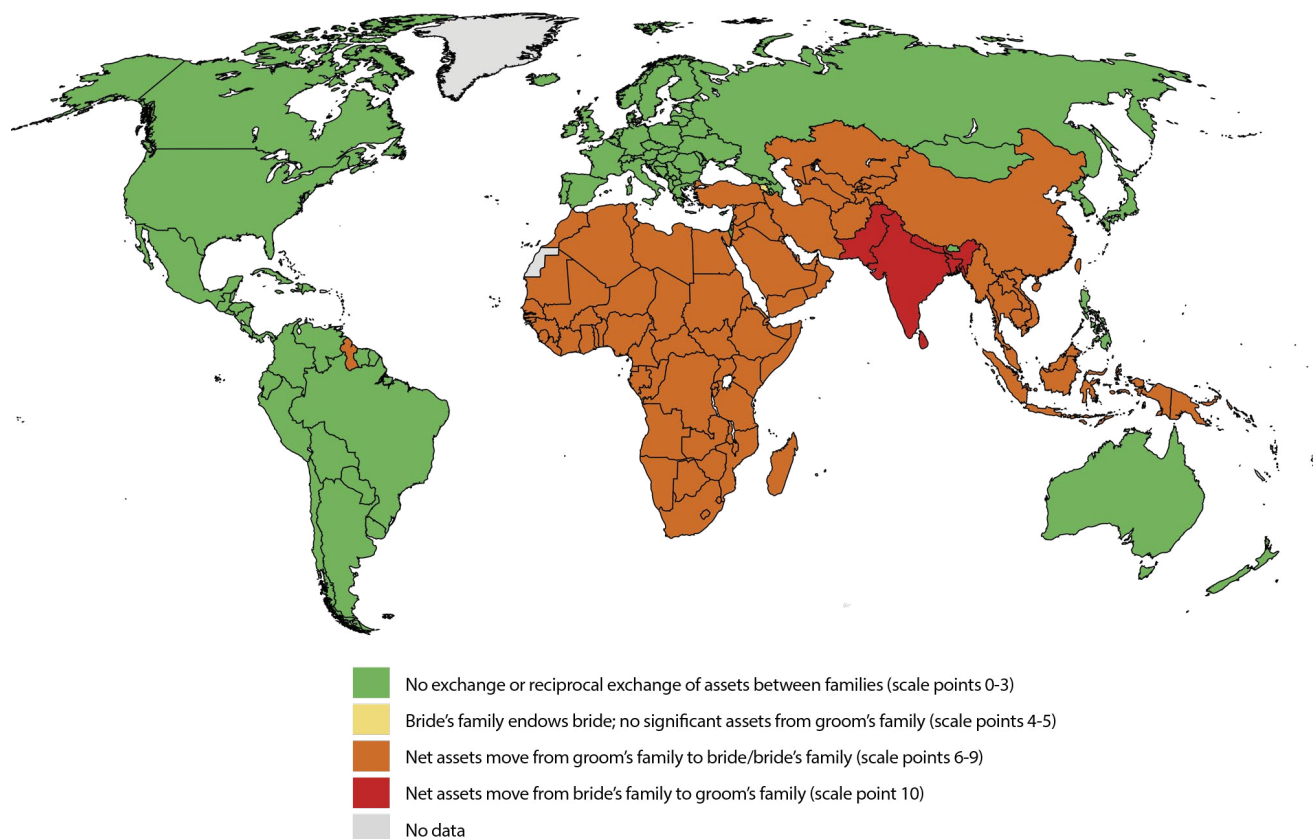
(Graphic by the WomanStats Project, http://womanstats.org)

Figure. Brideprice/Dowry/Wedding Costs (Type and Prevalence) Scaled 2016

Kasab's confession points to one such factor which we explore in this article. Across much of the world, especially in the shatterbelts (regions caught between stronger colliding external cultural-political forces) of the global south, customary law requires young men and their families to pay a brideprice in order to marry.[4] In this essay, we identify the role of marriage market obstruction caused by inflationary brideprice as an additional factor beyond those already identified in the literature as predisposing young men to become involved in organized group violence for political purposes, including terrorism, rebellion, intergroup aggression, raiding, and insurrection.

In many cultures, marriage is much more than a social formality; it marks the transition to culturally defined manhood. When marriage includes brideprice, it is also an expensive economic transaction. In these cultures, females are exchanged between kinship groups in return for assets, whether those assets be cash or cattle or gold or other goods that serve as

currency in the society. The figure above highlights the prevalence of this arrangement in the twenty-first century; in a sense, the world is divided by this custom into almost two equal parts.

Marriage in Patrilineal Cultures

Patrilineality is a social system wherein persons are accounted kin through the male (or agnatic) line.[5] A millennium ago, the overwhelming majority of societies were organized along patrilineal lines. In the twenty-first century, by contrast, the international system is comprised of states the societies of which are arrayed along a spectrum from non-patrilineality to strong patrilineality.

Patrilineality is, at heart, a security provision mechanism. In an anarchic world, patrilineality solves the social cooperation problem for a given group of men, providing them with natural allies in conflict situations because trust is created by blood ties among male group members. That is, the first priority in

assuring human group security requires managing male propensity for risk-taking, violence, and aggression and harnessing these predispositions for pro-group ends, lest they destroy the group.

With its focus on prioritizing male kinship, patrilineality is the solution to which human societies have, generally speaking, historically resorted, with the vast majority of traditional societies organized along agnatic lines. In a sense, the purpose of patrilineality is to create a fraternal alliance system of brothers, cousins, sons, uncles, and fathers capable of countering threats to the group. While it is not the only means of creating fraternity—fraternity can also be created in matrilineal societies, or somewhat less successfuly through ideological ties—patrilineality is the most straightforward and robust means of achieving the fraternal alliance necessary to provide security for a group.[6]

Under such patriline systems, women move between kinship groups in exogamous marriage (a social arrangement where marriage is allowed only outside a social group) and thus, in a sense, are not full kin in patrilineal societies. Therefore, in such systems, where patrilocal marriage becomes the norm, a bride moves to her in-laws' household and the patriline (male line of descent) retains all significant assets, particularly land and livestock. This system provides not just physical security for men, but economic security is afforded by the system to extended male kin groups related by blood. However, this situation typically precludes any significant property rights or marital rights for women. Women, therefore, suffer from a lack of both physical and economic security in a patrilineal system.

This system of social organization is still widely in use, especially in areas in which the U.S. military may be expected to operate in the foreseeable future. In a context where states are virtually nonexistent, such as in Somalia, or weak and incapable of providing security for citizens, or alternatively where they are profoundly indifferent to human security, the most viable alternative for an individual is to rely on extended kin groups for basic security needs instead of institutions viewed skeptically by many as artificial creations such as national state governments.

Consequently, males' status in patrilineal societies is strongly linked to marriage. Not only does marriage mark the transition to manhood in patrilineal societies, but it establishes an individual male as a source

of lineage and inheritance within the larger patriline and the culture it engenders. The marriage imperative is thus deeply felt among males in such cultures. And yet marriage is unobtainable without assets. In its 2006 report "The Other Half of Gender: Men's Issues in Development," the World Bank observed:

> The main social requirement for achieving manhood in Sub-Saharan Africa—for being a man—is attaining some level of financial independence, employment, or income, and subsequently starting a family. In much of Sub-Saharan Africa, bride price is commonplace, and thus marriage and family formation are directly tied to having income or property.[7]

These conclusions and descriptions are generalizable to many societies, but take on an intensified meaning in more strongly patrilineal societies. Although it is possible to be unmarried and still be regarded as an adult man in, say, the United States, it is not possible in a strongly patrilineal society. Marriage, then, is obligatory for men living in such societies. It is through marriage that men maintain a kindred "presence" in the lineage into the future by having legitimate male offspring. It is also the only way to claim a just share of the patriline's assets and rents, which are distributed to families and not individuals. Further, in this context males are not considered to be full adults until they marry. Only then will they have a significant voice in the male collective, making marriage an important socialization ritual in addition to a valuable economic practice.

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Additionally, marriage in patrilineal societies is largely regarded as a business transaction between families and will be accompanied by asset exchange, wherein brideprice offsets the cost to the natal family of raising the bride.[8] The consequences for women that grow out of this system, however, are deeply detrimental to their security and status. In addition to patrilocal marriage and lack of female property rights mentioned, these societies are characterized by arranged marriage in the patriline's interest, without regard for the personal welfare or desires of the female. This often results in a relatively low age of marriage for girls, a profound underinvestment in female human capital, an intense son preference resulting in passive neglect of girl children or active female infanticide/sex-selective abortion, a highly inequitable family and personal status law favoring men, and, chronically high levels of violence against women as a means to enforce the imposition of the patrilineal system on often recalcitrant women.

Consider the findings of a report by a Tanzanian women's organization following an extensive survey that "due to brideprice," women suffer "insults, sexual abuse, battery, denial of their rights to own property, being overworked, and having to bear a large number of children." In addition, the report noted that "women also complained of some men's tendency to reclaim the bride price when marriages broke up, saying fear of this outcome forced women to cling to their marriages even when abused."[9]

Elsewhere we have argued that patrilineality, though arguably effective in providing individual security for men in many circumstances, produces, generally speaking, an inherently unstable society prone to violent conflict and rentierism.[10] While historically prevalent, patrilineality is linked to a host of destabilizing tendencies—which have also been historically prevalent—such as food insecurity, demographic insecurity, annihilative violence, economic predation, and corruption.[11] Though understanding the broad-ranging effects of patrilineality on security is our overall research aim, in this essay we examine but one component of the patrilineal syndrome—brideprice—and trace its destabilizing effects on society.[12]

Brideprice and Marriage Market Obstruction

In patrilineal systems, brideprice becomes, in essence, an obligatory tax on young men, payable to older men. The young man's father and male kindred may help him pay the tax, but the intergenerational nature of the tax should be understood, especially as regards poor young men whose male relatives may likewise be too poor to help. The framing of brideprice as a tax and of marital exchange as a market eschews the kind of moralizing that often accompanies discussions of unfamiliar social rituals and clarifies the functioning of this market.

Important in this conceptualization is evidence that brideprice acts as a flat tax. For the most part, brideprice is pegged to what is considered the "going rate" within the society at any given timepoint. The brideprice is nudged slightly upward or downward at the margin according to the status of the bride's kin, but it is not influenced greatly by the status of the man responsible for paying it. If the cost of brideprice rises, it will rise for every man, rich or poor. The flat-tax nature of brideprice has been noted across geographically diverse areas such as Afghanistan, China, and Kenya.[13]

The tendency toward a consistent brideprice within a community is understandable. Jack Goody suggests, "in bridewealth systems, standard payments are more common; their role in a societal exchange puts pressure toward similarity."[14] The reason is that men pay for their sons' brideprices by first collecting the brideprice for their daughters. Such transactions are another force pushing down the age of marriage among girls in brideprice societies, in addition to the desire to stop providing for daughters who, socially, will become the responsibility of another family.

Unless a family is very wealthy, daughters in general must be married off first so that the family can accumulate enough assets to pay the sons' brideprices. Quoting anthropologist Lucy Mair, Goody remarks, "'when cattle payments are made, the marriage of girls tends to be early for the same reason that that of men is late—that a girl's marriage increases her father's herd while that of a young man diminishes it.' … [M]en chafe at the delay, girls at the speed."[15]

If brideprice were not standardized within the society, families could not count on the brideprices brought in by their daughters being sufficient to cover the costs of marrying their sons. Thus, over time, a fairly consistent brideprice emerges for the community at any given time, though the actual cost may vary somewhat over time depending on local conditions.

A photo uploaded to Facebook 7 August 2016 reputedly shows brideprice items for a woman from Mbaise, Imo State, Nigeria. (Photo reputedly from the Facebook account of Pastor Abasiubong Tom of Nigeria)

Many accounts suggest that men are highly sensitive to any new trends in brideprice, and also that the societal brideprice level is easily pushed upward, but very difficult to push downward. Quoting Mair once more, Goody notes, "Every father fears being left in the lurch by finding that the bridewealth, which he has accepted for his daughter will not suffice to get him a daughter-in-law; therefore he is always on the lookout for any signs of a rise in the rate, and tends to raise his demands whenever he hears of other fathers doing so. This mean in general terms, that *individual* cases of over-payment produce a *general* rise in the rate all around."[16]

Almost universally, then, where it is practiced, the amount required for an acceptable brideprice rises continually over time. The result of this persistent brideprice inflation is that marriage is either delayed or even put out of reach for many young men, particularly in situations of economic stagnation and/or rising inequality. A summary of the average brideprice from a number of different periods and countries found that the burden equated to as much as twelve to twenty times the per capita holdings of large livestock or two to four times gross household income.[17] As

Bradley Thayer and Valerie Hudson note in a 2010 essay on marriage market obstruction and suicide terrorism in Islamic societies:

> Delayed marriage has become a new norm in the Middle East. For example, in Egypt, one study documents that families of young adult males must save five to seven years to pay for their sons' marriages. From 2000 to 2004, wedding costs in Egypt rose 25 percent. As a result, the average marriage age for Egyptian men has risen sharply, from the early twenties to the late twenties and early thirties. In one study, nearly 25 percent of young adult males in Egypt had not married by age twenty-seven; the average age was thirty-one. In poverty-stricken Afghanistan, wedding costs for young men average $12,000–$20,000. In

Saudi Arabia, men usually are unable to marry before age twenty-nine; often they marry only in their mid-thirties. In Iran, 38 percent of twenty-five-year-old to twenty-nine-year-old men are unmarried. Across the Middle East, only about 50 percent of twenty-five-year-old to twenty-nine-year-old men are married, the lowest percentage for this group in the developing world. Whether in Afghanistan, Iran, Lebanon, or the United Arab Emirates, the exorbitant costs of marriage have delayed the age at which Muslim men marry.[18]

display of that higher status even in societies where women's labor is not valuable (such as in the United Arab Emirates [UAE]).

A final source of marriage market distortion is often common in brideprice societies: higher female mortality. Given both low investments in women's health and the early age of marriage for girls in these societies, maternal mortality rates in most patrilineal societies tend to be egregiously high.[21] If a young wife dies in childbirth, the logic of the patrilineal syndrome dictates that she will need to be replaced, usually by a girl the same age the first wife was when she married.

Table. Cross Tabulation of Brideprice (Yes/No) with (Rounded) Global Peace Index (GPI), 2016 (N=163)

Global Peace Index (1 is most peaceful)					
Brideprice	**1**	**2**	**3**	**4**	**Total**
No (0)	16	53	8	0	**77**
Yes (1)	0	68	14	4	**86**
Total	**16**	**121**	**22**	**4**	**163**

(Graphic by authors)

Given the tendency toward brideprice inflation, an unequal distribution of wealth will amplify market distortions by facilitating polygyny (multiple wives).[19] Wealthy men are able to pay even when poor men cannot, and since additional wives produce greater wealth for their husband both through their productive labor and through the birth of additional daughters who will fetch a brideprice for their father, brideprice inflation may cause a rise in the average number of wives in the households of such wealthy men. This, too, feeds into the predisposition to push down the age of marriage for girls where brideprice is present. Goody remarks,

> Polygyny … is made possible by the differential marriage age, early for girls, later for men. Bridewealth and polygyny play into each other's hands. … [T]he two institutions appear to reinforce each other."[20]

Polygyny is also, of course, a marker of higher status within the society, and sought after for purposes of

Despite the economic cost of having to pay brideprice once again when a woman dies in childbirth, adequate attention to the physical wellbeing of women and girls is often not culturally supported within the society.[22] Indeed, brideprice helps to reinforce and justify this underinvestment in women. As a women's rights activist in Uganda noted, women "cannot negotiate safer sex because of brideprice. They cannot limit the number of children that they have because of brideprice. They cannot go to school and do their own thing because they were bought."[23]

Thus, both polygyny and higher rates of post-marriage female mortality in effect increase the ratio of marriageable males to marriageable females. Sometimes this scarcity produces extreme downward pressure on the marriage age of girls in a given society, with some marrying off girls as young as eight.[24] In most societies, however, the alteration in sex ratio results in a greater number of young men unable to find wives, even if they could afford the brideprice.

Putting these three forces in play—brideprice as a flat tax on young men that they cannot refuse to pay without profoundly adverse social consequence, a tax that is notoriously prone to inflation; brideprice as catalyzing polygyny among the wealthier segments of society; and, high female mortality due to devaluation of women's lives—it becomes clear that this patrilineal syndrome is primed to produce chronic marriage market obstruction. And, marriage market obstruction, in turn, can be an important factor driving young men to join violent groups.

Brideprice as a Driving Force behind Political Violence

The flat and inflationary nature of brideprice guarantees that poor young men will be very hard-pressed to marry. Like Ajmal Kasab, they may not be able to raise the funds for brideprice without resorting to desperate measures. These young men are not taking up arms against the institution of brideprice. Rather, at the individual level, a young man engages in violence to become more successful within the patrilineal system. At the group level, it is merely the identity of the men who dominate that sociopolitical system that the group wishes to change, and not the system of male-bonded security provision itself: the recruits hope to replace those wealthy, powerful men with themselves one day.

Furthermore, if a family has many sons, it may strive mightily to get that first son married, but then the younger, higher birth-order sons (such as the third, fourth, and fifth sons) are typically expected to find their own sources of funding to pay brideprice. As Goody notes, these younger sons often "leav[e] the countryside to swell the growing population of the towns. … [I]t is people with a high bridewealth payment that have the highest rates of labor migration."[25] In sum, then, the marriage market in brideprice societies is thus obstructed specifically for poor young men and sons of higher birth orders.

Young Male Grievance

High levels of grievance open up an opportunity for anti-establishment groups to exploit young men attempting to gain the status and the assets to afford to marry. Delayed marriage and, also importantly, the threat that one may never father a son in a culture defined by patrilineality, are common elements exploited by groups seeking young adult men interested in redressing the injustice they feel on a personal level, by force if necessary.

It is fascinating to see how many terrorist and rebel groups are so very concerned about the marriage prospects of the young men in their ranks. For example, Diane Singerman notes, "To mobilize supporters, there were many reports of radical Islamist groups in Egypt in the 1990s arranging extremely low-cost marriages among the group's members."[26] The Palestinian Liberation Organization (PLO) did the same way back in the 1970s with the Black September subgroup, offering its members brides, cash, apartments in Beirut, and even a baby bonus of $5,000 if they had a baby within a year of marriage.[27] Taghreed El-Khodary has written that in the past decade, "Hamas leaders have turned to matchmaking, bringing together single fighters and widows, and providing dowries and wedding parties for the many here who cannot afford such trappings of matrimony."[28]

The Islamic State also provided its foreign fighters with opportunities to marry that they may not have had in their own country. In one such campaign, the group offered "its fighters a $1,500 bonus to go toward a starter home along with a free honeymoon in their stronghold city of Raqqa."[29] Ariel Ahram found that "ISIS foreign fighters paid $10,000 dowries to the families of their brides," suggesting that the group was attracting foreign fighters by promising resources (and available women) to marry.[30] Esther Mokuwa and her colleagues have described a greater ease of rebel recruitment in areas with higher rates of polygyny in Sierra Leone, as impoverished young men have no hope of marriage in areas where wealthy older men monopolize many wives.[31]

Here is one way to see this connection: we performed a cross tabulation between those same variables, with brideprice here discretized as a simple "yes" or "no" indicating whether any form of brideprice is practiced, and the Global Peace Index discretized by rounding to the nearest whole-number scale point. Such a metric allows comparison between nations and the ability to draw conclusions about the effect of a brideprice system on levels of peacefulness as measured by the index.

The results are striking (see table, page 40). No society with brideprice fell in the most peaceful quartile of this sample of 163 nation-states. No society without brideprice fell in the least peaceful quartile of the sample. Below we offer one case study to illustrate this linkage in this excerpt, and there are two more to read in our original article.

Bachelors to Boko Haram: How Brideprice Bolstered Recruitment in Nigeria

Inflationary brideprice in northern Nigeria led to, and then continued to fuel, the rise of the Salafi-jihadist group Boko Haram. Boko Haram first gained international attention following its abduction of 276 schoolgirls from Chibok, a town in the northeastern state of Borno in Nigeria in April 2014. While this episode, and the international community's rallying behind the campaign to #BringBackOurGirls, thrust the group onto the global agendas of Western countries and human rights advocates for the first time, the group has been active for more than a decade. At present Boko Haram-related actions have claimed more than fifty thousand lives and led to the displacement of an estimated 2.8 million people throughout the Lake Chad Basin, making it one of the most lethal insurgencies in Africa and one of the most dire humanitarian situations in the world.[32] The insurgency continues to engage in destructive bombing campaigns and has thwarted the government's efforts to exercise control over much of Borno State. The group has also expanded its activities into neighboring Chad, Niger, and Cameroon, drawing on existing trade and kinship networks.

Part of Boko Haram's recruitment strategy is organizing inexpensive weddings for members of the group, a practice that dates back to the group's establishment under Mohammad Yusuf. These marriages likely would not have occurred without Boko Haram's facilitation, and many of the recruits were young men marginalized by rising brideprice, underemployment precluding asset accumulation for paying brideprice, and polygamy-related bride scarcity.[33]

As in other contexts, brideprice in the Lake Chad Basin serves to "partially socialize younger men into their mature economic roles."[34] The region's marriage market is a reward system that incentivizes men to become economically productive in order to be socially significant; in short, economic success is rewarded through the ability to take a wife (or wives) and receive social status. Though the past three decades witnessed changes in Lake Chad Basin social norms, S. P. Renya's observation about the nearby Bama ethnic group in 1985 still holds true: "the crucial point is that the spoils of deference cannot begin to accrue to a man until he has married."[35] Within the social strata, the older, married men receive the most respect, then younger, married men, and lastly unmarried men. As Reyna describes,

> There are gatherings of men that convene in each ward every day. Though informal, these sessions play a vital role in communicating information and formulating opinions about affairs that touch village and ward. Mature, married men sit on cushions or stools in the center of large mats laid out beneath trees. Younger, married men sit on these mats, but on the edges and without stools or cushions. Young, unmarried men sit in the dirt beside the mat.[36]

This sort of social hierarchy also appears in anthropological accounts of the Kanuri ethnic group. Members of the group are thought to have made up a significant proportion of Boko Haram and leadership, particularly in the early years of the group's activities.

Among the Kanuri and other ethnic groups in the Lake Chad Basin, prestige is tied to the size of a man's family and household unit (which includes his family and other members of the community who live under his care), further incentivizing the taking of multiple wives and the expansion of patronage systems. Because of this incentive to have a large household, young men are often taken under the wing of a local "big man"—a man of wealth and social status who acts as a patron. In exchange for the youth's loyalty and labor, he is helped in the process of finding, courting, and affording a wife.[37] One account of the Kanuris found that, in traditional Kanuri political organization, these young men were so subordinate to their patron until they married that, lacking his support, the young men would not have a place to take their meals. Only after taking a wife is a young man able to act as a "real man," exercising autonomy and accumulating social capital.[38]

In northern Nigeria, obtaining the financial resources to pay brideprice has become increasingly difficult since the country's oil wealth disincentivized investment in the manufacturing sector, making non-agricultural, non-oil sector employment difficult to obtain. As a result, youth unemployment has been a constant issue in the region; and, less discussed than the economic ramifications of this shift is the impact of the lack of jobs on the psychology of unemployed young men.

A 2015 survey found that for 57 percent of Nigerian men "insufficient income" was a source of stress; 44

percent were stressed as a result of "not having enough work." Despite these economic stressors, 98 percent of men reported that "bride price is important and should remain" and 29 percent reported that "a real man in Nigeria is one with many wives," despite the associated

at this time "the Toshi became monetized and progressively included the funding for the Turaren wuta (scents) and kayan lalle (henna)," which are used by the women in the wedding ceremony.[43] The sheikh continued, "These were later included in the brideprice that

economic burdens of these practices.[39] These high percentages are all the more striking when one considers that the survey included regions in Nigeria where polygamy is not widely practiced as well as regions with higher employment statistics and annual incomes.[40]

In the communities surrounding Maiduguri, where Boko Haram was founded, the cost of "items required for the successful celebration kept changing in tune with inflation over the years."[41] The marriage ceremony in the area is ornate and involved. The Kanuri and Shuwa Arabs, two significant ethnic groups in the area, "primarily demand payment of dowries in gold coins."[42] Increases in the price of gold also make it difficult for young men to pay brideprice in the traditional fashion and residents noted the strain this places on communities.

The turn of the millennium also corresponded with shifts in the marriage practice called Toshi, which literally means "blocking," in which the fiancé, often with his family's support, provides gifts to the fiancée and her family to express interest and ward off other suitors. According to a spiritual leader in Maiduguri,

Several female students are displayed under guard in a Boko Haram video after their April 2014 abduction from a government secondary boarding school located in the Nigerian town of Chibok. Boko Haram, a Jihadi terrorist group affiliated with the Islamic State, abducted approximately 270 girls ranging in age from sixteen to eighteen. Many of the girls were reportedly forced into marriage with Boko Haram members or were sold as slaves. The reported brideprice for those who were selected for marriage was about US$12. Abubakar Shekau, Boko Haram's leader, stated in the video that the girls should not have been in school in the first place but rather should have been married. Approximately fifty of the girls have subsequently either escaped, or have been released, with more than two hundred still missing. (Screenshot from Boko Haram YouTube video; photo caption information from "Boko Haram 'To Sell' Nigeria Girls Abducted from Chibok," BBC, 5 May 2014, accessed 19 December 2017, http://www.bbc.com/news/world-africa-27283383)

resulted in a spike in the brideprice in the 2000s."[44] It was in this period that "economic hardship began playing a role in the marriage processes in Borno."[45]

It was also during this period that Boko Haram came into its own, with founder Yusuf breaking away

from his former patron, Ja'far Adams, and establishing his own mosque in 2002. Yusuf had been in charge of the youth wing of Adams's politically connected Salafist group because of his skill in mobilizing youth support. In exchange for mobilizing political support for then governor of Borno State, Ali Modu Sheriff, Adams and Yusuf influenced the terms under which Borno State adopted and implemented sharia law. Yusuf was influential in the appointment of the minister of religious affairs for Borno State. Yet, over time Yusuf became increasingly frustrated by perceived inadequacies in the implementation of sharia law. This frustration would eventually lead him to reject the legitimacy of the secular government of Nigeria (at the state and federal levels) and Western institutions and influences. Loosely translated, the moniker "Boko Haram" means, "Western education is forbidden."

In the early days of Boko Haram, Yusuf provided the types of social services that Borno State, the federal government, and traditional authorities had failed to supply. These included not only education and access to farmland, but also the arranging of marriages for young men. A resident of Markas, the neighborhood where Yusuf established his Ibn Tamiyyah mosque, recalled that in just a few years, Yusuf had facilitated more than five hundred weddings. The group also provided support for young men to become "okada drivers"—a popular, affordable motorbike taxi service. Some of these men were thus able to afford the traditional brideprice because of this new source of income, arranged by Boko Haram.

In this era, Boko Haram was relatively nonviolent, and instances of its aggression were targeted at local political and religious figures who criticized the group's religious interpretations rejecting the government's legitimacy. Violence ramped up, however, when the police began cracking down on the okada drivers, who claimed that the required use of protective helmets interfered with their religious head-dressings and were an excuse to target them. In 2009, government forces killed seven hundred suspected Boko Haram members in a massive security sweep in Maiduguri that included door-to-door raids and the extrajudicial killing of Yusuf. Following this crackdown, the group went underground for a year or so before reemerging with a deepened sense of grievance and a new leader—Abubaker Shekau.[46]

Under Shekau, Boko Haram became engaged in a wholesale war against the Nigerian state. Through raids on rural territory, suicide bombings, attacks on military posts, and the bombings of cities, the insurgency has killed more than 50,000 people and displaced more than 2.8 million.[47] Hundreds of suicide bombers have detonated their devices against civilian targets such as bus stations and markets, killing thousands of people.[48] In rural areas, the fear of Boko Haram has been so pervasive that farmers have left their fields fallow for several seasons, contributing to a regional food security crisis thought to have affected 11 million people in the Lake Chad Basin. The World Bank estimates that Boko Haram has caused $9 billion worth of damage throughout the country's north since 2010.[49]

Under Shekau, Boko Haram also began abducting women to be "wives" of insurgents, in many cases, merely kidnapped sex slaves. Amnesty International estimated in 2015 that the group had abducted more than two thousand women and it is likely that the figure has risen since then. In interviews, women who voluntarily joined Boko Haram reported that they were often attracted to the group because the brideprice, though smaller than those accompanying "traditional" weddings, was paid directly to the women, not to their fathers. At least in the beginning, however, a token brideprice was left for the fathers of kidnapped girls: one man recounted how Boko Haram kidnapped girls in his community, "tossing 5,000 Naira [about $25] on the floor as a bride price." In another account,

> Bawagana, a shy 15-year-old living in Sanda Kyarimi camp, one of the official internally displaced people (IDP) sites, said that a Boko Haram fighter had come to her home in Dikwa, 90 kilometres east of Maiduguri, and asked "Do you love me?" Of course I answered, "no!" she said, with her eyes fixed on the ground. The boy got very angry and said: "If you do not come with me, I will kill your father, but if you come with me I will let him live." I followed to save my father. The boy left 10,000 naira (about $50) on the floor. It was a bride price in Boko Haram's eyes.[50]

Those familiar with Boko Haram's practices explain that wives are used to reward fighters for their service and to cultivate loyalty. A fifteen-year-old who worked as a driver for Boko Haram before defecting to the Civilian

Joint Task Force, a vigilante group that assists the government's forces against Boko Haram, reported that "wives are 'earned,' they are a reward for those who stay six months." Once you have proven your commitment to the group, "if you see someone who you like, you can pick the wife you want."[51] The women themselves are often groomed before they are eligible to be taken as wives by members of the group; this may involve days of what is termed Quranic education, in which they are subjected to lectures on Boko Haram's ideologies.

Women who were married before Boko Haram abducted them are told to forget their "infidel" husbands and accept a Boko Haram husband. Though the abductions of women and girls as "wives" are often discussed by the media as cases of purely sexual and physical violence, reports suggest that the process of marrying an insurgent is always formalized for purposes of legitimation. The fifteen-year-old driver-turned-vigilante reported that the marriages are often accompanied by a large ceremony; the young man observed that the weddings in Boko Haram were "like a regular marriage."[52]

Since its founding as a dissident sect through its transformation into the most lethal insurgency in sub-Saharan Africa, Boko Haram has recognized the importance of marriage to young men, and capitalized on their marriage grievances caused by brideprice inflation. By providing access to wives, and thus a sense of self as a "real man," Boko Haram has gained a following of 3,000–5,000 young men with shockingly few reports of defection. "These men can take a wife at no extra charge," explained Kaka, a young woman orphaned, captured, and raped by Boko Haram members. "Usually it is very expensive to take a wife, very hard to get married, but not now."[53]

The intergenerational nature of the brideprice tax, coupled with other frustrations of the region's youth, has galvanized young men to obtain wives (and social standing) through alternative means that have destabilized the state and augmented the power of antistate groups, the most visible of which is Boko Haram. Without taking into account the effect of brideprice, one cannot fully understand why Boko Haram emerged, why it persists, how it acts—and how it could be undermined.

Conclusion

This analysis offers two important takeaways. First, no comprehensive security analysis of many of today's conflicts can be complete without an examination of how the structuration of male/female relations affects those conflicts. How those relations are structured has cascading effects on macro-level state phenomena, as the case of brideprice demonstrates. Marriage market obstruction, fueled by brideprice and polygyny, can destabilize nations by incentivizing violence and facilitating recruitment into insurgent groups.

As former Secretary of State Hillary Clinton asserted in 2012, "The subjugation of women is a threat to the common security of our world and to the national security of our country."[54] Gender lenses such as the one offered here significantly enhance situational awareness. One State Department official, after reading our original article, made the following comment confidentially:

> [Your article] brought back to mind a conversation I had with one of my Afghan colleagues a few years ago when I was stationed in Kabul. He was exasperated by the insanely high, and ever rising costs, of weddings in Afghanistan. I really didn't understand what the big deal was. He wanted the government to intervene and thought we in the Embassy should get involved in the conversation. At that time, we, the ever so enlightened American political officers, viewed it through the lens of cultural pressures to put on a good party, as a poverty issue, or discussed it in the terms of women's rights and social issues and cultural norms. We never linked it to national security implications and for me, this research provides the vocabulary necessary. You rightly point out the importance of taking the emotion and moralizing out of it and counting it as an important variable that has a place in the policy conversation. I got a bit exasperated with his insistence on it being a serious issue and showed him research about how many Americans go into extreme debt to have the "dream wedding" making the argument of who are we as foreigners to tell people how to spend their money—I was certainly moralizing.[55]

A second major takeaway of our analysis is that even though marriage is a deeply socialized practice, governments are not powerless; they can act to mitigate heightened risk of destabilization due to brideprice inflation, as the Saudis have done (the Saudi case is detailed in our

original article).[56] Given the linkages among brideprice inflation, grievance, and violent conflict, governments can, for example, place caps on brideprices or subsidize marriage costs to avoid marriage market obstruction. Initiatives to end child marriage and make it harder to contract polygynous marriages take on even greater significance once their relevance to national stability and security are recognized. This sort of regulation is a market intervention that not only protects the rights of girls and women but also inhibits the market's tendency toward concentration and inequality.

Seeing brideprice for the hard security matter it is in many shatterbelts where spillover threats easily destabilize entire regions illuminates the roots of issues that characterize the sociopolitical landscape where military intervention by great powers may one day be contemplated. The time has come to recognize what has been hiding in plain sight. ■

Notes

1. Vikas Bajaj and Lydia Polgreen, "Suspect Stirs Mumbai Court by Confessing," *The New York Times* (website), 20 July 2009, accessed 14 November 2017, http://www.nytimes.com/2009/07/21/world/asia/21india.html.

2. "Mumbai Gunman Video," Channel 4 Exclusive, n.d., accessed 14 November 2017, http://link.brightcove.com/services/player/bcpid1184614595?bctid=27874456001.

3. Alan B. Krueger and Jitka Maleckova, "Education, Poverty, and Terrorism: Is There a Causal Connection?," *Journal of Economic Perspectives* 17, no. 4 (November 2003), doi: 10.3386/w9074.

4. The term brideprice refers to an overall net transfer of assets from the groom's family to the bride's family. This includes brideprice, bridewealth, and bride-service. It also includes dower, such as the custom of *mahr*, which is not to be confused with dowry, which term refers to an overall net transfer of assets from the bride's family to the groom's family.

5. Linda Stone, *Kinship and Gender: An Introduction* (Boulder, CO: Westview, 2013).

6. For example, some matrilineal systems also practice brideprice, such as in Melanesia. While patrilineality makes male control over assets, women, and power more straightforward, males are still able to exert almost the same level of control in brideprice-practicing matrilineal societies, and brideprice plays a catalyzing role in grievance and violence in these societies, as well. We are indebted to Sue Ingram of the Australian National University for this insight. Additionally, ideology as a basis for fraternity is not as sturdy a foundation for fraternity, which is why some ideologically-based groups attempt to shore up that fraternity with marriages that make men not only ideological brothers but also in-laws and therefore kin. Osama bin Laden, for example, attempted to have his top lieutenants marry sisters to better ensure they would remain loyal to each other (see note 18, Thayer and Hudson, op cit.).

7. Ian Bannon and Maria C. Correia, *The Other Half of Gender: Men's Issues in Development* (Washington, DC: World Bank, 2006), 161, accessed 13 November 2017, https://openknowledge.worldbank.org/handle/10986/7029.

8. If we turn our attention from brideprice to dowry for a moment, dowry is intended to offset the cost to the groom's family of feeding and sheltering the bride, who is viewed as nonproductive (i.e., only reproductive).

9. "Human Rights Study links Payment of Bride Price to Abuse of Women," IRIN (website), 16 May 2006, accessed 13 November 2017, http://www.irinnews.org/report/59032/tanzania-study-links-payment-bride-price-abuse-women.

10. Valerie M. Hudson, Donna Lee Bowen, and Perpetua Lynne Nielsen, "Clan Governance and State Stability: The Relationship between Female Subordination and Political Order," *American Political Science Review* 109, no. 3 (August 2015): 535–55, https://doi.org/10.1017/S0003055415000271. "Rentierism" refers to an economic system based on appropriation of resources that produce rents, which rents are then used to govern and control society. Rentier powers govern, in the first place, through corruption.

11. Ibid.

12. Valerie M. Hudson, Donna Lee Bowen, Perpetua Lynne Nielsen, and Rebecca Nielsen, *The First Political Order: Sex, Governance, and National Security,* book manuscript in preparation.

13. Hudson, Bowen, and Nielsen, "Clan Governance."

14. Jack Goody and S. J. Tambiah, *Bridewealth and Dowry* (Cambridge, MA: Cambridge University Press, 1973), 18.

15. Ibid., 10.

16. Ibid., 5, emphasis in the original.

17. Siwan Anderson, "The Economics of Dowry and Brideprice," *The Journal of Economic Perspectives* 21, no. 4 (Fall 2007): 151-74, doi:10.1257/jep.21.4.151.

18. Bradley A. Thayer and Valerie M. Hudson, "Sex and the Shaheed: Insights from the Life Sciences on Islamic Suicide Terrorism," *International Security* 34, no. 4 (Spring 2010): 54, doi:10.1162/isec.2010.34.4.37.

19. Polygyny is also a custom which has not died out to the extent some would imagine; see here for a visual representation of the prevalence of polygyny in the world today: "Prevalence of Polygyny Scale, Mapped," WomanStats Project (website), accessed 14 November 2017, http://www.womanstats.org/substatics/PW-SCALE-1-2016.png.

20. Goody and Tambiah, *Bridewealth and Dowry,* 10.

21. That is not the case in some patrilineal societies. For example, in Saudi Arabia and the United Arab Emirates, there are sufficient resources to justify the expense of investing in maternal health care. Furthermore, the average age of marriage has been creeping upwards in these societies. For both these reasons, maternal mortality in these Gulf States tends to be relatively lower than in other patrilineal cultures. China, too, has made a successful push toward lowering maternal mortality rates, and it strictly regulates both age of marriage and fertility.

22. This is one of those phenomena that are difficult to explain in solely economic terms. While in some regions with brideprice, childhood sex ratios are normal (such as sub-Saharan Africa), indicating that families understand the economic value of keeping girls

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A fleet of armored vehicles and shrink-wrapped helicopters awaits redeployment to the United States 17 June 1991 after service during Desert Storm. The highly successful logistical efforts during the war were due in part to the appointment of Lt. Gen. William "Gus" Pagonis as the single lead for sustainment operations. (Photo by Lt. Gary W. Butterworth, U.S. Navy)

The Pagonis Effect
A Doctrinal Future for the Support Area Command Post

Brig. Gen. Michael R. Fenzel, U.S. Army

Capt. Benjamin H. Torgersen, U.S. Army

S ince the Battle of Thermopylae, when Xerxes attacked into the Spartan rear area and King Leonidas countered with three hundred of his finest warriors to forestall the Persian advance toward Athens, armies and their generals have seen the enemy's rear area as an enticing and, all too often, soft target. On the modern battlefield, the rear area is subject to the ravages of terrorism and disruptive effects of

strategically positioned insurgents. The objective has not changed in twenty-five hundred years: if you can destroy the supplies and means of sustaining an opponent's army then there is a clear path to victory. How a division commander thinks about the defense of his support area should be in direct correlation to the pitched fighting in the close and deep areas. Yet, no commander is interested in looking over his shoulder and diverting thought, energy, or resources to defending the sustainment operation once a battle is joined.

Given the current speed of warfare, the ubiquitous presence of both friendly and enemy unmanned aircraft systems (UASs), and the blending of terrorist and insurgent threats behind friendly lines, it is no longer enough to simply protect a division's logistical assets. Friendly forces must actively work to reduce the high tempo threat of outsized challenges to sustainment from developing. We argue that committing a fully functional headquarters focused on both sustaining and protecting ground lines of support and communication, while actively and aggressively targeting enemy forces, is a new imperative in warfare. The physical and doctrinal integration of protection, sustainment, and warfighting functions is the best method of controlling the support area. In this case, a deputy serves as the controlling agent to unburden the division commander. These are not new obligations but rather a modern variation on an ancient theme that armies neglect security of the support areas at their peril.

The history of the support area command post (SACP) as a concept dates back as far as the Roman legions, when there was an organizing function and set of principles that governed support area operations. The Roman army created specialized agencies to issue and transport weapons, equipment, and rations to front-line troops. They utilized wagons to transport supplies to and from the front lines with well-armed escorts. The army focused on constructing roads and bridges wherever it ventured to ease the burden of resupply. Military quartermasters and engineers trace their roots to this period.[1]

Napoleon recognized the fundamental importance of safeguarding and expediting his logistical structure in maintaining a large army. Building on the Roman army's example, Napoleon's chief of supply, Claude-Louis Petiet, developed a formal system for supply requisition and appointed military commissaries to oversee resupply efforts. Supply functions such as bread baking, meat

processing, and foraging all had their own designated agencies and chiefs.[2] In the Austerlitz campaign of 1805, these innovations, combined with Napoleon's decision to divide his army into divisions with organic support units, proved significant. Buoyed by this advantage, the French army covered large swaths of ground, consistently outmaneuvered their enemies, withstood heavy casualties, and repeatedly achieved victory.[3] Planning for and protecting extended lines of communication enabled Napoleon's success. His decision to empower Petiet was decisive in orchestrating these victories.

In World War II, the German army established rear area security on its eastern front. This was a measure taken to prevent the Russian army from dealing a devastating blow to their overextended supply lines. The Germans designated a rear area behind each front-line unit and put a single commander in charge of all security concerns. The security battalions were comprised of older World War I veterans, military units from the Baltic States,

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Capt. Benjamin H. Torgersen, U.S. Army, is a student at the Maneuver Captains' Career Course at Fort Benning, Georgia. He most recently served as the aide-de-camp to the deputy commanding general (support) of the 82nd Airborne Division at Fort Bragg, North Carolina. Prior to that, he served as an executive officer and rifle platoon leader in 2-325th Airborne Infantry Regiment,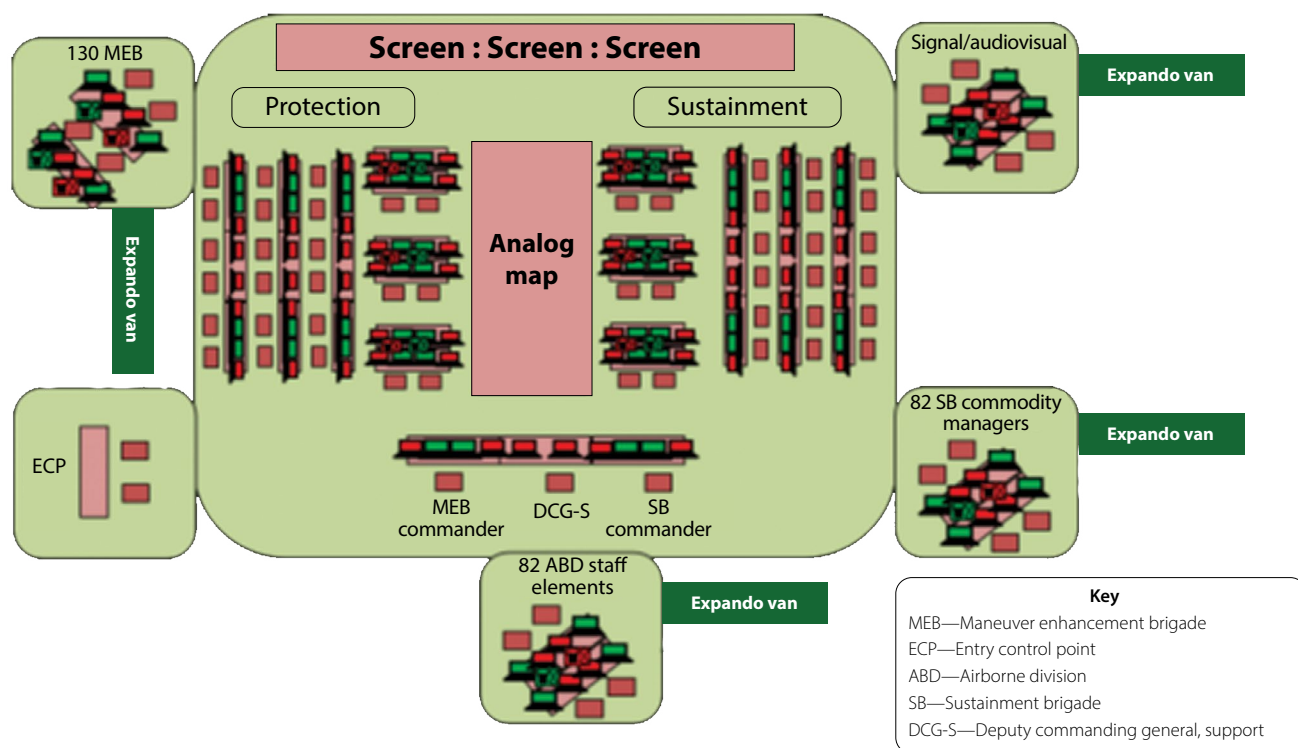 2nd Brigade Combat Team, 82nd Airborne Division. He holds a BA from Occidental College and is a graduate of the Royal Military Academy Sandhurst.

Figure 1. Layout of the 82nd Airborne Division Support Area Command Post

Key
MEB—Maneuver enhancement brigade
ECP—Entry control point
ABD—Airborne division
SB—Sustainment brigade
DCG-S—Deputy commanding general, support

(Graphic by authors)

and front-line soldiers who had temporarily returned to the rear for respite.[4]

Early failures to protect supply lines led to the introduction of a more refined security system. The system focused on clearly defining the supply transportation network and included requirements such as nonstop journeys between supply centers, rapid dispersal of supplies, and securing logistical stores from aerial observation and attack. The rail system was the main source of resupply and it was often targeted by partisan attacks. As a result, security details consisting of riflemen and mounted high-caliber guns often accompanied supply trains to provide protection to sustainment forces.[5]

The Pagonis Effect and Evolution of the Support Area Command Post Concept

Transitioning to the modern era, the Gulf War provides a clear parallel to what we are likely to experience in future wars. This was defined by a fundamental transformation from the commonly accepted doctrine of distributed logistical command to that of a single logistics leader.

During the Gulf War, Gen. Norman Schwarzkopf deviated from Army doctrine and appointed Lt. Gen. William "Gus" Pagonis the Central Command deputy commanding general for logistics to make a single individual in the command chain responsible for all sustainment operations. Pagonis controlled receipt and delivery of supplies by all methods in theater. As the single lead for logistics, he secured essential host-nation logistical support by working closely with the Saudi government to negotiate agreements. He directed his sustainers to establish "log bases" at key points in front of advancing forces. These temporary supply depots for expendable classes of supply were placed near main supply routes with instructions that they should be destroyed if compromised.

To do his job, Pagonis delegated significant authority to leaders at these log bases to adequately resupply combat forces and protect supply lines. This innovative approach ensured all sustainers across the theater could respond rapidly to exigent needs and remained flexible enough to address front-line requirements.[6] The application of this single command approach for all logistical resources directly contributed to victory.

130th Maneuver Enhancement Brigade, 82nd Airborne Division Sustainment Brigade, and division staff operate in a close, integrated command operations and intelligence center (as shown in figure 1, page 50) aimed at enabling closer and more direct coordination June 2017 at Fort Bragg, North Carolina. (Photo courtesy of the Mission Command Training Program staff)

Over the course of the last two years (2016–2017), the Army's divisions have sequentially developed the concept of mission command within the support area. In each case, there are important connections to the extraordinary freedom of action accorded to Pagonis by Schwarzkopf. In determining the best doctrinal direction to move in managing the support area, the evolution of the concept of mission command provides an excellent historical narrative. Each division has contributed to the understanding and employment of the SACP construct by adding building blocks during successive warfighter exercises (WfX). Indeed, the deputy commanding generals for support (DCG-S) in each division have directly coordinated with one another through each of the WfXs described here, and the DCG-S dialogue across the Army continued as this article was being written.

1st Infantry Division. The SACP innovation was born out of necessity and defined by the commanding general of the 1st Infantry Division (1ID) during WfX 16-04. During his first command post internal training exercise, the division commander recognized the need for a SACP because enemy activity within the support area was consistently disrupting logistical support, forcing him to divert attention away from the fight in the close and deep areas. Ultimately, the 1ID SACP successfully seized objectives and engaged enemy targets in the support area. This allowed the

commanding general to more effectively dictate the tempo of the fight in the close and deep areas.

1ID recognized the need to employ the capabilities of the National Guard maneuver enhancement brigade (MEB) attached to the division to operate the SACP at full capacity without shifting assets away from the division main command post (DMAIN). A highly capable National Guard or Army Reserve force can provide the inherent protection capabilities associated with an MEB. However, though liaison officers from the MEB participated in the WfX 16-04 planning process, the MEB had not worked with 1ID before in the field, so it possessed a very limited understanding of the SACP's role in the fight. In fact, the MEB commander (for the WfX) only just arrived for the start of WfX 16-04. Despite these integration challenges, the MEB was very effective at providing coordinated fire protection plans and counter reconnaissance patrols in the support area for WfX 16-04.

Expando vans form one of the main operational centers during a Bright Star command post exercise 4 October 2005 in Egypt. Expando vans can be combined in various configurations to create highly functional command posts. (Photo by Sgt. Alex Licea, Combined Joint Task Force–Bright Star Public Affairs Office)

The 1ID quickly discerned that providing additional resources and manpower to the SACP greatly benefited the division as a whole. By the start of their second command post internal training exercise under WfX 16-04, the MEB and the SACP each had a platoon of UASs and additional armor assets. This resulted in greater freedom of movement in the support area and enabled maneuver elements to operate at a higher tempo and speed. To better synchronize the efforts of the SACP with those of the DMAIN and the division tactical assault command post (DTAC), 1ID broadcast key meetings (battle update brief, commanders update brief, and targeting board) through speakers into the SACP, which worked extremely well to increase shared command and staff understanding.

3rd Infantry Division. The next permutation of the SACP originated with the 3rd Infantry Division (3ID) during WfX 17-01. It is worth mentioning that the authors were integral members of the higher command for the 3ID WfX and so in an excellent position to observe their thoughtful refinements to the 1ID model. 3ID envisioned the SACP as a division mission-command node built upon its assigned MEB. The DCG-S oversaw SACP operations to ensure they were nested with the

commanding general's intent, and the division staff addressed manning gaps by augmenting with personnel and equipment. With 176 personnel assigned, 3ID's SACP was much larger than the 1ID model because there was substantially greater participation from their assigned MEB. 3ID immediately recognized the importance of integrating the MEB into the fabric of their support area infrastructure. In fact, the division leadership and staff began coordinating and training with the MEB four months in advance of the WfX, which served to reduce the inevitable friction associated with integrating a new unit into a division's task organization. Leaders from all elements within the SACP began to reform the structure and define processes through ongoing coordination.

With the 3ID version of the SACP, the MEB commander functioned as the SACP commander while the DCG-S provided operational oversight. This was the

standard chosen because the MEB headquarters provided most of the personnel and equipment employed by the SACP. The 3ID SACP structure was, essentially, the MEB tactical operations center (TOC) with added space for the division staff personnel and the DCG-S. 3ID

subsequent divisions would follow in terms of ease of communication and coordination. At the midway point of the WfX, both brigade commanders were directed to collocate with the DCG-S at the SACP and asked to sit on either side of him to flatten communications between
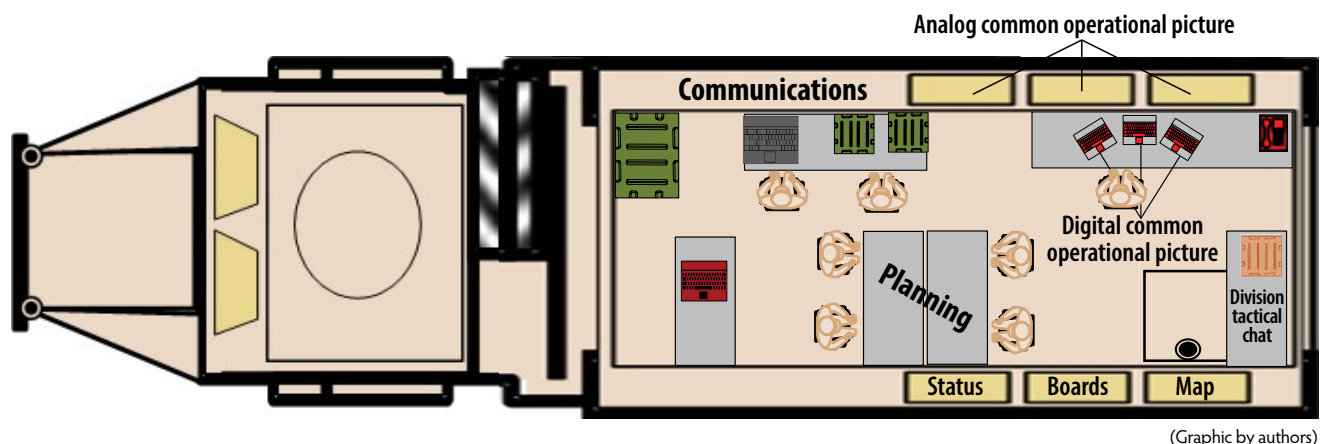
(Graphic by authors)

Figure 2. Expando Van Layout, Brigade Tactical Assault Center

also recognized the importance of liaison officers from non-Department of Defense organizations focused on external engagement, such as the Political Advisor Program, the United States Agency for International Development, and host-nation entities. These liaison officers enabled much better coordination across the support area.

In contrast to the 1ID approach, 3ID determined the SACP had the ability to issue orders specific to the support area and control elements occupying the terrain within it. 3ID's realization of the need for a senior division leader (in the form of the DCG-S) present who outranked all brigade commanders in the support area—and could more easily facilitate coordination than any division staff or subordinate-brigade-level commander—proved to be a key organizational innovation.

1st Armored Division. The 1st Armored Division (1AD) conducted its WfX, 17-02, employing the SACP as a coordinating command post tied to both the MEB and the sustainment brigade. The SACP was focused exclusively on current operations and direct coordination with the DMAIN to facilitate the management of protection operations in the support area. It lacked the capability to assume control of airspace or fires. Nevertheless, the sustainment brigade commander did serve as chief of sustainment and the MEB commander did serve as chief of protection, which provided the structure that
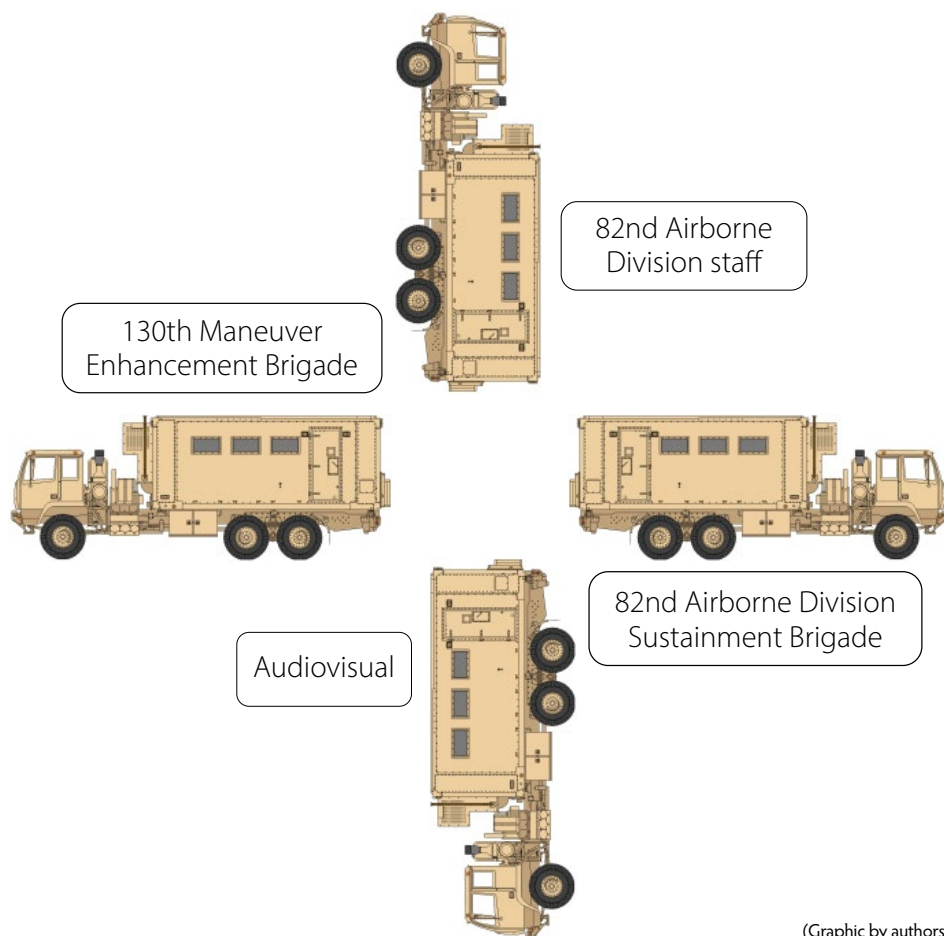
the sustainment and protection enterprises. They accomplished this after a few days of slower coordination and delayed problem solving while geographically dispersed. This was a groundbreaking step in the evolution of the SACP concept that was born out of necessity.

25th Infantry Division. The 25th Infantry Division (25ID) applied its own method to structuring its SACP during WfX 17-04 at Schofield Barracks in Hawaii. This was a well-organized and highly practiced approach that integrated a seasoned cross section of the division staff. The SACP's responsibilities relative to DMAIN and DTAC were clearly delineated by the DCG-S. The DMAIN was responsible for the close fight on the battlefield, while the DTAC was focused on either the deep fight or specific portions of the close fight such as wet gap crossings or brigade-level air assault operations. The DMAIN was focused on developing a targeting process that would address both the close and deep fights, while targeting in the support area was left to the coordination of SACP staff, but with only enough assets to protect ground lines of communication and insufficient capacity to control maneuver, fires, and effects.

Integration of the MEB was not achieved in advance of WfX 17-04 and occurred in limited terms during the exercise because the MEB was not focused on this as a primary training event (the Army Reserve

brigade commander did not participate). The senior representative for the MEB was a young and aggressive field-grade officer who had not worked with the division before. Despite the officer's best efforts, the lack of prior investment on the part of the MEB force made it impossible to appropriately integrate protection with sustainment. This was exacerbated by the fact that most resources required to control the support area came from a standard MEB Mission Table of Organization and Equipment. Because of this equipment and personnel integration shortfall, the 25ID SACP was only able to serve as a coordinating command post during WfX 17-04. The SACP synchronization meeting was the most valuable component of the battle rhythm relative to the coordination and management of the support area and served as an essential problem-solving venue throughout the exercise and yet another crucial refinement to the SACP concept.

(Graphic by authors)

Figure 3. Four Expando Vans Combine to Create the Support Area Command Post Tactical Assault Center

The DCG-S of 25ID was at the center of all support area staff attention and all efforts within it were coordinated through him to either reinforce or complement DMAIN efforts. It was clear that the division assets required to address logistical prioritization issues were attached to the SACP and functioned at a high level. This enabled full and efficient management of the support area by the DCG-S. However, the resources, technical personnel, and systems required to fully control the support area were not available—to wit, the systems required to control and clear airspace and control fires, such as the Tactical Airspace Integration System, the Advanced Field Artillery Tactical Data System, and the Air and Missile Defense Workstation were not available, and the school-trained air defense, field artillery, and aviation personnel to run those systems were not on hand either. Nonetheless, the capacity of the SACP through this exercise brought the SACP closest to a position of control than all prior divisions and established the requirements for a SACP to become a controlling division command post.

Emerging Doctrine for the Support Area Command Post

Our experience in the 82nd Airborne Division through WfX 17-05 was informed by all other previous division experiences and represented a purposeful integration of every lesson learned. The structure of the SACP was developed with the intent of the commanding general in mind. Maj. Gen. Erik Kurilla made

The 82nd Airborne Division established its support area command post (shown here) June 2017 on Holland Drop Zone, Fort Bragg, North Carolina, during Warfighter Exercise 17-05. (Photo by Capt. Benjamin Torgersen, U.S. Army)

clear that all command posts, including the SACP, were to be smaller, lighter, leaner, faster, more capable, and have more agile staffs. One principle developed with this intent in mind was achieving synergy between protection, sustainment, and warfighting command posts through colocation of TOCs. We combined 130th MEB (from the North Carolina National Guard), 82nd Airborne Division Sustainment Brigade (ADSB), and division staff elements into one SACP structure where brigade commanders and the DCG-S were within arm's reach of one another. All key staff from each of the three components were then working within essentially an open and contiguous set of tents to facilitate direct coordination (see figure 1, page 50).

The requirement to quickly relocate if the location was compromised by either UAS sighting or physical identification was achieved with the attachment of four M1087 five-ton expansible vans (expando vans). Three of the expando vans were aligned with each of the three TOC headquarters (MEB, ADSB, and division staff, respectively).

At the start of the WfX, we were focused only on utilizing a SACP tactical assault center (TAC) in a way that provided short-term mission-command responsibility while the SACP Main jumped to the location already established by the TAC. However, as the threat unfolded and operations proceeded, it became clear that the SACP TAC provides essentially the same capacity the

DTAC provides to the DMAIN, offering the command increased flexibility. The limitations of the SACP TAC are effectively connected to the "control" component of the SACP, since there is not currently sufficient capacity to control any fight in TAC mode (no airspace clearance or fires capacity). Nonetheless, the coordinating power of a SACP TAC provides tremendous logistical tracking capability and additional capacity to exercise mission command. At a minimum, the approach we adopted enabled effective command post jumps.

The physical construction of the TAC as it unplugs from the SACP is important to mention. Just as in the close and the deep areas, the support area will face exigent circumstances that require the primary command node to reposition rapidly to reduce vulnerability. How the staff are positioned to make these transitions while maintaining situational awareness is exceptionally important. Regardless of the type of division in question (e.g., infantry, armor, airborne), the use of expando vans is at least one workable method to employ (see figure 2, page 53). Implementation demands matching up one expando van with each of the

two brigades and another to the division staff element. Including an additional van to serve as the audiovisual center for all three units provided redundant secure communications in a quiet environment away from the bustle and noise of the other three vans.

Backing these expando vans into one another (see figure 3, page 54), connecting them with plywood flooring on the outside, and then covering all of it with both an oversized tarp and camouflage net provides a workable structure. It is also sufficient to not only assume "the fight" from the SACP Main but also to retain a degree of survivability in the process by employing the camouflage netting to reduce ground vehicle signature. Once the TAC takes control of the fight, the SACP Main breaks down as quickly as possible and jumps to the new position in close proximity to the TAC.

Collocating the DCG-S, MEB commander, and sustainment brigade commander in one command operations intelligence center is important to achieve synchronization of activities in the support area and to facilitate immediate coordination and deconfliction in a quickly developing engagement. Given the speed of operations, a sustainment brigade can only feasibly and effectively support one division at a time in a high tempo decisive action engagement. The WfX demonstrated to us that retaining the survivability of logistical support assets demands the integration of the sustainment brigade TOC into the SACP, rather than being positioned with an expeditionary support command. The addition of a DCG-S at the SACP enables coordination and deconfliction and greatly facilitates the receipt of critical assets from the DMAIN.

In WfX 17-05, the integration of the MEB, ADSB, and division staffs promoted rapid and effective decision-making through the creation of fusion cells across warfighting functions. A few of the most significant revelations uncovered during the WfX after-action review came from a close analysis of where key staff members sat during battle updates and where their work stations were positioned on the main floor (in relation to their counterparts). The early and continuous investment of cross talk between collocated brigade and division staff members is what sets this conceptual arrangement into motion.

During the planning phases of a military operation, there must be deep thought as to what assets, resources, and key personnel remain in the support area—through which all critical classes of supply and sustenance for the fight will flow and be controlled. In a dynamic and fast-paced threat environment, there is simply no time to either shift resources or move another command post to the support area to shore up vulnerabilities. The development of the SACP provides a mission-command node with the capabilities and appropriate oversight (in the form of a DCG-S) to address threats as they present themselves, call for critical assets, and implement the commanding general's priorities.

In a support area, current doctrine suggests that a sustainment brigade command post and maneuver enhancement brigade command post are appropriate to have set up and functioning.[7] Emerging doctrine suggests that a division mission-command post is appropriate because organizing assets, resources, and command priorities demands a node capable of enforcing decisions already made by the commanding general and directing actions that are consistent with his intent.[8] This is especially important because the threat in the support area will likely differ substantially from the nature of the threat in the close and deep areas.

The purpose of friendly forces in the support area will continue to be preventing the disruption of supply lines to ensure that maneuver forces are not starved of food, fuel, and ammunition. The preventive measures that are taken must be actively planned, aggressively implemented, and the structure that is chosen to synchronize these actions must be routinely practiced.

Closing Assessment of Integrating SACP into a Division

There are two possibilities for a SACP—coordinating and controlling. In a coordinating capacity, a SACP has no ability to either maneuver fires and forces or to direct the commitment of additional assets from a division's task organization. Conversely, a controlling SACP would have all the critical elements associated with either a DMAIN or DTAC. Those critical resources would include mission-command systems that allow the SACP to clear airspace, monitor airflow, and provide counterbattery fire. The systems required to carry out such actions include the Advanced Field Artillery Tactical Data System, Air and Missile Defense Workstation, and the Tactical Airspace Integration System, along with operators with the expertise required to integrate the feedback

into a clear common operating picture. Based on our experience in a division's WfX, we assess the controlling SACP as the more dynamic and effective option. The SACP must be able to control and direct battles that may ensue to the rear of maneuver forces.

In both a coordinating and—especially—controlling SACP, the DCG-S increases the synchronization and capability of the command post. The DCG-S very often serves as the immediate supervisor in garrison for the combat aviation brigade commander, division artillery commander, and sustainment brigade commander. This established and close working relationship creates opportunities to capitalize on that preexisting relationship. For example, if there is a clear need identified to prosecute a target in the support area but the only artillery assets available are in general support, very often a simple phone call from the DCG-S to the division artillery commander can bring about a quick shift to direct support until that target is neutralized and the threat reduced.

When combat logistics patrols traveling along a main supply route into the support area come under attack without any attack aviation escort, the long-standing relationship between the combat aviation brigade commander and DCG-S can also lead to very responsive support. At the root of why this concept works so well is the element that undergirds mission command—trust. It is not the rank or position that makes these calls for support and associated responses quick; instead, it is knowing that someone you work with closely and trust needs help right away.

That human dynamic drives this component of the SACP concept. There is obviously a positive externality that is associated with the formal chain of command established in garrison, but that is always superseded by the commitment to help a close associate in need.

The vulnerability of a division's support area will remain cause for commander concern if the mission-command architecture is not aligned in a way that can effectively address the enemy's most dangerous courses of action, namely attacking into the support area. Commanders must apply appropriate leadership and resources to that location so that they can remain focused on the fight in front of them or battle plans will become unhinged as they did for King Leonidas as his Spartan warriors fell victim to this vulnerability at the Battle of Thermopylae. Despite the bravery of the three hundred, the Spartans lost the battle and Leonidas was killed. Conversely, the authority and control granted to Lt. Gen. Pagonis in Operation Desert Storm was unprecedented and so were the effective results. In an era of warfighting where information and formations move at alarming speeds, the delegation of authority and control of the support area to a DCG-S is what will allow a division commander the luxury of focusing on the fight in front of him without having to look over his shoulder. Applying a Pagonis-like structure to this enduring challenge will prevent tragic surprises like those at Thermopylae in ancient Greece, allow for a greater provision of creativity, and generate opportunities like those Pagonis seized during the first Gulf War. ∎

Notes

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Prospective Strategy for Baltic Defense

The Russian Public and War Termination in the Baltic States

Lukas Milevski, PhD

A crowd protests against high-level government corruption 12 June 2017 at an antigovernment rally organized by supporters of Russian opposition leader Alexei Navalny in Yekaterinburg, Russia. Russian military leaders frequently express concern that such antigovernment mass rallies could easily lead to a so-called "color revolution" with the aid of foreign influence. (Photo courtesy of Wikimedia Commons)

E ver since early 2014, when Russia annexed Crimea, the defense of the Baltic States has been a concern for NATO and the United States. This focused interest stems from the possibility that Article 5, NATO's collective defense clause, might be triggered. Other than a general belief in deterrence, public discussion of Baltic defense has been pessimistic. Russia's ability to overwhelm the forces currently stationed in the Baltic States is emphasized in the discussion, as well as Russia's anti-access and area denial capabilities, which would make any return to the Baltic States after an initial Russian invasion a strenuous endeavor for NATO. (A commonly assumed Russian invasion route is depicted in figure 1, page 60.) These are not the only critical strategic conundrums that NATO could face in the Baltic.

War termination is another vital question that needs a place in discussion of defense of the Baltic States. It is important for defense planners to consider these questions: What does a successful end for NATO look like in the Baltic? And, by what means might it be achieved? This article briefly lays out the relationship between defense planning and war termination, with reference to the Baltic States, before delving into Russia's primary self-identified

weakness—its own public. After examining why the Kremlin believes the Russian public to be a weakness, this article considers the strategic relevance of this weakness and whether NATO has the ability to exploit it to end a possible war for the Baltic States.

Defense Planning and War Termination

Defense planning is prospective planning for the use of a strategy against an enemy in reality. As Professor of International Politics and Strategy Studies at the University of Reading Colin Gray articulates it, "The defence planner in effect is a practising strategic theorist. … Strategies are theories, which is to say they are purported explanations of how desired effects can be achieved by selected causes of threat and action

(Graphic by Arin Burgess, *Military Review*)

Figure 1. A Commonly Assumed Russian-Invasion Scenario

applied in a particular sequence."[1] Defense planners must imagine potential chains of cause and effect despite the overriding condition of their vocation—that the future is inherently uncertain and unknowable, especially in detail. This exercise in imagination must be guided by politics. As Carl von Clausewitz wrote to a colleague seeking feedback on a war-planning thought exercise,

> War is not an independent phenomenon, but the continuation of politics by different means. Consequently, the main lines of every major strategic plan are *largely political in nature*, and their political character increases the more the plan encompasses the entire war and the entire state. The plan for the war results directly from the political conditions

of the two belligerent states, as well as from their relationship to other powers. … According to this point of view, there can be no question of a *purely military* evaluation of a great strategic issue, nor of a purely military scheme to solve it.[2]

Politics sets direction for strategy through enunciation of a preferred end state as well as limits for what is operationally permissible.

Besides essential political guidance, this imaginative exercise of defense planning also requires a combination of specific knowledge about the potential enemy and general empathy—but not sympathy—for his or her perspective: "If the enemy's actions can reveal his assumptions about what strategic ways he

fears or values, the strategist should seek to exploit these in order better to achieve his ends."[3] However, in advance, defense planning the enemy's actions are less valuable a resource.[4] The opponent's strategically relevant activities may be scarce or unobservable, and not necessarily reflective of actual wartime priorities. Fortunately, Clausewitz also identified a wide range of potential centers of gravity which may pertain to an adversary in war but may be studied in peacetime: the main army, the capital, a larger ally of the enemy if one exists, and even leaders and public opinion in the right circumstances.[5] A potential enemy need not necessarily take action in the domain of the armed forces to reveal weaknesses that may have strategic relevance.

Much has been written about the defense of the Baltic States since 2014, most of it pessimistic about NATO's ability to defend the Baltic States should the need ever arise.[6] Few discussions get as far as actually considering war termination because the prospect of immediate defeat in the Baltic is so great and the challenges of forcefully reentering the theater of operations from western Europe and across Scandinavia are so vast and formidable that thinking past them seems too far ahead. One of the few authors examining considerations for ending a NATO-Russian conflict in the Baltic States did not even consider a conventional war, but rather focused on a "little green men" scenario in which Russia postures but does not ultimately act.[7] In this fictional account, Richard D. Hooker Jr. envisions a victorious NATO that, for its part, nevertheless surrenders much in the Baltic and even elsewhere in an effort to gain a peace of dubious value:

> All Russian military and subversive activities on the soil of NATO member states must cease. NATO would make a public declaration announcing that Ukraine should not join NATO, but would be free to choose its political and economic future for itself. Resolution of the Crimea issue would be deferred until a future date under UN auspices. Economic sanctions would be lifted and NATO forces would return to their home garrisons, with a promise not to be permanently stationed on the territory of any state formerly a member of the Warsaw Pact. A reinvigorated Organization for Security and Co-operation in Europe (OSCE) would monitor the disengagement of all parties and the stationing of their forces. The NATO-Russia Council would be reactivated to take a lead role in addressing the concerns of ethnic Russian minorities in the Baltic republics.[8]

This particular vision postulates a NATO success but considers only the possibility of what the West terms hybrid warfare, not a conventional force invasion.

It also reflects the readily anticipated difficulty of bringing Russia to terms to end a conflict that Russia might have little incentive to settle. In any potential war—conventional, unconventional, or hybrid—Russia would have enormous geopolitical and strategic advantages that would inhibit Western attempts at coercion. First, Russia's nuclear arsenal makes any attempt to invade Russian national territory a very dangerous endeavor. Second, compared to NATO, Russia at present displays a significantly greater degree of national unity, which would likely allow it to maintain more sustained political will and commitment to its objectives even through a prolonged period of adversarial, but not violent, confrontation such as that between the Allies and Germany in 1939–40.

Hooker's analysis makes clear that the West must think clearly about war termination now because, in the midst of a limited war, it would already be too late to do so effectively. To anticipate future strategy in the Baltic States in the event of war, the defense planner must have a reasonable vision of war termination and its probable salient features. Empathy for Russian viewpoints must play a large role in development of such strategy, for it is only through empathy that we may identify potential Russian weaknesses by which to pressure it into deescalating conflict and accepting defeat. As the defense

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A Russian tank leads a convoy of vehicles 1 August 2008 in South Ossetia. The Russian invasion, in what Russia called a peace enforcement operation, forced the retreat of Georgian forces from South Ossetia. Russia still occupies that country in violation of a ceasefire agreement. (Photo courtesy of Wikimedia Commons)

of the Baltic States in a conventional war scenario will likely rest upon NATO's ability to return to the theater of operations after an initial defeat rather than a stalwart and unyielding initial defense, for the purposes of this article achievement of such a NATO forcible return will be assumed. This will allow for the sole consideration of war termination, the heretofore largely unmentioned but vital aspect of strategic anticipation and defense planning for any hypothetical NATO-Russia war.

Russian Geopolitical Perspectives

The key to anticipating strategically and politically successful war termination in a conventional war with Russia lies in Russian geopolitical thought. This points to Russia's major weakness—or at least, what Vladimir Putin and his inner circle believe Russia's major weakness to be—the Russian public.

Three main strands of Russian geopolitical thought point to this conclusion. First is Russian nuclear strategic thought and Russia's threshold for the use of nuclear weapons. Second is Russian discussion of hybrid warfare and the color revolutions. Third is what has been called Russia's grand strategy of mobilization.

Russian nuclear strategic thought. Russia is not particularly open about its nuclear strategy or its nuclear threshold. Its military doctrine published in December 2014 stated that Russia

shall reserve for itself the right to employ nuclear weapons in response to the use against it and/or its allies of nuclear and other kinds of weapons of mass destruction, as well as in the case of aggression against the Russian Federation with use of conventional weapons when the state's very existence has been threatened.[9]
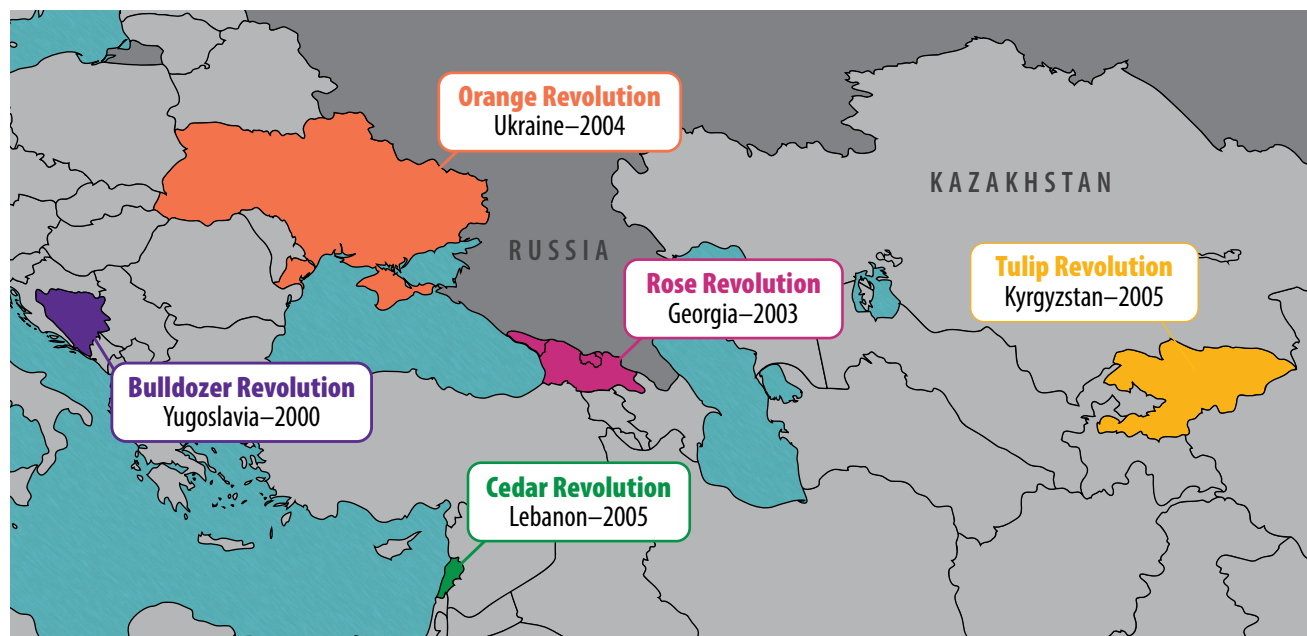
(Graphic by Arin Burgess, *Military Review,* based on an original map from Wikimedia Commons)

Figure 2. Regional "Color Revolutions" in Close Proximity to Russia

Although this is seemingly clear, Russian officials have muddied the waters in statements since 2008, variously saying that "Russia may use nuclear weapons against NATO missile defense facilities, and may increase the readiness of its nuclear forces in reaction to limited regional scenarios that do not involve WMD attacks or threats to its 'very existence.'"[10]

One may wonder whether this is a calculated effort to induce uncertainty, allow Russia nuclear flexibility, and pose a threat that leaves something to chance. Irrespective, the Russian-declared threshold for nuclear weapons use affects any strategy that NATO may pursue. Given the inherently adversarial circumstances of war, wherein each side tries to overthrow its opponent and thereby introduces the inevitable prospect of escalation, any war with Russia might plausibly intensify to nuclear use.

In recognition both of this possibility and of its undesirability, NATO could unilaterally declare national Russian territory to be a sanctuary, in much the same way that Manchuria was a sanctuary for the Chinese during the Korean War and North Vietnam was partly and variably a sanctuary during the Vietnam War. Such a declaration that specifies the West has no interest in posing an existential danger to Russia and thereby also endangering itself to a Russian nuclear strike seems inevitable as a political and strategic signal to Russia, whether it would be accurately received and perceived or not.

The limits placed by sanctuary on operations may be more or less strict. All forms of military power could be banned from entering into Russian territory or airspace, as in the Korean War vis-à-vis Manchuria, or airpower and cruise missiles could be allowed, at least against certain targets, as in Vietnam. Given the range and ability of Russian weapon systems based within Russia but able to interfere in operations beyond Russia's borders, the Vietnam airpower precedent may be the more likely option.

The upshot of this politically probable Western unilateral declaration of sanctuary could be that the Russian army would not serve as one of the continuous centers of gravity throughout the war. If operations in the Baltic turn against the Russians, their army might, albeit under pressure, withdraw from the Baltic States altogether. The Russian army could then simply remove itself from the playing board by entering the sanctuary of the adjacent Russian border and decline to engage NATO forces—although, depending on the details of any NATO sanctuary policy, it may still find itself under threat from NATO airpower.

If the Russians removed themselves without relinquishing their political will to continue the war,

A group of "little green men" stands guard at the military base 9 March 2014 during the 2014 Ukranian crisis in Perevalne, Crimea. The "little green men" moniker was used to describe fighters who wore uniforms without unit or national identifying information to maintain anonymity but were commonly thought to be Russian soldiers or ethnic Russian militia recruited from within Ukraine. They were widely reported to have preceded heavier Russian conventional ground forces in the 2014 seizure of Crimea. (Photo courtesy of Wikimedia Commons)

pursuant to Clausewitz's observations on center of gravity, the Russian capital itself or Russia's allies would then become the next prime centers of gravity subject to attack. However, as a practical matter, Moscow as a potential center of gravity would be inconceivable, and in such a war, Russia would not have any allies whose presence would be meaningful with regard to war termination. As a result, only one choice from Clausewitz's center of gravity checklist remains—Russian public opinion, which would be the only feasible Russian vulnerability susceptible to attack short of elevation to nuclear conflict. Ironically, Russian public opinion is already understood by Russian elites to be the major weakness in Russian efforts to achieve its political will across the globe.

Hybrid warfare and the color revolutions. The Russians themselves acknowledge their public opinion vulnerability. Russian Chief of the General Staff General Valery Gerasimov garnered much attention in the West during 2014 after Russia's conquest of Crimea when it came to light that he had already spoken about what the West terms hybrid warfare.[11] Moreover, it was widely assumed that Gerasimov had essentially laid out in his comments the blueprint for how Russia would

use force in the future to achieve its desired political objectives, and had vindicated this strategy through direct experience in Crimea. This was, in fact, not the case. Rather, as Charles Bartles notes,

> There is a general consensus in Russian military circles that hybrid war is a completely Western concept as no Russian military officer or strategist has discussed it, except to mention the West's use of the term, or to mention the West's use of hybrid warfare against Russia … The Russian military has been adamant that they do not practice a hybrid-war strategy.[12]

However, the Russian leader maintained that Russia is preparing to practice, and, in fact, is practicing against

the West what it believes the West has been already been using against Russia for some time. Gerasimov has defined Russian approach to contemporary warfare and its reaction to Western actions within its sphere of influence as "new type warfare."[13]

In offering his understanding of the nature of contemporary warfare, Gerasimov analyzed what he considered to be one of the West's key methods of undermining Russian power and influence abroad. This method, as previously noted, was described as *color revolution* (*color* derived from the common use of a color by activist groups to describe their revolutionary movement). A number of countries around Russia had experienced anti-Russian revolutions, which, in Russian eyes, have all been orchestrated by Western agents (see figure 2, page 63). These color revolutions are considered to be methods by which the West may use covert, semicovert, and public means to destabilize a chosen country, often leading to a change of government toward one that follows pro-Western and anti-Russian policies.[14]

This trend arguably began in the late 1980s with the Singing Revolution in what are now again the independent Baltic States. As Anatol Lieven notes, "Soviet loyalists have always argued that the CIA was behind the national movements, via agents from the Baltic emigrations."[15] The revolutions most often highlighted by the Russians include the Rose Revolution of 2003 in Georgia, the Orange Revolution of 2004 in Ukraine, the Tulip Revolution of 2005 in Kyrgyzstan, and most recently, the Maidan Revolution of 2013–14 in Ukraine. In Russian analyses, the various protests of the Arab Spring in 2011 also fall within the category of color revolutions.

Russians frequently point to public rhetorical support that high-ranking U.S. policy makers often give to such color protesters. This Western support has manifested itself not just in various countries surrounding Russia or throughout the Middle East and North Africa over the years, but even in Russia itself during and after the Russian presidential elections of 2012. Such public support has political consequences at even the individual level in Russia, including its relations with the West. One observer asserts, "Putin's personal sense of *obida* (offense) at U.S. support for the public demonstrations against him in late 2011 and early 2012 was the single most important reason behind the hardening of Russian policy toward Washington."[16] The United States had essentially

sought to chip away at Russia's main self-identified susceptibility, an unforgivable act for Putin.

Russia leaders also point to the large sums of Western money that fund nongovernmental organizations (NGOs), the declared missions of which often include governmental transparency, combating corruption in politics, and so forth. From a Russian perspective, such reforms may weaken Russian influence beyond its borders, which often relies on corruption and political and financial favors, alongside more open and direct funding of organizations whose supposed mission is to spread Russian culture.[17] Numerous Western NGOs have been shut down in Russia itself, on the basis that they are instruments of not just foreign but even of hostile power and seek only to undermine Russia's own power—often because they oppose numerous Russian social policies and advocate governmental transparency, which illuminates the corruption and poor functionality of government in Russia.[18]

The importance that the Kremlin ascribes to these revolutions and the ostensible means by which they are encouraged cannot be overestimated. In its own eyes, an arc of crisis girdles Russia, primarily but not exclusively to its south and southwest. Andrew Monaghan, director of Research on Russia and Northern European Defence and Security at the University of Oxford's Changing Character of War Centre, concludes,

> The narrative trajectory of international instability can be traced through the NATO air campaign in Kosovo in 1999, the wars in Afghanistan and Iraq, and then the air campaign in Libya in 2011 and the civil wars in Libya and Syria. Today, therefore, if the Euro-Atlantic community thinks of Russian aggression, even expansionism in post-Ukraine terms, Moscow sees international instability in a longer-term and wider post-Arab Spring context.[19]

Significantly, although some of these crises originated from or were exacerbated by overt Western intervention (e.g., Kosovo, Afghanistan, and Iraq), many others were caused by the (ostensibly U.S.-backed) color revolutions, including Libya, Syria, and Ukraine.

Not only are the current crises perceived by Russians as a threat to Russia to varying extents, but it is also an open question whether Russia can safeguard itself from such dangers. According to Monaghan, "the

Russian leadership is aware of the domestic systemic weaknesses which mean that Russia is not prepared to cope with the threats which emanate from such international instability. Moscow's responses must therefore be understood as emergency measures tantamount to putting the country onto a war footing."[20]

Russian strategy of mobilization. In consequence, Russian leaders seek not only to protect Russia's ability to wield power in—and beyond—Russia but are also even fortifying the Russian popular opinion of Russia's government and the population's still strong support for Putin. To that end, Russia is undertaking a massive synchronized effort to mobilize itself as a nation militarily, economically, and socially.

Russia has a history of mobilization dating back to the 1920s, when Russia's previous incarnation, the Soviet Union, was feeling besieged by the capitalist world. *Mobilizatsiya* in Russian has two meanings. First, "mobilisation can apply to a whole economy, society and polity, and refer to a concerted effort to raise it to another state or level of development."[21] However, "in a narrow, more technical sense, mobilisation also involves centralised leadership by the state, but in this case it is solely to prepare the economy and structures of power to meet the challenge of possible military aggression against the nation."[22]

Although many outside observers of Russia are focusing on the economic and military aspects of mobilization in Russia today, the societal aspects of the broader interpretation of mobilization are equally important. This is particularly so in the present context of a fear of color revolutions and hybrid warfare purportedly aimed at Russia in which fortifying and unifying society itself has become one of the main targets of strategic activity.

This emphasis on society is reflected in Putin's May Decrees, which he signed after returning to the presidency in 2012 and which formed a large part of his election campaign during the previous year. As Monaghan observes, these decrees "cover a broad agenda, including economic and social policy, healthcare, housing and utilities, education and science, demography, inter-ethnic relations, state administration, foreign policy, and military service and the armed forces."[23] Of these sectors, although foreign policy and military are indeed present, "the bulk of them do address matters that are politically and socially important to the Russian population. Putin has regularly emphasized that only a 'consolidated society' can fully carry out the development strategy. Reinforced by electoral victory, the May Decrees are part of this consolidation effort."[24]

Russia anticipates conflict, if not outright war, in its future. It has been taking measures to prepare for this future through its multidimensional mobilization. Nevertheless, "These are in effect emergency measures, since the Russian leadership is well aware that war is a test of society and that, despite the recent military experience gained in Ukraine and Syria, Russia is not ready for this test."[25] The Kremlin also has difficulty trusting its society, given its perception of Western methods of subversion and the experience of the 2012 election, when many protests against Putin were organized that were motivated by Western liberal ideals. Russia's late 2016 acquisition of China's "great firewall" internet censorship technology is indicative of this mistrust. A similar, but even more serious, indication is Russia's decision in late May 2017 to subordinate the Russian Army to the National Guard should an internal crisis warrant such a response.[26] Whether the Russian public really is as volatile as the Kremlin seems to think, this mistrust is a vulnerability that may be exploitable for strategic advantage should NATO and Russia ever go to war, perhaps even to the degree of advantageously terminating the war—whether in the Baltic States or elsewhere.

Yet, such a task would be an uphill endeavor. Strategists in the West may safely assume that should Russia ever attack the Baltic States, the Russian public would initially favor such an action, as analogously suggested by the Russian government's narrative during the operation that led to the annexation of Crimea and the manner in which the Russian public responded.

The Strategic Relevance of Russian Public Opinion

As one of Russia's most significant self-identified weaknesses, Russian public opinion stands as a potential vulnerability that may be exploited as a way to inhibit further Russian use of force in the case of a hypothetical war between NATO and Russia for the Baltic States. However, it is one question to identify a weakness and another to imagine how to exploit it. Is Russian public opinion a center of gravity that NATO could actually be able to attack to break Russia's hypothetical will to fight? Various factors are relevant to any given answer, including the landscape of the Russian media, the state

Protesters shout slogans 26 March 2017 at Dvortsovaya (Palace) Square in St. Petersburg, Russia. Thousands of people crowded into St. Petersburg for the unsanctioned protest against the Russian government—the biggest such gathering during a wave of nationwide protests that were the most extensive show of defiance against the Russian government in years. The writing on the protester's face reads "Putin is a thief." The author of this article contends that Russia's major vulnerability in the event of a Russian invasion of a NATO country, and the best hope for a peace settlement, will be found in the tenuous popular support by the Russian populace for such an invasion. (Photo by Dmitri Lovetsky, Associated Press)

of the Russian opposition, and the greatest wildcard of all: Russian public response to a hypothetical apparent Russian strategic failure and military defeat.

Russia has been gradually minimizing its societal and informational vulnerability to the West and Western ideas. Ever since the NATO intervention in Kosovo in 1999, Russia has responded to demonstrations of Western—and particularly American—power and will to spread liberalism with increasing authoritarianism and domestic repression in an effort to safeguard itself from the influence of such inimical ideas.[27] This naturally reduces the scope for NATO information operations against the Russian population in war. If the Russian public cannot be reached, then it cannot be exploited.

Although Russian public opinion may be Russia's weakness, it is also malleable under the Kremlin's own narrative pressure. The Russian government embarked on an extensive domestic public-perception management campaign throughout 2014 in conjunction with its annexation of Crimea and its involvement in the war in the Donbas. Among its most important efforts were the inculcation of the arguments that "the ascension of Crimea to Russia was a legitimate act of self-determination

and not annexation by Russia," that Crimea was one of Russia's historical and cultural cores, and that the West's criticisms of Russian actions were irrationally anti-Russian and a legacy Cold War mentality.[28]

In the context of the war in Ukraine, one Russian observer noted that in March 2015, 57 percent of the Russian population was satisfied with Russia's borders and 64 percent believed that "Russia shouldn't keep the former Soviet republics under its control."[29] Yet, Russians simultaneously largely approved of the annexation of Crimea, and there has been little opposition to

its involvement in the Donbas. This relatively positive viewpoint was based first on the belief that these actions were taken to protect Russia's own ethnic and cultural world and, second, that Russia itself was supposedly not intervening directly.[30] Russian manipulation of public opinion seems to be working; Russians have largely expressed indifference to casualties in Ukraine—when the public even finds out about the casualties—in a way they did not during the wars in Chechnya or Georgia.[31] Russia holds the advantage over NATO with regard to influencing Russian public opinion.

Moreover, the annexation of Crimea represented the first time that Putin "used explicitly ethnic nationalist terms to explain and justify his foreign policy moves" to the Russian, as well as international, public.[32] However, in 2015–16, Putin pulled back from the ethnonationalist narrative as he had putatively begun thinking that it might pose too large a risk to unified Russian state stability. Russian nationalism is a patchwork of competing substate, parastate, and state actors, each of whom relates differently with the Kremlin—and some of whom are hostile to it. Russian nationalism has the potential to be a threat as well as a support to Russia's stability and unity.[33] The Cossacks in particular have been increasingly divided over Russia's actions in Ukraine.[34] This mosaic picture naturally further complicates any potential efforts by NATO to strike at Russian public opinion in war.

Putin is widely considered in Russia to govern on behalf of the *siloviki*, or oligarchs and important businesses, rather than for the middle class or the Russian people as a whole. However, this common belief does not affect Putin's own popularity, although it does reflect upon the popularity of those around him. In an effort to change the frame of reference away from powerful individuals, the Kremlin has essentially begun to offer the Russian people a new social contract: rather than growing economic prosperity in return for loyalty, the state is offering "the feeling of inclusion in a power that was rising from its knees," for which Russia is demanding both loyalty and "a preparedness to sacrifice."[35] Russia is actively fortifying the mentality of its citizenry for war.

The condition and role of the Russian opposition is also crucial. One assessment of the prospect of color revolution in Russia noted that although the regime itself is vulnerable, it also has a number of advantages, including ready access to money, a huge geographic territory with a mostly low population density, and Putin's own personal popularity. Russia currently does not have an opposition that is capable of inspiring the level of challenge necessary to overturn Putin.[36] Numerous protests have broken out from late 2011, when Putin was campaigning for his third term as president, to the present day, including antiwar protests in 2014 and anticorruption protests in 2017. However, these appear to have had hardly any positive (from a Western viewpoint) policy impact. Even if NATO could reach the Russian public and navigate the various perspectives to influence it in an advantageous manner, it would remain an open question whether this would actually have any impact on Russian policy in leading to the end of a hypothetical war or not. The opposition may not be able to harness Russian disapproval, particularly as major opposition leaders are increasingly sidelined through prison time, smear campaigns, or deniable assassination. That said, some observers suggest that the Russian opposition is nonetheless strengthening and cite a doubling of the opposition's presence in cities across Russia between the anticorruption protests of 26 March and those of 12 June 2017.[37]

The overall situation paints a fairly bleak picture for NATO if it were to seek to influence Russian public opinion. Russia has been fortifying its population through numerous policies ranging from the increasing suppression of nonapproved perspectives, to revision of the social contract, the containment and even elimination of opposition leaders, and other manipulation of the media landscape. Is there any opportunity for NATO to leverage the supposed weakness of the Russian public for strategic effect?

There still remain unknown factors that may yet benefit NATO. The "feeling of inclusion in a power that was rising from its knees," which the Kremlin promises the Russian public in their new mutual social contract, is based upon Russia's increasing ability and will to act independently and forcefully in international affairs, especially in defiance of the West, as well as upon a string of apparently reasonably successful military operations. Except for a handful of disastrous episodes concerning internal security, Russia under Putin has not suffered a public military failure—and certainly none in its foreign interventions. The Russian public may be largely apathetic to casualties in Ukraine and Syria, but these casualties, at least the publicly acknowledged ones, are orders of magnitude lower than the casualties suffered in the Chechen wars or in Afghanistan

during the Cold War, wars whose ineffective conduct aroused significant Russian public disapproval. It remains to be seen how the Russian public would react to a major military defeat in a discretionary Russian military adventure under Putin.

Even given this wild card, does NATO itself have the capacity to influence the Russian public? NATO may not necessarily be prepared to exploit the Russian public's impressionability at whichever level. U.S. Joint Publication (JP) 3-13, *Information Operations*, for example, conceives of information operations as "the integrated employment, during military operations, of IRCs [information-related capabilities] in concert with other lines of operation to influence, disrupt, corrupt, or usurp the decision making of adversaries and potential adversaries while protecting our own."[38] JP 3-13 mentions foreign public opinion only once, and not in the context of influencing it. U.S. information operations target the potential enemy's own decision-making, rather than the public opinion behind it. Moreover, since Russia is gradually shutting down possible channels of influence, NATO's conceptual limitation of lacking a doctrine for influencing the foreign public

opinion of an adversary is also becoming an opportunity problem in the specific context of Russia.

Conclusion

The public defense debate concerning the Baltic States has tended to focus on matters relating to the immediate defense and early period of a hypothetical war with Russia. There is good reason for this, as the problems NATO would face are grave. However, it is also necessary to think further into the future and grapple with considerations of war termination. Ending any war in the name of Baltic defense with success would be a difficult endeavor as the geostrategic conditions inherently benefit Russia. Perhaps NATO's best opportunity to exert active pressure on Russia for the purposes of war termination would come from the Kremlin's pervasive suspicion of the strength and loyalty of its own citizenry. Russia recognizes this and has been making consistent efforts over the past two decades to strengthen and mentally fortify the Russian public. Heightened Western information efforts aimed at Russian public opinion are nonetheless worthy of further and more detailed consideration for eventual strategic effect. ∎

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7. The term "little green men" refers to masked soldiers in unmarked army uniforms and was first used by the Russian government during the annexation of Crimea to refer to those soldiers who occupied or blockaded Simferopol Airport, military bases throughout Crimea, and the Crimean parliament building in Simferopol.

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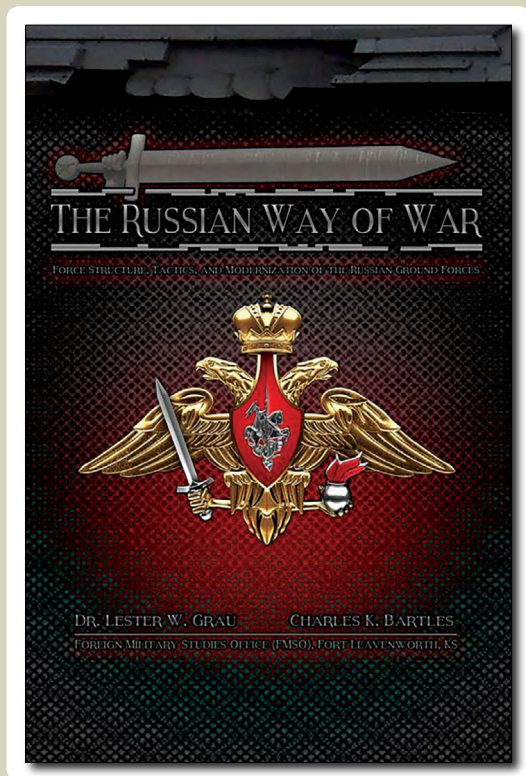
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Military Review

WE RECOMMEND

THE RUSSIAN WAY OF WAR

Force Structure, Tactics, and Modernization of the Russian Ground Forces

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Russia's 2014 annexation of the Crimean Peninsula in defiance of world opinion and international law, continuing material support for separatists in Eastern Ukraine, military exercises threatening the Baltic, an impressive and successful campaign to prop up the Syrian government, and aggressive behavior along its borders with eastern Europe especially toward nations that were formerly part of the Soviet Union have resuscitated keen international interest in the Russian armed forces. Students of armed conflict appear especially interested in the current structure, doctrine, and capabilities of Russian armed forces as contrasted to those of their Soviet-era predecessors as well as their internally debated plans for future development. However, assessments of the true state of the Russian armed forces are diverse and often contradictory. This book helps fill part of the void of understanding as a tutorial reference guide that provides authoritative insight into the current state of Russian ground forces, including how they are structured, how they fight, and how they are modernizing.

To view this publication, please visit http://www.armyupress.army. mil/Portals/7/Hot%20Spots/Documents/Russia/2017-07-The-Russian-Way-of-War-Grau-Bartles.pdf.

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German Gen. Wilhelm Keitel (*left*) and French Gen. Charles Huntzinger (*right center*) exchange documents during the signing of the Armistice acknowledging the French Third Republic's surrender to Nazi Germany 22 June 1940 in the Compiègne Forest, France. In an act of retribution, Adolf Hitler chose the Compiègne Wagon (railcar) and the forest for the signing, the same venue used for Germany's surrender to end the First World War. Author James Tollefson contends that Germany's rapid victory over France was the result of a failure by the French to evolve their doctrine during the interwar period. (Photo courtesy of Wikimedia Commons)

Fixing Army Doctrine
A Network Approach

Capt. James Tollefson, Alaska Army National Guard

On 10 May 1940, the German *Wehrmacht* rolled into Luxembourg headed for France.[1] By 15 May, the French front was decisively ruptured at Sedan.[2] Within six weeks, German forces pushed the British army out of Europe, destroyed the French army, and occupied Paris. Adolf Hitler accepted France's

surrender in the same railway car where France had received the Kaiser's surrender in November 1918.[3]

A stunned world asked, and has continued to ask in the seventy-seven years since, how this happened. A quarter century earlier, the same countries fought over the same ground and demonstrated at a cost of millions of lives that neither had the technological or doctrinal advantage required for victory. Only the entrance of the United States into the war finally forced it to a conclusion.[4] World War I seemingly proved that warfare had become an exhausting ordeal of attrition that bled nations, economies, and whole peoples white. Yet, twenty-two years later, Germany delivered a stunning victory that turned former assumptions on their head. The French army, hitherto regarded as the premier fighting force in Europe, was humiliatingly destroyed in mere weeks.

Contemporaries offered many explanations for France's defeat. Some felt the fault lay with the apathy of the French people.[5] Others blamed the incompetence of the French High Command.[6] Many suspected treason.[7] Perhaps the most compelling reason, however, is that France's military doctrine had not evolved since World War I to reflect the incredible technological advancements that took place during the interwar period. French army doctrine became rooted in a firepower-focused, methodical approach to warfare that reflected the lessons learned during the final successful campaigns of 1918.[8] The French never realized the potential of combined arms operations with large armored units, integrated indirect fires, and combat airpower destroying the enemy in depth. Yet these elements, combined with an emphasis on junior leader decision-making and initiative, were precisely the ingredients of German blitzkrieg that disoriented and crushed the French in 1940.[9] In summary, the French lost their freedom largely because they possessed inferior doctrine.

The Importance (and Difficulty) of Understanding Army Doctrine

Doctrine is important. It "provides a coherent vision of warfare" that "accounts for an army's understanding of war."[10] "The military profession, probably more than any other, fosters thinking about the future," and doctrine is the chief means by which those thoughts are communicated among military professionals and to the nation's civilian leaders.[11] Doctrine provides a theory of victory

that describes "how the military professional should execute critical tasks in support of national security objectives" in future conflicts.[12] Descriptive instead of prescriptive, effective doctrine provides a useful consistency that "simply overwhelms minor variations and unexpected reactions" and makes complex military campaigns possible.[13] Good doctrine wins wars and provides flexible, effective foreign policy tools for the nation's leaders. Poor doctrine leads to disaster.[14]

Nevertheless, few Army leaders would probably claim a burning passion for reading doctrine. Doctrinal ignorance is something many soldiers take ironic pride in, as if refusing to understand the Army's professional body of knowledge is a sign of intellectual independence. As Steve Leonard, a nonresident Fellow at West Point's Modern War Institute, points out, "We're often so proud of the fact we don't read our own doctrine that we joke about it."[15] We quote the apocryphal German officer's observation that "Americans do not read their manuals" as a sign of the inherent flexibility and independent spirit of our leaders.[16] This attitude bears an uncomfortable resemblance to that of French War College students before World War II "who had the study of doctrine as their primary concern" but "found its study less rewarding than horseback riding or terrain walks."[17] Given the results obtained by the French army in 1940 from an apparent lack of interest in doctrine, the uncritical acceptance of a similar approach today makes little sense.

Willful ignorance among the U.S. Army officers' corps is even more surprising given the generally high quality of U.S. Army doctrine and the Army's effectiveness at regularly changing and updating it.[18] To some extent, however, we have been victims of our own success. By the early 2000s, the Army had over five hundred doctrinal publications in print.[19] The staggering volume of doctrine, together with constant changes and updates, made it exceedingly difficult for leaders to determine what was relevant to them at any given time.

However, starting in 2011, the Army attempted to mitigate the overwhelming amount of doctrine by launching the Doctrine 2015 program to combat senseless proliferation. Doctrine 2015 reorganized the Army's doctrine into a hierarchical structure of Army doctrine publications (ADPs), Army doctrine reference publications (ADRPs), field manuals (FMs), and Army techniques publications (ATPs). ADPs and ADRPs

ATP 3-09

ADRP 3-09

FM 3-09

ATP 3-09.2

ATP 3-09.12

ATP 3-09.13

ATP 3-09.23

ATP 3-09.24 ATP 3-09.30 ATP 3-09.32 ATP 3-09.34

ATP 3-09.42

ATP 3-09.50

ATP 3-09.60

ATP 3-09.70
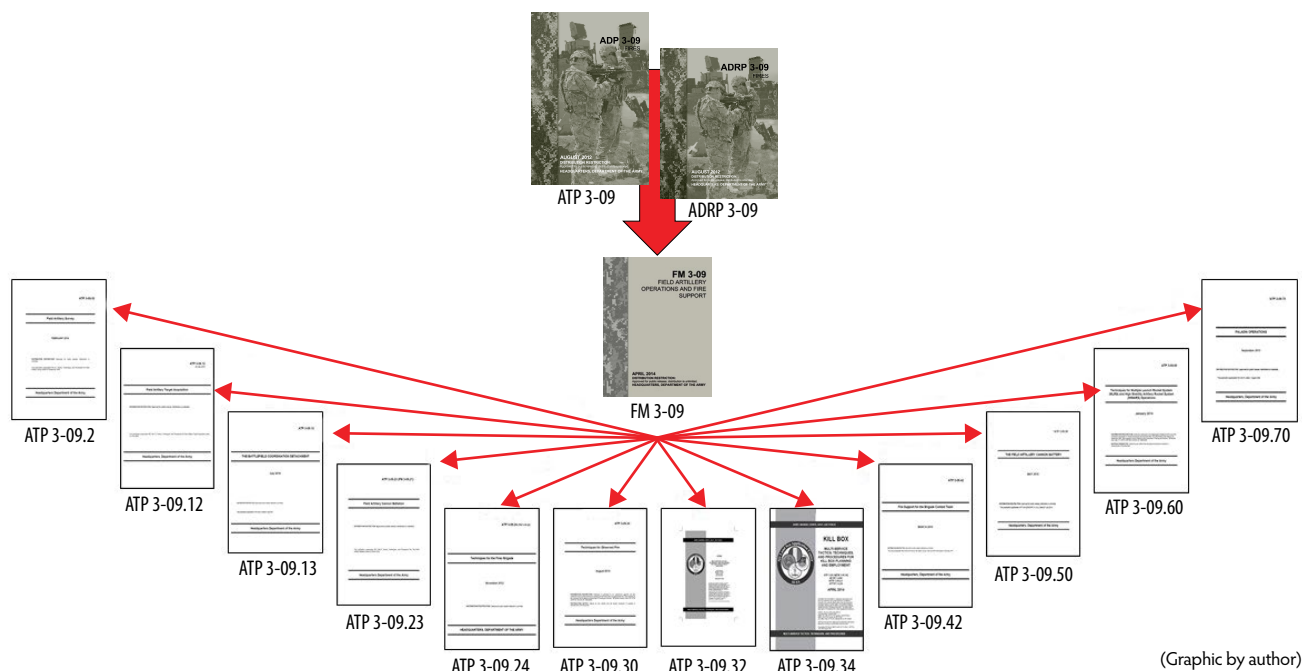
(Graphic by author)

Figure 1. Example of Relationships between Army Doctrine Publications

provide broad overarching principles for the employment of Army forces, while FMs and ATPs provide accompanying and clarifying details.

ADP 1, *The Army,* and ADP 3-0, *Operations,* are at the pinnacle of this hierarchy as the capstone publications that provide overarching concepts for the employment of Army forces. The publications are numbered to aid navigation.[20] For example, the basic doctrine for the employment of fires is addressed in ADP 3-09, *Fires,* and ADRP 3-09, *Fires.*[21] FM 3-09, *Field Artillery Operations and Fire Support,* provides more explanation, while a dozen 3-09 series ATPs provide detail down to the tactical employment of individual weapons systems. These relationships are illustrated in figure 1.[22]

Despite these improvements, the Army retains a dauntingly vast library of doctrine, comprising hundreds of publications. To actually read, much less retain it all, is effectively impossible. An average reader, who committed to reading doctrine for ninety minutes daily, six days a week, would take over two years to read everything currently published. Taking into account the constant publication of new or updated documents (an average of fifty-seven annually since 2012), potentially lengthens this task to almost four years. Once done, our

protagonist, to remain current, must still read each new publication upon release—an occurrence that happens, on average, each 6.4 days.[23]

A rhetorical question, for those who consider themselves professionals: How often do you peruse a doctrinal publication in its entirety? For if you are not staying current, you are falling behind.

The obvious riposte to this challenge is that no one is really expected to read and understand all of the Army's doctrine. As ADP 1-01, *Doctrine Primer,* explicitly states, "Although doctrine as a whole represents the Army's professional body of knowledge on the conduct of operations, no one is expected to be an expert in all of it."[24] Rather, the Army expects its leaders to be "experts

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in the doctrine that relates to the Army as a whole and that pertains directly to their levels of responsibility, their branch and functional areas, and their assignments."[25] Perhaps even more crucial, given the vastness of the Army's doctrine, is that "every officer and noncommissioned officer should know what doctrine exists for the conduct of different types of operations and how to access it in the event that unforeseen circumstances put them in an operation that differs from their personal experience, training, and education."[26]

This seems sensible, and at first glance, the reorganization of doctrine accomplished under Doctrine 2015 seems a reasonable way to facilitate the doctrinal navigation that doctrine itself explicitly requires. Upon closer examination, however, this proves untrue for several reasons.

First, it is not immediately obvious where a young Army leader ought to begin searching for relevant doctrine. Let us take as an example a young infantry platoon leader. The officer is probably aware that he or she should read the ADPs to form a broad understanding of the Army's overall doctrine (though if personal observation is any guide, it is likely that an officer will not do so until attendance at the Captain's Career Course, if ever). From branch-specific training, he or she will know that the Army has consolidated the directly applicable doctrine in ATP 3-21.8, *Infantry Platoon and Squad*.[27] Perusing its contents, the officer realizes that he or she wants to learn more about foot marching. He or she accordingly turns to the references page in ATP 3-21.8 to discern the appropriate publication is FM 3-21.18, *Foot Marches*, published in 1990.[28] When the officer looks at the field manuals on the Army Publishing Directorate, however, he or she finds that this document is mysteriously missing. The reference is obsolete, as are 57 percent of all the references in the Army's current doctrine.[29] If our young platoon leader knows that the Central Army Registry (CAR) records what publication replaced FM 3-21.18 (ATP 3-21.18, *Foot Marches*, published in April 2017), the officer can still find the required document.

Considering that few young officers are ever taught how to navigate the Army's doctrine, and fewer still are probably familiar with the CAR, the officer is more likely reduced to one of two options—give up or scroll through every FM and ATP until he or she finds the needed publication. Needless to say, few young leaders persist in this frustrating approach for long.

Second, doctrine is often updated without many Army leaders realizing it, updates from the Combined Arms Center notwithstanding.[30] I was recently conversing with a field grade officer who was explaining the importance of measures of performance and effectiveness from Army Tactics, Techniques, and Procedures (ATTP) 5-0.1, *Commander and Staff Officer Guide*.[31] When I mentioned that this document is obsolete, and that it was replaced in 2014 by FM 6-0, *Commander and Staff Organization and Operations*, he informed me that the definition in ATTP 5-0.1 was clear and probably had not changed enough to be concerned about.[32] However, this was not true; FM 6-0 is considerably different and makes the key point that the proponent doctrine for those terms is actually Joint Publication 3-0, *Operations*.[33] Of course, one does not make friends on Army staffs by pointing such things out, which further contributes to the fact that leaders throughout the Army are continuously referencing obsolete publications.

Third, the structure of the Army's doctrine does not always highlight the relative importance of its publications. Although I will demonstrate this a little later, suffice it to say that even our capstone doctrine is not necessarily as important as its exalted position might seem to suggest. It is not always easy to determine what is important to read and what merely appears to be.

Doctrine 2015 significantly improved the size and organization of the Army's doctrine, but clearly, much remains to be done. The question, then, is "How can we do so in an efficient manner that remains responsive to the ongoing turbulence in our professional body of knowledge?" Network theory can provide us with a solution.

A Network Approach to Understanding Army Doctrine

A network is an "interconnected or interrelated chain, group, or system" formed of nodes and edges.[34] Nodes are individual entities in a network and edges (usually represented as lines between nodes) are the connections between them. In a social network, each user is a node while the edges represent the connections between users. A map of the Facebook network would show each user as a node with edges connecting them to each of their friends.
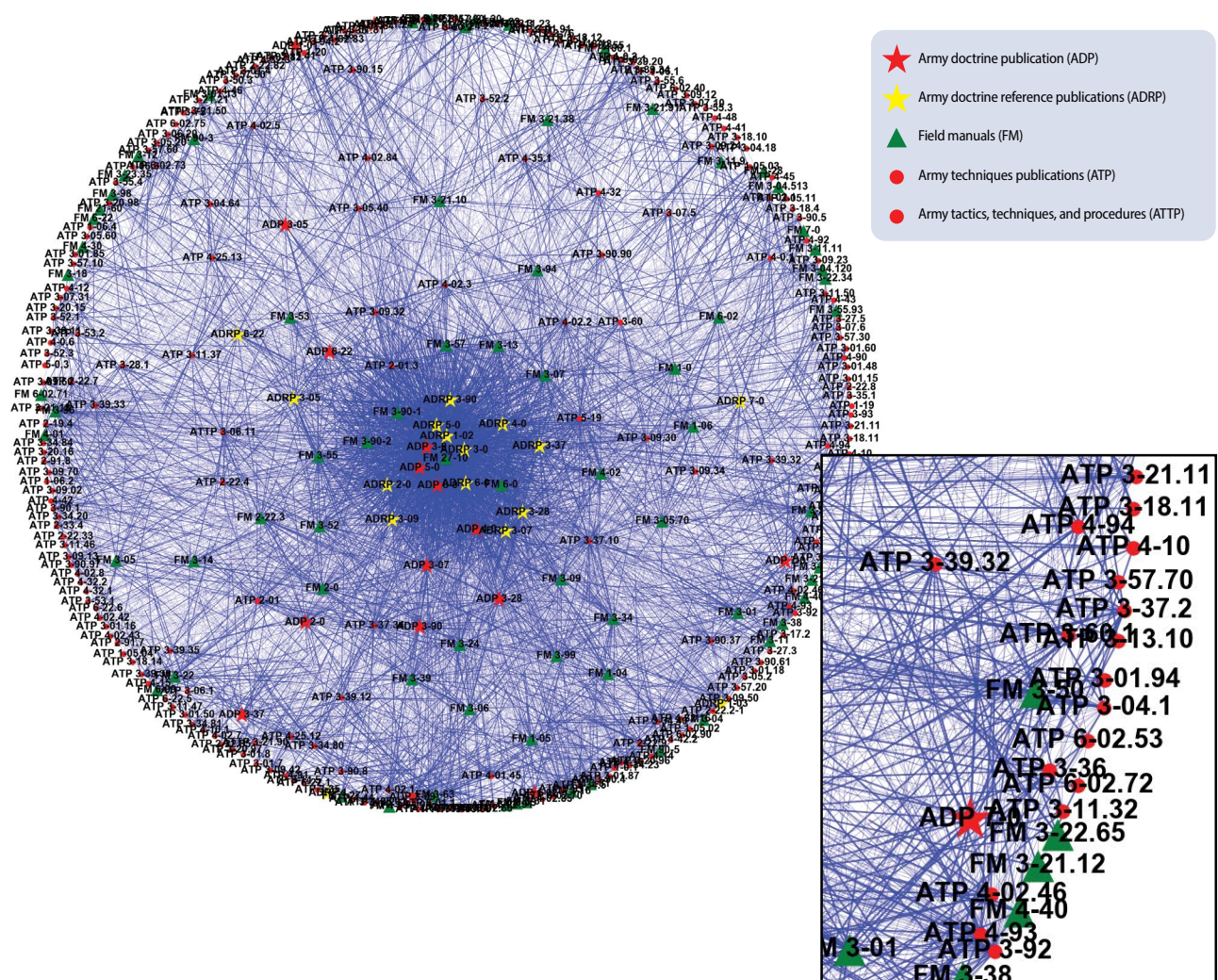
Figure 2. Army Doctrine Depicted as a Directed Network

(Graphic by author)

Many extraordinarily complex phenomena can be described as networks. Cells are complex networks of chemicals connected by chemical reactions, the internet is a network of routers, linked both physically and wirelessly, and fads and ideas spread over social networks with links formed by social relationships.[35] Analyzing networks allows us to understand the dynamics present in complex systems and even to model the future.[36]

Edges are either directed or undirected depending on the type of relationship or connection they represent.[37] In an undirected network, the edges between nodes represent reciprocal relationships. Facebook is an undirected network because Facebook friends communicate with one another and can see each other's content. Directed

networks, by contrast, contain edges that point from one node to another. These edges represent unidirectional relationships. The Twitter follower network is a directed network because followers receive content from the users they follow but the followed individual does not receive content from the follower. The importance of any given node to the overall network can be calculated by simply counting all the nodes connected to it. The resulting number is the node's degree. To return to the social network paradigm, a node's degree is directly analogous to the number of friends a user accumulates on Facebook.

Army doctrine is easily depicted as a directed network. Each doctrinal publication contains references to numerous other publications. Each publication is a node with directed edges pointing to the documents it

references. Figure 2 shows the topology, or shape, of the Army's doctrine as generated in this way. Red and yellow stars represent ADPs and ADRPs, respectively, while green triangles represent FMs and red dots indicate ATPs. The thin end of each edge points to the source while the thick end points to the target (the referenced publication). The closer a publication is to the center of the graph the higher its degree in the network.

Several characteristics are immediately apparent. ADPs and ADRPs crowd the center of the graph, loosely surrounded by clusters of FMs and a cloud of ATPs at the fringe. This reflects the Army's hierarchical ordering of doctrine under Doctrine 2015, as we should expect. Surprisingly, however, a number of ADPs and ADRPs hover on the outskirts of the network, including ADP 1, one of the two capstone publications.

We also find that a number of FMs seem to enjoy pride of place in the Army's doctrine. FM 3-90-1, *Offense and Defense: Volume 1*, and FM 3-90-2, *Reconnaissance, Security, and Tactical Enabling Tasks: Volume 2*—the Army's tactics manuals—and FM 6-0 describing commander and staff organization, are central documents.[38] At the very center of the graph we find FM 27-10, *The Law of Land Warfare*.[39] Looking at the overall degree distribution of the doctrinal network (figure 3) we find that ADRP 1-02, *Terms and Military Symbols*, which provides the professional language of land warfare, is the single most connected publication in the doctrinal corpus.[40] Next comes ADP 3-0 and ADRP 3-0, both titled *Operations*; one of the two capstone publications, these provide "the Army's basic warfighting doctrine."[41]
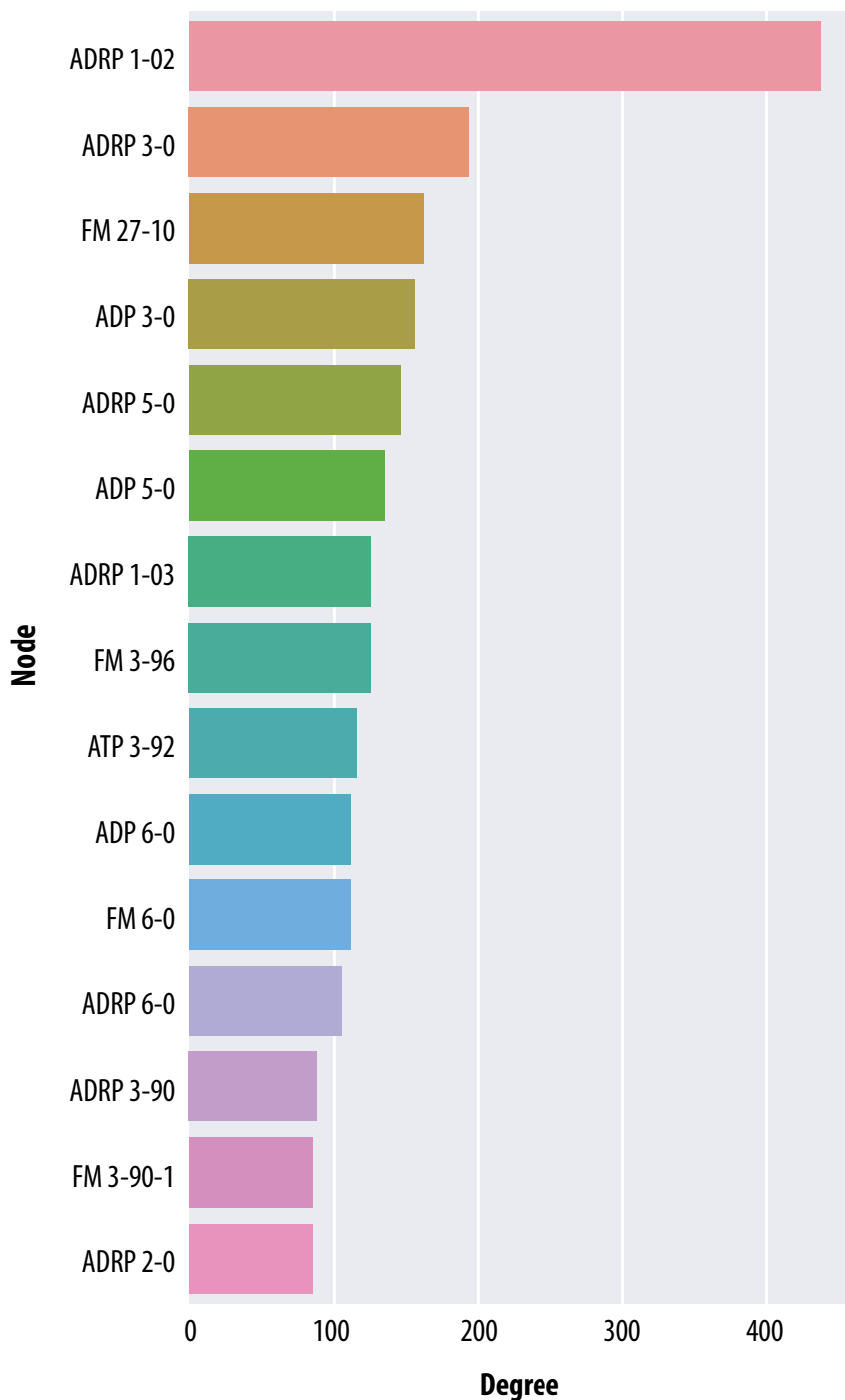
(Graphic by author)

Figure 3. Node Degree Distribution of the Doctrinal Network

FM 27-10 and ADRP 5-0, *The Operations Process*, round out the top five.[42]

Taking a network perspective also allows us to examine specific elements of the Army's doctrine. Let

us say, for instance, that we want to look only at the topology of the Army's leadership doctrine. Taking advantage of the Army's doctrinal numbering system, we can re-create our network with only documents connected to 6-22 series publications (see figure 4).[43] Looking at the resulting products, we immediately learn that, as we might expect, ADP/ ADRP/FM 6-22 are central. We see that the 6-0 series mission-command doctrine and FM 27-10 are also key. We see some curious omissions, however. Why, for instance, does ATP 3-21.21, *SBCT Infantry Battalion,* not mention the Army's leadership doctrine when ATP 3-21.11, *SBCT Infantry Rifle Company,* refers to it repeatedly?[44] Surely, effective leadership is as important at the battalion level as it is in a rifle company. Upon closer inspection, we discover that ATP 3-21.21 quotes the Army's leadership doctrine verbatim without citing it. Network analysis allows us to quickly and easily identify these types of discrepancies.

Room for Improvement

By taking a network approach, we can begin to identify easy fixes that would dramatically improve the navigability and intellectual coherence of the Army's doctrine. Although the following recommendations hardly represent a comprehensive list of such needed changes, they identify some obvious high-payoff
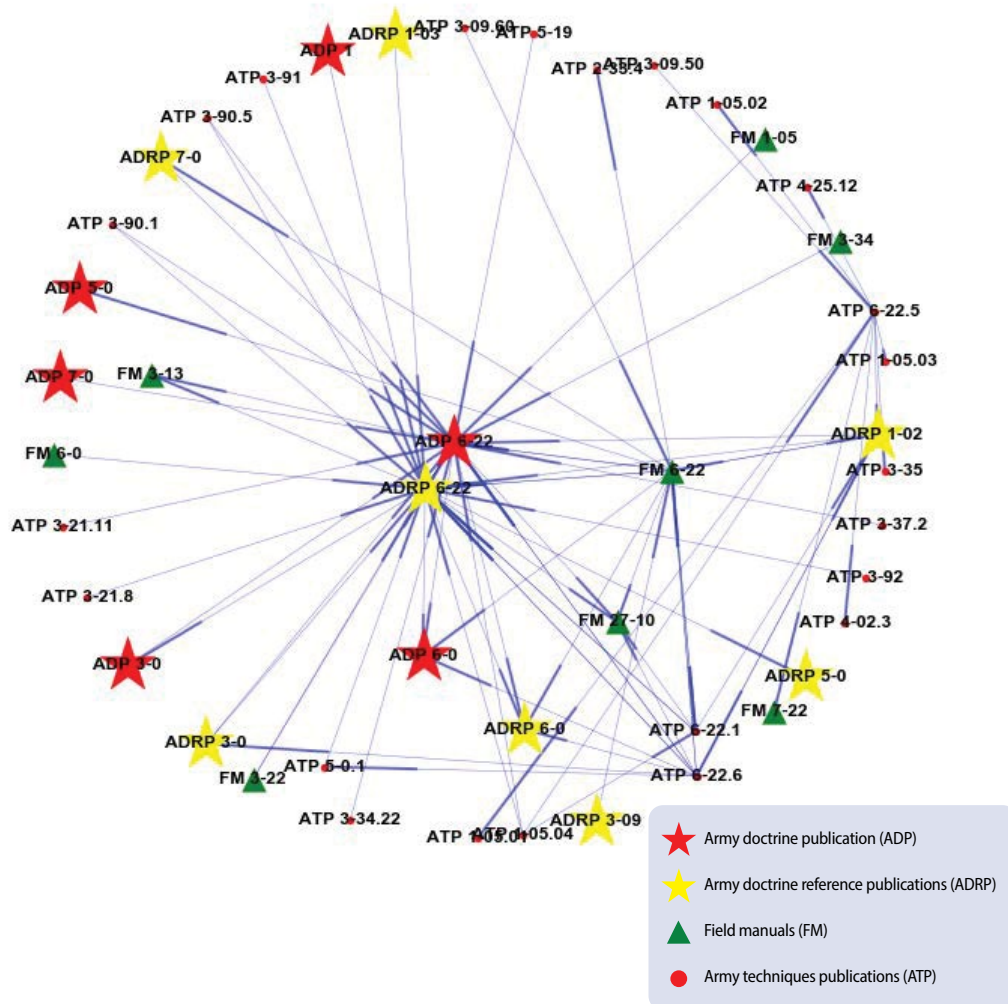
(Graphic by author)

Figure 4. Network of 6-22 Series Publications

actions and suggest the potential that such an approach could hold if applied rigorously by such organizations as the U.S. Army Combined Arms Center and the U.S. Army Training and Doctrine Command.

Rigorously examine the content and value of ADP 1 to determine if it deserves its exalted status as "capstone" doctrine. It is obvious from the doctrinal network topology that ADP 1 is essentially irrelevant to the way the Army conceptualizes its operations. It is barely mentioned in the remainder of the Army's doctrine. There are two potential explanations for this: either the content of ADP 1 is actually not doctrine at all, or the Army has failed to integrate the content of its own capstone doctrine into the way it thinks about waging war. Given that ADP 1 reads more like an

apologetic for the Army's place in the national security enterprise than a description of how the Army fights, it seems reasonable to ask whether ADP 1 is in fact doctrine at all. It reads more like a strategic communications document than a doctrinal statement. It is meaningful that ADP 1 states its audience is "combatant commanders, other services, all serving soldiers, and all Army civilians," while ADP 3-0 limits its audience to "Army officers in the rank of major and above" and "civilian leaders of the Army."[45] If ADP 1 is not really doctrine, then we should not call it doctrine, much less place it as a capstone document atop our understanding of land warfare.

Promote FM 27-10, *The Law of Land Warfare,* to an ADP or ADRP. Aside from having the salutary effect of updating this document from its current 1956 edition, such a promotion would formally place this doctrine where it already is—at the center of the Army's understanding of how land warfare should be conducted. If the way we plan and conduct operations deserves primacy in our doctrine (as enshrined in ADPs and ADRPs 3-0 and 5-0), then surely the laws and customs that place "limits on the exercise of a belligerent's power" likewise require our attention.[46]

Create a user-friendly software tool that allows young Army leaders to navigate the doctrine network to find doctrine relevant to their duties. The young infantry platoon leader we mentioned earlier should be able to simply type ATP 3-21.8 into this tool's search function and generate a list of all doctrine that is linked to it. This would immediately allow him to ascertain, for instance, where the appropriate guidance resides regarding the conduct of foot marches.

Remove irrelevant references. References to obsolete doctrine are easily identified using the same readily available open source software used to conduct the analysis in this paper. It is outrageous that 57 percent of the references in our current doctrine are obsolete. We should, and easily can, do better. Such updating would greatly enhance the navigability and relevance of our doctrine.

Integrate a network perspective into the drafting and maintenance of doctrine. Such an approach greatly reduces both the sheer drudgery and the difficulty of analyzing and comprehending the Army's doctrine in its entirety. The fine officers charged with developing the Army's doctrine have a difficult and enormously important task. Using simple network analysis techniques can make it significantly easier and more efficient.

Conclusions

Doctrine is important. Its quality and the widespread understanding of its content among Army leaders provides coherence to military operations and a useful consistency for civilian leaders. There is no question that the Army's leaders need to read and understand their doctrine, even if they deliberately choose to depart from it in the heat of action—a decision that is itself grounded in doctrine.[47] Yet, the sheer volume and complexity of Army doctrine renders this task, so fundamentally important to the profession of arms, tremendously difficult. The Doctrine 2015 initiative made great strides in simplifying and organizing doctrine, but significant deficiencies remain. This is partly deliberate, since the speed with which the Army implemented Doctrine 2015 "did not afford time for deeply examining some underlying issues" and required deferring the question of why—or whether—some information was important.[48] The time has come to begin answering those questions. Network analysis can provide invaluable assistance in that task. ∎

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An Alliance Divided?

Five Factors That Could Fracture NATO

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*In states with many factions vying for power, the center of gravity lies mainly in the capital; in small states supported by a more powerful one, it lies in the army of the stronger state; **in alliances, it lies in the unity formed by common interests**; in popular uprisings, it lies in the persons of the principal leaders and in public opinion.*

— Carl von Clausewitz

*They [the parties to this treaty] are determined to safeguard the freedom, common heritage, and civilization of their peoples, **founded on the principles of democracy, individual liberty and the rule of law.***

— The North Atlantic Treaty, 1949

For almost seventy years, NATO has positively influenced the world. The Alliance's many credits include acting as a major factor in deterrence of nuclear war, contributing to the erosion of the communist ideology of the Soviet Union, and projecting stability in difficult places such as Bosnia, Kosovo, and Afghanistan. Although these measures of past performance indicate that NATO could continue to succeed in the future, there are no guarantees. In fact, if the complex and adaptive security environment continues to evolve on its present course, it will become increasingly difficult to maintain cohesion of the Alliance. Arguably, it is one

of the most successful alliances in human history, but without cohesion, NATO can and will fail.

Whether one agrees with Carl von Clausewitz's supposition that the center of gravity of any alliance is "unity formed by common interests" or not, no one can deny that if the members are of one mind, an alliance exists.[1] Conversely, if the members do not have a common understanding, an alliance does not exist. Between these two extremes lie varying degrees of cohesion, and, as such, directly proportional degrees of effectiveness, efficiency, and synergy. If one makes the assertion that cohesion is a center of gravity of NATO, then it becomes essential to identify the types of variables that affect the strength of this center of gravity.

In the spring through the summer of 2017, the authors of this article conducted in-depth research into the factors that contribute to or detract from Alliance cohesion pursuant to the development of the document *The Framework for Future Alliance Operations*.[2] This article summarizes the project's analysis of factors that could affect Alliance cohesion in the future. It provides a model grounded in data to help readers understand and visualize the aspects of cohesion. It is an exploration of the realm of the possible and acts as a solemn warning to leaders of the many possible ways the Atlantic alliance could fracture in the future.

Underlying Conceptual Definitions

As with many research projects, this study began with an exploration of conceptual definitions. The *NATO Glossary* defines a *center of gravity* as the "characteristics, capabilities, or localities from which a nation, an alliance, a military force, or other grouping derives its freedom of action, physical strength or will to fight."[3] This Clausewitzian metaphor refers to a "focal point" as "the source of power that provides moral or physical strength, freedom of action, or will to act" for the group.[4] Rather than "characteristics, capabilities, or locations," centers of gravity can be "dynamic and powerful physical and moral agents of action or influence."[5] Even though some question the idea of a center of gravity, the

concept retains its relevance for many contemporary planners as it helps them understand the complexities of the security environment and the relationships between systems, as well as prioritize efforts.[6]

The next key term, *alliance cohesion,* reflects the degree to which the members are able to agree on goals, strategies, and tactics, and coordinate activity for attaining those goals.[7] In addition to this behavioral component, cohesion represents the particular quality that makes its members operate as a whole during times of crisis. Literature from the psychology field defines cohesion as "bonds, either social or task based, that contribute to the synergistic functioning as a whole."[8] Other accounts claim "alliance cohesion is based upon the distance between individual member interests and the collective alliance interest."[9] In defining this term, it is key to note that cohesion is a very fluid idea, contextually based and highly subjective. Therefore, this research proceeded under the assumption that cohesion is largely qualitative in nature.

Some assert that the best moment to understand cohesion is in time of crisis, such as when the Alliance faces a significant conflict. In case of wartime alliances, cohesion refers to the states' ability to coordinate military strategy, agree on war aims, and avoid making a separate peace, together with "the degree of convergence among member states' commitments to the alliance."[10] This is important, since conventional wisdom asserts the source of cohesion is usually the element (be it political, economic, military, or nonmaterial) that is targeted by adversary activities and likely results in the defeat of the attacked party. It then follows that by adhering to these definitions, one could consider Alliance cohesion to be at the level of a center of gravity, since it "exerts a certain centripetal force that tends to hold an entire … structure together."[11]

Literature Review

Many scholars in the fields of political science and international relations have conducted research into the topic of cohesion. Especially, the post-Cold War period led some to assert that cohesion between North America and Europe is "no longer guaranteed by a commonly acknowledged existential threat."[12] With their national interests "less predetermined by *a priori* ideological considerations," the "situational nature of threats and challenges, capabilities, and commitments, and interests and

alignments" has directly affected Alliance cohesion.[13] One can therefore assume that if a direct existential threat exists, the bond is stronger than when it does not.

Therefore, the first and the most parsimonious factor that emerges is *threat*—a cognitive, or perceptual, concept, whose degree is mostly a function of capabilities.[14] Particularly, the level and source of threat tell about the raison d'être of alliances and inform us about their internal dynamics and durability.[15] The alliance cohesion theory's dominant explanation concerns the *external threat* to alliance. Especially, the realist school of thought writes, "Alliances have no meaning apart from the adversary threat to which they are a response," while being "maintained by stronger states to serve their interests."[16]

The next key observation is that the evolving security context and disappearance of traditional alliance politics have led to the default mode of uses of "coalitions of the willing" and "alignments of convenience."[17] Especially in terms of operations in Afghanistan and Iraq, cohesion has become "challenged politically as well as militarily."[18] Moreover, threat assessment differentials in terms of dissimilar prioritization based on the perceived level of threat negatively affect alliance cohesion to a significant extent. In the past few years, cohesion waned as the multiplication of crises—including international terrorism, mass migration, and Russian foreign policy—deepened strategically the east-south division among NATO allies, and as the Alliance's internal disputes intensified due to rising populism and Euroscepticism.[19] While these various "domestic pressures and diverging threat perceptions are threatening to pull Allies apart," cohesion "remains critically dependent on its collective defense commitment."[20]

In outlining realist, economic, institutionalist, and social-constructivist theoretical perspectives, other categories of variables emerged: internal dimension of threats, bureaucracy and alliance institutionalization, and shared values and identity. What happens inside the Alliance could matter as much as what happens outside the Alliance.

Given that NATO's endurance had not conformed to the predictions of traditional alliance theory, Ohio University professor Patricia Weitsman suggested examining internal and external threat dyads in order to understand alliance cohesion.[21] She found that NATO survived the end of the Cold War due to low *internal threat*, which concerns the politics of alliances. Consequently,

this alliance cohesion theory says the lower the internal threat, the more cohesive the alliance; and the greater the external threat, the higher level of alliance cohesion.[22]

Another important factor in alliance cohesion is the way in which intra-alliance cooperation institutionalizes bureaucratic structures.[23] For instance, some assert that consultative norms and structures can mitigate internal threats to cohesion.[24] Furthermore, the Alliance's institutional structures allow for information exchange among allies that can raise the level of alliance cohesion independently from external factors.[25] Additionally, the transatlantic bond has depended on credible signaling (i.e., an ally's trust in another's assurances). Especially in the context of nuclear sharing, "weak signals" of U.S. commitment to Europe could damage NATO's cohesion.[26]

The next factor that emerges is that technology and its rapid development remains omnipresent, affecting both the relative operational effectiveness and interoperability of the Alliance.[27] Lastly, some assert that Alliance cohesion flows from the degree of security community formation and the socialization of political and military elites within and among democratic allies that possess a shared set of values and collective identities.[28]

Having laid the conceptual foundation inspired by the existing scholarly literature, this study explored, examined, and refined these ideas

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A paratrooper with 1st Squadron, 91st Cavalry Regiment, 173rd Airborne Brigade and a Slovenian soldier assemble and launch an RQ-11B Raven unmanned aerial vehicle 1 December 2016 during Exercise Mountain Shock in Cerklje, Slovenia. The drill was part of a situational training exercise designed to train and test their reaction to contact and tactical battle drills. (Photo by Staff Sgt. Philip Steiner, U.S. Army)

in an attempt to ascertain the factors that affect the cohesion of NATO in a practical sense.

Methodology

The primary research objective of this study was to identify and explore which factors were likely to affect NATO's cohesion through 2035 and beyond in terms of both risks and opportunities. This project targeted students and professionals as the next generation of leaders from different backgrounds (e.g., academia, military, industry, etc.) to understand their perspectives on NATO's cohesion. The primary question that guided this research was, "Which factors are likely to affect NATO's cohesion through 2035 and beyond?"

The study followed a grounded theory methodology and employed both quantitative and qualitative methods, triangulated with the scholarly literature on alliance cohesion theory. Between March and June 2017, researchers gathered data through a series of focus groups, an online survey, and a workshop prepared in cooperation with the Innovation Hub sponsored by NATO Allied Command Transformation. In total, almost one hundred persons participated from across NATO and Partnership for Peace nations.[29] The researchers then analyzed the data with the objective of identifying the thematic categories of variables and the organization of these themes into a theoretical model grounded in the data.[30]

Findings: Five Cohesion Factors

In making sense of Alliance cohesion in the future, this study first refined the understanding of cohesion itself. The findings indicate that NATO's cohesion means synergy and the ability of NATO nations to think and act together. That is, to develop shared interests, values, and common standards and rules, and to respond to problems as a united group. Relying on mutual trust, cohesion is "doing what is best for the community" and looking beyond self-interests. Building on the analogy of ties between family members, the participants stated that cohesion is an expression of

Alliance cohesion

External risks

Political and economic factors

Organizational structures and processes

Technology advances
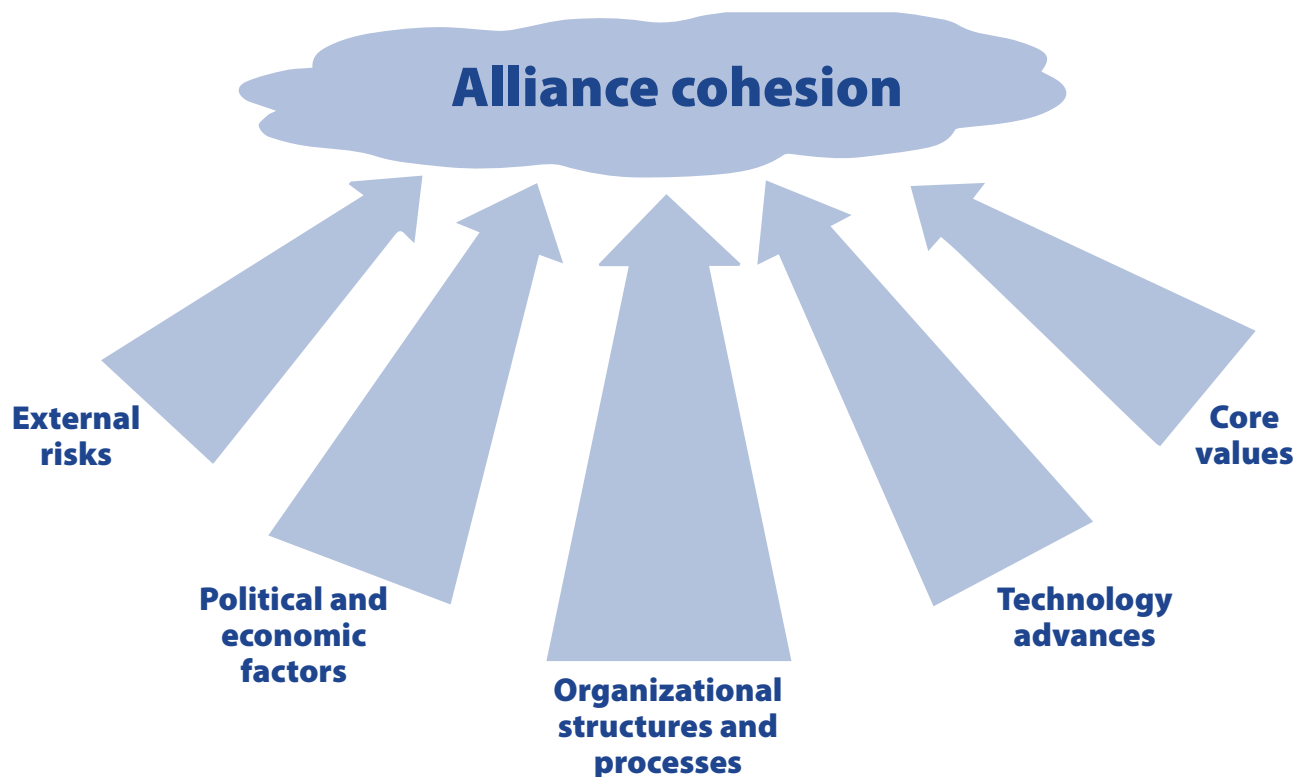
Core values

Figure 1. Five Factors Affecting Alliance Cohesion

staying together despite differences, of "something bigger than ourselves." One participant believed that "without cohesion, the Alliance would implode."

Consequently, based on the scholarly literature and corroborated through the focus groups, this study established that alliance cohesion fluctuates in accordance with a variety of factors. The data collected in this study indicated that variables that affect alliance cohesion fell into five thematic areas: (1) external risks, (2) political and economic factors, (3) organizational structures and processes, (4) technology advances, and (5) core values (see figure 1).

External risks. The participants found it questionable whether allies will be able to find a common conventional threat that would be perceived as strong enough to "transcend the domestic pressures and the concept of sovereignty." Although an absence of external threat to the Alliance is very unlikely, the future risk will lie in multiplication of external threats and a lack of common perception of those threats.

This underdeveloped common understanding of external threats, accompanied by differential threat assessments, could weaken NATO's cohesion. To illustrate this point, although the survey participants listed the failure to activate Article 5 in case of attack as a potential risk, further discussions showed that non-Article 5 missions could constitute the real test for NATO's cohesion. In words of the one of participants, "if there is an operation and only two nations show up, this is not cohesion."

For some nations, this threat multiplication and dissimilar threat perceptions can lead to an operational overstretch or to an eventual "mission creep." In contrast, other nations might develop an excessive sense of security that would lead them to reduce their attention and willingness to participate in NATO activities. For this reason, terrorism, for instance, cannot constitute NATO's defining threat. Additionally, the changing nature of threats to allies' security will require domestic, nonmilitary means to address them, rather than alliance-wide military measures. In other words, "nations will be looking inside to maintain order."

Political and economic factors. The group of political and economic factors points to the risks of severe

disagreements among the allies, which could lead to the weakening of the transatlantic bond, disintegration tendencies within the European Union, or even withdrawal of a NATO nation from the Alliance.

At the level of political elites, the participants identified the crisis of political leadership in NATO nations among the most probable causes of weakening alliance cohesion in the future. Particularly, populist leaders who prefer narrow, short-term political gains at home and who are prepared to "undermine an international institution to gain consensus internally" represent a serious threat to multilateralism, on which the Alliance has depended. Oftentimes, national leaders "use NATO as a scapegoat for their domestic political games," while "NATO does not [and cannot] fight its own nations."

At the level of domestic population, the support for the Alliance in member states can decline due to NATO's unclear purpose. This could become an acute problem, especially if national leaders continue to frame security problems exclusively in domestic terms instead of treating them as NATO-wide. Particularly, concerns over sovereignty could override the relative value of the Alliance's collective good and make governments pull limited funds away from NATO.

In a similar vein, demographic shifts changing the socioeconomic and cultural fabric of nations, such as an aging population and migration, will drive differences in fiscal priorities, which could result in decreasing national defense spending. Furthermore, if the free-riding behavior reaches critical proportions within NATO burden sharing, it can create, out of those who bear their fair share, a group of allies disinterested in defending free-riding nations, as they could cease to see "return on their investment."

Organizational structures and processes. This project's focus groups concluded that NATO's rigid organizational processes that hold onto the past could result in an Alliance "unable to evolve with member states' national interests." Bureaucratic politics within the Alliance structures could cause NATO's slow adaptation to contemporary needs and values. For instance, the participants listed the top-down defense planning process of determining capability requirements as a case where the Alliance and evolving national interests do not align.

Furthermore, civil-military frictions on both NATO and national levels could negatively affect readiness of the forces. Long decision-making processes and underdeveloped institutional procedures in national headquarters could prevent the Alliance from developing a legal framework for a common course of action under the NATO flag; for instance, in addressing new adversaries that use unconventional means such as cyber. Put simply, NATO cannot be faster than the individual countries that make it up.

Lastly, size matters; cohesion is more difficult to forge and maintain in an ever-enlarging alliance, especially when increasingly divergent national interests tend to change the modus operandi of the Alliance. More rather than less often, NATO's international staff will need to find compromise during its decision-making processes between a political and formal equality hoped to enhance Alliance cohesion on the one hand and the desirable Alliance effectiveness on the other hand.

Technology advances. The participants agreed that technology advances are important for NATO's continued cohesion. Technology will constitute a significant intervening factor in how NATO nations maintain their cohesion in the future for three reasons. First, ever-evolving communication technology can facilitate the spread of risks coming from outside of the Alliance and exacerbate their negative effect. The examples that resonated the most during focus group sessions are information warfare and targeted propaganda against NATO nations. Internet communications technology creates infinite room for alternative media that distort reality, contribute to the emergence of populist and radical movements, and increase the danger of miscommunication among nations.

Second, NATO risks losing the innovation game to the commercial defense industrial sector. In the future, private companies will continue to stay ahead of NATO in designing specifications and setting standards for platforms. This can have a major impact on readiness and interoperability among NATO nations if their innovation efforts (e.g., the U.S. Third Offset Strategy) do not materialize.[31]

Third, some nations may become reluctant to share their latest technology acquisitions, especially if they put private gains above the collective endeavor. This would pose a challenge "for anyone to share information they own without gaining any profit for themselves." The political unwillingness may feed distrust, which can result in a deepening interoperability gap between allies on the battlefield, and ultimately, a less cohesive Alliance.
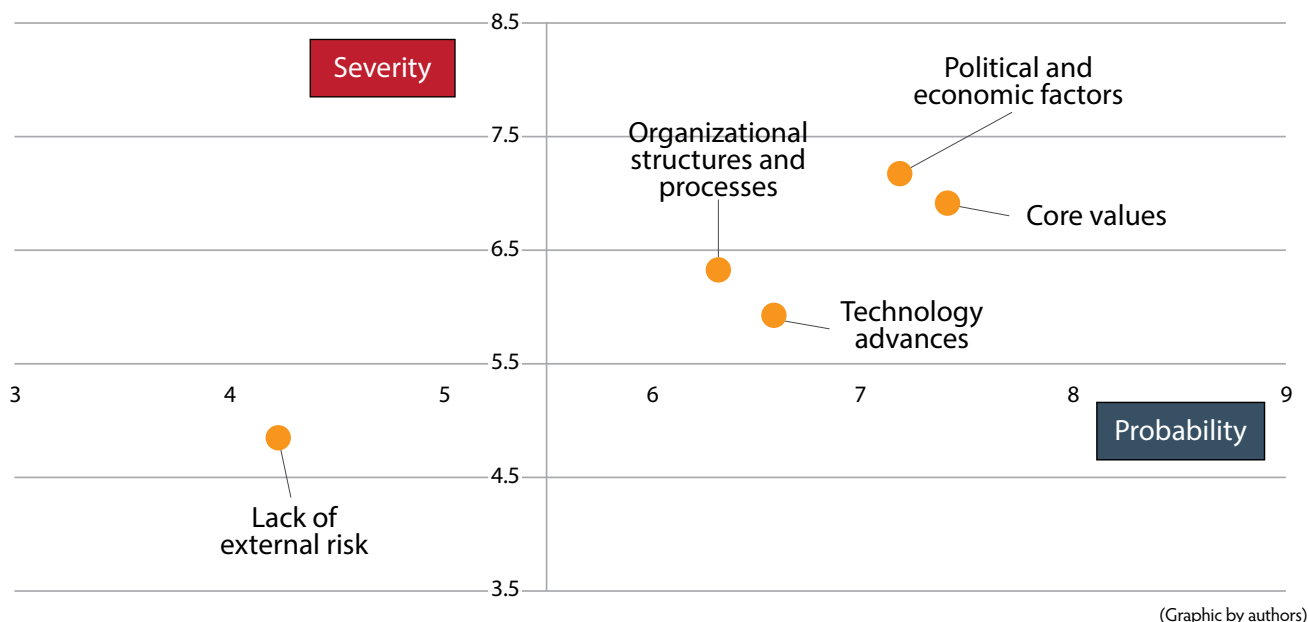
(Graphic by authors)

Figure 2. Probability versus Severity of Risks to NATO Cohesion

Core values. The participants acknowledged that shared values and identity mean that allies do not represent a threat to each other. NATO's core liberal-democratic values, defined in the Preamble and Article 2 of the North Atlantic Treaty, further frame the nonadversarial culture of the Alliance's internal relational dynamics.[32] Yet, although core values scored high in the survey, the discussions revealed the disagreement about whether they are more crucial for cohesion than national interests are.

The findings indicated that the general problem with core values relates to the intangibility of the common good that NATO produces. If the Alliance is successful, "nothing happens," which leads nations to take peace, security, and stability for granted. This can affect the overall understanding of NATO's purpose among domestic populations. Due to an unknown or unclear purpose of NATO, this "we-feeling" can disappear.

Moreover, the rise of populism and radical nationalism with authoritarian inclinations, further fueled by hybrid, cyber, or information warfare coming from Russia, appears threatening to NATO's core values and will create frictions within NATO. Arguably, the Islamic State also uses a "strategy of chaos" intended to divide the NATO nations and to destroy the cohesion within and among their societies. Further regarding authoritarian regimes, the participants mentioned that

the Alliance should think twice before establishing a partnership with yet another country.

Additionally, some participants believed that the continuing migration to Europe from the Middle East and North Africa region would change the fabric of the European societies. European societies might drift apart due to the different paces of change in their identities and values.

To conclude, although there was no consensus among the participants on the degree to which common values play a role in NATO and its cohesion, sufficiently aligned interests of NATO nations, together with a shared purpose of NATO, constitute a definite precondition for a cohesive Alliance.

Probability and Severity

The online survey participants were asked to evaluate possible negative effects of these five factors on NATO's cohesion in terms of probability and severity on a scale from one to ten, ten being the most probable/severe (see figure 2). The overall quantitative data indicate that in terms of probability, NATO will most likely face weakening of its core values, accompanied by internal political and economic risks to its cohesion.

Additionally, the findings indicate that political and economic factors will likely have the most severe impact on NATO's cohesion. On average, in the survey

technology advances and organizational structures and processes scored relatively high as well. As outlined above, the focus groups discussions further refined and detailed the understanding of the possible negative evolution of NATO's cohesion in the future.

Recommendations for the Future

During this project, it became apparent that each factor that contributed to cohesion could also detract from it if the conditions changed. If NATO nations acknowledge these factors and can implement proactive and dynamic policies to manage them, they can affect cohesion for the better. If they fail to do so, by either ignorance or inaction, cohesion could very well wane, leading ultimately to a fracturing or disintegration of the Alliance. Therefore, the Alliance could take concrete steps to manage each of these five cohesion factors by taking the following measures:

- **Remain grounded in the values that brought NATO together in 1949.** Nations founded the Alliance on the principles of democracy, individual liberty, and the rule of law. In the future, these values will provide a unique and distinct advantage over potential adversaries that lack the ability to provide a morally based alternative narrative.
- **Identify political frictions and agree to move toward common solutions.** NATO stakeholders will continue to have their own unique interests. In the dynamic security environment of the future, when these interests differ, it will be critical to acknowledge the differences and agree to move toward integrative solutions to minimize friction.
- **Maintain the technological edge, but do not let technology outpace interoperability.** The members of the Alliance should invest to maintain the technological advantage over potential adversaries, but realize that if technological development is uneven or uncoordinated, it could lead to major interoperability issues in the future.
- **Keep pace with the future security environment.** In the future, leaders should ensure organizational structures and processes function at a pace that allows timely decision-making to address instability in the security environment before, during, and after it occurs.
- **Develop and maintain a common understanding of future threats.** NATO leadership should seek to develop and maintain a common understanding of external threats and a holistic common threat picture (internally and externally, across all domains including cyber and space, and across all levels of war, strategic to tactical).

Of course, the Alliance can maintain its cohesion in the future in many ways. This list of ideas is a start point for discussion on what NATO could do to maintain its cohesion. What the Alliance will do in the future is a question for future leaders as they address the challenges of their time. This study indicated that if they can keep an eye on maintaining cohesion and the factors that add or subtract from it, they might increase the chances of future Alliance successes.

Conclusion

The purpose of this project was to identify the possible future risks to cohesion and to provide NATO with a perspective on how to prevent the Alliance's cohesion from eroding. Although an absence of external threats to the Alliance is very unlikely, the future risks to cohesion may lie in a lack of common understanding of external threats and in disagreements about priorities among NATO nations. Even though there was no consensus on the degree to which common values play a role in cohesion, sufficiently aligned interests of NATO nations, together with a shared purpose, constitute a definite precondition for a cohesive Alliance.

Overall, NATO as a whole is more than just a sum of its parts. Despite many challenges and criticisms levied against it over its history, today the nations that comprise it see its value as an insurance policy for the unexpected, unforeseeable, and unknowable. Simply put, in the future, cohesion will be the glue that will hold the Alliance together and give it its strength. If the future leaders of NATO understand the nature of cohesion, the factors that contribute to it, and how to maintain it, the Alliance can remain intact to contribute positively to stability and security in an increasingly unstable and Hobbesian world. ∎

Disclaimer: The views expressed in this article are the authors and do not represent the views of the U.S. Army, NATO, the Department of Defense, or the U.S. government.

Notes

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"The Myopic Muddle of the Army's Operation Doctrine," a critique of recently published Army Doctrine Publication 3-0, *Operations*, and Army Doctrine Reference Publication 3-0, *Operations*, intended to spur discussion prior to important doctrine updates released at the end of 2017.

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"Russian Actions and Methods against the United States and NATO," an analysis of Russian information operations, as well as NATO understanding of, and response to, Russian actions, intended to enable understanding of the complexity of response to aggression in the twenty-first century.

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Practical Lessons Learned for Dealing with Toxic Leaders and Bad Bosses

James W. Shufelt Jr.
Clinton O. Longenecker, PhD

"Practical Lessons Learned for Dealing with Toxic Leaders and Bad Bosses," research analysis designed to provide practical insights and responses to frustrating and enervating professional roadblocks in the collaborative work environment.

To view this article, please visit http://www.armyupress.army.mil/Journals/Military-Review/Online-Exclusive/2017-Online-Exclusive-Articles/Practical-Lessons/.

A Response to "Practical Lessons Learned for Dealing with Toxic Leaders and Bad Bosses"

(*Military Review* Online Exclusive, November 2017)

Maj. Alex Willard, U.S. Army

Online Exclusive articles also serve as a space for discussion and debate on arguments and ideas of importance to the Army. A recently published response to "Practical Lessons Learned for Dealing with Toxic Leaders and Bad Bosses" showcases respectful dialogue on defining and understanding the practicalities of professional behavior in the Army chain of command.

To view this article, please visit http://www.armyupress.army.mil/Journals/Military-Review/Online-Exclusive/2017-Online-Exclusive-Articles/Response-to-Toxic-Leaders/.

ARMY UNIVERSITY
PRESS

Readiness and Interoperability in Operation Atlantic Resolve

Lt. Col. Chad Foster, U.S. Army

Our fundamental task is like no other—it is to win in the unforgiving crucible of ground combat. We must ensure the Army remains ready as the world's premier combat force. Readiness for ground combat is—and will remain—the U.S. Army's number one priority.

—Gen. Mark A. Milley, Chief of Staff of the Army

The newly established "heel to toe" rotation of armored brigade combat teams (ABCTs) to Europe in support of Operation Atlantic Resolve (OAR) provides an opportunity to demonstrate how the Army can reconcile deployment mission requirements with the demands of the Sustainable Readiness Model (SRM). The Army can optimize OAR deployments to this end by establishing enduring unit-to-unit partnerships between battalions in the rotational ABCTs and specific allies, and by directly linking unit readiness to the strategically important task of building interoperability. Rather than presiding over the atrophy of unit readiness as many past deployments have

done, OAR is poised to return brigades and battalions to home station at a consistently higher level of combat proficiency and overall readiness than when they first arrived in theater. If approached correctly, doing so will support the chief of staff of the Army's top priority of maintaining readiness while simultaneously contributing in a meaningful way to NATO's larger deterrence mission in Europe.

The Sustainable Readiness Model: A Contract

During the height of the Global War on Terrorism, the Army relied upon a model of tiered readiness called Army Force Generation (ARFORGEN). According to Army Regulation 525-29, *Army Force Generation*, ARFORGEN sought to provide a "sustained flow of trained and ready forces" to support the regular cycle of twelve-to-fifteen-month deployments to Afghanistan and Iraq.[1] Under this model, units would return from deployment and enter an extended period of *reset*, during which the formation conducted maintenance on its equipment while a large portion of its personnel departed for new duty assignments. The mass exodus of soldiers and leaders would temporarily leave the unit understrength and untrained until sufficient replacements arrived and the formation entered its next cycle, *training*.

While in reset, units were designated as unavailable for rotational deployments or contingencies, allowing them time to build readiness progressively over a twelve-month period. With as many as one third of U.S. brigade combat teams (the basic building block of American ground combat power) in reset and another third already committed to deployments primarily in Iraq and Afghanistan, the Army found itself extremely limited in its strategic flexibility.

However, the economic recession that began in 2008 along with changes to the global security environment necessitated a new model for readiness. In a new atmosphere of diminishing funding and increased budgetary scrutiny, the SRM was born. The SRM seeks to increase the number of ground forces available for use by requiring commanders to maintain their combat readiness over time instead of allowing it to lapse during periods of rest. This is supposed to be done through a proactive approach to managing personnel, training, and maintenance. The stated objective of the SRM is to "sustain over 66 percent of our aggregate regular Army units in a combat ready status at any moment in time."[2] Doing so is intended to provide the U.S. government with greater strategic flexibility to respond to contingencies and thus better justify budget expenditures on ground combat forces. In this way, the SRM signifies a new "contract" between the Army and the American taxpayer, pledging a bigger "bang" for every dollar spent.

Unfortunately, the pace of deployments has not lessened in recent years, and the fact remains that deployments often degrade readiness rather than build it. The combat proficiency of deployed ground forces tends to decrease with each passing month, as live-fire qualifications grow out of date, and opportunities to properly practice and evaluate key collective tasks are not always available. For example, battalions sometimes engage in advisory or capacity-building deployments that take the focus away from the units' readiness regarding their core combat missions. Additionally, many locations to which units find themselves deployed lack the training resources and facilities to support collective live-fire qualifications and large-scale maneuver training. These conditions risk imposing crippling readiness constraints upon Army formations as their skills atrophy before returning to home station.

Operation Atlantic Resolve 2017: The Return of Armor to Europe

In January 2017, the 3rd Armored Brigade Combat Team of the 4th Infantry Division arrived at the German port of

Spc. Jacob Quitugua, 2nd Battalion, 503rd Infantry Regiment, 173rd Airborne Brigade, holds an RPG-7D antitank grenade launcher while Pvt. Pawel Tylek, 16th Polish Airborne Battalion, 6th Airborne Brigade, describes the proper sight picture for the weapon 29 October 2016 during antiarmor training in Studnica, Poland. The U.S. soldiers were in Poland on a training rotation in support of Operation Atlantic Resolve, a U.S.-led effort in eastern Europe that demonstrates U.S. commitment to the collective security of NATO and dedication to enduring peace and stability in the region. (Photo by Sgt. Lauren Harrah, U.S. Army)

Lt. Col. Chad Foster, U.S. Army, is a student at the U.S. National War College. In May 2017, he relinquished command of a cavalry squadron in the 3rd Armored Brigade Combat Team, 4th Infantry Division, after being deployed for five months in support of Operation Atlantic Resolve. He holds an MA from the U.S. Naval College of Command and Staff.

U.S. and Polish soldiers discuss possible locations of a simulated enemy nuclear, biological, chemical, or radiological attack as part of a bilateral training exercise 7 March 2017 at Swietoszow Training Area in Swietoszow, Poland. The U.S. soldiers were in Poland on a training rotation in support of Operation Atlantic Resolve, a U.S.-led effort in eastern Europe that demonstrates U.S. commitment to the collective security of NATO and dedication to enduring peace and stability in the region. (Photo by Sgt. Justin Geiger, U.S. Army)

Bremerhaven and moved thousands of soldiers and pieces of equipment to various locations spread across eight countries. The presence of this force "mark[ed] a significant moment in European defense and deterrence," according to Gen. Curtis M. Scapparotti, then commander of U.S. European Command (EUCOM) and NATO's supreme allied commander.[3] This deployment's significance lay mostly in the type of units that were arriving in Europe. Rather than sending additional airborne or wheeled vehicle-based units to theater, the U.S. chose to deploy the heavy firepower of an ABCT. Deploying American M1A2 Abrams main battle tanks and M2A3 Bradley fighting vehicles along with supporting artillery and engineers was an unmistakable demonstration of Washington's commitment to NATO.

The January 2017 return of American armored formations to the European continent also marked a reversal, albeit a small one, in the dramatic drawdown of U.S. ground combat power in Europe that followed the dissolution of the Soviet Union. Slowed down only by the 1991 Gulf War and commencement of a yearly cycle of deployments to Iraq and Afghanistan in the early days of the Global War on Terrorism, U.S.

ground forces actually stationed in Europe had steadily declined since the end of the Cold War. By 2017, the only permanently stationed ground maneuver units in Europe were an airborne brigade headquartered in Italy and a Germany-based infantry brigade equipped with six-wheeled Stryker vehicles. Although highly mobile and possessing unique capabilities, neither of these formations is well suited to counter a heavy armored threat such as the one that NATO currently seeks to deter in Europe. While a single rotational U.S. ABCT does not offset NATO's initial numerical disadvantage in a likely outbreak of conflict in central Europe, it does signal a deeper U.S. commitment to the Alliance and provide a somewhat more credible deterrent on the ground.[4]

Polish soldiers operate a PT-91 Twardy main battle tank alongside a U.S. Marine Corps M1A1 Abrams tank during a combined arms live-fire exercise 9 June 2017 as part of Exercise Saber Strike 17 at Adazi Training Grounds, Latvia. Exercise Saber Strike is an annual combined-joint exercise conducted at various locations throughout the Baltic region and Poland. The combined training prepares NATO allies and partners to effectively respond to regional crises and to meet their own security needs by strengthening their borders and countering threats. (Photo by 1st Lt. Kristine Racicot, U.S. Marine Corps)

Challenges for Readiness and Interoperability

Currently, the U.S. Army has nine active-duty ABCTs with another being formed beginning in the summer of 2017 through the conversion of an infantry brigade at Fort Stewart, Georgia.[5] These units are employed in a cycle of three standing, nine-month operational deployments through which these ABCTs currently rotate in Kuwait, South Korea, and Europe. However, this operational tempo, although predictable, quickly consumes the availability of these formations for other contingencies. At any one time, three of these ABCTs are deployed to these strategically important locations while another three are completing final preparations to replace those currently overseas. The remaining three have recently returned from these deployments and are in the initial stages of preparing to deploy once again. Even with the eventual addition of a tenth formation, the reality of limited forces available leaves little room for flexibility should a contingency arise elsewhere in the world. It also means that there is little margin for error when it comes to maintaining the combat readiness of these formations.

Two of these rotational deployments are already well postured to support both the readiness of participating ABCTs and interoperability with host-nation forces. The range facilities and vast training areas available in the desert of northern Kuwait are ideal for live-fire qualifications and maneuver exercises. The biggest challenge facing deployed ABCTs in Kuwait is the intense Middle Eastern heat (depending on the time of year). Because this deployment cycle has been established for a long time, deconfliction of range time with Kuwaiti land forces is a relatively easy task. Similarly, in South Korea, there are also suitable ranges and training areas available, in part as a legacy of the past presence of a full U.S.

mechanized division in that country. For both of these deployments, there is only a single country with which U.S. ground forces must integrate, making interoperability requirements less problematic.

In Europe, however, U.S. forces face significantly more complex challenges in both optimizing the theater's ability to support the sustainable readiness of deployed ABCTs and in achieving the level of interoperability necessary for NATO's larger strategic mission of deterrence. In terms of readiness, the most obvious challenge is the uneven level of training resources and facilities resident across the different NATO countries. In places such as Germany, there are robust ranges and training areas that can meet all the requirements of an ABCT. However, in other locations that lack such established resources, U.S. forces are unable to maintain training and live-fire qualifications at all necessary echelons. Though efforts are ongoing to improve ranges and facilities throughout theater, this reality still endangers the SRM contract between the Army's ABCTs deployed to Europe and the American taxpayer.

Less obvious to the outside observer are the challenges caused by a lack of sufficient time on the ground with specific partners to build true interoperability. Moving units around Europe, sometimes down to the company level or below, to participate in exercises of varying scale that reassure allies in a specific area of U.S. commitment, or to exercise the theater's ability to transport units from one location to another, are all laudable goals. However, there are significant drawbacks. In order to deter Russian aggression with limited forces, the commander of U.S. Army Europe declared that his task is "making 30,000 troops look like 300,000."[6] Presumably, the repositioning of units across theater is part of these efforts.

In practice, this "anywhere and everywhere" approach to deterrence undermines interoperability efforts as deployed U.S. battalions seldom remain in one location long enough to make any real progress. Partnerships suffer as our allies quickly begin to see us as only short-term transients, as every new U.S. unit that arrives must start over from scratch with interoperability rather than building on a previously established foundation. Just as the soldiers and leaders on both sides begin to figure out how to operate together, the Americans load trains for movement to a different country.

Some might argue that this practice enables a force that can deploy anywhere in Europe and rapidly integrate with any ally. Such arguments fail to consider the realities confronting units on the ground that would have to do the hard work of fighting alongside allies. Interoperability is difficult and messy work, even among nations that have highly capable, professional military forces who are motivated to work together for a common cause. At the lowest levels, junior officers and noncommissioned officers (NCOs) have to experiment on the ground with counterparts to identify and bridge capability gaps. This effort includes the development of common tactics, techniques, and procedures that can then be codified, practiced, and validated under realistic conditions down to the company, platoon, and squad levels.

To complicate matters further, unlike the situations in Kuwait and South Korea, U.S. forces deployed to Europe must deal with an alliance consisting of twenty-nine member countries, each of which speaks a different language and possesses sometimes vastly different equipment and capabilities. In order to provide a framework in overcoming these obstacles, NATO has divided interoperability into three components: *technical*, *procedural*, and *human*.

The technical component focuses on the compatibility of equipment. The procedural component, as the name suggests, entails a commonality of doctrine and standard operating procedures (SOPs) as embodied in standardization agreements among NATO members.[7] Lastly, but certainly not least, the human component encompasses on the ground training that enables individual soldiers, leaders, and units to work together effectively during operations.

In an article published in May 2017, Lt. Gen. Ben Hodges, the commander of U.S. Army Europe, rightly called on NATO members to acquire new and more advanced equipment to allow secure communications and to facilitate digital processing of indirect fires.[8] Unfortunately, there is little reason to believe that technical solutions will come close to bridging all of these gaps across the Alliance in the foreseeable future. When one considers that in 2016 only six of the twenty-nine NATO countries actually committed at least 2 percent of their gross domestic product to national defense (and only five managed to do so in 2017), it seems unlikely that significant purchases of new military equipment will soon occur.[9] And, even if such purchases did transpire, more and better equipment is not the panacea for interoperability. Only deliberately planned combined training carried out over a sufficient period will ensure full allied integration.

10th Army Air and Missile Defense Command operations officers work with Polish counterparts 24 March 2015 in the Surface Air Missile Operations Center at Sochachew Air Base, Poland. (Photo by Sgt. 1st Class Randall Jackson, U.S. Army)

One cannot wish away these difficulties, nor should one understate the impact of interoperability (or a lack thereof) on a strategy of deterrence.

What Can Be Done

It is possible to optimize OAR to support simultaneously the readiness of rotational ABCTs and allied interoperability. Sustaining readiness allows the Army to fulfill its contract with the American taxpayer while achieving true interoperability keeps faith with our European allies by contributing meaningfully to NATO's strategic mission of deterrence. The necessary steps begin with the establishment of enduring partnerships between U.S. battalions and specific NATO allies. Next, interoperability must become an official component of unit readiness, creating the right mindset among soldiers, leaders, and commanders that will allow full exploitation of opportunities as the distribution of training resources becomes more even across the continent. Both of these efforts necessitate a deliberate, long-term approach to interoperability that prioritizes quality over quantity when it comes to combined training and exercises.

To begin, battalion-level units should be partnered with specific European allies on an enduring basis. As of now, the nature and proximity of the potential threat makes it seem most sensible for such partnerships to focus on countries in the eastern part of the continent. Emphasis could be placed on Poland, the Baltic States, Hungary, Romania, and Bulgaria, with others included depending on the strategic assessment. Battalions from the rotational ABCT would focus on bilateral combined training, but they could also easily augment the mission of NATO's enhanced forward-presence battlegroups through participation in multilateral training exercises held in their respective partner countries.[10]

For bilateral combined training, enduring partnerships would make possible detailed planning and resourcing well ahead of U.S. units' arrival to theater. European armies plan their training calendars years in advance. If

Maj. Gen. Michael A. Bills, 1st Cavalry Division commander (*left*), and Command Sgt. Maj. Andrew L. Barteky, 1st Cav. Div. (*second from right*), stand beside their Lithuanian counterparts, Maj. Gen. Almantas Leika, Land Forces commander (*second from left*), and Command Sgt. Maj. Osvaldas Žurauskas (*right*), to observe a combined arms live-fire exercise 30 October 2014 at a firing range near Pabrade, Lithuania. These activities were part of the U.S. Army Europe-led Operation Atlantic Resolve land force assurance training that took place across Estonia, Latvia, Lithuania, and Poland to enhance multinational interoperability, strengthen relationships among allied militaries, contribute to regional stability, and demonstrate U.S. commitment to NATO. (Photo by Spc. Seth LaCount, U.S. Army National Guard)

a U.S. battalion has an established and enduring relationship with a specific ally, collaborative planning and coordination can occur within a timeline that is least disruptive to the host country and that ensures sufficient resources to support the deploying unit's readiness requirements. For example, an allied nation might possess only one live-fire range complex that can support Table VI crew qualification for M1 tanks. Collaborative planning conducted well in advance would mitigate scheduling conflicts and ensure access to resources that are essential in maintaining readiness qualifications.

Just as important, the establishment of enduring partnerships between U.S. units and specific allied nations would send a powerful strategic message regarding our commitment to the Alliance. In January 2014, Polish Defense Minister Antoni Macierewicz described the arrival of the armored brigade from the U.S. 4th Infantry Division to his country as the fulfillment of a long-held dream. "We waited for decades, sometimes feeling we had been left alone," Macierewicz said at the welcome ceremony in Zagan, Poland.[11] Such sentiment is also evident in many places in Europe, especially along the eastern frontiers with Russia, where history combines with recent events to add a sense of urgency to NATO's mission of deterrence. Having enduring partnerships between allied militaries and specific U.S. battalions, ones that over time help forge true interoperability, is a profound and tangible gesture that communicates the commitment of the U.S. to NATO members who feel particularly vulnerable.

When viewed through the lens of regionally aligned forces (RAF), the value of enduring country-specific partnerships becomes even clearer. The basic premise underlying RAF is that regional context significantly affects military operations. Factors such as history, culture, geography, demographics, and economics drive decisions about how to plan and integrate military operations with our allies. The Army

intended RAF to provide responsive forces that were tailored to the specific needs of combatant commanders through a baseline of decisive action proficiency as well as specific cultural and language training.[12] OAR deployments offer a ready testing ground to validate the investment in specialized skills training and educational efforts. Formal language training for selected soldiers followed by informal training for the rest would naturally follow along with the possibility of officer and NCO exchanges to further enhance partnerships. The implications for interoperability and NATO's deterrence mission would be significant. Battalions would quickly become the subject-matter experts in combined operations with their enduring partners, providing their brigade headquarters with increased tactical flexibility in the event of a contingency.

Finally, if interoperability is to receive the emphasis that it requires from unit commanders and leaders among partnered national entities, it must be linked directly and tangibly to unit readiness. This cannot be done in a generic way because what it takes to operate

effectively, for example, with a Hungarian motorized infantry unit equipped predominately with BTR-80 wheeled armored personnel carriers is drastically different from what it takes to fight alongside a Polish mechanized infantry formation equipped with tracked BMP-1 infantry fighting vehicles.

Variations in equipment such as night vision devices, communications systems, and indirect-fire assets are only the beginning. Personalities, language, culture, and a multitude of other idiosyncrasies also come into play. U.S. units must be able to conduct the same tasks in conjunction with allied forces that they are expected to do unilaterally. This takes time, practice, and an external evaluation to validate proficiency. All of this directly supports unit readiness, and all can be done in OAR.

When it comes to interoperability, the questions we ask must be, *Interoperable with whom? Interoperable for what?* Interoperability efforts must align U.S. battalions with specific allies based on functionality and a reasonable expectation that they would operate together in the event of a contingency. For example, a cavalry squadron
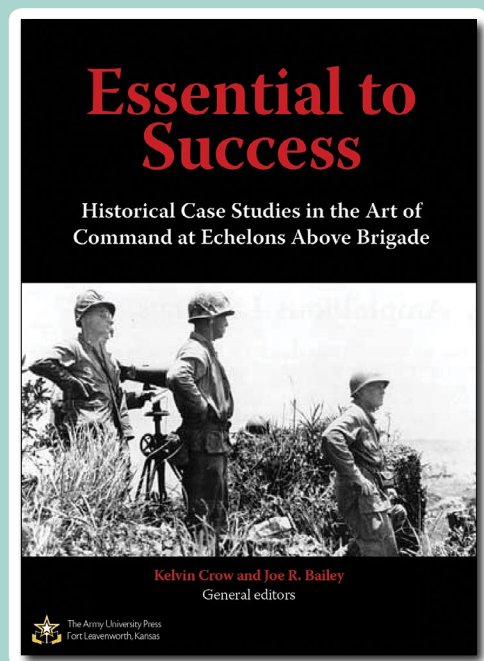

Above: A Polish BMP-1 infantry fighting vehicle maneuvers at the Central Air Force Training Range 16 June 2016 on the shore of the Baltic Sea in Poland. (Photo courtesy of Wikimedia Commons)

Below: A BTR-80 armored personnel carrier participates in the Victory Day Parade 3 May 2011 in Moscow. (Photo by Vitaly Kuzmin, www.vitalykuzmin.net)

WE RECOMMEND

Essential to Success

Historical Case Studies in the Art of Command at Echelons Above Brigade

Kelvin Crow and Joe R. Bailey
General editors

The Army University Press
Fort Leavenworth, Kansas

Essential to Success: Historical Case Studies in the Art of Command at Echelons Above Brigade is the latest book from Army University Press. Commissioned as a companion to the Army's 2017 version of Field Manual 3-0, *Operations*, it contains twenty engaging and thought-provoking chapters by scholars and former large-unit commanders who analyze key decisions, enabling factors, and limiting factors in large-unit combat operations from the Second World War to current conflicts.

The U.S. Army's recent history of small-unit operations combined with increased potential for large-scale combat against peer or near-peer rivals and advances in technology and social media call for a reassessment of command at senior levels. *Essential to Success* highlights situations faced by commanders of the past, and it explains and contextualizes the problems they faced, the decisions they made, and the outcomes of those decisions. The book invites readers, commanders, and their staffs to think critically and apply historical experience to large-scale ground combat of the future in an attempt to preserve American lives and valuable national resources.

To view this publication, along with video commentaries from contributing authors, please visit http://www.armyupress.army.mil/Books/Browse-Books/Command/Essential-to-Success/.

deployed to OAR could be paired with an allied armored brigade with whom they would train for a period of months before undergoing a combined external evaluation either at the Joint Multinational Training Center in Hohenfels, Germany, or at a different location where sufficient resources are available. The combined train-up and subsequent external evaluation would emphasize reconnaissance hand off, passage of lines, processing of fires (U.S. observers to allied guns and vice versa), and any other tasks deemed most vital for likely contingency scenarios involving these two types of units.

The combined SOPs could then be codified and integrated into future training in the United States even after the American unit returns home. A permanent exchange of officers and NCOs, if undertaken, would help keep the unit-to-unit connection strong by facilitating continued training of combined SOPs and helping planners on both sides to better integrate.

Despite having enduring partners, U.S. forces would be far from stagnant. On the contrary, exercising mobility and "speed of assembly" would be greatly enhanced. Imagine a U.S. battalion in western Poland receiving orders to consolidate at a nearby rail facility along with elements from their partnered Polish brigade. As part of the same emergency deployment readiness exercise, equipment and personnel from both countries' armies could be deployed to a different location within Poland or across borders to practice contingency response drills *together*. Elements of the ABCT's headquarters and their Polish counterparts could also take part, making the exercise far more realistic. A combined deployment such as this would be a far more powerful demonstration of interoperability than any unilateral rail movement by U.S. forces.

Make Readiness Equal Interoperability in Operation Atlantic Resolve

The rotation of U.S. Army ABCTs to Europe in support of OAR offers an immense opportunity to demonstrate our ability to carry out a deployed mission while simultaneously meeting

the obligations of the sustainable readiness contract with the American taxpayer. Enduring partnerships between U.S. units and specific allied countries optimize the ability to do so in the European theater. Although challenges remain in some key areas, making unit readiness synonymous with interoperability in OAR is a worthy and feasible goal. It supports tactical integration among allies, operational flexibility across NATO, and a strategy of deterrence in the region. In today's global security environment, when combined action among allies is likely to be the key to success in any contingency, an assessment of the readiness of U.S. forces must include an evaluation of their ability to integrate with those allies.

Today, we talk about deterrence of aggression in Europe in terms of making thirty thousand American troops look like three hundred thousand.

Perhaps a better way to frame the problem is to think of deterrence as making that relatively small number of U.S. personnel the catalyst for developing a larger, fully integrated, much more formidable allied force that really is three hundred thousand. However, this requires U.S. ground units that are truly interoperable with our NATO allies. Enduring partnerships is a simple yet powerful way to achieve this end. Implementing these partnerships and synchronizing plans accordingly for combined exercises within OAR will take a significant amount of coordination and staff analysis at the highest levels across Europe. However, the payoff from these efforts will be immense for both the U.S. Army's readiness objectives and for NATO's deterrence mission. In short, the hard work is well worth the reward. ■

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The Army's Role in the Future Pacific Theater

Emily Martin

Samantha Wooley

At a time when threats to U.S. national security are constantly evolving and growing, it is imperative that the U.S. armed forces be prepared to fight and win in an increasingly complex world. The U.S. Army anticipates that in the 2030–2050 timeframe it will face a near-peer competitor that will attempt to restrict U.S. freedom of maneuver, challenge its superiority across multiple domains (air, sea, land, space, and cyber), and turn current U.S. strengths into weaknesses.[1] One of these looming adversaries is China and the challenge it presents to U.S. forces and its allies within the Pacific theater of operations. China is already taking steps to limit the freedom of maneuver of other nations in the South China Sea through island building (see figures 1 and 2, page 106) and its buildup of anti-access/area denial (A2/AD) capabilities.

The geopolitical importance of China's encroachment in the South China Sea should not be underestimated. In his influential 1944 work *The Geography of Peace,* Yale political scientist Nicholas Spykman postulated that maintaining control of the inner seas surrounding an area's outer islands and territories was a mandatory prerequisite to securing power over these rimlands and thus, access to the mainland.[2] By Spykman's logic, three of the most important regions for global power are the East China Sea, the South China Sea, and the Yellow Sea. As the entryway for access to power over the entirety of Asia, stability of control over these particular inner seas is a vastly important issue.

China's control over this air and maritime region would affect not only Asia; it would also have detrimental consequences to the United States and, to some extent, the rest of the world. According to East Asian regional experts like Dr. Michael Auslin of American Enterprise Institute, the Asian region, particularly China, poses a threat to both the United States and to the world due to major unmitigated risks in the region. In June 2017, Auslin consulted with Army officials from The Army Concepts Integration Center on the risks that China poses to U.S. regional

allies such as Japan, as well as the risks it poses to the United States itself. In his recent book *The End of the Asian Century,* Auslin states that despite the West's overwhelming praise of the successes of the "Asian Century," during which the region has experienced incredible economic growth and prosperity, there are five interrelated risks that pose a major threat to political and economic stability in East Asia.[3] The five risks are (1) lack of relevant economic reforms, (2) demographic imbalances, (3) unfinished political revolutions, (4) lack of a formal political community in Asia, and (5) the possibility of war in the region. These risks could disrupt the rest of the world by inflicting heavy economic losses to countries that trade with East Asian countries and causing the global stock market to plunge. China, particularly, could pose not only an economic threat to the United States but also a military threat should it continue to pursue territorial disputes and confront its neighbors with an increasingly aggressive military in its surrounding waters. According to Auslin, the threat to the maneuverability of

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A Terminal High Altitude Area Defense (THAAD) interceptor missile is launched during a flight test 1 November 2015 from a THAAD battery located on Wake Island, which lies northeast of Micronesia in the Pacific Ocean. During the test, the THAAD system successfully intercepted two air-launched ballistic missile targets. (Photo by Ben Listerman, U.S. Missile Defense Agency)

Rodney Rose (*top left*), U.S. Army Japan political-military advisor, looks at the work being discussed by junior officers from Japan, the United States, and the Republic of Korea (ROK) December 2015 during the annual U.S.-Japan-ROK Trilateral Junior Officer Exchange program held in Camp Zama, Japan. The program stresses the importance of developing a trilateral relationship as the foundation for security cooperation in the Asia-Pacific region. Continued engagements such as this provide a venue for dialogue between future leaders from their respective countries. (Photo courtesy of U.S. Army Pacific)

the United States and Asian countries within the Pacific endangers the economic and trading capacities of these powers. Additionally, China's air defense identification zone in the South China Sea (figure 3, page 107), established in 2013, integrates its naval and air power to assume military control of both the skies and sea in this critically important region, thus presenting a more integrated, complex, and long-term threat to the United States and its allies.[4]

Over the past few decades, the world has witnessed the rise of Chinese economic and military power. While the People's Liberation Army has been shrinking in physical size, spending on the military has increased as it has refocused its efforts on developing quality over quantity capabilities. It is estimated that China's defense spending will continue to increase by at least double digits every year, and spending will be up to $260 billion by 2020, with much of this money being directed toward the People's Liberation Army Navy.[5] Recurrent political tensions between the United States and China coupled with this recent military buildup increases the likelihood of armed conflict between the two countries sometime in the future. In exploring the potential for conflict with China, the U.S. Army must be prepared to play any one of three possible roles: a central role, a supporting role to the U.S. Navy and Air Force, or little-to-no role.

It appears most likely that the U.S. Army will be a key or supporting entity, rather than nonexistent, should there be a conflict with China in the Pacific theater. As we will show, academics, midlevel Department of Defense (DOD) experts, and leaders within the DOD and Department of the Army

Pvt. 2nd Class Darrell Enger, 2nd Stryker Brigade Combat Team, 2nd Infantry Division (*left*), conducts a counter-improvised explosive device patrol with other U.S. and Malaysian Army soldiers 20 September 2014 during bilateral training exercise Keris Strike 14 in Kem Desa Pahlawan, Malaysia. Keris Strike is a U.S. Army Pacific-sponsored Theater Security Cooperation Program exercise conducted annually with Malaysian Army forces to enhance partner land-force capacity and capabilities. The exercises contribute to the regional peacekeeping capability in Asia. (Photo by Sgt. 1st Class Adora Gonzalez, U.S. Army)

generally concur that the Army would play a central or supporting function in the region. We discuss each of these potential roles in detail below.

The Army as the Primary U.S. Player in the Pacific

While most of the literature surveyed indicated that should there be an armed conflict between China and the United States, the U.S. Army would most likely have a supporting function in the Pacific, several academics and national security experts, along with lessons learned from wargames, suggest that the Army could indeed have a central function during a conflict with China.[6] In fact, at the 24 May 2017 Land Forces in the Pacific Symposium, Adm. Harry Harris of U.S. Pacific Command stated that he would "like to see the Army's land forces sink a ship, shoot down a missile, and shoot down the aircraft that fired that missile—near simultaneously—in a complex environment where our joint and combined forces are operating in each other's domains (air, land, sea, cyber, and space)."[7] Like many other senior DOD officials, Harris is advocating implementation of the multi-domain battle concept in the Pacific, with the U.S. Army playing a critical role in the Pacific by integrating its capabilities with those of all services across all domains.

The Army War College follows this line of thought, declaring that the future Pacific theater will be a "land-force centric, maritime theater" that will require the Army to have a central role in coordinating with regional allies, establishing forward-positioned bases, and significantly increasing its anti-A2/AD capabilities in the region.[8]

The 2017 RAND report, "What Role Can Land-Based, Multi-Domain Anti-Access/Area Denial Forces Play in Deterring or Defeating Aggression?," proposes that the Army focus its resources on countering Chinese A2/AD capabilities by establishing forward-positioned bases with its own A2/AD capabilities by sending antiship, antiaircraft, and surface-to-surface missiles to the Pacific theater.[9] This report also suggests that the United States should provide support and reinforcement to its regional allies in order to counter Chinese aggression. If the U.S. established its own A2/AD antiship, antiaircraft, and surface-to-surface capabilities in the region, the U.S. Army would certainly be able to accomplish Harris's goal of sinking a ship, shooting down a missile, and shooting down an aircraft within a short window of time should conflict erupt.

Along with the 2017 RAND report, scholars such as Andrew F. Krepinevich propose that the United States work with allies to establish Army bases within the Pacific theater and provide allies with support, training, and reinforcement.[10] Krepinevich states that the Army should deploy to several islands within the Philippines, including Palawan, and that the Army should aim to eventually deploy to Vietnam as well.

Perhaps the most outspoken study regarding the Army's role in the Pacific Theater is RAND's "The U.S. Army in Asia, 2030–2040" report.[11] It asserts that alongside providing defense of U.S. assets, support to allies, and support to the joint force, the Army should even project expeditionary combat forces

(Graphic by Arin Burgess, *Military Review*)

Figure 1. Area of Chinese Constructed Reef Islands and Surrounding Seas
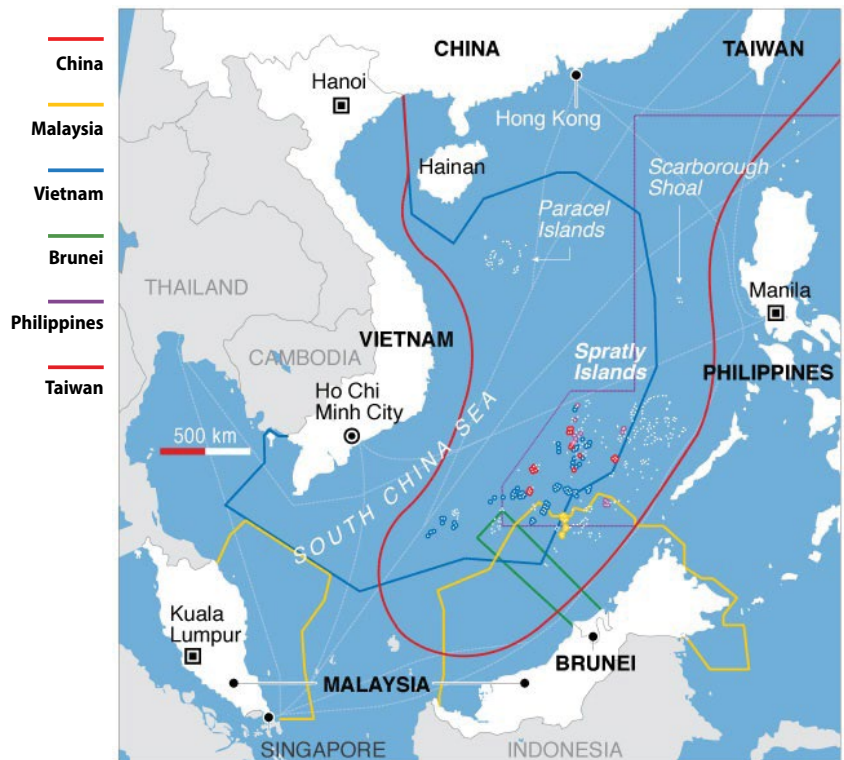
(Graphic courtesy of Wikimedia Commons)

Figure 2. South China Sea Claims

into the theater, including the ability to execute modest-sized forced entry operations.

"What Role Can Land-Based, Multi-Domain Anti-Access/Area Denial Forces Play in Deterring or Defeating Aggression?" and other literature, such as J. Michael Cole's "How A2/AD Can Defeat China," agree

(Graphic courtesy of Wikimedia Commons; modified)

Figure 3. Air Defense Identification Zones

that a robust Army presence will be central to maintaining and supporting alliances, defending key assets, facilitating cooperation across all branches of the armed forces in the region, establishing forward-positioned forces, and countering China's A2/AD systems while providing its own A2/AD systems.[12] "The U.S. Army in Asia, 2030–2040" RAND report previously noted goes so far as to project that the likelihood of armed conflict with China is high, thus requiring the Army to preposition forces that have the ability to execute forced-entry operations.
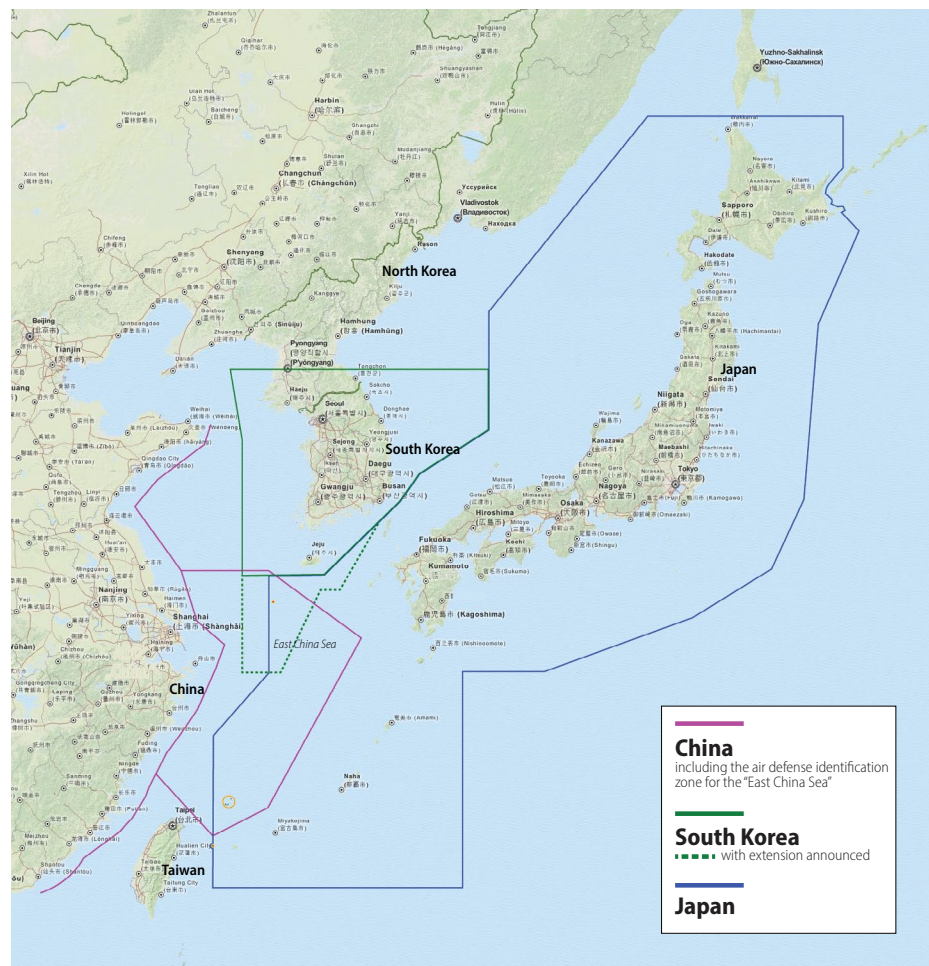
These studies project that it will be crucial for the U.S. Army to have the capabilities to successfully oppose China, and they support predictions of leaders such as Harris who believe that the U.S. Army will be one of the most important actors in the Pacific during a conflict with China. According to key officials such as Harris and scholars such as Evan Braden Montgomery of the Belfer Center, in order to decisively defeat China in an armed conflict, the U.S. Army should send its own A2/AD capabilities into the theater and establish itself on forward-positioned bases to be able to launch land-based offensives against China if necessary.[13]

The Army in a Supporting Role

Most literature surveyed, as can be seen in this section, supports the theory that the Army will play a supporting function in the Pacific theater should the United States continue its political and military competition with China. The Army will do so through the pursuit of advanced technology that will aid maneuverability and capability in the Pacific, ensuring deterrence and supporting other military branches, particularly the Navy and the Air Force, within the Pacific theater. Former Secretary of Defense Ashton Carter stated in 2015 that the Army would focus on modernizing its current capabilities and supporting new innovative technology.[14] In fact, Carter asserted that the United States was focused on investing in critical future technologies, like long-range stealth bombers, a new, long-range antiship cruise missile, and railguns, as well as space and electronic warfare capabilities. The U.S. Army would be primarily responsible for cyber

and space capabilities within the Pacific theater, since operations that assure free access to cyberspace require ground-based support, and locations for space-based platforms are directly affected by capabilities on land.[15]

Most national security experts and academics believe that although the Pacific is a primarily maritime theater, the U.S. Army will certainly have a supporting future presence in the region. In fact, Chief of Staff of the Army Gen. Mark A. Milley supports current initiatives in the Pacific like the Pacific Pathways program.[16] Pathways is a multinational, three-part series of U.S. Army training exercises in the Pacific.[17] These training programs "provide semipermanent presence, strengthen relationships, improve interoperability, and build capacity."[18] Training programs such as the Pacific Pathways program allow U.S. Army soldiers to gain experience and increase their readiness without taking the decisive step of establishing Army bases in countries like the Philippines. A combination of coordination efforts with allies and the mastery of new technologies that can be used in the Pacific will allow the U.S. Army to support credible deterrence toward China and play a supporting function in the Pacific theater.

Col. Bob Simpson of the Army Capabilities Integration Center (ARCIC) states that the U.S. Army, though it might not need to directly put forces on the ground to have land power, must have the credible threat of the ability to deploy in order to deter aggressive governments.[19] Many national security experts within the DOD and defense think tanks emphasize the need for the United States to create an A2/AD shield—consisting of mobile land-based forces and integrated air defense—that will be able to inflict heavy naval and air losses on near-peer competitors such as China and will allow the United States to "project power outward from land" within the Pacific theater.[20]

Experts such as Dr. Evan B. Montgomery and Bryan Clark, who are both senior fellows at the Center for Strategic and Budgetary Assessments (CSBA) and who have testified before Congress, agree through various CSBA publications that the United States can continue to promote credible deterrence by modernizing, supporting technological innovation, and continuing to fund Army capabilities and training. To that end, Montgomery advocates for building the United States' forward defense posture by employing ground-based missiles in the western Pacific. He contends that ground-launched missiles

would deter aggressive military action in the region and would inflict heavy losses on Chinese military assets should Beijing begin a conflict with the United States. Clark argues that the United States should modernize by using directed energy technologies to aid in missile defense, improving electromagnetic spectrum (EMS) warfare capabilities (particularly by improving the ability to jam and confuse EMS sensors), and employing stand-off and hypersonic missiles to build upon current strike and surface warfare. If the U.S. Army harnessed these technological capabilities and then integrated them in the Pacific region, they would make the U.S. Army a very costly and challenging force to engage.

For the Army to play a supporting role in the Pacific, not only must it have credible methods of deterrence and tailored technological advancements but it also must be an adaptive force that is able to coordinate with allies. When Milley was asked to give insight on his vision of future warfare, he stated that soldiers in the future battlefield must adapt to live and fight in difficult and uncomfortable conditions, learn to have units that are constantly mobile in order to avoid becoming targets, and practice "disciplined disobedience" that would allow junior level officers to disobey orders in order to achieve important objectives on the battlefield.[21] Through Milley's insights, it can be understood that top Army leadership envisions future warfare requiring a mobile, adaptable, and dedicated Army that encourages flexible leadership.[22]

The Pacific Pathways program, an operational deployment program that allows U.S. soldiers to train alongside allies in the Pacific, further supports the notion that the Army will have a supporting role in the Pacific theater; the Pathways program places an emphasis on the importance of a lasting, strong Army presence and influence in the Pacific. Not only does the Pathways program reinforce the U.S. Army's presence in the Pacific and strengthen relationships with

A 2.6-kilometer runway is clearly identifiable in this 22 July 2016 satellite photo of the western arm of Mischief Reef, located east of the contested Spratly Islands in the South China Sea. The reef is one of several that have been occupied by Chinese forces in recent years as part of that country's land reclamation efforts, undertaken to gain and control access to the South China Sea. (Photo courtesy of the Center for Strategic and International Studies/Asia Maritime Transparency Intitiative/DigitalGlobe)

allies, it also makes soldiers comfortable operating within environments in the Pacific and develops their leadership skills and adaptability. The program does this through joint exercises with Asian allied forces, such as those of the Philippines and the Republic of Korea. For example, a battalion task force might partner and train with host-nation forces during combined-arms live-fire exercises, allowing the U.S. soldiers to acclimate to foreign environments, bridge language barriers, and overcome cultural divides.[23]

Adapting to difficult environments and remaining flexible are both abilities that Milley has emphasized for soldiers to be successful in future environments.[24] The Pacific Pathways program certainly aims to achieve these objectives and aims to prepare soldiers for a complex, unpredictable battlefield in the Pacific theater. Current programs like Pacific Pathways and objectives like Milley's signal that current leadership acknowledges and anticipates the U.S. Army will likely play a supporting role in the Pacific theater.

Little to No Role

Alternatively, although unlikely, there remains a possibility that the Army would play little to no role in a conflict with China. As identified below, some academics and DOD thinkers have written on the Army's role being advisory or nonexistent. However, discussions directly challenging the need for ground forces in the Asian-Pacific theater are limited; most simply focus on the superiority and importance of air and maritime forces instead of directly asserting that ground forces are unnecessary. Most suggestions lean toward the idea not that the United States should neglect the development of land-based forces but simply that it should focus more on naval and air capabilities such as forward-positioned aircraft carriers and submarines. This viewpoint is logical, as the main source of current tension between the United States and China is the recent Chinese aggression in the South China Sea, making this problem of more immediate concern to air and naval forces.[25]

Chinese development and occupation of man-made islands there, and their subsequent militarization, continue to increase friction between China and the United States. And, due to the rimland and inner sea position of these islands and the South China Sea itself, the militarization and increasing aggression is primarily an issue of an air and maritime nature.[26] Many proposed solutions to the rising tensions in the South China Sea, therefore, leave little room for a significant function for the Army or other ground-based forces.

For example, in a series of East Asia policy recommendations, Dan Blumenthal of American Enterprise Institute suggests that the U.S. military should focus on forward-positioned combat aircraft, carrier strike groups, and attack and ballistic missile submarines as a deterrent in the region. Blumenthal recommends the United States focus on maintaining regional alliances and partnerships, and that it continue funding maritime and air capabilities rather than land-based capabilities.[27] His viewpoint is shared by several others within the defense community.

In their publication "War with China: Thinking Through the Unthinkable," RAND Corporation scholars David Gompert, Astrid Cevallos, and Cristina Garafola suggest that China is intent on establishing and maintaining sea power, particularly dominance over the United States, in the western Pacific.[28] Recommendations notably include that the United States should make its sea power less vulnerable by relying more on submarines, pursuing a political strategy, and engaging in an East Asian maritime security partnership. Because China continues to develop its maritime power, this is mainly an issue for the Navy, with support that can be provided marginally by other armed services; therefore, the role of the Army in such a situation would be almost nonexistent.

Likewise, in a statement before the Senate Armed Services Committee, Bryan Clark said,

> Deterrence will, therefore, rely on new operational concepts and capabilities that enable ships, aircraft, ground units, and their bases to survive and conduct offensive operations in these highly contested areas long enough for them to stop aggression and punish the aggressor. These operational concepts and capabilities should be the focus of efforts to reshape the U.S. military over the next decade.[29]

Clark continued to assert, "the most important areas for DOD to address in reshaping the force are air and missile defense, EMS warfare, strike and surface warfare, land warfare, and undersea warfare."[30]

Conclusion

In a survey of the discourse regarding the U.S. Army's potential function during a hypothetical conflict

with China, we have identified three clear policy fore-casts. The first is that the Army would play a central role. This view is supported by several experts, academics, and the results of wargames. Those asserting a central role suggest that the Army would be key to countering A2/AD capabilities as well as in coordinating with allies and establishing forward-positioned based as part of a joint force. In this role, proponents of the position assert the U.S. Army would also be key to training and maintaining allied forces in the region.

Alternatively, the vast majority of literature surveyed suggests a second view: that the Army's part in the Pacific theater would be important but not central. Instead, its role would be primarily supportive in nature. According to this view, in performing such a supporting role the Army will inevitably pursue new technologies to aid maneuverability and increase military capabilities, provide aid and support to other military services, and, most importantly, ensure deterrence through an A2/AD shield and physical projections of military power.

In apparent support of this view, the Army has already begun playing this role with the establishment of initiatives like the Pacific Pathways program, which help to train soldiers and establish a semipermanent presence without having a permanent, perhaps provocative base in the region.

Finally, in a third view, some believe that the Army or ground forces would have little or no role in the strategy to defeat China in an armed conflict. This is primarily asserted through detailed discussions foreseeing the nature of the conflict, which would be so heavily focused on air and naval power during narrow timeframes that there would be little space or time for the Army to provide meaningfully assistance. However, it is worth noting that this rationale is a minority view, the least common of the three.

It appears from this survey of the available literature generated by experts both in and out of the military that if the United States were to enter a war against China, the Army would necessarily assist the other military services greatly by acting as a supporting entity to the joint force in the ensuing conflict. Thus, we should expect that the U.S. Army will play a significant role at a minimum as a joint force enabler, securing joint freedom of action. Consequently, the Army, while shifting focus toward modernization and joint integration, should emphasize preparation for scenarios in which it will play a supporting role in the Pacific against a near-peer adversary. ■

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NCO JOURNAL

FEATURE ARTICLE

The Department of the Army announced in February 2017 the establishment of a new type of unit—the security force assistance brigade (SFAB)—to support foreign nations in developing military capabilities that foster stable and secure areas of operation around the world. The Military Advisor Training Academy on Fort Benning, Georgia, trains SFAB soldiers on the specialized skills required to succeed as combat advisors. The author of "Getting Inside the 1st SFAB" interviews participants in the overall development of this program as well observations on the status of the first SFAB preparing to deploy in 2018.

Getting Inside the 1st SFAB
By Kimball Johnson
NCO Journal

Dec. 8, 2017

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Staff Sgt. Justin S. Seeley, right, and Staff Sgt. Joshua Maynard, assigned to 1st Security Force Assistance Brigade, plot grid coordinates during a Master Unmanned Aircraft Systems Operator course, Nov. 3, 2017 at Fort Benning, Ga. Soldiers interested in joining the SFAB should contact their branch manager for more information. (U.S. Army photo by Sgt. Arjenis Nunez)

It is no doubt a good thing to conquer on the field of battle, but it needs greater wisdom and greater skill to make use of victory. – Polybius, (as quoted in Field Manual 3-0, Operations)[1]

Security Force Assistance Brigades are the newest addition to the Army's evolving response to the need to establish stable and secure areas of operation around the world. The SFAB's value lies in its sustained ability to support a commander's mandate, per FM 3-0, paragraph 8-17, to "consolidate gains and transition an AO to a legitimate authority able to maintain security and public order."[2]

Therefore, according to Sgt. Maj. of the Army Daniel A. Dailey, the creation of SFABs is the number one priority for Gen. Mark A. Milley, Army Chief of Staff.[3]

The Army is currently offering incentives to qualified noncommissioned officers who volunteer to be team members in one of six SFABs to be fielded (five for Regular Army and one for the Army National Guard).[4] NCOs holding the rank of promotable specialist and above are needed to accomplish the SFABs' mission .

A ground-based interceptor missile is emplaced in July 2006 at the Missile Defense Complex, Fort Greely, Alaska. Alaska's location makes the state a critical component of the nation's ballistic missile defense system. (Photo courtesy of the U.S. Army)

Why Alaska and the Arctic are Critical to the National Security of the United States

Col. Michael J. Forsyth, U.S. Army

Over the past five years, Russia has moved aggressively to build its Arctic military capabilities, apparently in an effort to secure its claims and interests in the region.[1] Increasingly, human activity is occurring in the Arctic as the sea ice recedes and economic opportunity opens to nations via new shipping

lanes. Characteristically, in any geographical area, with the rise in human activity there is also the corresponding possibility that friction will occur as people compete to exploit the natural resources and corresponding economic possibilities. Such friction—and potential conflict—in the Arctic is highly likely at some point unless preparations are made to mitigate it.

Alaska makes the United States an Arctic nation, and its location places the state and country at the center of this fast-evolving region.[2] Thus, Alaska is critical to the national security of the United States; however, we are not, as a nation, keeping pace with the rapidly changing security situation in the Arctic. Lagging here could also have an enormous impact on our economy. To change this dynamic, there are several things that the U.S. military can do to ensure the future security of the region.

Alaska's Geostrategic Importance

"Alaska is the most strategic place on earth," stated Brig. Gen. Billy Mitchell in testimony before Congress in 1935.[3] The reason for this bold statement is that Alaska is the closest U.S. location to the center of the Northern Hemisphere (see figure 1). The state is singularly closer to many national capitals in the hemisphere than most points in the lower forty-eight states. This makes Alaska the perfect power projection platform for the United States from a military standpoint. Further, because Alaska sits astride the Bering Strait chokepoint and the Great Circle Routes between North America and Asia as can be seen in figure 2 (on page 115), it is critical to our economic and national security.[4]

The air lanes and sea lanes of the Great Circle Routes are heavily trafficked by shipping companies because

(Graphic courtesy of North American Aerospace Defense Command [NORAD]; used in an Alaskan Command and Alaska NORAD Region command briefing. Alaska is close to the center of the hemisphere and Joint Base Elmendorf-Richardson [JBER] is uniquely positioned to project power. The distances depicted in nautical miles are to select world capitals from JBER.)

Figure 1. The Northern Hemisphere from the Perspective of the North Pole

they shorten the distance between the two continents, saving time and money for shippers. Consequently, the city of Anchorage and Alaska are at the center of existing commercial shipping lanes between East and West. Anchorage, at roughly the halfway point between the major commerce centers of North America and Asia, is an important hub for such international corporations as Federal Express and DHL.[5] Moreover, many nations such as China and Russia are routinely making use of these routes for their economic benefit.

However, while Alaska is critical to intercontinental shipping now, emerging routes due to shrinking ice impediments could raise the state's economic stature to even greater heights. The retreat of ice coverage in the Arctic Ocean has opened up the potential for shipping along the Northern Sea Route and the fabled Northwest

Passage (see figure 3, page 116).[6] The Northern Sea Route parallels Russia's Arctic coastline, as much of it is within the country's exclusive economic zone. In the past few years, shipping along this route has increased, topping out with seventy-one passages in 2013.[7] Moving goods along this route cuts off thousands of miles, saving

(Graphic courtesy of Defense Mapping Agency)

Figure 2. The Great Circle Routes between North America and Asia

money on fuel costs and insurance (since there are no pirates along this route).[8] Moreover, Russia is facilitating passages through the use of its large icebreaker fleet, making her an indispensable player in shipping through the High North while profiting from such transit by charging fees for services akin to a toll.[9]

Thus, the emerging Northwest Passage has recently become a possibility for shippers. For centuries, explorers and adventurers sought a route from Europe to Asia across Canada's High North. Most of these individuals failed in this attempt, but now the dream is nearing reality. In 2017, the luxury cruise liner *Crystal Serenity* made a trip through the Northwest Passage starting from Seward, Alaska, and terminating in New York City.[10] While much of the Northwest Passage remains

difficult to navigate due to remaining heavy ice pack, continued ice retreat could make this route feasible in the future. Alaska's position on the east side of the Bering Strait places the state in a central position on the choke point of both routes. However, with increasing human activity, it is inevitable that disagreements among nations making claims in the area will arise as competition heats up. Again, Alaska's location thrusts her to the forefront of strategic calculations that the United States must make to deal with emerging geopolitical and geoeconomic circumstances.

Incidentally, what makes the Great Circle Route good for shipping also makes it the preferred route for the employment of missiles aimed at North America. As previously noted, this route shortens the distance between the two continents. Just as shippers prefer the route because the reduced distance saves time and money, the same principle of distance holds true for ballistic missil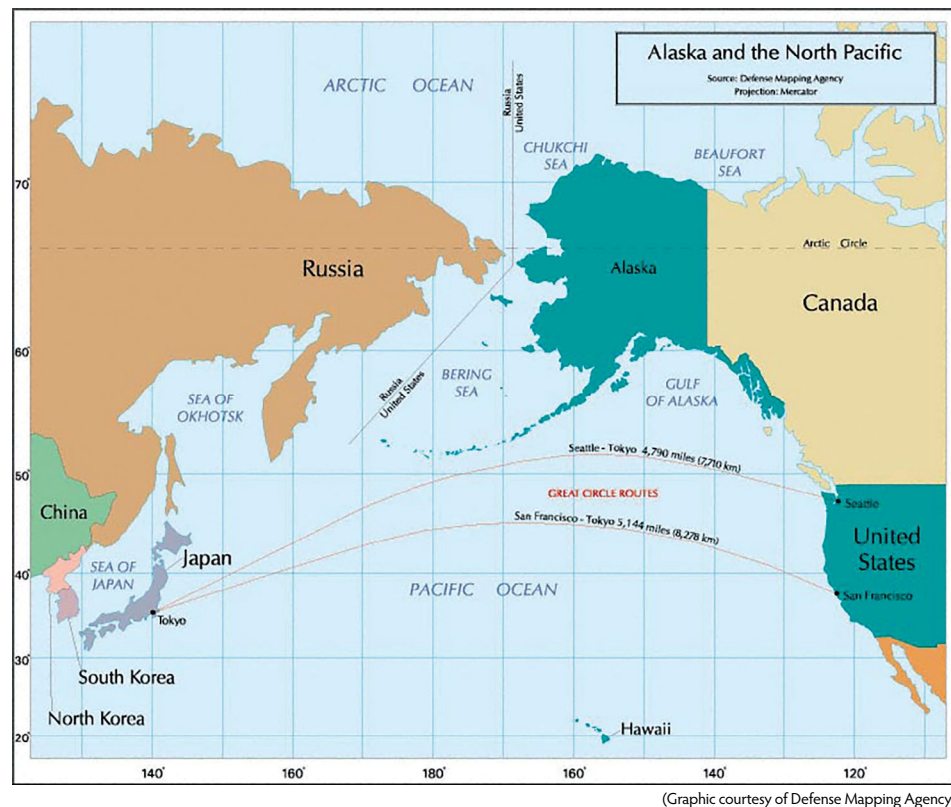es. Potential adversaries could fire weapons along this trajectory to close the distance more quickly while lessening the potential for early warning to their attacks. Thus, Alaska's location makes the state a critical component of the nation's ballistic missile defense system.

Arctic Natural Resources

In addition to the great potential for shipping through the Arctic, there is considerable capacity for economic expansion based on the abundant natural resources in the region. There are across the entire Arctic oil, gas, coal, rare-earth metals, and fisheries. It is estimated that 13 percent of the undiscovered oil and 30 percent of the gas worldwide is in the region, along with a host of other resources.[11] As a result, Arctic nations are very interested in tapping into these to facilitate economic growth and
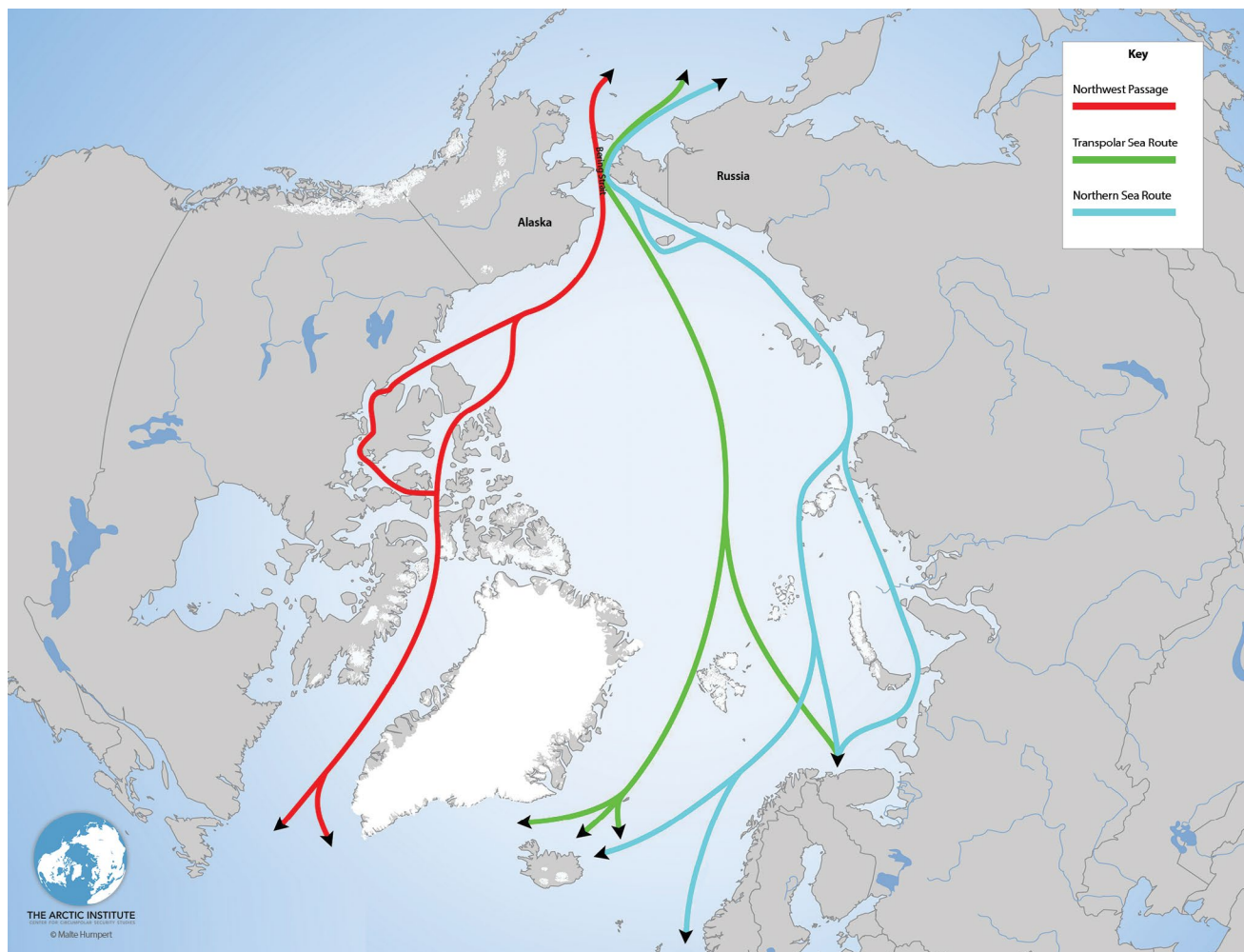
(Graphic by Malte Humpert, The Arctic Institute, https://www.thearcticinstitute.org/future-arctic-shipping/)

## Figure 3. Potential Shipping Lanes through the Arctic Ocean

generate revenue. The retreat of sea ice and glacial melt is making these resources more accessible to Arctic and interested near-Arctic nations like China.

The desire to obtain this mineral and energy wealth is stimulating competition among these countries. All of the Arctic nations have made claims beyond their exclusive economic zones on the outer continental shelf so that they have exclusive right to exploit these resources (see figure 4, page 117). Claims are made under the auspices of the United Nations (UN), which then adjudicates them according to the UN Convention on the Law of the Sea. The problem is that many of these claims overlap, complicating the UN's ability to judge in a manner satisfactory to all the claimants. This in turn gives rise to friction among the nations as they increasingly confront each other. Herein lies the potential for

conflict in the Arctic region, which has heretofore been known for regional cooperation and peace.

Sources of Conflict

The obvious source for possible conflict is the increasing human contact and the claims put forth by the various Arctic nations. One nation making such claims in the Arctic region has made a concerted effort to assert or expand its sovereignty in other areas of the globe recently; that nation is Russia. The Russian Federation already derives 20 percent of its gross domestic product from economic activity in the Arctic, and its claims would expand its reach to make further economic growth possible.[12] Over the past five-plus years, Russia has systematically embarked on a program to establish new or refurbish abandoned
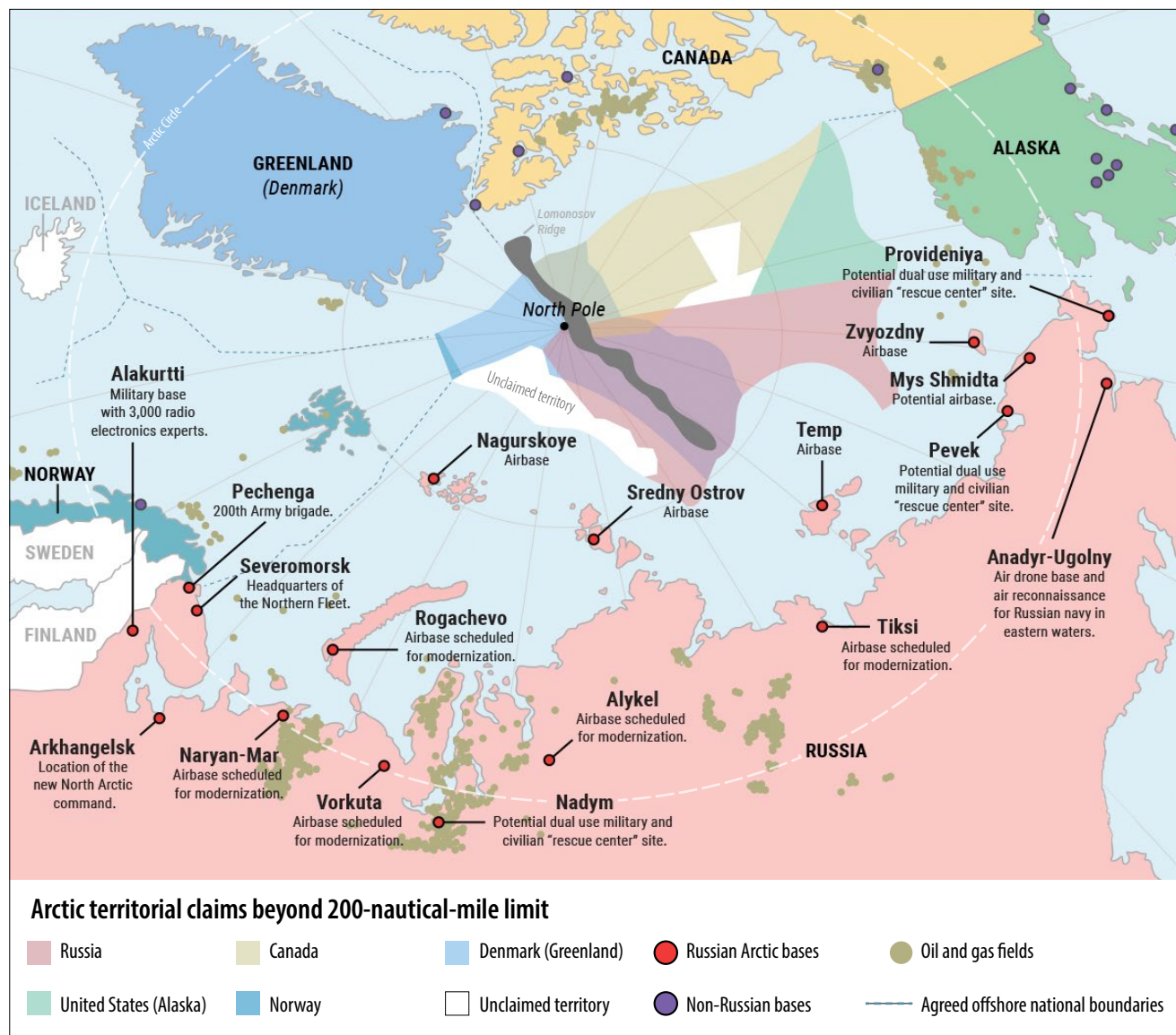
(Graphic by Mike Nudelman, Business Insider, http://www.businessinsider.com/russia-equipped-six-military-bases-in-the-arctic-2015-12; modified by extending key and adding the Arctic Circle)

Figure 4. Existing and Newly Constructed Military Bases Established by Russia in the Arctic Region Today Compared to Other Nations

military bases in the Arctic (see figure 4). The reasons for this effort include providing protection to the emerging Northern Sea Route and securing its economic interests. As already noted, the Northern Sea Route has the potential to provide great benefit to Russia through direct trade or the facilitation of trade between Asia and Europe. Further, should Russia win its claims on the outer continental shelf, it will control vast areas and resources to its benefit.[13] Thus, refurbishment and expansion of new bases is an effort to

secure what Russians believe is theirs. However, this gives rise to the strong possibility of conflict if other nations do not accept Russian claims.

A reason for concern that Russia may press its claims even if the UN decides against it is based upon recent developments in other regions. As we have seen over the past four years, Russia has aggressively pressed forward with territorial claims in its "near abroad" at the expense of Russia's neighbors.[14] Russia annexed Crimea from Ukraine in a brazen

land grab. Later, under the pretense of protecting ethnic Russians, it fomented a war with Ukraine to seize territory on its western border with Ukraine. Most recently, Russia has intervened in Syria on behalf of Bashar al-Assad's government to prop that regime up to ensure its survival as well as to enable Russia to gain access to new locations in Syria from which to stage both Russian air and sea power in the Mediterranean Sea and Middle East. This raises the question, Would Russia move in a similarly aggressive manner to establish military hegemony and control over much of the Arctic?

Mitigating the Risk of Conflict

Since, the Arctic region is so self-evidently important to the United States both economically and militarily, we must assert ourselves to ensure that the region remains peaceful and is of benefit to all nations as part of the global commons. So, what can the U.S. military do to ensure this outcome?

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First, we must ensure that we maintain and sustain a credible force in Alaska. Much recent discussion by senior political and military leaders has centered on cutting force structure in Alaska.[15] In particular, the Army has considered drawing down the airborne brigade combat team posted at Joint Base Elmendorf-Richardson. This would send the wrong message to potential adversaries that the United States is not committed to protecting either its own interests and claims, or Arctic security in general. This might encourage aggressive actions on the part of

nations, most prominently Russia, seeking to seize and exploit opportunities within the Arctic region.

Second, U.S. forces must exercise frequently and visibly to demonstrate our capability to secure our interests in the Arctic. Such exercises should include joint forces and incorporate combined operations with Arctic partners. By conducting joint and combined exercises, we send a message to potential adversaries that we intend to secure our interests and those of our partners in the austere environment of the Arctic. Moreover, combined exercises demonstrate the interoperability of our forces with partner nations for a deterrent effect.

Third, U.S. military forces have to regain Arctic skills to enhance deterrence in the region. There is much work to be done. Over a decade of war focused on counterinsurgency in the desert environment of the Middle East and central Asia has left forces in Alaska with atrophied Arctic survival and tactical skills and antiquated equipment. Further, a major winter exercise in the Arctic targeted at the operational level of war has not occurred in several years. To have a credible deterrence to any nation's design for expansion in the Arctic, the United States has to systematically rebuild and demonstrate its Arctic skills and refurbish or field new equipment to give U.S. forces in Alaska a robust capability to challenge aggressors.

Fourth, U.S. forces in the Arctic require technological and equipment modernization. In the same way that Arctic skills have atrophied over the past decade-plus, so also has the equipment available to the force become either obsolete or difficult to maintain due to age. For example, early-warning defense radar systems require modernization as software becomes out of date and the purpose for which they were designed has evolved. Additionally, ground mobility suffers from an aged system that is difficult to maintain, making it a challenge to move ground forces in deep snow or mud. The M973 Small Unit Support Vehicle (SUSV) is not viable since it is no longer a program of record, and a material solution is required to enable greater mobility for ground forces in the Arctic. These are just two examples of equipping needs among many. The bottom line is that U.S. forces will require investment in materiel that facilitates operating in the tough conditions of the Arctic. This is essential to demonstrate our commitment to security in the region.

Finally, in conjunction with rebuilding Arctic forces' equipment and effectiveness, commanders in Alaska

need the authority to conduct military-to-military consultations with counterparts around the region. We maintain this with most Arctic nations through Alaskan Command's security cooperation line of effort. However, in 2013, all consultations with Russia were curtailed. Lack of regular contact with Russia continues to be a strategic gap that, with increased competition as well as the already tense relations that prevail between the two nations, could lead to misunderstandings and miscalculations between the United States and Russia and potentially result in needless conflict.

Regular consultation with Russia needs to be restored. The ability of commanders from U.S. Army Alaska and Alaskan Command to consult with counterparts in Russia would go far to reduce tension and assure clear communication between the two nations. This simple step could go a long way toward ensuring peace in the Arctic.

Conclusion

The U.S. position in the Arctic because of Alaska is of enormous strategic significance. The United States has vital interests in the Arctic region that are unfortunately often overlooked because turbulence in other areas of the world often draw more attention. In time, these interests will come to be seen as both critical and vital to our own long-term economic interests as well as security. Consequently, there is a need to ensure our interests in the Arctic are sufficiently secured to ensure resolutions to territorial and resource claims remain peaceful.

To effect protection of our interests, the United States has to assert leadership using critical elements of national power, including the military. We must rebuild long-ignored Arctic military capabilities to provide a credible deterrent to any nation that may want to expand its territory outside of recognized international norms to exploit the tremendous resources of the Arctic. As human activity continues to increase in the Arctic, it will become more and more important for the United States to demonstrate its strength in the region. Failure to do so could allow the friction of human interaction to grow into needless regional confrontation with global implications. This is preventable with a commitment to leadership and peace in the region that stems from sufficient investment and preparation. ∎

Notes

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2. Heather A. Conley and Jamie Kraut, *U.S. Strategic Interests in the Arctic: An Assessment of Current Challenges and New Opportunities for Cooperation* (Washington, DC: Center for Strategic & International Studies [CSIS], 2010), 7.

3. Brian Garfield, *The Thousand Mile War: World War II in Alaska and the Aleutians* (1969; repr., Fairbanks, AK: University of Alaska Press, 1995), 59.

4. "Alaska and the North Pacific," Alaska Humanities Forum (website), accessed 8 November 2017, http://www.akhistorycourse.org/images/geography/large/l3.jpg.

5. "Alaska's Location," Alaska Humanities Forum (website), accessed 24 October 2017, http://www.akhistorycourse.org/geography/alaskas-location/.

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7. Heather A. Conley and Caroline Rohloff, *The New Ice Curtain: Russia's Strategic Reach to the Arctic* (Washington, DC: CSIS, 2015), 47 and 84.

8. Conley and Kraut, *U.S. Strategic Interests in the Arctic*, 6.

9. Conley and Rohloff, *The New Ice Curtain*, 48–49; Conley and Kraut, *U.S. Strategic Interests in the Arctic*, 7.

10. Brady Dennis and Chris Mooney, "Luxury Cruise Ship Sets Sail for the Arctic from Seward," *Alaska Dispatch News* (website), 18 August 2016, accessed 24 October 2017, https://www.adn.com/arctic/2016/08/16/luxury-cruise-ship-sets-sail-for-the-arctic/.

11. Stephanie Pezard et al., *Maintaining Arctic Cooperation with Russia: Planning for Regional Change in the Far North* (Santa Monica, CA: RAND Corporation, 2017), 35–36.

12. Conley and Rohloff, *The New Ice Curtain*, vii.

13. Ibid., 70; Pezard et al., *Maintaining Arctic Cooperation with Russia*, 10–12.

14. The term "near abroad" is one used by Russia and is defined as the fourteen recently independent republics on Russia's immediate border that emerged after the dissolution of the Soviet Union. *Encyclopedia of Russian History*, Encyclopedia.com, s.v. "near abroad," accessed 9 November 2017, http://www.encyclopedia.com/history/encyclopedias-almanacs-transcripts-and-maps/near-abroad.

15. Joe Gould, "Lawmakers Blast US Army Force Cuts," *Defense News* (website), 8 July 2015, accessed 6 September 2017, https://www.defensenews.com/2015/07/08/lawmakers-blast-us-army-force-cuts/; Erica Martinson, "Troop Cuts at Joint Base Elmendorf-Richardson on Hold," *Alaska Dispatch News* (website), 7 October 2015, accessed 24 October 2017, https://www.adn.com/military/article/jber-cuts-hold/2015/10/08/. Since the original announcement of potential troop cuts, the Army has rescinded the decision, stabilizing the force structure at its current levels.

Cyber is the New Air
Domain Superiority in the Megacity

Maj. Austin G. Commons, U.S. Army
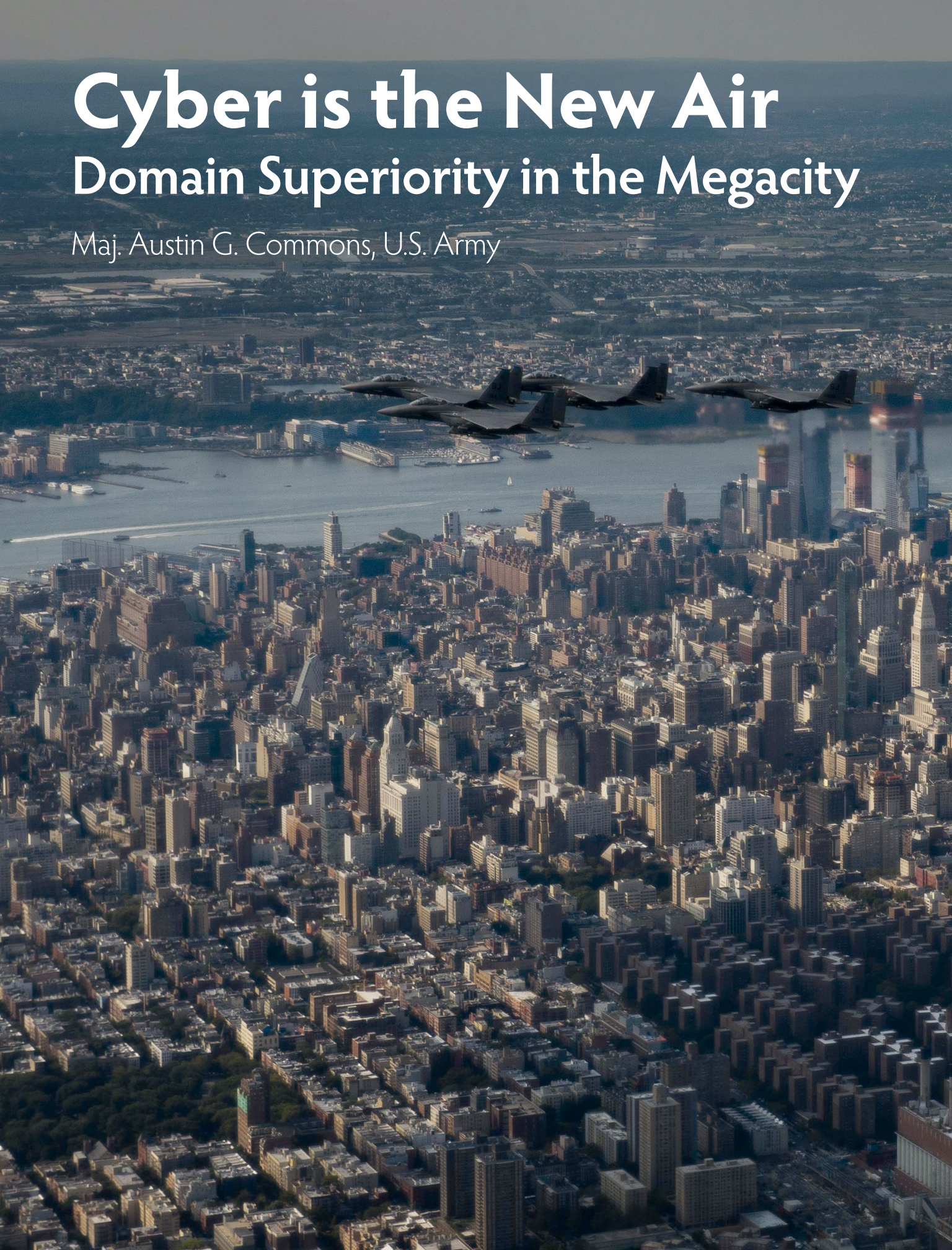
War is, at its most elemental level, a human endeavor. Violent conflict on all scales will nearly always take place in the spaces where people live and work. Two current global trends are significantly shaping the human dimension of conflict: the movement of people to megacities having populations of over ten million and the increased interconnectedness of populations and infrastructure. As of 2014, there were twenty-eight megacities in the world, and that number is projected to reach forty-one by the year 2030.[1] Furthermore, a global explosion in internet and cellular access has resulted in cities and populations that are densely networked.

Modern megacities are the most complex environments in the world today, with the city functioning as a complicated and intricate ecosystem. The megacity is unique as an operational environment because it layers three elements: large spaces, complex and restrictive physical terrain, and dense human populations. This environment creates significant friction across all domains

Four U.S. Air Force F-15E Strike Eagles assigned to the 334th Fighter Squadron at Seymour Johnson Air Force Base, North Carolina, fly over the U.S. megacity of New York, September 2017. The massive size and complexity of such megacities that are emerging globally present a range of new challenges to military planners, especially those charged with establishing control through air superiority in the event of an urban conflict. (Photo by Staff Sgt. Andrew Lee, U.S. Air Force)

(land, sea, air, space, and cyberspace), providing ample opportunity for adversaries to deny U.S. forces' freedom of action. Gen. Mark Milley, chief of staff of the Army, has highlighted the importance of this problem by calling for the development of concepts for megacity combat.[2] The U.S. military's current joint doctrine is insufficient to address this type of conflict.

Since World War II, joint doctrine has prioritized achieving air superiority as a prerequisite to enjoying freedom of action in the other domains.[3] Megacities, however, with their tall buildings, narrow and crowded streets, and subterranean spaces offer extensive protection from aerial surveillance and close air fire support. Fortunately, a new domain—cyberspace and the electromagnetic spectrum—has emerged as the preeminent medium for understanding and shaping actions in the other four domains. For the joint force to seize, retain, and exploit the initiative in a megacity environment, joint task force commanders must prioritize cyberspace superiority rather than air superiority as an operational prerequisite.

One might argue that the U.S. military's recent decade of experience fighting in Iraqi cities such as Baghdad, Fallujah, and Mosul provides a solid conceptual and doctrinal foundation for urban combat that is applicable on a larger scale to the megacity problem. Joint Publication (JP) 3-06, *Joint Urban Operations*, underwent significant revision in 2009, with updates across all joint functions.[4] These updates comprehensively address the challenges inherent in modern urban environments, citing lessons learned from recent conflicts such as Operation Iraqi Freedom. JP 3-06 provides an accurate description of the challenges faced in urban environments and lays out nine fundamental principles for conducting urban operations:

- Conduct a systemic assessment.
- Integrate all actions within the context of an overarching major operation or campaign.
- Learn and adapt.
- Selectively isolate key portions of the urban environment.
- Apply highly discriminate, destructive, or disabling force to disrupt an adversary's ability to pursue its objectives.
- Establish and extend control and protection of urban sectors and subsystems.
- Persuade municipal governments, groups, and population segments to cooperate with joint force operations.
- Provide essential support into the urban environment to sustain it during the ordeal of combat operations to improve its ability to survive.
- Support improvements to urban institutions and infrastructure.[5]

These principles are objectively sound and reflect years of experience in Iraq and other urban conflicts. However, while this framework may be adequate for smaller cities, the uniquely layered characteristics of the megacity make the current doctrinal framework insufficient to win a fight in this environment. This article outlines the shortfalls in current joint doctrine when applied to the megacity environment and demonstrate how cyberspace superiority can enable the joint force to overcome these disadvantages.

The Megacity Problem: Inadequate Doctrine

Current joint urban operations doctrine is insufficient to guide military operations in a megacity due to the unique challenges presented by their layered combination of size, density, and complexity. As noted above, joint urban operations doctrine prescribes nine fundamentals for commanders and staffs. All of these are essential to winning an urban fight, and all require significant freedom of action to execute effectively—making these fundamentals especially difficult to apply in megacity combat. Two of the most difficult principles to apply in this environment are selectively isolating key portions of the urban environment and applying highly discriminate force to disrupt an adversary. The extreme degree of complexity presented by this environment provides an adversary with a myriad of opportunities to deny and disrupt a joint force commander's freedom of action.

Physical isolation of key terrain is often unfeasible in a megacity due to the long physical distances that a maneuver force needs to travel through a heavily congested environment. Task Force Ranger experienced this in 1993 in Mogadishu, Somalia, physically overwhelmed by the crowds and congestion in a relatively small city that today has a population of "only" 2.1 million.[6] At the operational level, isolation means "cutting the adversary off from the functions necessary to be effective," which current urban operations doctrine describes as being critical for success.[7]

However, even if the key terrain targeted for isolation is relatively small, maneuver forces will often need to move a considerable distance to reach it. Crowded

> " … in any city where the legitimate government is ineffective and unable to provide basic services, criminal and other unofficial networks are inevitably quick to fill the void and thus exert considerable influence and control over the population. "

city blocks connected by narrow, congested streets may make it nearly impossible for ground units simply to maneuver to an area that must be physically isolated. Translating the example of Mogadishu to a much larger megacity illustrates how easily a small-combat formation such as Task Force Ranger can be swallowed up by a large urban population.[8] The numbers of ground troops required to maneuver to isolate key terrain may be unavailable or politically unpalatable. Furthermore, moving to objectives and key terrain is only part of the challenge that fighting in a megacity presents.

Physically isolating key terrain in a megacity environment is also unfeasible due to the requirement to control the lines of communication (LOCs) that provide an adversary force with people, materiel, and information. During the 2008 terrorist attack on Mumbai, India, by the Pakistani extremist group Lashkar-e-Tayyiba, ten attackers infiltrated the city from the water and moved to their targets by taxi, rail, and foot.[9] In addition to these physical LOCs, the attackers and their commanders in Karachi relied heavily on the digital infrastructure of the city to control and coordinate their actions, without which they would not have been able to inflict nearly as much damage.[10] This example represents a network of LOCs that are far too complex for a joint force to control physically. The megacity environment, with its extreme population density, highly interconnected transportation infrastructure, and illicit criminal networks, tips the scales considerably against any security force attempting to isolate and control key terrain. Even with troops numbering in the tens of thousands, physically controlling an urban area consisting of tens of millions of people inverts the force ratios recommended in doctrine.[11] Moreover, physically controlling a conflict area often requires the application of lethal force—another urban doctrine precept.

Applying destructive or disabling force to disrupt an adversary is immensely difficult in a megacity not only due to collateral concerns but also because of the unique complexity of the megacity ecosystem in which adversary networks operate. In a megacity such as Karachi, with a population of 27.5 million, potential adversary groups meld seamlessly into a complex web of illicit networks, with cooperation stemming more often from convenience and financial gain than from shared ideology. Members of extremist groups such as the Pakistani Taliban, the Afghan Taliban, and Lashkar-e-Tayyiba enjoy a symbiotic relationship with the armed criminal organizations that provide their own form of security and governance to the poorly governed slums of Karachi. Furthermore, Karachi is a bustling port city through which large amounts of international commerce flow; it is "Pakistan's equivalent to New York City, Chicago, or Los Angeles."[12] The shipping and trucking industries in Karachi employ significant numbers of extremists and other young men susceptible to criminal or extremist recruitment.[13] This industrial base is also a key source of fundraising for the Pakistani Taliban and other extremist groups through extortion and other criminal activities.[14]

Urban operations doctrine specifies that destructive force must be highly discriminate, minimizing the impact on the broader urban environment.[15] However, in any city where the legitimate government is ineffective and unable to provide basic services, criminal and other unofficial networks are inevitably quick to fill the void and thus exert considerable influence and control over the population.[16] Unfortunately, assuming that the joint force could accurately find and fix these networks in place,

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applying lethal force to these interconnected adversary groups will inevitably have a significant negative impact on the broader environment and population because the lethal force applied against any adversary group or their base of support in a megacity such as Karachi has the potential to cause major disruptions in basic services. Likewise, similar disruptions to regional and international commerce stemming from lethal force could be expected to have the same kinds of effects that would reach far beyond the immediate area of operations for a joint task force.

A Concept for Cyberspace Superiority

While applying joint urban operations doctrine to the megacity fight is extremely challenging, joint task force commanders can mitigate these challenges by prioritizing the attainment of cyberspace and electromagnetic spectrum superiority to have freedom of action across the physical domains. To explore these options, it is necessary to establish a concept of what cyberspace superiority might look like in practice. This concept will closely mirror the concept of air superiority, long considered an operational prerequisite for freedom of action in the other domains. JP 3-0, *Joint Operations*, states that "control of the air is a prerequisite to success for modern operations or campaigns" because it prevents enemy air assets from interfering with operations in other domains "thus facilitating freedom of action."[17] However, as previously discussed, the complexity of the physical and human terrain in a megacity can significantly diminish the advantages gained from air superiority. To mitigate this, superiority in the cyberspace domain can set the conditions for friendly freedom of action in the other domains. Conceptually, for a joint task force to achieve cyberspace superiority in a megacity, it must be able monitor and collect the preponderance of digital communications traffic in the area of operations, access adversary and host-nation digital networks at will, and defend friendly networks against interference by adversaries or third parties.

Current joint doctrine defines cyberspace superiority as "the degree of dominance in cyberspace by one force that permits the secure, reliable conduct of operations by that force, and its related land, air, maritime, and space forces at a given time and place without prohibitive interference by an adversary," which repeats nearly verbatim the doctrinal definition of air superiority.[18] Notwithstanding, this concept goes a step further by establishing a set of

concrete conditions that can assist a joint force in evaluating their degree of cyberspace superiority.

The ability to monitor and collect digital communications in a megacity area of operations is key to achieving cyberspace superiority. The inability to see what is passing through the digital terrain is analogous to the inability to conduct aerial surveillance of a physical area of operations. Achieving this will require access to the digital communications infrastructure of that city, to include cellular networks and wired internet. Examples of systems that are able to do this already exist.

Since 2007, the National Security Agency (NSA) has run a collection system, known as Prism, which collects communications traffic from a long list of prominent U.S.-based internet companies such as Google, Yahoo, and Facebook. These companies account for a large portion of global internet traffic, and programs such as Prism provide valuable access points to the cyber terrain of megacities around the world.[19] Similarly, the NSA has access to cellular networks around the world, many of which are owned by U.S.-based companies, through previous agreements.[20] These agreements with both wired and wireless internet providers cover the vast majority of digital communications in any megacity. The remaining cyber "terrain" that is inaccessible through standing agreements will need to be accessed clandestinely and covertly through the myriad of hacking tools at the NSA and the U.S. Cyber Command. Gaining access to these denied communications networks is a crucial component of achieving cyberspace superiority during a conflict.

Digital communication networks that the joint force cannot access provide freedom of action to an adversary in a megacity, while also providing opportunities for an adversary to disrupt U.S. freedom of action. These may be networks belonging to insurgents or criminal organizations, or to a government-controlled communications network run by a hostile nation-state. The air superiority analog would be a portion of the area of operations that are covered by enemy air-defense systems and thus inaccessible to friendly forces under current doctrine.

The Libyan revolution of 2011 provides an example of the impact of denied cyberspace as insurgent groups utilized commercial off-the-shelf tools to create their own digital communications networks to circumvent the Mu'ammar Gaddhafi regime's internet crackdown. By establishing these networks separately from Libya's existing digital communications infrastructure,

revolutionary groups were able to procure funding, influence international opinion, pass targeting data to NATO intelligence centers, and avoid the regime's digital spying capabilities.[21]

While the Gaddhafi regime may not provide an example of moral conduct, its military situation throughout the revolution highlighted that being able to access adversary networks is a key component for achieving cyberspace superiority in modern conflict. Though the regime recognized the vital need and had some limited success hacking the Skype calls and other digital communications passing over the insurgent networks, its efforts came too late and too little in the face of NATO support for revolutionary groups.[22] Irrespective, the Libyan example illustrates that without access to adversary networks, the joint force cannot achieve superiority and freedom of action in cyberspace as denied cyber terrain will provide a given adversary a means to disrupt U.S. joint functions while enabling its own.

Understanding the Megacity through Big Data

A second key factor in cyberspace dominance will be the relative advantage achieved by the effectiveness of data collection techniques. One emerging technique that will play an increasingly important role is *big data* collection, since it is nearly impossible for a joint task force to effectively assess and understand the complex megacity ecosystem without relying on massive amounts of digital data collection and analysis. According to current doctrine, conducting a systemic assessment of the urban environment is the first fundamental of urban operations. Doctrine states that an understanding of the urban environment is the basis for planning and executing operations in it.[23] Assessing and understanding a megacity comprehensively and effectively using established methods and tools is an extremely daunting task.

Task Force Ranger personnel take cover alongside buildings near the site of a helicopter crash 3 October 1993 in Mogadishu, Somalia. This is the only photo released of the battlefield during the battle. (Photo courtesy of the U.S. Army)

Task Force Ranger and the Battle of Mogadishu

From 3 to 4 October 1993, a joint U.S. special operations task force fought a prolonged battle through the densely populated streets of Mogadishu, Somalia, after its mission to capture key members of a Somali militia group led by Mohamed Farrah Aidid was met with unexpectedly stiff resistance and a portion of the task force was pinned down in the center of the city. The lessons learned from Task Force Ranger portended even greater challenges in the future for U.S. forces facing the prospect of combat in urban settings and megacities.

Task Force Ranger included units from the 3rd Ranger Battalion, 1st Special Forces Operational Detachment–Delta, the 160th Special Operations Aviation Regiment, and other special operations elements from the Air Force and the Navy. It was given the mission to capture Aidid and dismantle his organization, the Somali National Alliance. On 3 October, it sent a force of 19 aircraft, 12 vehicles, and 160 men to arrest two high-level leaders of the Aidid organization.

The mission began well, with the quick capture of two militia leaders, although one ranger was injured during a fall from a helicopter while fast-roping. However, a large crowd of armed militia and civilians, including women and children, rapidly converged on the scene, congesting the roads and blocking the extraction of the injured soldier and the two militiamen by ground convoy. The situation degenerated further after two helicopters were shot down by rocket-propelled grenades. The task force was forced to defend itself and the surviving helicopter crewmembers in place overnight.

After a night of beating back attacks by the Somalis, the group was able to extract itself with the help of a rescue convoy comprising U.S. 10th Mountain Division, Malaysian, and Pakistani forces. In the end, eighteen members of the task force were killed and eighty-four others were wounded; one Malaysian soldier was killed and ten were wounded; and two Pakistani soldiers were wounded. Estimates of Somali casualties range from three to five hundred dead and seven hundred wounded.[1]

U.S. forces have since fought significant battles in urban areas in Iraq and Afghanistan, reinforcing and adding to the lessons learned in Somalia regarding urban combat. These lessons should be adapted and applied to prepare for future multi-domain battles in megacities.

Note

1. Casualty estimates vary; the data here is from *U.S. Forces, Somalia After Action Report and Historical Overview: The U.S. Army in Somalia, 1992–1994* (Washington, DC: U.S. Army Center for Military History, 200].

However, big data—the ability to collect, analyze, and correlate massive amounts of information in novel ways to produce useful insights—can provide a vital set of tools for joint task forces to understand the megacity environment.[24] For example, New York City's government established a data analytics task force in 2009 to determine how to use the city's massive stores of information to improve the effectiveness of city management. This task force collected and analyzed information ranging from tax records to rodent complaints in order to more efficiently address illegal housing practices and improve public safety.[25] The data this task force used already existed in a wide variety of city databases—it simply needed to be aggregated, correlated, and otherwise analyzed to produce useful insights. Similarly, in today's urban environment, a vast majority of individuals and institutions are connected via digital communications networks, providing a trove of data that allows a better understanding of the environment.

Just as New York City's analytic task force did, a U.S. military force operating in a megacity environment using big data can collect and analyze massive amounts of digital data generated daily. This still-nascent capability is referred to in the military intelligence community as computer network exploitation (CNE), and it can provide an essential tool to understand more fully the megacity sociopolitical and economic ecosystem. Currently, mobile broadband networks ("third generation" [3G] and above) reach 84 percent of the global population, and mobile broadband subscriptions are growing at double-digit rates in developing countries.[26] Because individuals utilize mobile broadband networks for a wide variety of activities—including texting, emailing, banking, reading the news, and interacting via social media—this data, when properly aggregated and scrutinized, can provide insights on everything from movement patterns to public opinion and to the functioning of illicit criminal networks.

With a significant portion of a megacity's population accessing the internet daily from a geolocatable mobile device, a joint task force with cyberspace superiority can collect and analyze a glut of data points to gain insights about the megacity environment and the system of systems operating within it.

In addition to the digital activity of individuals and human networks, the digital activity of city and national governments can help shape a detailed understanding of the megacity environment. Increasingly, governments around the world are providing services and information to their citizens via the internet. While the connectivity of individual governments varies around the world, all 193 United Nations member states have a degree of online presence.[27] In heavily networked megacities, where a greater portion of the population has access to the internet, it is reasonable to assume that government entities utilize digital networks to collect and process a significant amount of data. Government communications and databases will increasingly contain large amounts of information regarding law enforcement, public services, government finances, and public infrastructure. A joint force with cyberspace superiority can access and analyze this data, providing additional layers of understanding about the megacity and its inhabitants.

While CNE has the potential to provide an unprecedented level of understanding of the megacity environment, a joint task force must have cyberspace superiority to collect, analyze, and glean insights from this valuable resource. Collecting the required data from individual and institutional digital activity requires access to the majority of internet and cellular networks in the area of operations, as outlined in the previously proposed concept of cyberspace superiority. Additionally, much of the process of harvesting and analyzing big data is automated with already existing software tools capable of creating an automatic and persistent push of data to intelligence analysts.[28] This reliance on automation, along with the large data storage requirement, is unquestionably necessary due to the sheer volume of data to be collected and analyzed. However, the expansion of a joint task force's digital footprint and increased reliance on analytical software also increases its vulnerability to cyberattack from adversaries. Therefore, cyberspace superiority requires not only the ability to access digital communications networks but also to defend friendly networks against attacks and disruption.

While CNE is a valuable and necessary tool for understanding the complex megacity environment, a joint task force cannot harness this capability unless it has achieved cyberspace superiority first.

Shaping the Megacity Battlefield

Along with using cyber capabilities to better assess and to understand the complex megacity ecosystem, joint task forces will need to shape the megacity battlespace by utilizing cyberspace and electromagnetic

Second Lt. Stephanie Stanford, 90th Information Operations Squadron (IOS) cyber development lead, Staff Sgt. Aaron Wendel, 90th IOS cyber network technician, and Senior Airman Brett Tucker, 90th IOS cyber systems operator, perform cyber operations 1 August 2012 at Lackland Air Force Base, Texas. (Photo by Boyd Belcher, U.S. Air Force)

spectrum tools to create effects in the physical domains. These cyber and electromagnetic capabilities, when utilized to create effects on the battlefield, are termed nonlethal fires. The U.S. Army's emerging multi-domain battle concept embraces this idea, promoting the employment of "cross-domain capabilities" to create and exploit chronological "windows" of advantage.[29]

The multi-domain battle concept, however insightful, broad, overarching, and, applicable to a wide range of different operating environments, must nevertheless be adapted to the unique characteristics manifest in each. Consequently, as urban contingencies emerge, the multi-domain battle concept must be tailored to the megacity environment, which is unique in that it combines large spaces, complex and restrictive physical terrain, and dense human populations. One common feature that a megacity's characteristics give is the strong potential to deny and disrupt U.S. freedom of action in the physical domains of land, sea, and air. A megacity's physical and population characteristics stack the deck against U.S. ground forces from the outset. In such an anticipated environment, only in the cyberspace domain can the joint force enjoy freedom of action without the disruptions endemic to the physical obstacles

characteristic of the megacity environment that impede movement. Therefore, cyberspace superiority provides the joint force with a potential means to shape the physical battlefield to their advantage using cyber tools as key enablers for actions in the physical domains, making attaining cyberspace superiority a prerequisite for conducting physical domain operations. For example, large areas filled with a complex maze of streets and buildings, densely crowded with civilians, will make land combat extremely difficult without cyber assistance. As illustrated in the Battle of Mogadishu, a crowded urban environment can significantly enable adversary forces to deny U.S. forces freedom of action.[30]

Because a megacity's physical and population characteristics puts U.S. ground forces at a great disadvantage from the outset, cyberspace superiority provides the joint force with a means to shape the physical battlefield to their

advantage. To mitigate the physical environment in future megacity engagements, ground units will need to employ nonlethal fires along with cyberspace and electromagnetic spectrum intelligence collection to identify and create avenues of approach, identify targets, isolate objectives and key terrain, and disrupt enemy functions. Additionally, a joint force with cyberspace superiority operating in

streets, maritime forces can easily lose their freedom of action in a crowded littoral space where adversary forces are nearly impossible to identify and isolate.

The littoral area of a megacity presents nearly as many physical disruptions as the city's land area, and joint maritime forces must leverage freedom of action in the cyberspace domain to overcome obstacles and fric-

> " … ground units will need to employ nonlethal fires along with cyberspace and electromagnetic spectrum intelligence collection to identify and create avenues of approach, identify targets, isolate objectives and key terrain, and disrupt enemy functions. "

a megacity can shape the physical battlefield through nonlethal effects such as transmitting misleading messages to enemy leaders and fighters, locating concentrations of enemy troops, transmitting messages to the broader population, shutting down communications networks in an objective area, disrupting financial transactions and resupply operations among enemy networks, geolocating or shutting down enemy devices, shutting off electricity to an objective area, and directing host-nation security forces (either overtly or covertly), to name just a few.

Additional Challenges Related to Maritime Megacities

On considering the common problems related to dealing with urban warfare in megacities, it is important to note that a significant number of the world's megacities are located in crowded coastal areas, which creates additional operational challenges for a maritime force that it must overcome with cyber capabilities. For example, sea spaces surrounding megacities such as Mumbai and Lagos, Nigeria, are extremely congested with fishing vessels, container ships, and passenger ships, and are often home to illicit smuggling and piracy networks. Adversary forces can leverage this congested littoral environment to disrupt joint maritime operations in a variety of ways including clandestine surveillance and reconnaissance, electronic disruption of communications systems, obstruction of sea lines of operation, and armed resistance to amphibious operations. Consequently, just as land forces in a megacity can be quickly overwhelmed by swarming crowds and narrow

tions in the physical maritime domain. In order to enjoy freedom of maneuver in this challenging coastal zone, maritime forces must employ nonlethal fires to achieve effects such as identifying adversary networks concealed in civilian marine traffic, manipulating or disrupting enemy communications, manipulating or disrupting enemy navigation systems, transmitting instructions or misleading messages to civilian vessels, and shutting down communications and electrical networks on shore in advance of an amphibious assault.

Air Operations Over Megacities

The nature of the megacity environment also enables adversary forces to bypass and disrupt U.S. airpower, making it necessary to apply nonlethal fires to employ effective aerial assets. No matter what degree of air superiority a joint task force enjoys over a megacity, the nature of the physical environment on the ground makes many air operations prohibitively difficult to execute. Tall, closely spaced buildings and narrow streets inhibit aerial reconnaissance and surveillance, and crowds and other collateral concerns constrain the employment of aerial fires, rendering air assets largely ineffective. Furthermore, the densely packed urban terrain provides ample cover and concealment for enemy air defense systems.

To overcome these challenges, joint forces with cyberspace superiority can employ nonlethal fires and cyberspace intelligence collection to disrupt enemy air defense targeting systems, geolocate and maintain custody of targets prior to engaging them, conduct electronic surveillance and reconnaissance from the air,

conduct airborne manipulation or disruption of enemy communications, and many other actions that shape the physical battlespace in the megacity.

Conclusions and Recommendations

Demographics and global security trends make it likely that the U.S. military will find itself operating at some point in megacities, a distinct operating environment in which the United States has very limited experience. The unique physical characteristics of the megacity—vast spaces layered with complex urban terrain and massively dense populations—make it possible for adversaries to disrupt and deny U.S. forces' freedom of action on land, sea, and air.

In the megacity environment, cyber and electromagnetic spectrum capabilities will enable the joint force to understand and shape the physical battlespace across all three of these physical domains in the megacity. However, a joint task force cannot do this without cyberspace superiority. The joint force must have freedom of action in cyberspace in the megacity area of operations to effectively collect, analyze, and weaponize data and electronic signals. This makes cyberspace superiority a crucial operational prerequisite for military operations in a megacity, supplanting air superiority. To effectively employ this operating concept, however, the joint force must adjust its doctrine and organization.

Computer network exploitation has the potential to ensure that joint force commanders thoroughly understand the uniquely complex megacity environment. Technology companies are already harnessing big data similarly to understand the world and make businesses and governments more effective. However, for this capability to be successful, the U.S. military and broader intelligence community must be better postured to adopt the technological tools that the private sector continues to develop rapidly. The Department of Defense must significantly revise its innovation and information technology-acquisition policies, instituting a "technology push" acquisition model as well as the existing "demand pull" model.[31]

The U.S. Army Training and Doctrine Command appears to have fully grasped the ability of cyber and electromagnetic activities to understand and shape the physical battlespace, as evidenced by the development of the multi-domain battle concept. The broad concept of conducting actions in one domain to gain advantages in another is a natural modernization of traditional combined arms operations. Going forward, the entire joint force must understand and adopt this operating concept, with the air and maritime services revising and influencing the concept to ensure it is truly joint. More importantly, as multi-domain battle is written into future doctrine, joint force leadership must emphasize that this is a broad, overarching concept that must be appropriately tailored to fit specific operating environments.

In incorporating the multi-domain battle concept, joint doctrine must account for the challenges posed by fighting in a megacity. Future editions of JP 3-06 should contain a portion dedicated to the unique characteristics of megacities, the challenges they present in the physical domains, and options to defeat these challenges via the cyberspace domain. Future editions of joint operations publications must encourage cyberspace superiority as an operational prerequisite for megacity operations, rather than promoting air superiority as a universal precondition for operations in all environments.

Finally, given the growing ability of cyberspace and the electromagnetic spectrum to influence the physical domains, operational-level joint task forces should establish a joint force cyberspace component similar to the existing air, land, and maritime components. Currently, operations taking place in the cyberspace domain and across the electromagnetic spectrum fall under a variety of compartmented functions, organized differently across the military services. Service members from communications, signals intelligence, electronic warfare, information operations, and cyberwarfare specialties all operate and function in cyberspace and the electromagnetic spectrum. A joint cyberspace component with the requisite commander and staff will ensure that cyberspace and electromagnetic activities are synchronized and deconflicted across the task force's area of operations, as well as providing a crucial link between the task force and U.S. Cyber Command.

The U.S. Naval War College tested this concept in a 2014 war game and concluded that there is a valid requirement for a cyber component commander.[32] As this is still a nascent and undeveloped concept, the joint force must continue testing and refining the model of a joint cyberspace component.

Just as air superiority emerged as an operational prerequisite throughout the twentieth century, so too

must cyberspace superiority emerge as such during the twenty-first century. Current joint doctrine and operational concepts acknowledge and account for the importance of the cyberspace domain. However, when the U.S. military is called upon to fight and win in a densely populated, heavily networked megacity, acknowledging the importance of cyberwarfare will not be enough—operational commanders striving to win the fight on the ground will need to win the digital fight first. ∎

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Response to Capt. Jerad Hoffmann and Capt. Paul Holoye's "Logistical Operations in Highly Lethal Environments"

(Military Review, November-December 2017)

I concur with most of the conclusions drawn by Captains Jerad Hoffmann and Paul Holoye in their article "Logistical Operations in Highly Lethal Environments" concerning the need to stress survivability for sustainment units. However, I take issue with their discussion of the placement of the brigade support area (BSA) and the battalion field trains. Essentially, my question is this: Why are BLUEFOR [friendly force] units establishing their BSAs at the Joint Multinational Readiness Center (JMRC) within effective range of OPFOR [opposing force] artillery?

Captains Hoffmann and Holoye lamented about the current practice of collocating the field trains within the BSA as it "makes such concentrations of units immediately subject to [OPFOR] fires before they can react," established earlier in the article as "within five to fifteen minutes" of detection by enemy UAVs. I assume from the article that field trains elements at the JRMC are dying like flies to OPFOR artillery. These gentlemen have definitely done their homework when it comes to the current Russian artillery threat capabilities; however, they missed a key employment consideration.

While Russian doctrine places maneuver in support of artillery, Russian artillery will most likely deploy roughly 25–33 percent of their maximum artillery range from their forward line of troops (FLOT). Speaking from repeated experience as a support (now called distribution) platoon leader, maneuver S-4, and field trains commander from back in the 1990s (deploying against a similar OPFOR threat), we typically positioned the BSA twenty to thirty kilometers behind the FLOT—essentially mitigating the threat from OPFOR artillery.

If units at the JMRC are deploying the BSA (and their field trains) any closer than thirty-four to thirty-eight kilometers behind the BLUEFOR FLOT, considering the modernized Russian artillery threat, then they are wrong. Deploying the BSA and field trains

thirty-four to thirty-eight kilometers behind the BLUEFOR FLOT should obviate much of the OPFOR artillery threat.

Splitting the field trains out—and possibly placing them closer to their supported maneuver battalions—may actually decrease their survivability. Sending the field trains outside the BSA footprint in the 1990s was the exception, not the rule. Now, more than ever, sustainment formations struggle with an increased amount of Level I and II threats [individual to small tactical unit threats] in the brigade and division support areas. This stresses the need of keeping the field trains within the BSA footprint for mutual security.

Even at a distance of thirty-four to thirty-eight kilometers, the brigade support battalion and the forward support companies remain responsive to the needs of the maneuver commanders. While some may consider this an extreme distance, the field trains may operate a five- to six-hour logistics package (LOGPAC) mission (about two hours from the BSA to the logistics release point [LRP], two hours on site, and about two hours back). In the 1990s, once a company first sergeant linked up with his LOGPAC at the LRP, it never took more than two hours for his company to receive their supplies and bring the company's LOGPAC back to the LRP for the return trip. The company first sergeants and executive officers resupplied their companies through a well-honed battle drill designed to limit their exposure time during this very vulnerable operation. Imagine the tactical equivalent of a NASCAR pit stop with a mobile pit crew brought out to the track during a very narrow, preplanned time window.

This article illustrates that we not only need to dust off our survivability tactics, techniques, and procedures (TTPs) for sustainment units, we also need to brush up a new generation on the full range of forgotten tactical sustainment TTPs.

Maj. John Wilson, U.S. Army Reserve, 90th Sustainment Brigade

Specialist Five James C. McCloughan

MEDAL OF HONOR

VIETNAM WAR

Michigan native James C. McCloughan was awarded the Medal of Honor by President Donald J. Trump in a 31 July 2017 White House ceremony for actions "of gallantry and intrepidity at the risk of his life above and beyond the call of duty" from 13 to 15 May 1969 during the battle of Battle of Nui Yon Hill in the Republic of Vietnam. McCloughan is credited with saving the lives of at least ten soldiers while being wounded several times during the fight. During the ceremony—the first such award presented by Trump—the president described McCloughan's bravery: "He would not yield, he would not rest, he would not stop, and he would not flinch in the face of sure death and definite danger."

McCloughan, then a private first class, was assigned as a combat medic with Company C, 3rd Battalion, 21st Infantry, 196th Light Infantry Brigade, Americal Division, when the unit air assaulted into an area near the city of Tam Kỳ in Quảng Nam Province. "Charlie Company" came under heavy small arms and machine gun fire almost immediately, and two U.S. helicopters were shot down. McCloughan ran one hundred meters through the withering gunfire to reach a wounded pilot, and then he carried the pilot back through the fire to safety.

Later that day, a Charlie Company platoon conducting a reconnaissance patrol was ambushed by a large North Vietnamese Army force and suffered heavy casualties. McCloughan again exposed himself to enemy fire, running into the ambush to pull two soldiers to the safety of a nearby trench. He was wounded by a rocket-propelled grenade during the rescue, but he ignored a direct order to stay back and moved into the fire four more times to save other soldiers. McCloughan refused evacuation to stay with the company.

As the fighting continued the next day, McCloughan was wounded a second time by small arms fire and shrapnel while aiding two wounded soldiers in a rice paddy. In the face of an attack from three sides by two North Vietnamese companies and seven hundred Viet Cong soldiers, he continued to expose himself to enemy fire to rescue wounded soldiers while fighting to repel the attack. That night, he volunteered to hold a strobe light in an open area, and still while under fire, to provide a marker for a much-needed resupply drop. He continued to fight and treat the wounded throughout the night.

McCloughan was inducted into the Pentagon's Hall of Heroes on 1 August 2017 by Secretary of Defense Jim Mattis. In his remarks, Mattis remarked to the members of Charlie Company in attendance, "Jim held the beacon for you that night in 1969. Today he is the beacon and we are humbled and honored in holding him high—a guide to others to keep their souls fit and always do the best they can, always serve each other."

There have been 3,517 Medals of Honor awarded as of 23 October 2017. This was the second awarded to a member of Charlie Company, 3rd Battalion, 21st Infantry Regiment. Another medic, Pfc. Dan Shea, received the award posthumously in 1971. Shea was killed during the same operation while carrying a wounded soldier to safety.

Read more about Jim McCloughan on the Army's Medal of Honor site at https://www.army.mil/medalofhonor/mccloughan/.

Right: Former Spec. 5 James C. McCloughan gives his remarks 1 August 2017 during the Medal of Honor Hall of Heroes induction ceremony at the Pentagon in Arlington, Virginia. (Photo by Sgt. Alicia Brand, U.S. Army) **Above:** Graphic courtesy of U.S. Army.