Topical Essays

Treating the Pathologies of Victory: Hardening the Nation for Strategic Competition

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For years after the Cold War ended, it was hard to make the case in polite company that the United States should continue to focus on major-power competition in its national security strategy.[1] America won. The Soviet Union vanished, its republics flew apart, and its client states went their own way. The vaunted Soviet military returned home and rapidly atrophied. The Soviet Union's brutal history made it hard enough for American national security experts to imagine the Soviet Union's swift demise, let alone the relatively bloodless way it happened.

Given the fortuitous outcome, it was easy, expedient, and popular to imagine that this marked the end of history. The global alliance of representative governments had triumphed over a seemingly implacable foe, and weak authoritarian states suddenly seemed vulnerable. Events had their own way of highlighting the exceptional nature of this strategic turning point. Operation Desert Storm cemented that conclusion as America ejected Saddam Hussein's Soviet-equipped army from Kuwait using a blizzard of military technology built to prevail against the Red Army in Central Europe. It seemed entirely pessimistic, even paranoid, to insist that the U.S. military should use these events as an opportunity to configure itself to prevail against major powers in the 21st century.

In many respects, America's Cold War triumphalism was not exceptional. Winners almost always fall prey to hubris; dramatic winners always do. This is the pathology of victory.

But history exacts a price for hubris. The U.S. national security bureaucracy has been afflicted by a multitude of strategic viruses over the past 30 years, and the accompanying incremental, almost imperceptible corrosions of the U.S. military accrued after the Cold War now threaten to undermine the basic competitive advantages that caused America to prevail. Not all of these maladies are physical, and for many in the national security enterprise, they are deeply embedded and generational. It is all they know.

Normalized dysfunction infused Pentagon thinking, dialogue, and actions, resulting in a general reluctance to accept the security environment as it presented itself. As with all things, strategic pragmatists who saw the post–Cold War "unipolar moment" as anomalous were forced to swim against this bureaucratic current, absorbing derision and marginalization.[2] Thus, embedded ideas may be hard to dislodge in the search for strategic reawakening.

Major-power competition is back—although, of course, it never really left—but the pathologies of victory remain. For America to rise to the challenge once again, we must

understand how the end of the Cold War led the American defense bureaucracy to evolve ways of thinking that left America in a position of competitive inferiority. In this essay, we will explore some of the most damaging pathologies and recommend prescriptions to return the U.S. to a position of purposeful competitiveness.

Although there are many, four pathologies of victory stand out:

- The triumphalism of the 1990s led to the ultimately corrosive seduction of overseas engagement and constant intervention;

- After 9/11, strategic distraction delayed a more comprehensive understanding and reaction to China's rise and Russia's reemergence as self-identified and seriously dangerous enemies;

- The analytic focus of the Cold War atomized to the point where, as a nation, we lost our ability to mobilize our brainpower for major-power competition and, as a necessary precondition, to conduct deep, strategically focused studies of our adversaries; and

- As major-power competition reemerged, a new and powerful brand of wishful thinking surfaced that actively resisted strategic reform on the scale required by the emerging security environment.

This essay explores each of these American post–Cold War pathologies, revealing their deleterious, if unintended, effect on our ability to compete with Russia and China in the coming decades. The triumphalism of the 1990s forms the foundational mindset. Its bookend, wishful thinking, infuses all of the pathologies, so it can be thought of as the key enabler. In the concluding section, six key strategic judgments about today's security environment, resisted by a bureaucracy bathed in this acquired mindset, demonstrate the deleterious effects on our contemporary strategic dialogue that hamstring America's competitive rebirth.

The essay focuses on the Department of Defense (DOD), for that is the center of gravity of this publication and the epicenter for some of the worst cases of pathological strategic dysfunction. To be sure, the entire national security enterprise fell prey to these afflictions, and they all deserve careful retrospective treatment, but we concentrate mostly on the Pentagon.

The reader should be aware that this essay contains challenges. It specifically calls into question deeply embedded ways of thinking that have been parroted by many national security commentators. Interestingly (and somewhat ironically), many of these themes align with propaganda coming from Russia and China, so the reader must retain a healthy skepticism, fight confirmation bias, and consider the consequences of how distortions in our collective thinking affect strategic competitiveness, all of which may lead the reader to conclude that a fundamental correction is required.

Pathology #1: Triumphalism

The Cold War's decisive end virtually guaranteed triumphalism in America. Some commentators believe we overexploited our victory in foreign policy, for example, by expanding the North Atlantic Treaty Organization (NATO) into previous Warsaw Pact and even, in the case of Latvia, Lithuania, and Estonia, into formerly Soviet territories. From a broader perspective, however, history will treat America as a remarkably forgiving victor. Perhaps more important, as a matter of rediscovering competitive discipline and focus, we must gain greater awareness of and become more allergic to parroting Russian and Chinese propaganda. Externally, by any historical standard, America served as a magnanimous victor, but the internal effects of such a dramatic victory sowed seeds of dysfunction that act as a competitive anchor restricting vital strategic reform.

Bureaucratically, the remarkable end of the Cold War led to the elimination of bedrock institutions by decisions that catalyzed

a corrosion of our nuclear deterrence forces and set in motion a series of conventional force distortions in force posture, war planning, and force modernization and recapitalization that, unless challenged and reformed, will hamper our ability to compete effectively against two dedicated foes. More ominously, the 1990s served as a prime catalyst for the rise of China and Russia's resurgence.

The abandonment and subsequent neglect of our nuclear strength represents a clear example, and it happened quickly. In 1991, the George H. W. Bush Administration ordered dramatic, unilateral nuclear weapon reductions (called Presidential Nuclear Initiatives or PNIs) in which Russian reciprocity was merely "encouraged." The entire PNI process occurred in a backroom manner with little consultation or debate. Although the PNIs contained some strategic logic, such as attempting to induce a reduction of Russian tactical nuclear weapons, the Russians never reciprocated. Thus, we were left with a massive Russian superiority in tactical nuclear weapons that, together with the rise of Vladimir Putin and the volatility of his regime, presents a major threat to strategic stability.

Additionally, the PNIs affected strategic nuclear forces in a way that significantly exceeded arms control agreements, including the unilateral, accelerated retirement of the Minuteman II ICBM and the cancellation of mobile Peacekeeper and small ICBM programs. PNIs also ended Peacekeeper production; capped the B-2 stealth bomber program at a "platinum bullet" level of 20 aircraft; terminated the stealthy (nuclear) Advanced Cruise Missile; and ended production of the advanced W-88 D-5 submarine-launched ballistic missile (SLBM) warhead.[3] Perhaps most important, the PNIs dissolved the Air Force's venerable Strategic Air Command (SAC).

Thus, on June 1, 1992, a mere five months after the December 26, 1991, dissolution of the Soviet Union, SAC disbanded. Air Force nuclear capabilities lost their powerful advocate in Omaha and were placed under Air Combat Command, a fighter-dominated organization in Langley, Virginia. Conventional force leaders opined that the dramatic increases in conventional military effectiveness created by the Second Offset Strategy could supplant nuclear weapons.[4] As a result, officers with nuclear experience gradually found their careers curtailed, and nuclear unit morale plummeted.

The dramatic anti-nuclear maneuvers of the immediate post–Cold War period and their aftermath now seem shortsighted in light of the atrophy and institutional neglect within the Air Force's nuclear enterprise. After a series of embarrassing incidents involving the loss of control of a nuclear weapon and related firing of the Air Force Secretary and Chief of Staff in 2009, the Air Force was compelled to reincarnate a SAC-like institution in the form of the Air Force Global Strike Command, led by a four-star general.[5] Secretary of Defense Chuck Hagel, addressing the obvious morale problem in the force, declared that "we must restore the prestige that attracted the brightest minds of the Cold War era."[6] Unfortunately, however, they had already, as airmen like to say, fallen behind the power curve on nuclear. No amount of report-writing, fist-pounding, rhetorical assurances, or half-hearted stabs at institutional reform could bring back the rather draconian, highly disciplined culture required to advocate for, control, and operate nuclear systems that had been established over decades.

Today, every important American nuclear system needs recapitalization, and the defense bureaucracy delayed each of those systems until there is no more room to retreat.[7] Due to bureaucratic triumphalism, the entire nuclear enterprise has been fighting a retrograde action since the end of the Cold War with no relief in sight.

The assault on nuclear institutions created a wasting strategic asset, but the bureaucratic effects of triumphalism also served to degrade America's conventional force posture after the end of the Cold War. The surprising overmatch in 1991 against the seemingly powerful Soviet-equipped Iraqi military in Operation Desert Storm exacerbated conventional pathologies.

Impact on Defense Modernization and Recapitalization

Two areas where triumphalism hurt our conventional posture were defense modernization and recapitalization, which started on a decades-long hiatus in the 1990s from which it never recovered. Less well-understood is the complete reorientation of American war planning and force posture that left American forces geriatric, lacking in readiness, and stretched far too thin. We are now asking those depleted forces to deter and potentially confront two modernized, resurgent, acquisitive, self-confident militaries, each of which has been laser-focused on overcoming the U.S. military. How did that happen?

The U.S. military had been oriented toward deterring and fighting the Soviet military in a battle royal in the European Central Front and, to a lesser extent, in the Pacific. As the Soviet Union dissolved, each of the armed services found itself groping for a new identity that would support its people, forces, acquisition programs, and budget. What ensued was a gradual separation from war thinking and war planning and a slide into "engagement" and "shaping" the world. The Les Aspin-led 1993 Bottom-Up Review (BUR) exemplified this shift:

> While deterring and defeating major regional aggression will be the most demanding requirement of the new defense strategy, our emphasis on engagement, prevention, and partnerships means that, in this new era, U.S. military forces are more likely to be involved in operations short of declared or intense warfare.[8]

Not all was lost: Strategy always lurks in dark corners of the Pentagon. During a brief period in the mid-1990s, spurred by the Office of Net Assessment's concept of an ongoing Revolution in Military Affairs, the services briefly revived their interest in thinking about future warfare. A series of service-led annual war games ensued that imagined what threats might lurk in the future security environment. But that brief flowering of interest was soon buried by the emerging "shaping" and "engagement" theory and its de-emphasizing of warfighting.

The Goldwater–Nichols Department of Defense Reorganization Act of 1986[9] also created very powerful regional combatant commanders who capitalized on peacetime engagement. U.S. European Command had always dominated the others for pragmatic reasons, but regionally focused shaping now provided increased status and purpose for others, especially U.S. Central Command. Threats posed by Iraq and Iran during the 1990s, including the post–Desert Storm Iraqi no-fly zone, allowed Central Command to grow in power and influence. General Anthony "Tony" Zinni in Central Command and Admiral Dennis Blair in Pacific Command capitalized on the regional commands' newly found diplomatic leverage, filling a gap created by the Department of State, which remained content to emphasize bilateral, embassy-based diplomacy.[10] In this new geostrategic environment, the State Department found itself unable to match or control the growth of the Defense Department's regional shaping mission.

Numerous commentators have deplored this "militarization of foreign policy," but within the DOD, this trend led paradoxically to the "diplomatization" of the U.S. military senior leadership and their staffs, who increasingly saw themselves as super-ambassadors rather than as war planners and fighters. The *sine qua non* of a regional combatant commander's power became the number of forces deployed in his theater, which supposedly provided greater shaping leverage, but his schedule began to look more like a diplomat's. After the 1997 Quadrennial Defense Review,[11] which enshrined shaping, regional staffs dedicated to peacetime shaping ballooned at the expense of operational war planners, and this trend continued unabated in the ensuing decades.

As a result, the armed services found themselves having to supply more and more of their aging forces for regional shaping, and this drew their attention away from global deployment

and joint, combined-arms, operational warfighting. Forces deployed and operated more and prepared for war less, causing a gradual decline in warfighting readiness and an acceleration of equipment and personnel wear and tear. Even the concept of fighting two simultaneous "major theater wars," albeit against weak opponents, became a fiction as U.S. forces deployed as "fight tonight" forces in various regions, or piecemeal to a series of non–war plan contingencies throughout the 1990s. These deployments sapped their ability to respond to the execution of actual war plans.

The constant deployment strain also affected military people and caused a troubling decline in retention, the bedrock of U.S. military expertise and professionalism. After a decade of strain, the 2001 Quadrennial Defense Review noted the effect on the force pinched by a lack of recapitalization and constant use: "Excessive operational demands on the force have taken a toll on military personnel."[12] Brookings scholar Michael O'Hanlon wrote that despite some positive changes, "[b]y far the most troubling trend during the Clinton era was the real and significant decline in troop morale."[13]

Those demands caused U.S. weapon systems to atrophy as well. The George H. W. Bush Administration believed it could curtail weapon system procurement by "skipping a generation" of systems, ostensibly to modernize more quickly, but under the Bill Clinton Administration, skipping a generation turned into the so-called procurement holiday in which defense procurement was slashed to 50 percent of Reagan-era levels. Those cuts made some sense given the Cold War victory, but the procurement hiatus went on far too long. Essentially, the so-called post–Cold War peace dividend came at the expense of military personnel and procurement even as overdeployment of forces caused the aging of key weapon systems.

Exploitation by Russian and Chinese Military Planners

To make matters worse, constant U.S. presence and combat operations in the 1990s gave Russian and Chinese military planners a convenient, threatening, and easily analyzable target that intensified and focused their acquisition and reform efforts. Both militaries studied each of the American campaigns carefully, often sending advisers to observe. The reform and modernization incentive that these operations provided our major-power competitors cannot be overstated.

- For China, Operation Desert Storm, the 1995–1996 Taiwan Strait crisis, and Operation Allied Force, the NATO operation to stop the Serbian slaughter of ethnic Albanians in Kosovo, provided a powerful stimulus for modernization and reform. Desert Storm showed the Chinese that they clearly lagged behind the U.S. military in significant ways; the carriers sent by the U.S. to tamp down the Taiwan Strait crisis hyperfocused their anti-carrier efforts, which resulted in the DF-21D medium-range ballistic missile system; and Allied Force included the accidental bombing of the Chinese embassy in Belgrade—an event that made an impression.

- For Russia, Desert Storm proved Marshall Nikolai Ogarkov's[14] prediction that the U.S. had achieved a "military-technical revolution" that obsolesced the Russian conventional forces that had seemed so ominous in the 1970s.[15] Moreover, several U.S. military operations in their Balkan backyard (notably Operations Deliberate Force and Allied Force) cemented the U.S. as a deeply threatening aggressor that they could not deter and that essentially did not respect their perceived zone of influence. As Vladimir Putin retorted in 2016 when asked whether Russian intervention in Syria "aggravated" U.S.–Russian relations, "Think about Yugoslavia. This is when it started."[16]

Driven by those events, Russian and Chinese militaries set out to emulate and adapt various aspects of U.S. operational concepts,

weapons, and organizational structures. It was not hard for the Russians, since we invited several waves of Russian military officers to attend our joint warfighting and war planning schools during the 1990s. The Chinese downloaded what they needed through cyber-espionage and flooded academic institutions with students and professors eager to capitalize on our open system.

Yet within the Pentagon, those ripple effects barely caused concern. We were the champions, and the weak not only suffered what they must,[17] but were ignored. The 1990s addiction to shaping and its later incarnation in the 2000s as "Phase Zero" continued unabated, caught in an inertial cul-de-sac. Rather than providing a peace dividend for the American people and its military, the post–Cold War period became an era of constant military operations, produced senior leaders focused on diplomacy at the expense of warfighting, resulted in forces degraded by corroding readiness and personnel strain, and offered precious little strategic benefit from all the high-sounding, self-referential shaping rhetoric.

All of this happened for comprehensible reasons, but it was also based on the rather non-strategic assumption that the unipolar moment would last indefinitely. Triumphalism, a natural byproduct of a stunning victory in the Cold War and the evolutionary political dynamics in its aftermath, represented a seductive attraction that infuses the DOD to this day. Pentagon insiders may point the finger at others—and, indeed, the entire national security system contributed to the general decay—but if we are to rise out of the post–Cold War morass, the Pentagon bureaucracy must accept that it not only went along with, but also actively supported many of triumphalism's most corrosive elements. Multiple generations of officers helped to create and support the shaping narrative and exacerbated the drift away from warfighting. Yet those years resulted in the emergence of more pathologies than just triumphalism.

Pathology #2: Strategic Distraction: 9/11 and Its Aftermath

This gradual atrophy of war planning and focus, in addition to the high operational tempo experienced during the 1990s, accelerated after the attacks on 9/11. Operations in Afghanistan and Iraq dragged on with no meaningful strategic gains to show for the enduring, costly effort. The theory of shaping should have been debunked by this time if evidence had anything to do with it, but instead of preventing war and leading to a more peaceful world, constant deployment just led to a weary force engaged in constant operations. This accelerated the worst aspects of 1990s force atrophy, prompted international observers to view the U.S. as overly meddlesome, and stimulated unnecessary frictions. The result: strategic distraction.

Throughout the celebratory 1990s, a small minority of strategists like Andrew Marshall in the Office of Net Assessment (ONA) pointed to the potential emergence of China as a strategic competitor. Working in and for that office since 1996, I observed and supported a significant analytical effort exploring that issue. Despite evidence from Chinese sources that their economic resurgence and strategic rise might accelerate, however, ONA remained a voice crying out in the Pentagon wilderness.

Working in the ONA provided a catbird seat from which to watch Pentagon bureaucrats, in uniforms and suits, actively resist the possibility that any nation, let alone China, might emerge as a strategic competitor. But even ONA was largely dismissive of the storm brewing in Russia. In 1999, obscure Boris Yeltsin loyalist Vladimir Putin became the fifth Russian prime minister in less than 18 months. Russia's economy was in shambles, its demographic trends looked disastrous, and its military was bogged down in a quagmire in Chechnya. Meanwhile, the Pentagon was captivated by its operations in the Balkans, which served as an operational distraction.

As a result, anyone arguing for China's or Russia's phoenix-like rise were easily dispatched by the Pentagon cognoscenti. The methods ranged from calling people Chicken

Littles, accusing them of pining for the Cold War, or more derisively charging them with attempting to create another major competitor to revitalize a Cold War–like defense industrial base. It was common to hear the rather strategically dubious retort (often from very senior officials), "Are you deliberately trying to turn China into our enemy?" The majority felt secure in ignoring the mounting evidence of Chinese and Russian resurgence, in part because they believed that American military dominance and global engagement precluded or suppressed the rise of belligerent powers, but also because their attention was occupied by never-ceasing military interventions.

The 9/11 terrorist attacks made it dramatically easier for the bureaucracy to distract itself even though the years following that tragic event also included the acceleration of both China and Russia as troubling strategic competitors. Furthermore, the U.S. response to 9/11 hastened military atrophy in real and subjective terms, most tellingly for the power projection forces that would be critical in deterring a rising China and revanchist Russia. Ground and special operations forces took center stage in Afghanistan and Iraq. The Rumsfeld 2001 Quadrennial Defense Review, which was going to shine a bright light on the rise of China, was hurriedly rewritten at the 11th hour to emphasize counterterrorism (CT).[18] Counterterrorism ruled the day in both ideological and budgetary terms, and the focus on counterinsurgency (COIN) gradually cemented America's extended presence in Iraq and Afghanistan.

When the refocus on CT and COIN did not happen fast enough, Secretary of Defense Robert Gates pushed it harder at the expense of power projection forces. As a seasoned veteran of D.C. political turf wars, Gates knew that advocating for new CT/COIN systems was not good enough: He had to denigrate others in the zero-sum game of budgetary politics. Gates presided over what Center for Strategic and International Studies defense budget analyst Todd Harrison accurately described as "the hollow buildup" of the 2000s.[19] Although procurement funding rose slightly, increases came from specialized gear that has little or no utility in fighting a major power. Under Gates' watch, even talking about China as an adversary became banned speech for Pentagon personnel in the years from 2009–2011, well after the Chinese Second Artillery rocket forces had deployed DF-21D medium-range anti-ship ballistic missiles designed to hold the aircraft carrier air wing well outside its useful combat radius.[20]

The 2006 Quadrennial Defense Review identified China as a country poised at a "strategic crossroads." In retrospect, the 2006 QDR serves as a lodestar for bureaucratic distraction: "U.S. policy seeks to encourage China to choose a path of peaceful economic growth and political liberalization, rather than military threat and intimidation."[21] The bureaucracy loved that language, but China was not at a crossroads. It was marching down a very purposeful strategic path and would not be shaped.

Strategic distraction has a long half-life in the Pentagon. Even today, as the evidence pointing to the need to operate credibly against burgeoning Chinese and Russian conventional military formations multiplies, the Pentagon retains a distracting obsession with the "gray zone," a term created by Special Operations Command that describes sub-threshold irregular activities designed to destabilize a territory. Rather than actively developing those lost or atrophied aspects of major force employment, combined-arms operating concepts, heavy logistics, and power projection against formidable defenses, commentators and bureaucrats still reflexively talk about the gray zone. After almost two decades of dealing with occupation and counterterrorism, the gray zone had become the comfort zone.

Again, former Secretary of Defense James Mattis teaches us: "The surest way to prevent war is to be prepared to win one."[22] Chinese and Russian planners have carefully and painstakingly read our book and are becoming increasingly comfortable that they can prevail in major combat operations. If that continues, gray zone activity will be the least of our worries.

All of these distractions combined with 1990s triumphalism left the U.S. defense establishment at a dramatic analytical disadvantage as well, compared to our major power competitors. Events conspired to hyperfocus their study of our military, whereas ours became ever more distracted. How did a deficit in adversary analysis become yet another troubling pathology of victory?

Pathology #3: Lack of Analytical Depth and Sophistication

Analytical depth and sophistication about oneself and one's adversary constitute the cornerstone of any strategic competition. In order to compete, you must know your adversary. To compete well, you must know your adversary better than he knows you. The vast analytical depth underpinning our understanding of the Soviet Union served as a critical foundation of our ability to conduct a purposeful strategic competition. To be sure, analytical depth did not guarantee perfect understanding or translate into a focused strategy. That is not how strategy works in America. But it is true that the nation itself—its government, academic institutions, journalists, and interested citizens—combined over decades to build a deep, elaborate, longitudinal body of knowledge about the Soviet Union.

Above all, it is the *relative* depth, sophistication, and competitive focus of that knowledge base that provide competitive leverage. The objective is not to gain such analytical superiority that you can anticipate an adversary's decisions and actions: We cannot achieve that even for our own government. The goal must be to gain a more focused, more complex, more diverse understanding of the enemy *than the enemy has of us*. In that important relative sense, the American national security community suffers from an analytical deficit of such magnitude that only a serious, focused, and well-resourced campaign can meet the strategic need.

The first, most compelling analytical deficit for America in this triangular strategic competition stems from a dramatic asymmetry of focus. China and Russia know one thing: America is their most compelling existential threat and must be overcome. Our victory in the Cold War and liquidation of authoritarian regimes thereafter put us squarely in their strategic crosshairs. Our military employed an ever-expanding set of mind-bending innovations, seemingly without incentive, and was not shy about showing it off—stealth aircraft, precision guided munitions, even more accurate cruise missiles, and unmanned systems to name only a few. China had been carefully studying us as the prime target of their ambitions far longer than most Americans would like to admit, back to our normalization of relations in the 1970s and Ronald Reagan's acceleration of that relationship in the early 1980s.[23]

By contrast, we atomized our analytical focus from one big thing, the Soviet Union, to everything. Everything mattered, which meant that as a practical matter, nothing mattered. The intelligence community, for example, slashed its Russian analytical capability throughout the 1990s and then, after 9/11, gutted it, either retiring or repurposing highly educated, top-level analysts to counterterrorism work. The result was that by 2015, when I was asked by Deputy Secretary of Defense Robert Work to catalyze the DOD's and the intelligence community's Russian analytical effort, I found what amounted to a 15-year analytical black hole. When you lose longitudinal analytical depth, the rolling narrative about where they were and how they got here, it is hard to bring it back. We simply had lost our focus on Russia and required crash rehabilitation.

With respect to China, the defense community suffers from a different analytical deficit. For the most part, the DOD ignored the rise of China after the end of the Cold War. Starting with Admiral Dennis Blair, a succession of commanders of U.S. Pacific Command kept the Navy interested, but the Chinese Second Artillery's development and testing of the DF-21D anti-ship ballistic missile boosted the Navy's interest in the middle 2000s, right in the middle of the Pentagon's period

of maximum distraction during operations in Iraq and Afghanistan.

With the exception of efforts by the Navy, which largely kept adversary intelligence compartmented to naval issues and to itself, China was not the subject of serious analytical effort across the U.S. defense establishment until the evidence became overwhelming that its military rise constituted a looming threat. Unlike our approach to Russia, which benefitted from intense analytical focus during the Cold War but then fell into obscurity, the China effort started very slowly and rose gradually over time, but always in lag compared to the pace and magnitude of the People's Liberation Army's military modernization over the past three decades.

Today, intelligence and general analytical interest with respect to either adversary suffer from an inadequate level of analytical supply or demand across the defense community. The intelligence community's general disdain for open-source analysis continues unabated in an era when open-source information has exploded, leaving America with a perilous competitive information deficit.

The Navy remains a demanding customer for China information, but the Air Force, the other power projection service critical to dealing with China's rise, has largely neglected China analysis. Some individual exceptions exist, but for the most part, the Air Force still lacks the institutional interest or senior leader demand for analytical services. The Navy, for example, opened an open-source China Maritime Studies Institute at the Naval War College in the mid-2000s, whereas the Air Force's China Aerospace Studies Institute, modeled on the Navy's, did not open until more than a decade later. Similarly, the Army has slowly increased its demand for Russia-focused analytic support over the past several years, whereas the Air Force, also critical to the European theater, falls a distant second in its demand for Russian intelligence.

Finally, service-centered analytical demand tends to be rather tactical. With the neglect of open-source exploitation, broader strategic information about either nation tends to be highly compartmented and unavailable to or unknown by senior DOD leaders.

The contrast between current efforts and the Cold War analytical effort within the academic community and among journalists and specialist authors also bears mention. The Pentagon still exerts a powerful influence on each group, so its own analytical loss of concentration inevitably reverberated through those communities as well.

The Cold War academic and journalistic community constituted a diverse, curious, strategically focused group who contributed to a sophisticated, deep analytical pool of knowledge. Most important, those non-governmental sources posed a challenge to government analysts, sharpening America's analytical edge. Investigative journalists dug for information. Academics capitalized on strategic moments like the orbit of Sputnik in 1957, the Cuban Missile Crisis of 1962, or the defense reform debates of the 1980s to examine and critique the defense issues of the day. Some of that work, such as the work that led to a more nuanced understanding of the role of nuclear weapons, happened entirely outside the government and proved to be groundbreaking.

Nothing approaching that diverse analytical ecosystem exists today to bolster our understanding of China and Russia as strategic competitors. There is very little focus on how to prevail. During the years of distraction, the academic community shifted its focus to counterterrorism or counterinsurgency, and it has been slow to adapt to the re-emergence of major-power competition. Online defense analysis generally lacks the weight and sophistication of its Cold War antecedents, mostly because younger authors lack that comparative lens. As a nation, we imagined away major-power competition. Now that it is back, we do not know what to make of it.

Blame is not the objective here. A natural course of events, evolving bureaucratic incentives, and social trends put us in this position. Well-meaning, patriotic Americans fell into the post–Cold War vortex, leaving strategic

iconoclasts to keep the major-power competition pilot light from extinguishing. But we are where we are, which brings us to our final post–Cold War pathology: wishful thinking.

Pathology #4: Wishful Thinking: The Insidious Pathology

Remediation of the three maladies described above constitutes a herculean task for the American national security enterprise. Of all the pathologies of victory, however, wishful thinking hurts American strategic competitiveness the most and is the hardest to cure. Wishful thinking describes a broader, umbrella category that serves as a key enabler for all of the other pathologies. In the presence of distractions and analytical hollowness, it gains power. Ironically, wishful thinking also gains momentum as contrary evidence mounts.

Perhaps most appallingly to hard-working Americans, wishful thinking permeates our national security bureaucracy, the very group entrusted with exploring and guarding against the worst scenarios. It drives bureaucratic behavior: The cheerful, positive bureaucrat makes the boss happy and gets promoted, while the brooding, pessimistic, reads-too-much-history, "Chicken Little" empiricist is either confined to a dusty room or reorganized out of a job. The Pentagon bureaucracy, like all government bureaucracies, flourishes on inertia and "go along to get along" attitudes that, from a strategic perspective, retard reform when it is most needed.

Wishful thinking intensifies all of the other maladies like a competitive immuno-suppressive. Strategy is no place for happy talk, and when you are the world's sole superpower, no matter how loudly we whistle by the strategy graveyard, the human condition dictates unavoidably that everyone else in the world either wants to take America down or would be pleased if it happened. Someone must guard the strategic gates that Americans built over decades with blood and treasure, and they should not be smiling.

British author Christopher Booker captured the dynamics of American post–Cold War wishful thinking in a striking if unintentional manner by identifying the three phases of what he calls "the fantasy cycle." First, he observed that wishful thinkers experience the "dream stage" when "all things seem to go well for a time," as in the triumphal 1990s. Then, "because this make-believe can never be reconciled with reality," a "frustration stage" sets in, "prompting a more determined effort to keep the fantasy in being."[24]

After the 1990s, with the catalytic events of 9/11 and the rise of China and resurgence of Russia, the Pentagon entered Booker's frustration stage, typified by Secretary Robert Gates' cutting power projection programs and banning references to China as a competitor. Then, as Vladimir Putin thrust Russia back on the stage and invaded Crimea, it took years for the Pentagon to come around to treating China and Russia as a problem requiring action. The Pentagon's frustration period accelerated, along with escalating efforts at denial, until finally catalyzing in 2018 with the promulgation of Secretary Mattis's National Defense Strategy, which declared that "we are emerging from a period of strategic atrophy."[25]

But are we emerging or still mired in strategic atrophy? The Mattis National Defense Strategy seems only to have toughened the Pentagon's bureaucratic "sitzkrieg." How long will the dissonant "frustration stage" last? More important, what is Booker's third and final stage in "the fantasy cycle?" He calls it the "nightmare stage" when, as he puts it, "the fantasy finally falls apart."[26] Our purpose must be to fight the resistance to strategic reform caused by the pathologies of victory so that we can fend off the nightmare stage.

Six Embattled Strategic Judgments

Resistance comes in many forms, but it pops up repeatedly in response to key competitive strategic judgments that are critical to enacting the organizational changes required to conduct an effective competitive strategy against Russia and China. To understand the stiff institutional resistance to these ideas, one must understand their institutional ramifications.

Bureaucrats hate reform and understand that to kill it, they must attack its arguments. Six strategic judgments represent the ideological battlegrounds where this drama will play out.

Strategic Judgment #1: Russia and China present threats that are *increasingly global* in nature. One often hears denigration of adversary military capability as being only local or regional and thus not worthy of serious attention. Yet even though it has become increasingly obvious that the Russian and Chinese militaries may have achieved local overmatch, it is their increasingly global reach that poses a fundamental organizational challenge to the regional command stovepipes created by the Goldwater–Nichols legislation and exacerbated by the end of the Cold War.

In recent decades, we have become a global power with only regional strategies. How does the Pentagon coordinate and synthesize a response to global threats when each regional commander and staff cares about only one region? In an age in which the space and cyber domains, both inherently global and destabilizing, have become utterly indispensable to American military operations, the reform question becomes how we rationalize a geographically divided, integration-resistant system of regional fiefdoms behind a global campaign against two major-power adversaries.

Strategic Judgment #2: Russia and China represent *enduring, multi-decadal challenges*. Naysayers talk about China's or Russia's economy tanking as the end of those challenges, or that a change in leadership will somehow lead either nation to go back into its non-threatening box. Those arguments are merely excuses to do nothing and ignore the domestic politics of each country and the desire of their people to rise up out of a national humiliation.

If, however, you believe that China and/or Russia are here to stay as adversaries, that major-power competition is the historical norm and our post–Cold War unipolar decade was an anomaly, then you will advocate for significant changes in force structure and posture, changes in operational concepts, a dramatic increase in analytic focus and resources, and a return to actual integration (i.e., jointness). Each of these choices rates high on the list of Pentagon institutional allergies.

Strategic Judgment #3: Russia and China represent *highly volatile, crisis-unstable nuclear threats*. Conventional force types in the Pentagon, smug in their Second Offset afterglow and the walkovers of the 1990s, thought they got rid of their former nuclear overlords with the end of the Cold War. Regardless of what those officials might desire, our enemies believe that nuclear deterrence represents the highest expression of national power. Moreover, the escalatory dynamics of this age represent a clear, present, and truly existential danger to the American people.

The increasing incentive for preemptive action in the space and cyber domains represents a step-function increase in crisis instability, and awareness of that threat exists only among a very small group of analysts who are able to translate the Cold War literature on this issue into 21st century geopolitical and military-technical terms. We must rediscover a broader understanding of comprehensive stability in the 21st century and find ways to compete that minimize the incentives for preemption and escalation on all three sides.

Strategic Judgment #4: Russia and China express clear, significant *extraterritorial ambitions*. Modernists cling to the belief that territorial acquisitiveness is a vestige of our barbaric past. They will often adopt adversary propaganda to support their claims that, for example, Crimea was a part of Russia and contains numerous Russian citizens. Yet we see strong evidence that China and Russia harbor territorial grievances and want to act on them.

Crimea is a "drop-the-mic" example, but new, militarized South China Sea islands, Taiwan, and territorial coercion against India are just a few on a long list of Chinese claims. Most egregiously, Russia's numerous "frozen conflicts" such as in Eastern Ukraine, Transnistria (Moldova), and Abkhazia and South Ossetia (both in Georgia) represent the aggressive

revanchist doctrine not just of Vladimir Putin, but of the Russian people who applaud his actions.[27] Under the umbrella of advanced anti-access, area denial systems taken from America's Second Offset playbook, everyone on China's and Russia's borders has reason to be worried, and all represent escalatory dangers.

Strategic Judgment #5: China and Russia represent a *metasystemic strategic challenge*. That is, both have mobilized their nations to compete with America for primacy. Budgets must be modified, long-term investments made, institutions reimagined, and institutional connective tissues built. Accepting this in full requires a national commitment and a much higher degree of intra- and inter-governmental integration, which the unipolar-comfortable bureaucracy abhors. Integration is hard, but major-power competition demands it. Thankfully, we do not have to be perfect; we need only to be better than China and Russia. Perhaps we should analyze their integration activities to understand what we are up against.

Strategic Judgment #6: The competition with Russia and China represents an *ideological struggle*. It becomes tiring to hear wishful thinkers say that this is not an ideological struggle. Again, lack of analytical depth and sophistication seriously hampers this discussion. Very senior Russians and Chinese officials say repeatedly and with great passion that the United States represents an existential ideological enemy that is trying to penetrate and adulterate their cultures and liquidate their political systems. To them, this is ideological on a deep level.

Is it also a reciprocal threat? Former Secretary Mattis thinks so: "Failure to meet our defense objectives will result in decreasing U.S. global influence, eroding cohesion among allies and partners, and reduced access to markets that will contribute to a decline in our prosperity and standard of living."[28]

These six strategic judgments represent just a few of the rhetorical debates that define the struggle between those who desire strategic reform and those who like their current jobs. In the 1990s, the evidence concerning the chances of major-power competition was there (albeit harder to assess) for those few who would see it. Now that it is obvious, bureaucratic naysayers and foot-draggers have responded by elevating their game. Resistance to reform keeps escalating even as Putin and Xi continue to solidify the case for it.

But the stakes for American national security must take precedence over the comfort requirements of "The Blob," as the entrenched, inertial bureaucracy has been called.[29] In order to support the 2018 National Defense Strategy and embark on a revitalized competitive trajectory, we must address the pathologies of victory and act on Secretary Mattis's admonition to "pursue urgent change at significant scale."[30]

Conclusion

The only antidote to the pathologies of victory is fear. In a bureaucracy as large as the Pentagon's, collective fear must reach a point at which it overcomes inertia. That this certainly has happened in China and Russia is evidenced by a series of real institutional reforms in their national security establishments.

Moreover, we have done it before. We feared, in that serious, strategic, existential way, the British during the Revolutionary War and for decades afterward. We feared the Axis Powers enough during World War II to mobilize the nation. We feared the Soviet Union during the Cold War, the first time since the Revolution that we could have been utterly destroyed as a nation. In that extended conflict, both the First and Second Offset Strategies came about as a result of accumulated, collective fear opening the way to meaningful defense reform.

Yet even in the presence of self-declared, powerful nation-state enemies that possess nuclear arsenals and aim to prevail over us, our national security apparatus acts as though we still lived in the bucolic unipolar moment. They prefer business as usual today; about the future, who knows? Because of this bureaucratic sclerosis, the National Defense Strategy has not yet affected budgets or force structure or war plans, nor has it catalyzed an

across-the-board campaign to rebuild our anemic analytic ecosystem.

Thus, the wheel of strategy turns. If we as Americans do not want that wheel to roll over us, we can take positive steps to cast aside some of the more dysfunctional attitudes and orientations that have accumulated over the past 30 years. To prevail against self-declared enemies with focused national power and deeply held historical grievances, America needs to rediscover some of the harder, sharper, more pragmatic aspects of our national character and adapt them to the challenges of the 21st century security environment. We must irradiate the pathologies of victory and, by doing so, help the defense community to rediscover its latent but uniquely American competitive drive.

The 21st century presents advantages for authoritarian regimes and vulnerabilities for open, representative governments that we have already observed. We ignore them now at our peril.

Endnotes

1. This essay uses the term "major-power competition" instead of the more common "great-power competition" for a simple reason: By any standard, China and Russia are not great powers. America ranks as the only great power today and for the foreseeable future. We should not ascribe great-power status to adversaries who do not measure up.
2. Among this afflicted subgroup, the now-departed uber-strategist Andrew Marshall saw the potential emergence of China as a strategic adversary as far back as the 1980s and accelerated his analytical focus during the 1990s. Just one of his farsighted projects from the mid-1990s includes an investigation of a purported Chinese carrier-killing medium-range ballistic missile, for which he and his tiny staff were dismissed by a fleet of naval analysts as cranks. The author worked on this project for the Office of Net Assessment in the mid to late 1990s.
3. Susan J. Koch, "Presidential Nuclear Initiatives of 1991–1992," National Defense University, Center for the Study of Weapons of Mass Destruction *Case Study* No. 5, September 2012, pp. 1 and 19, https://ndupress.ndu.edu/Portals/68/Documents/casestudies/CSWMD_CaseStudy-5.pdf (accessed July 3, 2019).
4. The First Offset Strategy countervailed the Soviet Red Army's mass and proximity advantage by using nuclear coercion during the immediate post–World War II years. Then, as that competitive advantage waned in the 1960s and 1970s, American strategists conceived of the Second Offset Strategy, which employed microprocessor-based systems to achieve conventional overmatch against superior Red Army numbers and proximity. In both cases, fear drove the defense bureaucracy against a phalanx of naysayers to overcome inertia and enact real reform.
5. The post–Cold War nuclear atrophy adversely affected the Navy's nuclear deterrent forces as well. The effects of corrosive institutional drift in both nuclear services were captured with clarity in a special independent review for the Secretary of Defense authored by former Strategic Air Command Commander in Chief and retired General Larry Welch and retired Admiral John Harvey in late 2014. For that extraordinary document, see *Independent Review of the Department of Defense Nuclear Enterprise*, U.S. Department of Defense, June 2, 2014, https://dod.defense.gov/Portals/1/Documents/pubs/Independent-Nuclear-Enterprise-Review-Report-30-June-2014.pdf (accessed July 3, 2019). The author served as Executive Secretary for the high-level Nuclear Deterrent Enterprise Review Group charged by Secretary of Defense Chuck Hagel with addressing the many deficiencies found in that report. See U.S. Department of Defense, "Statement on the Nuclear Enterprise Review & Reforms as Delivered by Secretary of Defense Chuck Hagel, Pentagon Press Briefing Room," November 14, 2014, https://dod.defense.gov/News/Speeches/Speech-View/Article/606634/statement-on-the-nuclear-enterprise-review-reforms/ (accessed July 3, 2019).
6. Eryn MacDonald, "Independent Review of DOD's Nuclear Enterprise: Money, Maintenance, and Morale," Union of Concerned Scientists, November 21, 2014, https://allthingsnuclear.org/emacdonald/independent-review-of-dods-nuclear-enterprise-money-maintenance-and-morale (accessed July 3, 2019).
7. For a good explanation of the price of delaying U.S. nuclear recapitalization, see Peter Huessy, "The 40 Year Nuclear Procurement Holiday," *Real Clear Defense*, October 11, 2016, https://www.realcleardefense.com/articles/2016/10/12/the_40_year_nuclear_procurement_holiday_110195.html (accessed July 3, 2019).
8. Les Aspin, Secretary of Defense, *Report on the Bottom-Up Review*, U.S. Department of Defense, October 1993, p. 8, https://www.hsdl.org/?view&did=448259 (accessed July 3, 2019).
9. H.R. 3622, Goldwater–Nichols Department of Defense Reorganization Act of 1986, Public Law 99-433, October 1, 1986, https://www.govinfo.gov/content/pkg/STATUTE-100/pdf/STATUTE-100-Pg992.pdf (accessed July 4, 2019).
10. For a trenchant examination of the emergence of America's new proconsuls in the 1990s, see Dana Priest, *The Mission: Waging War and Keeping Peace with America's Military* (New York, W.W. Norton, 2003).
11. See, for example, "Section III, Defense Strategy: Shaping the International Environment," in U.S. Department of Defense, *Report of the Quadrennial Defense Review*, May 1997, pp. 9–10, https://history.defense.gov/Portals/70/Documents/quadrennial/QDR1997.pdf?ver=2014-06-25-110930-527 (accessed July 6, 2019).
12. U.S. Department of Defense, *Quadrennial Defense Review Report*, September 30, 2001, p. 8, https://archive.defense.gov/pubs/qdr2001.pdf (accessed July 4, 2019).
13. Michael O'Hanlon, "Clinton's Strong Defense Legacy," *Foreign Affairs*, Vol. 82, No. 6 (November/December 2003), p. 133, https://www.brookings.edu/wp-content/uploads/2016/06/20031101.pdf (accessed July 4, 2019).
14. Sergey Gorshkov was Admiral of the Fleet of the Soviet Union, leading the U.S.S.R. navy and serving at the highest levels of the Soviet defense establishment for much of the Cold War.
15. Eliot A. Cohen, "Come the Revolution," *National Review*, July 31, 1995.
16. Christian Snyder, "Analysis: How a 1999 NATO Operation Turned Russia Against the West," *The Pitt News*, September 7, 2017, https://pittnews.com/article/121917/opinions/analysis-1999-nato-operation-turned-russia-west/ (accessed July 4, 2019).

17. In the Peloponnesian War, 431–404 BC, Athens embarked on a military expedition against the people of Melos, who stood neutral in the war. Facing subjugation or destruction, the Melians protested to the Athenians, who replied that "you know as well as we do that right, as the world goes, is only in question between equals in power, while the strong do what they can and the weak suffer what they must." See Chapter XVII, "Sixteenth Year of the War–The Melian Conference–Fate of Melos," in Thucydides, *History of the Peloponnesian War*, https://www.mtholyoke.edu/acad/intrel/melian.htm (accessed July 4, 2019).
18. See, for example, U.S. Department of Defense, *Quadrennial Defense Review Report*, September 30, 2001, pp. 18–19.
19. Todd Harrison, "Defense Modernization Plans Through the 2020s: Addressing the Bow Wave," Center for Strategic and International Studies, International Security Program *Report*, January 2016, p. 3, https://csis-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/160126_Harrison_DefenseModernization_Web.pdf (accessed July 4, 2019). The labels can be both entertaining and revealing. In the 1990s, the triumphalist acquisition downturn was called the "procurement holiday."
20. For a comprehensive analysis of this threat, its Soviet precursors during the Cold War, and what the Navy could build to offset this anti-ship system effectively, see Thomas P. Ehrhard and Robert O. Work, *Range, Persistence, Stealth, and Networking: The Case for a Carrier-Based Unmanned Combat Air Wing*, Center for Strategic and Budgetary Analysis, 2008, https://csbaonline.org/uploads/documents/The-Case-for-A-Carrier-Based-Unmanned-Combat-Air-System.pdf (accessed July 4, 2019). Despite building a representative prototype and flying it from a carrier in a series of historic flight tests, the Navy resisted procuring this system for the fleet in a classic case of failure to integrate a strategically leveraged, innovative system. To understand why, see Robert Martinage and Shawn Brimley, "The Navy's New Museum Drone and Strategic Malpractice," War on the Rocks, April 28, 2015, https://warontherocks.com/2015/04/the-navys-new-museum-drone-and-strategic-malpractice/ (accessed July 4, 2019).
21. U.S. Department of Defense, *Quadrennial Defense Review Report*, February 6, 2006, p. 29, https://history.defense.gov/Portals/70/Documents/quadrennial/QDR2006.pdf?ver=2014-06-25-111017-150 (accessed July 4, 2019).
22. James Mattis, Secretary of Defense, *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge*, U.S. Department of Defense, 2018, p. 5, https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf (accessed July 4, 2019).
23. Jacqueline Deal, "The Fudan Fulcrum," Ronald Reagan Institute, https://www.reaganfoundation.org/media/354598/dr_jacqueline_deal_fudan_university.pdf (accessed July 4, 2019).
24. Booker lists as one of the contemporary fantasies of our time "the belief that we can sort out the world's trouble spots by reckless military interventions which fail to anticipate the bloody chaos they will unleash." Christopher Booker, "What Happens When Great Fantasies, Like Wind Power or European Union, Collide with Reality?" *The Telegraph*, April 9, 2011, https://www.telegraph.co.uk/comment/columnists/christopherbooker/8440423/What-happens-when-the-great-fantasies-like-wind-power-or-European-Union-collide-with-reality.html (accessed July 4, 2019).
25. Mattis, *Summary of the 2018 National Defense Strategy of the United States of America*, p. 1.
26. Booker, "What Happens When Great Fantasies, Like Wind Power or European Union, Collide with Reality?"
27. Russia maintains military bases in Transnistria, South Ossetia, and Abkhazia. See Robert Orttung and Christopher Walker, "Putin's Frozen Conflicts," *Foreign Policy*, February 13, 2015, https://foreignpolicy.com/2015/02/13/putins-frozen-conflicts/ (accessed July 4, 2018).
28. Mattis, *Summary of the 2018 National Defense Strategy of the United States of America*, p. 1.
29. Susan B. Glasser, "Trump Takes on The Blob," *Politico*, March/April, 2017, https://www.politico.com/magazine/story/2017/03/trump-foreign-policy-elites-insiders-experts-international-relations-214846 (accessed July 4, 2019).
30. Mattis, *Summary of the 2018 National Defense Strategy of the United States of America*, p. 11.

Being Realistic About Strategy

Bill Hix

In the midst of peace, war is looked upon as an object too distant to merit consideration.

—Publius Flavius Vegetius Renatus, *De re militari*

As this essay is written, America is reacting to a complex mix of international and domestic challenges. The U.S. and those aligned with it confront geostrategic rivalries characterized as great-power conflict, with a rising, revisionist China[1] and a resurgent, revanchist Russia[2] that act both independently and in collaboration.[3] Growing and increasingly dangerous regional challenges manifest in nearly every corner of the globe. The scourge of terrorism, though diminished for the moment, remains.[4] These challenges are further complicated by significant economic tension[5] and daunting technological change.[6] Diverging priorities and political discord at home[7] and abroad[8] often result in half measures and paralysis on large issues. The assumptions of the past have not worn well.[9]

These contemporary developments are complex, demanding, and dangerous. Former CIA Deputy Director Michael Morell characterizes this period as "the most complex and difficult global security environment in our nation's history."[10] Economically, Bloomberg recently reported leading investors are "bracing for protracted superpower conflict and adjusting their portfolios accordingly."[11] Exacerbating these challenges is a "technological revolution…unlike anything humankind has experienced before."[12] Indeed, Leon Panetta, former CIA Director and Secretary of Defense, observed "The last time the global threat picture was this crowded and combustible was in the lead-up to World War I."[13] That combustion consumed the world in a catastrophe of world war, economic calamity, and political upheaval that spanned three decades.

America eventually prevailed, but its response, bereft of strategy, was at best reactive. The U.S. entry into World War I, more out of "passion and propaganda…than by realistic analysis [or] prudent…'war planning,'" left the President and the nation "powerless"[14] to "make the world safe for democracy." On the eve of World War II, General Albert C. Wedemeyer has noted, "Washington seemed as confused and divided as the nation itself."

> I could find few if any concrete answers to… vital questions. So far as I could discover, no systematic official attention had been given them. No mechanisms for considering them in an orderly and informed way existed within the government. Indeed, I found little awareness or acceptance of the notion that supreme issues of war and peace *required* thorough analysis in the top echelons of the national government. An uneasy feeling came over me that the ship of state was rudderless in the storm; or, if the rudder were still intact, there at least were no charts and orders on the bridge to guide the navigator.[15]

Success came at an exceptionally high cost. For the U.S., this included the economic and social displacement of the Great Depression and the bloodiest period of war in its history.[16] With nations across the globe suffering, on average, a 30 percent economic downturn, rising illiberal political movements, including fascism, socialism, and Communism; civil and global war; and, in the end, some 100 million dead,[17] this 30-year period was perhaps history's most consequential.

Yet in its aftermath, the U.S. prevailed in the no less dangerous four-decade Cold War at far less cost. Historically guided by doctrines,[18] America's response to the Cold War challenge was a unique act of grand strategy.[19] Compelled by its new role as a great power and the existential, global post-war challenge posed by an increasingly aggressive and capable Soviet Union,[20] America formalized its grand strategy of containment in President Harry Truman's National Security Council Paper NSC-68. Refined by President Dwight Eisenhower and comprehensively leveraging the whole of statecraft,[21] that grand strategy guided America's successful response across nine presidential Administrations.[22]

The Cold War, despite many lesser crises, saw the U.S. avoid nuclear Armageddon and end that great-power conflict with a "whimper rather than a bang."[23] The question is whether the U.S. can engineer a similar outcome despite facing two collaborating great-power competitors[24] and a host of other challenges as complex and volatile as any in history.[25]

Today's great-power challenges, like those of the past, are contests of true consequence, as the global catastrophe of two world wars and the Cold War's threat of nuclear Armageddon confirm. Today's risks, posed by the centennial ambitions, capabilities, and actions of China,[26] along with Russia,[27] separately and in collaboration,[28] are no less consequential. Indeed, they may well be greater as the world has not yet properly evaluated the risk.[29]

Given the magnitude of those challenges, America and others invested in a system that supports self-ruling government and market economics should seek to repeat the geostrategic success of our Cold War predecessors: retaining America's global leadership, avoiding Armageddon, and preserving the principles that underpin that system. Fully realized, such an effort must be comprehensive, placing demands on every instrument of statecraft. The business of strategy is a complex one.

Why Strategy?

Strategy without tactics is the slowest route to victory. Tactics without strategy is the noise before defeat....

—Sun Tzu, *The Art of War*

The concept of strategy originated in ancient Greece[30] and evolved over time, with the Romans, Chinese, and Europeans all adding to its understanding. Entering common use in Europe in the late 18th century, its framework expanded as national interests ranged continentally and then globally; weapons increased in sophistication, reach, and lethality; and the resources, reach, and instruments of statecraft grew. On the eve of World War II, Princeton's Edward Meade Earle offered that "strategy is...an inseparable element in statecraft at all times."[31]

In the modern era, strategy has extended beyond the realm of government and war. As Lawrence Freedman has observed, "Everyone needs a strategy.... [N]o serious organization could imagine being without one.... [N]o military campaign, company investment or government initiative is likely to receive backing unless there is a strategy to evaluate."[32]

Yet, while many fields rely on strategy to guide their endeavors, none is more consequential than national security. It is here that the concept of strategy originated and evolved, and it is here that the interests of nations and life and death hang in the balance. Given history and the risk inherent in a world challenged by conditions uncomfortably parallel to those preceding World War I,[33] it would seem prudent to "address causes rather than symptoms, to see the woods rather than the trees."[34]

What Kind of Strategy?

In the realm of national security, however, the debate is spirited and unresolved. As strategy lacks an "agreed-upon definition...that describes the field and limits its boundaries,"[35] authorities generally take one of two views on strategy and national security. One holds that strategy is solely the purview of war. The other advances a more expansive understanding.

In this debate, adherents of Clausewitz, author of the 19th century classic *On War*,[36] maintain that strategy's sole focus is war. This view, advanced by many,[37] is exemplified by Oxford's Hew Strachan: "[P]oliticians, who in practice exercise strategic responsibility, have been persuaded by neo-Clausewitzians that war really is the continuation of policy by other means. This is to elevate theory over actuality."[38] He continues:

> Today strategy is too often employed simply as a synonym for policy.... Strategy has to deal in the first instance not with policy, but with the nature of war.... [W]estern military thought has been hoodwinked by the selective citation of... Clausewitz's own introduction...that 'war is nothing but the continuation of policy with other means.' That...is not a statement about the nature of war.[39]

While Strachan acknowledges more expansive views,[40] he is unconvinced. He asserts that "[s]trategy is about war and its conduct, and if we abandon it, we surrender the tool that helps us to define war, to shape it and to understand it."[41]

Strachan's skepticism would be familiar to Johns Hopkins' Eliot Cohen, who rejects the very notion of grand strategy, specifically targeting Earle's definition of grand strategy as "'the science and art of controlling and utilizing the resources of a nation...to the end that its vital interests shall be effectively promoted and secured.'"[42] Perhaps reflecting frustration over the Iraq and Afghan wars, Cohen maintains that the "lure of grand strategy reflects the frustration of military officers at the intractability of the problems they are assigned, and at what often seems to them the slackness of the rest of government"[43] and asserts that "grand strategy is an idea whose time will never come, because the human condition does not permit it [and it] confuses the big idea with important choices."[44]

For Cohen, containment of the Soviet Union was merely "policy...a more useful if less grand term"[45] that proved inadequate in defining the U.S. response to the likes of the Suez crisis, Vietnam, or China's opening. His analysis appears to ignore containment's larger geostrategic success. Focused on the existential threat of the Soviet Union, as Kennan described,[46] containment was more than mere policy. Comprehensively orchestrating all instruments of statecraft, this grand strategy enabled America to maintain its focus on the primary threat, notwithstanding countless crises. Reflecting Eisenhower's view that in the "cold war...victory...could be as devastating as defeat,[47] this grand strategy, balancing America's strengths, guided successful resolution of that generational struggle.

While a thoughtful observer and strong advocate for military power, Cohen does not demonstrate that military-centered strategy is superior to a grand strategy. As Paul Kennedy concludes in *The Rise and Fall of the Great Powers*, "the history of the past five hundred years of international rivalry demonstrates that military 'security' is never enough."[48] Moreover, a strategy that relies solely on military power would seem to be insufficient given the challenge of China, described by Cohen as "America's greatest challenge,"[49] and the complexities of Cohen's other "distinct challenges."[50] It is notable that recent Defense Department,[51] U.S.–China Economic and Security Review Commission,[52] and other reporting cast China and the greater security environment as far more challenging than even Cohen found.[53]

Seemingly responding to Cohen, Freedman concludes that "[s]trategies are neither designed nor implemented in controlled environments.... [S]uccessful outcomes depend on trying to affect a range of institutions,

processes, personalities, and perceptions...[to cope] with situations in which nobody [has] total control."[54] Consistent with this view, John Hopkins' Hal Brands proposes that "[g]rand strategy is the highest form of statecraft...the intellectual architecture that lends structure to foreign policy" that is "essential to effective statecraft, but...so challenging as to be an illusion."[55]

Illusion or not, an evolving concept of grand strategy emerged from the realities of a world either at or on the brink of war. "The expansion in the meaning of strategy and grand strategy spilled over the boundaries of war and peace, propelled by the increasing complexity of war," writes Lukas Milevski. "Strategy—and grand strategy—evolved in reaction to the requirements posed by the actual geopolitical context"[56] where the "distinction between war and peace [is] insignificant."[57] These observations are instructive as strategists consider today's challenges and those on the horizon.

Consistent with "actual geopolitical context," Brands delineates grand strategy as "[a] purposeful and coherent set of ideas about what a nation seeks to accomplish in the world, and how it should go about doing so."[58] In a new geostrategic environment of the sort described by Milevski, "[s]trategy is not merely the art of preparing for the armed conflicts in which a nation may become involved.... It is the rational determination of a nation's vital interests...its fundamental...priorities" that guide "the narrower strategy of war planning and warfighting."[59]

In an era of increasingly complex geostrategic conditions, the interplay between a grand strategy and a series of aligned and complementary functional and regional strategies would seem to provide a more agile and resilient approach to "what a nation seeks to accomplish in [this] world, and how it should go about doing so."[60] Such an approach acknowledges the complexities of this age, the unique and complementary nature of each instrument of statecraft, and the geographic, social, cultural, and historical distinctiveness of various regions.

While the Cold War era was fraught with unforeseen developments,[61] it ended well. That outcome reinforces grand strategy's value in the modern age while also exposing insights into the challenges of strategy development and key considerations for framing a strategy that can endure over the coming decades.

Considerations of Strategy

This comprehensive interpretation of strategy would give U.S. policy a measure of coherence and stability it has not had, and does not now possess, but which is utterly mandatory if our republic is to meet the challenges of the future.

—General Albert C. Wedemeyer, USA, Retired

While essential to dealing with complexity, strategy is difficult business. In *Explorations in Strategy*, Colin S. Gray identifies six difficulties: its "complexity," its demands on "the intellect" and "the imagination," its "unique physical and moral burdens," "the uniquely pervasive and uniquely debilitating nature" of friction "in that realm," and the fact that "success in strategy calls for a quality of judgment that cannot be taught."[62] As America repostures strategically, Gray's analysis warrants careful consideration, particularly when assessing the qualities of those charged with developing and implementing strategy.

Noting Gray's cautions, strategy also requires capacity. Albert C. Wedemeyer, principal author of the World War II Victory Plan and no stranger to the imperatives for and challenges of strategy, questioned "the adequacy of our national policymaking machinery to deal with the challenges of an increasingly turbulent and complex world."[63] He advocated more effective strategies, asserting that "all the [post–World War II] ordeals America has experienced...could have been much brighter" with more coherent strategies.[64]

The complexity of today's challenges, however, demands that other considerations be accounted for as well. A recent study usefully noted that U.S. strategies have suffered

systemically from unclear priorities, inattentive leadership leading to lowest-common-denominator decisions, poor links between objectives and resources, and are slow to respond to change.[65] Its recommendations emphasize the necessity to involve leadership, account for politics, drive priorities, account for resourcing, align objectives across strategies, focus aims, and address risk.[66]

Mindful of history, the perspectives and insights reviewed above, and current and emerging challenges, several considerations should be taken into account in framing a strategy relevant to this era.

Interests. National interests, "the essential foundation for a successful American foreign policy,"[67] can be characterized as vital, extremely important, important, and secondary.[68] Interests are synonymous with priority, and strategies not aligned with interests needlessly expend resources and often fail at a high cost. "Only a foreign policy grounded in America's national interests...will allow America's leaders to explain persuasively how and why American citizens should support expenditures of American treasure or blood."[69] While central to our understanding of our priorities, understanding other nations' interests is equally important. As British Prime Minister Lord Palmerston observed, "Our interests are eternal and perpetual, and those interests it is our duty to follow."[70]

American interests evolved rapidly in the early days of the Cold War. NSC 68 framed U.S. vital interests around national survival, avoiding war, and preserving America's sphere of influence in the face of exhausted allies and a growing Soviet threat.[71] With NSC 162-2, emerging from Eisenhower's Solarium Project, expressions of national interests expanded, recognizing the importance of allies, the necessity of choices, the need to balance defense and economics, and the value of stabilizing nations and creating mutual interests.[72]

On the eve of the 21st century, the Commission on America's National Interests found "five vital US national interests" that reflect those formulated some 50 years earlier:

- Prevent, deter, and reduce the threat of nuclear, biological, and chemical weapons attacks on the United States or its military forces abroad;
- Ensure US allies' survival and their active cooperation with the US in shaping an international system in which we can thrive;
- Prevent the emergence of hostile major powers or failed states on US borders;
- Ensure the viability and stability of major global systems (trade, financial markets, supplies of energy, and the environment); and
- Establish productive relations, consistent with American national interests, with nations that could become strategic adversaries, China and Russia.[73]

Even with this consistency, however, fostering a common understanding of these interests and the challenges to them, as well as building support for the actions and resources necessary to protect them, requires evidence, leadership, and communication. Unity on what comprises the nation's vital interests is vital.

Mindful of Lord Palmerston's judgment, strategy development must consider the interests of others. For example, the strategic concept of "offshore balancing," relying on a regional power to check instability and counter hostile powers, depends on the alignment of national interests. The challenges of the nonaligned movement during the Cold War; the limits of ally or proxy commitment in Iraq, Afghanistan, Libya, or Syria; and issues of freeriding in alliances and coalitions all highlight the implications of conflicting or misaligned national interests. Mapping interests before acting prevents disappointment, overextension, and failure.

Leadership. As in most things, leadership is central to the development and execution of strategy. Leadership has both individual and international components. From an individual

perspective, effective strategy depends on vested leaders. Leadership styles and priorities vary; therefore, process must conform to the leader in question. However, the absence of leader involvement leaves strategy subject to bureaucratic and external influences, risking failure. From an international perspective, alliances and coalitions rarely function effectively when ruled by committee. One member must assume the leadership mantle.

The formulation of NSC 68 originated from Truman's staff because the President was not experienced in policy and planning and was wrestling with a host of domestic and international issues. Truman's inexperience was not unique. In the lead-up to World War II, Franklin Roosevelt "had little time to consider grand strategy."[74] This bottom-up approach created an impetus for action, but it also resulted in an overly militarized grand strategy and a host of disconnected policies.

Eisenhower's experience drove the top-down Project Solarium, resulting in a comprehensive strategy that prioritized economics and politics, buttressed by prudent military deterrence. Conversely, captured by Vietnam and domestic issues, Lyndon Johnson and Richard Nixon allowed focus to slip. The result was military surprise as the Arab–Israeli War exposed superior Soviet military capabilities that nearly defeated Israeli forces, a reasonable proxy for American forces.[75] Ronald Reagan hastened the Soviet collapse through a complex, balanced campaign of economic growth, military modernization, aggressive pressure in Europe, arms control, relentless political action, and unsparing political warfare. Engaged national leadership ensures effective strategy.

Absent America's current global leadership role, any strategic approach is not likely to succeed. No nation or coalition with similar interests or values is likely to assume that role or capably bear that burden. Moreover, history has been unkind to declining powers in great-power transitions.[76] Further, eras without strategic leadership have invited risk, including world wars. However, unlike during the Cold War, growing diversification of power,[77] especially economic power, enables more to share this burden. Current and future allies likely resist this obligation.

Unity. The Constitution's requirement that the Congress declare war and the Senate ratify treaties reflects the Framer's intent that a degree of unity is required on questions of national interest and security beyond our nation's shores. Developing, resourcing, and implementing a strategy that can resolve complex and enduring problems requires consent across political constituencies. Strategies without this consensus are invariably underresourced, lack resilience, and exploitable by an adversary.

This challenge is reflected in the reception accorded America's most recent security and defense strategies. While addressing great-power conflict,[78] and despite statements of their import,[79] they are the subject of great criticism.[80] Moreover, they neither reflect a consensus view, given a widening partisan gap in national priorities,[81] nor enjoy consensus support within the nation's political leadership.[82]

Problem Definition. Not all challenges, no matter how emotionally compelling, can be treated equally. At best, addressing low-priority or poorly defined problems can needlessly waste resources. At worst, such errors can mire the nation in distractions, exposing it to strategic surprise or risking political, economic, and strategic bankruptcy. Clarity on the problem and its relationship to national interest reduces this risk. Conversely, the absence of unity on the nation's problems makes the coherent formulation and implementation of strategy less likely. This hinders the advancement of U.S. interests, creates opportunities for adversaries and other actors, and denies opportunities to the U.S. and its allies.

America is confronted by a complex mix of international and domestic challenges. Sorting these out is a function of probability and consequence. Some high-probability challenges are continuous, requiring careful prioritization and judicious response so that they will not distract attention from the most

consequential. In the current environment, the challenges of China and Russia are existential, with economics and technology equally consequential as "technology has blurred the lines between national security and economic competitiveness."[83]

China, both a Cold War adversary and partner of convenience, is now an expansionist, opportunistic power. Chinese strategic culture is asymmetric to Western tradition while involving the whole of statecraft.[84] Its social-historical culture is likewise asymmetric.[85] China's approach is decidedly long-term. China was recently characterized as "climate change: long, slow, and pervasive, as opposed to Russia's 'hurricane.'"[86] Its strategic ambition, not yet well understood, is to supplant America as the dominant global power by mid-century.[87]

China competes comprehensively. Economically, its gross domestic product (GDP) exceeds that of the U.S.[88] Technology figures heavily for China, presenting a decade-long,[89] Sputnik-like moment that can be existential. Over time, given the dominance historically accrued by technologically ascendant nations, China's military will protect Chinese interests as they expand along the Belt and Road.[90] Should China's military modernization and institutional reforms succeed, its military will likely pose an existential military threat in 10 to 15 years.[91] Should China succeed in supplanting the U.S., America's very way of life will be at stake.

Russia, as the Soviet Union, was a deliberate, opportunistic, and expansionist power with checks and balances that controlled escalation. Today, Russia is a defensive, reactive, and declining power with a smaller, less balanced structure that dangerously fears and will resist decline. Its strategic and historical-social culture is not in the Western tradition. It is driven by perceived vulnerabilities, comprehensive views of power, and the need for immediate decisive advantage.[92]

While spanning Eurasia, Russia's center of gravity remains west of the Urals.[93] Russia remains focused on securing buffers and restructuring Europe's balance of power. Its military is a priority: Its military creates a shield of perceived impunity behind which it wages an indirect campaign to unravel the European Union and NATO, seeking to improve its advantage in a divided Europe. Russia remains an existential threat, given its nuclear weapons, and its asymmetric political will and information power may create existential outcomes. Successful disintegration of Europe would invite instability and war, invariably pulling the U.S. across the Atlantic.

Economics remains an American strength. America and its allies must preserve, promote, and revise the market economic system that has significantly increased wealth, reduced poverty, and diversified economic power across the globe.[94] Unlike the Soviet Union in the Cold War, China is proving to be a worthy economic adversary, with a GDP exceeding America's.[95] Economic security is national security as technology blurs the lines between national security and economic competitiveness.[96] Further, success will demand constant demonstration of the value of liberty and market economics, as current debates on inequality and socialism highlight. The U.S. must take steps to sustain if not increase economic growth to create resources both to meet the economic and social expectations of its people and to support necessary effort across all instruments of statecraft.[97] Allies must also reassess their economies and likewise increase the resources available to their nations.

Technology defines the 21st century socially, politically, economically, and militarily. In a period of change of greater consequence than the dislocating impact of the Industrial Age,[98] the U.S. and selected allies must regain and preserve undisputed intellectual and developmental leadership in technology and proactively prepare the international system and society for the potentially dislocating impacts of this emerging age.

Assumptions. In lieu of facts, prudently employed assumptions enable foresight and narrow the degree of uncertainty over time; imprudent assertions create or obscure risk. Strategy is necessarily forward-looking and is

only as good as the assumptions upon which it rests. Absent facts and evidence, assumptions allow the strategist to see the way forward. However, using overly optimistic projections merely hastens strategic surprise. When assumptions change, the strategies they underpin must change as well. Yet stubborn adherence to strategy despite changing conditions remains more the rule than the exception.[99]

To America's benefit, Charles Bohlen did not fall prey to stubborn adherence to failing assumptions. In 1947, setting the predicate for containment, he observed that:

> The United States is confronted with a condition in the world which is at direct variance with the assumptions upon which, during and directly after the war, major United States policies were predicated.... [H]owever much we may deplore it, the United States...must re-examine its major policy objectives.... Failure to do so would mean that we would be pursuing policies based on the assumptions which no longer exist....[100]

Today's strategic process has not benefitted from such candid foresight. Despite decades of assumptions that discounted adverse outcomes,[101] adversaries have been able to take advantage of American distraction. Although awareness is improving,[102] technological trends can lead to optimistic assumptions on future conflict.[103] To temper such optimism, strategists should carefully consider Lawrence Freedman's *The Future of War: A History*, which chronicles the folly of short-war pundits and the consequences of their promoting hope rather than clear-eyed analysis.[104]

Methods. The instruments of statecraft are most effective when adequately resourced, employed comprehensively, and coordinated. Significant objectives are rarely achieved without the coordinated use of these instruments; without coordination, they can even work at cross-purposes. The resources and capacity of the agencies associated with each instrument must also be clearly understood; otherwise, strategies will fall prey to unrealistic expectations. Recognizing the truth of Eisenhower's Cold War concern that "victory...could be as devastating as defeat,"[105] America's political, economic, informational, and technological instruments must lead and be backed by capable military power, prudently resourced, and mindful of Paul Kennedy's great-power trap.[106]

Given its importance to national security, military power deserves a more focused review. Military power serves the nation by protecting, defending, and supporting America and its people, deterring physical—or, given the technologies of this age, nonphysical or virtual—attack on the United States and its allies.

In the face of indirect operations in peacetime, the military must create conditions that enable statecraft's other instruments to create and sustain an environment in which American society, liberty, and market economies thrive. If America is attacked, military power should fight forward and defeat any attacker to defend the strength and viability of America's society and allies and minimize war's effects on the homeland.

However, the realities of war against an existential threat place a premium on deterrence, made real by the capability and capacity to fight and win. Deterrence enables other instruments of power to check and defeat China and/or Russia artfully, without direct conflict. While a militarized strategy is inadequate given the comprehensive and complex threats facing America, the other instruments of statecraft cannot succeed in the absence of a viable military strategy.

Accounting for these roles and emerging, new methods and means for war will require the military to posture accordingly. This is a complex undertaking, resolution of which exceeds the scope of this essay.

Resources. Resources enable action. An inadequately resourced strategy is merely rhetorical flourish, obscuring risk and inviting miscalculation by the nation and its adversaries. Conversely, resource-constrained objectives can also obscure risk. The phrase "strategy driven, resource informed," while

promoting the preeminence of interests over resources, loses credibility in the face of scarce resources. This requires a careful balance of disciplined ambition, risk, and resources, including the need to generate more. Absent that balance, any strategy rapidly becomes hollow rhetoric or worse.

In the concluding chapter of *The Rise and Fall of the Great Powers,* Paul Kennedy highlights the risk of imbalanced, overextended strategies, noting that they come with "dire implications for [a state's] long-term capacity to maintain...its international position."[107] Reflecting that insight, Eisenhower weighted the economic and political over the military, relying on nuclear forces instead of a larger conventional military for deterrence. Reagan avoided Kennedy's great-power trap by growing the economy, balancing America's economic and military power, while creating additional resources to fund the so-called Reagan buildup, which built the modern military that delivered Desert Storm's four-day air–ground war.

Strategies today require similar balances.

Conclusion

The international developments challenging the U.S. and the larger international system are daunting. Nevertheless, those challenges can be resolved, ending with a "whimper rather than a bang"[108] through the development and implementation of comprehensive strategy.

This strategy must preserve America's global leadership role and its military, economic, and technological advantages while preventing conflict, and success will demand leadership, clarity on America's national interests and the challenges to them, a sense of common national purpose, adequate resources, foresight, and constant assessment and adjustment. It must be realistic regarding interests, risk, resources, and endurance. It cannot be narrowly focused on one aspect of statecraft, but rather should comprehensively orchestrate all instruments of statecraft.

Navigating this dangerous and complex period can repeat the geostrategic success realized by our Cold War predecessors: retaining America's global leadership, avoiding Armageddon, and preserving the principles that underpin a system that promotes the consent of the governed and free markets. To do so, this effort must be comprehensive, placing demands on every instrument of statecraft. That is the business of grand strategy.

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Pragmatism, Populism, and How Americans Think About Investing in Defense

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History shows that sustained defense investment comes about in America only as a reaction to an emergency: Pearl Harbor, Russia's A-bomb, the Korean War, Sputnik, Vietnam, the Soviet Union's buildup after 1979, 9/11, the Iraq surge. It is a national impulse and one that subsides abruptly.

Americans, however, may no longer be able to afford that episodic approach to national security. Great-power competition is back, and its blend of diplomacy, economics, and military matchups requires the U.S. to keep the upper hand. The rise of China and the return of Russian adventurism have altered course for U.S. strategy, but if America can find a way to break its typical boom-and-bust cycle in defense spending, it can enjoy a second century as the world's superpower.

As things stand today, more money is needed to make up for earlier cuts in defense programs, recover fully from nearly three decades of global combat operations, and prepare the U.S. for future challenges that, if history is any guide, could include a high-end fight. "Without sustained and predictable investment to restore readiness and modernize our military to make it fit for our time," warned the 2018 National Defense Strategy (NDS), "we will rapidly lose our military advantage, resulting in a Joint Force that has legacy systems irrelevant to the defense of our people."[1]

In November 2018, a bipartisan Commission on the National Defense Strategy found that "the security and wellbeing of the United States are at greater risk than any time in decades" and recommended that the Department of Defense (DOD) budget be increased at rates from 3 percent to 5 percent above inflation for the next five years, and perhaps beyond. As the commission pointed out, investments made now will pay off in capabilities that the military will use into the 2070s and 2080s.[2]

The Pentagon agreed on the need for consistent and predictable funding and laid in a 4.9 percent increase for fiscal year (FY) 2020. The five-year program, to run through FY 2024, funds what the NDS characterizes as "decisive and sustained military advantages."[3]

Can Americans shake off the old pattern of up-and-down defense spending and set a course for sustained investment? The threats from Russia, China, and others are clear, but the case for sustained investment in defense needs work. Stinging expert critique, a vocal business community committed to trade with China, volatile public opinion with respect to defense spending, and a reflexive, populist critique of the defense establishment are still powerful forces impeding the case for sustained investment.

Background: Missed Opportunity 2009–2015

The problem stems in part from the way the U.S. came off the crest of defense spending brought about by the Iraq surge. A comparison between the way the U.S. handled its defense spending during and after the Iraq war and how it handled defense spending during the Korean War illustrates the point. Caught off guard by Communist aggression, the Truman Administration increased the defense budget from just $213 billion in FY 1950 to $672 billion in FY 1952. Defense budgets did not reach that high a level again for 50 years, until the Iraq surge set a period of steep increases from FY 2006 through FY 2012. The peak came with a total budget of $801 billion in FY 2008.

While the 1952 budget allotted $162 billion in operations and maintenance with $262 billion in procurement, the defense budgets of the Iraq and Afghanistan surges paid for the wars that were taking place, not future modernization. A stunning proportion of the budgets went to operations and maintenance. The FY 2008 budget funded $305 billion in operations and maintenance and $195 billion in procurement. Day-to-day expenses far outpaced purchases of equipment. The high daily costs of the Iraq War included other elements such as health care services and information technology. The nation spent hundreds of billions on war costs in those years without investing for the future.

Also, while Americans gave their forces in battle the best capabilities possible—new systems like the Predator/Reaper family of unmanned planes and over $45 billion in Mine Resistant Ambush Protected (MRAP) vehicles were fast-tracked to meet urgent warfighter needs[4]—these systems were designed for use in Iraq and Afghanistan and not for burgeoning threats from China and Russia. In contrast, the buildups during Korea, Vietnam, and the Reagan years bought force structure that supplied the armed services for years to come.

Despite record levels of funding, however, the long-term task of replacing Reagan-era equipment and buying new force structure, scheduled for the 2000s, was not carried out. The services came out of the surge with aging force structure and insufficient progress on advanced weapons. As Secretary of the Army Mark Esper has said of this period, the Army "mortgaged its readiness" for the future fight.[5]

Then it was time to cut the budget. At the time, Washington dialogue led by Secretary of Defense Robert Gates settled on a moderate risk assessment and made the case that the military was much too big. According to Pentagon leadership, there were only moderate military threats ahead in the 2010s. This aligned with the Obama Administration's focus on the growing national debt and a desire for defense to take up less of the discretionary share of the federal budget.

Gates chose deep cuts in procurement. The Pentagon did trim back operations and maintenance, but following Gates' instructions, it also cut modernization. In his own words, the weapons and other programs that Gates deemed questionable "have not only been plucked, they have been stomped on and crushed."[6] Cuts began in April 2009 with restructuring and termination of major defense programs like the F-22 fighter and the Army's Future Combat System.

A tinge of populism had brought back the passion for lambasting big budgets and with it a misty-eyed conception that America's military could use a bit of a rest. Under this thinking, the U.S. military was big enough to coast for years without much investment in force structure.

Gates made several speeches almost mocking the military for expensive platforms and having more ships and planes than several other militaries combined. For example, his 2010 speech to the Navy League pilloried "significant naval overmatch," and Gates quipped that "no one is going to challenge us to a Dreadnought race."[7]

"It is important to remember that, as much as the U.S. battle fleet has shrunk since the end of the Cold War, the rest of the world's navies have shrunk even more. So, in relative terms, the U.S. Navy is as strong as it has ever been," Gates calculated. He continued:

> The U.S. operates 11 large carriers, all nuclear powered. In terms of size and striking power, no other country has even one comparable ship.... Our Navy can carry twice as many aircraft at sea as all the rest of the world combined. The U.S. has 57 nuclear-powered attack and cruise missile submarines—again, more than the rest of the world combined. Seventy-nine Aegis-equipped combatants carry roughly 8,000 vertical-launch missile cells. In terms of total missile firepower, the U.S. arguably outmatches the next 20 largest navies.[8]

These remarks seemed to assure the public that the U.S. military was sufficiently (if not overly) strong and would be so indefinitely.

The populist toting up of fleet sizes, refusal to distinguish one platform from another, and inattention to emerging threats from Russia and China created a fog bank around future defense investment. Possibly the most generous comment on this period came years later from Chairman of the Joint Chiefs of Staff General Joseph Dunford. Looking back, Dunford said the operating assumption for many in Washington was that overseas commitments would decline and the fiscal environment would stabilize.[9]

Neither happened. Disagreements between Congress and the Obama Administration in the summer of 2011 led to the Budget Control Act and sequestration cuts. Congress forged deals to create room under the budget caps, but defense investment actually dropped far below what the Gates budget had planned. Lost defense investment surpassed $539 billion in the period from 2012 to 2019.[10] The cutbacks hurt readiness as the services deferred maintenance and cancelled training and exercises. Long-term modernization suffered as well, with major procurements in programs like the F-35 Joint Strike fighter slowed to meet budget caps.

Great Powers Show Their Hands

Of course, the world did not stand still. The moderate risk talked about in 2010–2011 morphed into competition with not one but two resurgent great powers as Russia and China moved swiftly to expand their military operations and influence.

During the 1990s and 2000s, Russia and China had appeared on track to integrate into global economic institutions (Vladimir Putin once talked about an economic cooperation zone from Lisbon to Vladivostok) and were far behind the U.S. and allies in defense modernization, but both of those conditions began to change, especially after 2012. Putin consolidated his power in Russia, and Xi Jinping did the same in China. Both stepped up military activities and began to shed the veneer of cooperation with Western economic institutions.

In 2014, the annexation of Crimea from Ukraine marked the end of any show of Russian interest in formal integration. Russian military forces went into Syria and set up military bases.[11] In 2018, the Russian state security services conducted a nerve agent poisoning in Great Britain.[12] Thirty thousand Russian troops assembled on NATO countries' borders and practiced with tactical nuclear weapons. Russia accelerated development of nuclear and conventional missile types. Sanctions on Russia and a downward economy bumped Russia out of the G8 group of leading world economies, but this did not lead Russia to reduce its military activity.

In China, Xi Jinping was elected president in March 2013. The era of "peaceful rise" gave way to a plan for increased influence and dominance of key sectors such as artificial intelligence. Meanwhile, China's military forces displayed huge advances. China had launched its first aircraft carrier, the *Liaoning*, in 2012. Soon thereafter, China began a dredging and construction program in the South China Sea, converting small reefs and terrain features into a string of seven military bases. China also set up military facilities in Djibouti and began to buzz the airspace around Japan on a daily basis.

China's gross domestic product grew from $9.6 trillion in 2013 to $12.2 trillion in 2017. The U.S.–China trade deficit was $318 billion in 2013 but grew to $439 billion in 2018 according

to official U.S. government figures.[13] Xi's program included military reforms, advanced technology, ship construction, and development of advanced aircraft. The final stroke was the militarization of the South China Sea terrain features. By 2018, despite a 2016 pledge to desist, China had created a string of bases with capabilities that included a 10,000-foot runway, petroleum storage, electronic warfare capabilities, and more.

Chinese and Russian influence touched NATO and the Middle East and penetrated into Central and South America. Collectively, "China and Russia are also trying to shuffle the U.S. out of the Central Command theater of operations," said Marine Corps General Kenneth F. McKenzie, Commander, U.S. Central Command.[14]

"By 2015," said Dunford, "it was clear to all that operational commitments were not going to be reduced and the fiscal situation was not stabilized."[15] Global competition was back, and this time the United States was competing with two other major powers. Added to this were ongoing disruptions from North Korea and Iran and the generational problem of terrorism.

Turnaround

So began the efforts of Secretary of Defense James Mattis and others to align and stabilize investment in the military. From FY 2017 to FY 2020, the defense budget request rose from $606 billion to $718 billion, as documented by the DOD Comptroller.[16] The modest FY 2017 increase marked the first sustained uptick. Budgets for FY 2018 and FY 2019 also included emergency funding for space systems and extra ballistic missile defense capabilities, including theater-based THAAD and a doubling of the Alaska ground-based interceptor protecting the U.S. homeland. The FY 2018 and FY 2019 budgets also improved unit readiness and set a stable course for investment.

However, the episodic pattern of U.S. defense spending is not reassuring. Before the Reagan buildup, budget increases lasted no more than four years, even in wartime. The Reagan buildup saw increased budgets from FY 1981 to FY 1986 with FY 1987 also quite high.[17] According to this historic pattern, the great power buildup has been underway since FY 2017 and will have no more than three years to go. That will not cover the nuclear modernization of the mid-2020s, the move to advanced multi-domain information systems, or the restocking of equipment for the services.

International conflict and military operations do not fully account for the pattern. Stronger forces are at work and can be seen in public opinion data. Even during the Reagan buildup, consensus on defense wavered. In 1980, on the cusp of the Reagan buildup, 71 percent of responding Americans told a Harris poll that they favored increased defense spending. By 1983, the number had plummeted to 14 percent.[18] Those numbers suggest that support can be found for quick infusions of investment but not for steady, long-term increases of the kind recommended earlier by the bipartisan Commission on the National Defense Strategy.

The same problem may affect defense investment in the 2020s. Americans in 2019 rightly hold the military in high regard. That regard is so high, in fact, that Americans polled by Gallup in early 2019 believed that military spending was about right or somewhat too high. Just 31 percent of Americans favored higher defense spending. They also felt more satisfied with national defense than with any of 21 other issues facing the nation. Compared to immigration, the economy, and other issues, defense seemed just fine.[19]

The investment in and modernization of forces needed to project power and achieve superiority in any domain are now at stake. "The challenge for Trump and Pentagon leaders," Gallup senior scientist Frank Newport has observed, "is to explain why the excellent job the military is doing today (as perceived by the public) translates into the need for more and more military funding tomorrow."[20]

Public Opinion, Populism, and Pragmatism

Though illogical, the rhetoric of the Gates speeches on Dreadnought competitions and

the oversized military caught hold in part because it resurfaced certain deep strains in American public sentiment: distrust of the defense establishment, concerns about the share of defense spending and the economy, fatigue with the problems of the world "over there," and a popular impulse to bash defense programs that dates back nearly 100 years. These familiar themes still have the power to knock 2020s defense investment plans off balance.

There has long been a strain in American public opinion that has been wary of the entire defense establishment. Historical ambivalence about military power, perhaps stemming from George Washington's warning to beware of foreign entanglements, is as much a part of American culture as the Fourth of July. During World War I, President Woodrow Wilson took over two years to settle on the message rallying Americans to side with Britain and France in 1917.

Joining in the Great War did not eradicate the problem. On the contrary, it linked war with a powerful populist sentiment. After the war, military strength plummeted to new lows. Reaction to World War I also engraved a distaste for overseas wars and for munitions makers into the American consciousness. From 1925 to 1935, the belief that war could be stripped of its profitability—or even outlawed through international mechanisms—became widespread. The decade that spawned the Great Depression also encompassed the Spirit of Locarno, the Kellogg–Briand Pact to outlaw war, and the Nye Committee's hearings on war profits.[21]

In September 1934, the Senate Munitions Committee opened its investigation into whether arms manufacturers had dragged America into World War I. North Dakota Senator Gerald Nye led the committee through 93 separate hearings debating whether "manufacturers of armaments had unduly influenced the American decision to enter the war in 1917," thereby reaping "enormous profits at the cost of more than 53,000 American battle deaths." The investigation was sparked by concern that "these 'merchants of death' [might] again drag the United States into a struggle that was none of its business." Among the captains of industry called to testify were J. P. Morgan, Jr., and Pierre Du Pont (the Du Ponts had been in the gunpowder business since the Revolution). The Nye Committee found little but stoked "popular prejudice against the greedy munitions industry."[22]

It was against this background that President Dwight Eisenhower warned of the military–industrial complex in his farewell speech in 1961.[23] He mentioned that the annual defense appropriation was nearly equivalent to the share of corporate profits in a single year. Back then, defense spending was a major chunk of the federal budget and held greater sway in the U.S. economy. Now neither is true. The term "military–industrial complex" has been popular ever since then, with numerous anniversary articles in 2011 from the Council on Foreign Relations. "Eisenhower was able to keep a lid on the military–industrial complex because he was Eisenhower," noted Leslie Gelb in a 2011 interview,[24] and the term continues to pop up in 2020 election speeches.[25]

The populist tide against defense investment recurs periodically, as it did at the peak of the Reagan defense buildup in the 1980s when defense program bashing started to single out specific programs. Journalists made easy prose of it, highlighting the absurdities of alleged Pentagon expenditures: "a $285 screwdriver, a $7,622 coffee maker," and "a $640 toilet seat," wrote *Los Angeles Times* columnist and former World War II Marine combat reporter Jack Smith in 1986.[26]

In 2018, a full 32 years later, it was Iowa Senator Chuck Grassley speaking out against "thousand-dollar coffee cups" on Air Force aerial refueling tanker planes. The facts of the case actually concerned innovation by enlisted airmen who 3D-printed replacement handles for just a few dollars,[27] but the part of the story that stuck was the sardonic, populist takedown of military spending.

The point is that Americans adore stories about bloated defense spending partly because of a cultivated skepticism about defense

industry and "foreign wars." Underlying this theme is the idea that defense spending is "too big" as a share of national spending and can imperil the economy. By this thinking, high defense spending is somehow an abnormality and will ebb in time.

Since Eisenhower's time, there has been a vast decoupling of defense spending from the American economy—something of which he would have approved. Based on 2018 dollars and statistics from the St. Louis Federal Reserve Bank and the Department of Defense, in 1959, U.S. corporate profits totaled $1.14 trillion, and the defense budget was $422 billion. In 2018, U.S. corporate profits were $7.7 trillion, and the base defense budget was $643 billion. The defense budget was indeed about 37 percent of the total income of U.S. corporations in 1959, as Eisenhower suggested. In 2018, it was only about 8 percent of that same total income.[28]

Corporations and the defense budget have changed a great deal since 1959, and the comparison is not academically perfect, but the overall message still rings out: The FY 2020 defense budget is no burden on America's economy.

The theme persists, however, currently expressed as a concern for the national debt. In 2012, a group of august former officials including Henry Kissinger and former Chairman of the Joint Chiefs of Staff Admiral Michael Mullen issued a statement warning that "our long-term debt is the single greatest threat to our national security."[29] Although an amended 2016 statement also recognized growing threats from Russia and China, this group still recommended reform of the Pentagon, elimination of unnecessary or antiquated weapons systems, and encouragement of soft power as remedies.[30]

The national debt rightly worries many Americans, but familiar populist complaints about America spending more on defense than is spent by other nations are nothing more than a superficial approach to the problem.

China: Partner and Rival

One final area of public opinion is of great significance in staying the course on sustained defense spending: On the one hand, there is the view of China as a military rival; on the other, there is the conflicting view of China as a business partner. Washington's coalescing view sees China as a military threat and rival that did not play fair after joining the World Trade Organization; American businesses see China as a vital market.

That split poses a challenge. The complex China threat asks Americans to hold conflicting images in tension and to back sustained investment in defense against a nation that also makes their phones, shoes, and shirts.

This problem did not come up during the U.S.–Soviet Cold War. U.S. military policy toward the USSR did not have to contend with a big trade relationship. American companies did relatively little business with the Soviet Union. According to RAND economist Abraham Becker, in 1984, a peak year of the Cold War, just 1.5 percent of U.S. exports went to the Soviet Union, and the Soviet Union accounted for a miniscule 0.2 percent of total U.S. imports. Trade between the USSR and Western Europe, especially Finland, was somewhat higher. However, self-sufficiency was a pillar of Soviet policy. The USSR had little to sell other than gold and energy. Imports focused on grain and valued manufacturing equipment like drill bits.[31]

In short, the trade was insignificant enough to be batted around as a policy tool with little risk. Richard Nixon and Leonid Brezhnev used trade as a tool of détente. So did Ronald Reagan and Mikhail Gorbachev as they dealt with fluctuating grain sales and export controls. However, U.S.–Soviet trade was available as a policy tool partly because it was so limited.

In contrast, U.S. trade relations with China will remain a variable. Vociferous debates on tariff positions have amplified the implications for business, again crowding out the implications for national security. The Trump Administration's imposition of tariffs beginning in 2018 was justified in part on national security grounds, including intellectual property theft. High-profile cases like B-2 bomber espionage,[32] the 2013 Office of Personnel Management data

hack by China,[33] and intrusion into Tennessee Valley Authority nuclear facilities[34] would seem to make the case. Yet discussion remains bifurcated. "China is not an enemy. It is a nation trying to raise its living standards," wrote one professor in a recent editorial.[35]

However, discussion of the economic relationship should not provide an avenue of retreat. China is not confused: It sees the U.S. as a rival. "The men in Beijing understand that Trump is the first president in a generation to 'get it' about China's effort to create a new world order that depends on the Chinese economy," one observer has written.[36] Whatever the trade situation, America needs the fortitude to invest in systems to deter China in the Pacific, in space, and around the globe.

Business Tools for Sustained Defense Spending

So far, this essay has argued that policymakers must present a credible and consistent threat analysis and develop a case for sustained defense spending that can navigate past obstacles in public opinion and take on the popularity of the China market with the business community.

Rebuilding the military does not end with appropriation and justification. Assume, for a moment, that a good budget is put in place with a sound future-year plan that keeps the U.S. ahead of Russia and China. Another equally important step remains: implementing management tools within the Pentagon's future years defense program. "Even though DoD is a public entity, it should manage itself more like a business (whenever it can)," according to the Defense Business Board.[37]

Business reviews of the Pentagon tend to focus on personnel costs, management layers, and overhead. While there is room for improvement in these areas, the business executive approach often overlooks specific management tools already available within the DOD and on Capitol Hill. Fortunately, a few tools are available that are centered on a common theme: sound execution of major defense programs.

Program Management: Multiyear Procurement and Economic Order Quantity. The defense program manager and his or her service acquisition overseers have two powerful tools at their disposal for defense investment: multiyear procurement and economic order quantity. Used effectively, these tools can save billions while still providing America with the military it needs.

A multiyear procurement is an agreement by the government to buy ships or planes across multiple fiscal years instead of in a single year. Generally, the government contracts to buy a fixed quantity in one year only. In a multiyear procurement, the contract is for unit quantities for several years. In March 2019, for example, the Navy awarded Boeing a $4 billion contract to buy 78 F/A-18E/F Superhornet fighters across three years from 2019–2021. "A multiyear contract helps the F/A-18 team seek out suppliers with a guaranteed three years of production, instead of negotiating year to year," explained Dan Gillian, Boeing's vice president of F/A-18 and EA-18G programs.[38]

Multiyear procurements work best when the weapon system is stable and past the modification and price volatility of early production learning curves. Defense industry program managers like multiyears because they can buy from suppliers in economic order quantities. Other efficiencies include steady labor force plans, investment in cost-reducing factory improvements, and lower administrative burdens. Granted, the government must negotiate a good price up front. Typical multiyear contracts save 10 percent, which is a substantial amount on billion-dollar contracts.[39] Each multiyear procurement requires a justification and approval from Congress.

Most Navy ships are bought under multiyear procurements. This approach should be extended to major aircraft, helicopter, and other acquisitions.

With or without multiyear procurements, sustained defense investment depends on the concept of economic order quantity. In cases such as the production of aircraft and Navy surface combatants, there exist periods a few

years in to full-rate production where learning curves have created significant unit price savings. These are the prime years in which to buy. Stretching out purchases is almost never a wise move.

According to a landmark RAND study on Navy shipbuilding, costs of weapon systems go up over time because of two types of factors: those driven by the customer and those driven by the economy.[40] The customer-driven factors include design changes, among others. The economy-driven factors include real zingers: labor costs, matériel prices, and—looming over it all—inflation. A program on a 10-year acquisition cycle is subject to variable cost inflation that is both independent of any improvements in the system itself and largely beyond government managerial control. The longer the program runs, the more subject it is to variations in inflation from one year to the next. The only thing the defense program manager can do is buy in quantity at the right time.

While putting aside funding does tempt Pentagon management and congressional committees to pilfer and reallocate those big dollars, economic order quantity and multiyear purchases are two powerful fiscal tools that should be used for sustained investment.

Fencing Programs: Strategic Deterrence Modernization. The best way to achieve stable investment for some programs may be to fence them off from the larger defense budget. The Congressional Budget Office has projected that modernizing nuclear forces will cost $494 billion from 2019 to 2028.[41] That sum, almost $50 billion per year, includes some Department of Energy funding but is centered primarily on DOD modernization programs.

Congress can limit volatility by establishing stable funding for strategic nuclear modernization apart from the regular budget for defense. Despite occasional debate, the strategic nuclear triad of bombers, land-based ICBMs, and submarines remains a solid foundation. Nor has NATO given serious thought to abandoning the tactical nuclear weapons delivered by a variety of fighters and bombers. Both Russia and China have modernized and expanded their nuclear forces, and nuclear ambitions persist in several other countries.

Here is a case for American pragmatism. Fenced funding for the major nuclear modernization programs including the B-21 bomber, *Columbia*-class submarine, ICBM modernization, nuclear command and control, and weapons programs can help to ensure fiscal stability for these expensive programs and deliver capability at the same time. Several of these programs would be good candidates for multiyear contracts. Safeguarding this major cluster of programs could allow service program managers to use all of the management tools at their disposal to bring their programs in on time and at more efficient cost.

Gaining support for $50 billion of sustained investment per year will require great effort. The Pentagon must free the armed services to tie investment to these programs by name. President Reagan did not "recapitalize long-range aviation"; he built the B-1 bomber. While it may seem a minor point, a little more explanatory publicity and a little less secrecy could help to forge the consensus on investment.

Prioritizing the Services. Along the same lines, one of the best ways to sustain defense spending is to remember that it ultimately buys capability for the military services, not for the Pentagon. The high regard that Americans have for the military is regard for the Army, Navy, Air Force, and Marine Corps (and perhaps one day, a Space Force).

The best leaders for sustained defense investment are the Secretaries of the Army, Navy, and Air Force. They, not the Office of the Secretary of Defense, have the statutory authority to cultivate top talent through their general and flag officer promotion systems. Their requirements drive funding, and the actions of their servicemembers produce the results in the form of military operations. The service departments alone are the one type of organization that is set up to manage requirements and leadership over a long period. The service secretaries and their staffs are also in the best position to conduct requirements trades for new systems and set upgrade,

logistics, and other funding priorities across the force structure.

While joint command has been a huge success, the post-Goldwater–Nichols legacy of joint requirements evaluation has not produced notable investment efficiencies; arguably, it may have compounded problems by creating oversize program offices. Joint weapons procurement actually works best in the form of bilateral agreements on specific programs. For example, the Army went on to buy the unmanned Grey Eagle plane after the Air Force had developed and tested it in combat.

Now for some good news. Orbiting overhead is a success story for sustained defense investment based on a service vision: in this case, the Air Force's. The Global Positioning System (GPS) began as a military satellite constellation to provide accurate navigation and timing. The system, owned by the U.S. government and operated and controlled by the U.S. Air Force's 50th Space Wing, also makes possible countless commercial/private-sector transactions, from banking to map location. The timing signal is accurate to a millionth of a second, and location is better than 100 feet. An even more accurate system is reserved for military users.

When the full constellation of 24 satellites filled out in 1993, GPS began providing radio-navigation to unlimited users. More than 30 years of sustained investment has created a global information resource used by individuals and businesses large and small every day. It also provided an on-ramp for significant private investment to break into and establish market share for a highly demanding government customer. GPS satellites have now been launched by SpaceX's Falcon 9 rocket, marking a success for sustained private investment.

Conclusion

The U.S. exited the Cold War still reaping the benefits of earlier technology investments. Since then, the episodic pattern of surge and cut has eroded the U.S. military's competitive edge. The U.S. remains the world's strongest military power, but steady investment is crucial if America is to maintain its edge through 2025 and beyond. That time horizon is important. According to a U.S. Army estimate, Russia's military strength will grow through 2028 and beyond, while China will not reach its peak goals until 2030.[42]

Sound defense investment planning must steer through the ups and downs of public opinion and craft a rationale that takes into account the competing military and economic tides of a bumpy multipolar world where deterrence and trade go hand-in-hand. U.S. defense investment buys long-range power projection in many forms and the ability to respond with tailored ground forces. Most of all, the military must complete its transition to a framework in which the use of information and cyberspace can decide the tactical advantage. All of this will take place under the commons of space, which must be safeguarded as never before.

As President Eisenhower told America in his farewell address long ago:

> [What] is called for [is] not the emotional and transitory sacrifices of crisis, but those which enable us to carry forward steadily, surely, and without complaint the burdens of a prolonged and complex struggle—with liberty the stake. Only thus will we remain, despite every provocation, on our charted course toward permanent peace and human betterment.[43]

The plans and actions of Russia, China, Iran, and others make clear that the struggle is complex and the stakes still high. "We pray that... those who have freedom will understand, also, its heavy responsibilities," said Eisenhower back in 1961. "May we be ever unswerving in devotion to principle, confident but humble with power, diligent in pursuit of the Nation's great goals."[44]

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The Economic Dimension of Great-Power Competition and the Role of Cyber as a Key Strategic Weapon

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Napoleon Bonaparte may have said that an army marches on its stomach, but it is perhaps even truer that a military force marches, sails, flies, and attacks on the back of its nation's economy. Cripple an enemy's economy and not only will the stomachs of its fighting forces go empty, but commerce, trade, and innovation will grind to a halt, sapping the will of the people and depriving the leadership of most of the parts needed for the machinery of war.

Ancient civilizations recognized that economic warfare could destroy an adversary during conflict and weaken him during more peaceful times to keep him from becoming a rival. The catalyst for the Peloponnesian War nearly 2,500 years ago was an act of economic warfare. The Athenians imposed crippling economic sanctions against an ally of Sparta in order to sow dissension and weaken the coalition's ability to threaten Athens and its allies. Recognizing the danger, Sparta responded with military action. The war culminated in a final act of economic warfare when Sparta (with Persia's assistance) blockaded Athens and forced its surrender.[1]

Closer to our own time, Napoleon made wide use of economic aggression in hopes of shaping the battlefield to his advantage. In 1806, in an attempt to weaken England's fighting forces by ruining the economy that undergirded its power, he issued the Berlin Decree declaring the British Isles to be in a state of blockade. While not as successful in that case—in fact, some scholars blame it for the ultimate ruin of France—the military strategy of using economic means to cripple the adversary has never fallen out of favor.[2]

Economic Warfare, Invention, and Innovation

Economic warfare and, conversely, economic invention and innovation have been integral to American strategy since the Founding. George Washington believed so strongly in the importance of encouraging the advancement and protection of inventions for the benefit of the national defense that he called for passage of the Patent Act in his first State of the Union address on January 8, 1790. "To be prepared for war is one of the most effectual means of preserving peace," Washington declared, and to be prepared, manufacturing, "particularly for military supplies," had to be encouraged and protected.[3] Washington personally signed and sealed each of the 150 patents issued during his presidency.[4]

Having witnessed British attempts to use blockades to weaken the rebellious American colonies,[5] Alexander Hamilton encouraged another kind of economic warfare to advantage fledgling American industries and curb the military prowess of England. In his *Report on*

the Subject of Manufactures sent to Congress in 1791, Hamilton encouraged the new nation to engage in extensive private theft and application of foreign intellectual property in order to transfer wealth-generating capabilities to the new nation.[6] England recognized the threat posed by this pervasive intellectual property theft not only to the British economy, but also to its national security and thus implemented initiatives, including barring the export of key technologies, to prevent it from succeeding.[7]

The Great Wars

In the first half of the 20th century, America watched Great Britain incorporate economic warfare into its World War I and World War II strategies. In the lead-up to the Great War, the Naval Intelligence Department of the British Admiralty developed a plan to cripple Germany's ability to wage war by leveraging British advantages in "the largely British-controlled infrastructure of international trade." Specifically:

> Economic warfare strategy entailed doing "all in our power" to disrupt the already strained enemy economy, recognizing that significant additional pressure could be exerted upon the German economy by systematically denying access to the largely British-controlled infrastructure of international trade—British banks, insurance companies, and communications networks. In essence, the Admiralty argued that the beginning of a major war would find the German economy teetering on the edge of a precipice and that British strategy should seek to push it over the edge and down into "unemployment, distress, &c., and eventually in bankruptcy."[8]

The idea was that Britain could prepare for such a collapse and even leverage it, while Germany would be immobilized. Although the plan was never fully implemented, partly because England feared loosing the economic dogs of war more than it feared traditional military conflict, at the start of the Second World War, London created a new Ministry of Economic Warfare (the successor to the Ministry of Blockade during World War I) and specified that "[t]he aim of economic warfare is so to disorganise the enemy's economy as to prevent him from carrying on the war."[9]

During this time, but before the United States formally entered World War II, Washington also turned to economic warfare. President Franklin Roosevelt ordered a U.S. embargo of all sales of oil and scrap metal to Japan, hoping to constrain Japanese foreign aggression. The result may not have been what Washington desired: Emperor Hirohito's diaries from those years reveal that Japan went to war with the United States because of the embargo.[10]

Despite that outcome, economic coercion has become a key component of U.S. national security strategy, and Washington has relied increasingly on economic sanctions to deny adversaries access to global markets, thereby significantly degrading their capabilities. The United States controls the essential infrastructure that underpins global trade, and over the past two decades, we have used it to further our foreign policy and national security aims.

Fine-Tuning U.S. Strategy for Economic Warfare

The sophistication of U.S. sanctions began 15 years ago with efforts to punish Pyongyang's illicit activities and deny the regime funds to support its nuclear weapons program. When the United States slapped money-laundering sanctions on a little-known bank in Macau, Banco Delta Asia, in 2005, Washington "unleashed financial furies" unlike any the world had seen before.[11] Juan Zarate, Assistant Secretary of the Treasury for Terrorist Financing and Financial Crimes, said that after those sanctions, "[e]very conversation [with the North Koreans] began and ended with the same question: 'When will we get our money back?'"[12] During the Six Party Talks, an inebriated North Korean delegate admitted that with those sanctions, "[y]ou Americans have finally

found a way to hurt us."[13] With the world's largest economy standing behind it, the almighty dollar was a powerful foe, and given the relative lack of economic engagement between the U.S. and North Korea, American businesses never felt any pain from the sanctions imposed by Washington or the U.N.

Washington then took this preliminary playbook and developed its economic toolkit by testing its powers against Iran. Six months after Congress passed comprehensive sanctions against Iran's energy sector, then-Undersecretary for Political Affairs William Burns testified in December 2010 that the legislation had already cost Iran between $50 billion and $60 billion.[14] As a result of U.S. sanctions and economic mismanagement, Iran's gross domestic product (GDP) contracted by 6 percent in 2012/2013 and another 2 percent in 2014/2015.[15]

The imposition of sanctions following U.S. withdrawal from the international nuclear agreement with Tehran has similarly triggered worsening economic conditions.[16] In April 2018, one month before the U.S. decision to withdraw, average annual inflation was 8 percent. Less than a year later, inflation had more than tripled to about 30 percent.[17] Both the International Monetary Fund and the World Bank have begun to forecast deepening recession.[18] As recently as June 2018, the World Bank was projecting a 4.1 percent GDP growth for 2018 and 2019, but in January 2019, it had revised those numbers down to 1.5 percent and 3.6 percent GDP reduction.[19]

The U.S. government estimates that between May 2018 and April 2019, sanctions had taken 1.5 million barrels of Iranian oil off the market and "denied the regime direct access to more than $10 billion in oil revenue."[20] As a result, Tehran's regional proxies are starved for cash. Hezbollah has appealed for donations for the first time and has implemented austerity measures.[21] Militants in Syria have missed paychecks, and projects are going unfunded.[22] Without access to capital, it is difficult for Tehran to project power in the region and threaten U.S. interests and allies.

Washington's Economic Warfare Blind Spot

Disturbingly, despite the continued use of economic coercion by Washington since September 11, 2001, U.S. policymakers have an economic warfare blind spot: We have forgotten that we can be the victim and not just the perpetrator of economic warfare. Perhaps we have grown complacent because since the early years of the Republic, we have not faced a great-power rival with the ability to damage our economic wherewithal not just during, but also before and below the level of armed conflict.

Not even during the height of the Cold War, when the Soviet nuclear arsenal contained at least 55,000 warheads, did the best of America's military strategists consider how Moscow could undermine American economic wherewithal to weaken the United States strategically. This snapshot in time, roughly 1947–1991, frames much of the assessment and planning for great-power conflict by today's strategic thinkers, but there is a major deficiency in seeing that past as prologue.

The Soviet economy did indeed possess the strength to create one of the world's strongest militaries during its heyday, but in the end, it was self-defeating. As the late Dr. Charles Wolf, Jr., wrote, the Soviet system was based on five fundamental principles:

> (1) Pervasive and centralized political and social control; (2) rule by a self-perpetuating political/military elite; (3) domination of military/security priorities over civil ones; (4) persistent cultivation of external/internal threats, and requirement for international "struggle"; and (5) preference for self-reliance.[23]

These principles, when operationalized, left the Soviet Union in an ever-weaker position vis-à-vis the United States. Although there was little doubt that Moscow's nuclear capability could indeed obliterate both Wall Street and Main Street, in the absence of that cataclysmic event, the United States grew more prosperous,

more innovative, and more capable of shaping the world to its advantage.

During the postwar period between the 1950s and mid-1970s, some Western economists assessed Soviet economic growth rates as averaging about 5 percent per year, suggesting that the USSR was outpacing the average growth of the United States.[24] More detailed studies of the Soviet economy, however, recognized the mendacious data upon which those growth numbers were based and estimated a truer measure of the two countries that ranged from the Soviet economy's being equal to only 14 percent of the U.S. economy on the low side to 30 percent at the high end.[25] In 1988, Soviet foreign purchases and sales were roughly $200 billion, less than one-third those of the United States, and much of that trade was with other Soviet states that had no choice but to buy the inferior products foisted upon them in the closed Soviet system.[26]

Chinese Cyber-Enabled Economic Warfare Threatens U.S. Supremacy

The largest U.S. companies of 1980, from Exxon Mobil to General Motors to IBM to General Electric (first, second, eighth, and ninth, respectively, on the *Fortune* 500 list of that year[27]), did not fear that Moscow might execute a coordinated campaign to steal intellectual property, contaminate the supply chain, degrade operational systems, or offer below-market prices on key technological solutions to drive them out of business and weaken the digital fabric of the American national security industrial base. The reality today is far different, and so are the contours of the battlefield upon which the U.S. is now forced to engage.

"[U]nlike the 'bad old days' of the U.S.–Soviet Cold War, when our economic engagement with the USSR was relatively insignificant," Assistant Secretary of State for International Security and Nonproliferation Christopher Ford has commented, "the United States and its friends and allies have deep and extensive economic ties to China in this era of high-technology international commerce."[28] In the words of General Paul Nakasone, head of the National Security Agency and U.S. Cyber Command:

> We are in a period where our adversaries are looking to really take us on below that level of armed conflict, to be able to steal our intellectual property, to be able to leverage our personally identifiable information, to be able to sow distrust within society, to be able to attempt to disrupt our elections.[29]

China's economy is the second largest in the world behind the United States and the "largest if measured in purchasing price parity terms."[30] China has been the largest single contributor to world growth since 2008.[31] While the real size and growth rate are likely far below the Chinese Communist Party's official claims,[32] the reach of China's global investments gives Beijing leverage that it can use to challenge U.S. supremacy.

China conducts cyber-enabled economic warfare against the United States and its allies.[33] After South Korean conglomerate Lotte Group provided its government the land on which to deploy the Terminal High Altitude Area Defense (THAAD) missile defense system, Chinese hackers unleashed cyberattacks, and the government issued trumped-up regulatory action against the company as a way to pressure Seoul to change its policies.[34] Beijing's tactics seem to have succeeded: South Korea acquiesced to military constraints in return for relief from Chinese economic warfare.[35]

Today, China is engaged in a massive, prolonged campaign of intellectual property theft, using cyber-enabled technologies to target nearly every sector of the U.S. economy.[36] China's strategy is one of "rob, replicate and replace. Rob the American company of its intellectual property, replicate the technology, and replace the American company in the Chinese market and, one day, in the global market," according to the U.S. Department of Justice. "From 2011–2018, more than 90 percent of the Department's cases alleging economic espionage by or to benefit a state involve China,

and more than two-thirds of the Department's theft of trade secrets cases have had a nexus to China."[37] Even when technology is commercially available, China engages in a "concerted effort to steal, rather than simply purchase" these products.[38]

For a sense of scale, intellectual property theft costs the U.S. economy as much as $600 billion per year.[39] If China respected intellectual property rights, the U.S. economy would gain 2.1 million jobs and $107 billion in sales.[40] In just one case in which wind turbine company Sinoval stole trade secrets from U.S.-based AMSC, the company "lost more than $1 billion in shareholder equity and almost 700 jobs, over half its global workforce."[41]

Beijing's military–civil fusion[42] means that none of this intellectual property theft is driven purely by commercial motivation. President Xi Jingping has called "military–civilian integration" a "prerequisite for building integrated national strategies and strategic capabilities and for realizing the Party's goal of building a strong military in the new era."[43] Particularly with emerging technologies, the line between civilian and military purposes is disappearing.[44] Beijing's effort to build national champions in sensitive technologies "directly complements the PLA's modernization efforts and carries serious military implications," according to the U.S. Department of Defense (DOD).[45]

Meanwhile, more than 60 percent of Chinese export violations are attempts to acquire critical technologies that have military applications,[46] and the targets of Chinese hackers align with the priorities of Beijing's Made in China 2025 strategy.[47] China's J-20 fighter plane, for example, bears striking similarities to the F-22 Raptor made by Lockheed Martin—the same company from which the Department of Justice accused a Chinese national of stealing technical data.[48] At the time, a nine-man team run by Chinese intelligence officers was hacking a French aerospace manufacturer and U.S. companies that made parts for turbofan jet engines, and "a Chinese state-owned aerospace company was working to develop a comparable engine for use in commercial aircraft manufactured in China and elsewhere," according to the Department of Justice.[49] Meanwhile, press reports revealed that one group of Chinese hackers has targeted dozens of universities and private companies over the past two years to steal military-related maritime technology.[50]

Each cyberattack, each espionage operation, each export control violation is "part of an overall economic policy of developing China at American expense" and "stealing our firepower and the fruits of our brainpower," in the words of Assistant Attorney General for National Security John Demers.[51]

Beijing's strategy is to weaken U.S. geopolitical and military capabilities and advance its own by using all means available including cyberattacks to undermine the defense industrial base and the broader U.S. economy from which America draws its strength. "U.S. military superiority since World War II has relied on both U.S. economic scale and technological superiority," a January 2018 DOD study concluded.[52]

Washington should never send its soldiers into a fair fight. Our adversaries agree, so they are trying to defeat our weapons systems and undermine our military capabilities before we realize that we are already at war. Belatedly, the U.S. military and intelligence communities are starting to take notice. For example:

- In its annual report to Congress on China's military capabilities, the Pentagon has warned that Beijing uses its cyber capabilities to "exfiltrate sensitive information from the [defense industrial base]" which in turn "threaten[s] to erode U.S. military advantages and imperil the infrastructure and prosperity on which those advantages rely."[53]

- The head of FBI counterintelligence has testified similarly that China's "economic aggression, including its relentless theft of U.S. assets" through cyber and traditional means, "is positioning China to supplant [the United States] as the world's superpower."[54]

- The U.S. Navy reportedly has made the economic endgame of adversaries such as China even more explicit: "The systems the U.S. relies upon to mobilize, deploy and sustain forces have been extensively targeted by potential adversaries, and compromised to such extent that their reliability is questionable."[55]

Global Trade, Rule Enforcement, and China's Civil–Military Fusion

As the U.S. military considers how to fight and win wars in the 21st century when it has an adversary with an economy that is quickly advancing on its own, diagnosing how Beijing's creeping invasion of our national security industrial base could have gone unnoticed—or, perhaps worse, been noticed but not addressed—is critical.

A 2005 RAND study, for example, warned that Huawei and other ostensibly private companies are in fact merely the "public face for, sprang from, or are significantly engaged in joint research" with the Chinese military. Huawei itself "maintains deep ties with the Chinese military."[56] An even earlier 2001 report in the *Far Eastern Economic Review* concluded that Huawei is "financially and politically supported by the Chinese government."[57] In 2012, the House Intelligence Committee concluded that Huawei's "assertions denying support by the Chinese government are not credible."[58] Yet Western media continue to treat Huawei's ownership as an unanswered question,[59] and the CIA is still trying to convince U.S. allies that Huawei receives state funding.[60]

We have known since that 2012 House Intelligence Committee investigation that Chinese telecommunications giant Huawei shows a "pattern of disregard" for intellectual property rights.[61] This state-backed, multibillion-dollar company is accused of stealing innovations from everyone from start-ups to multinational companies, yet the press was surprised that Huawei had a policy of providing bonuses to employees who stole trade secrets.[62]

Huawei's theft of trade secrets is just one example of China's persistent efforts to steal research and development, intellectual property, and proprietary technology. In another example, China announced in 2014 that it intended to spend $150 billion to become dominant in the semiconductor industry.[63] Semiconductors are critical components of all modern technology. The Semiconductor Industry Association warned that while the United States has led previous semiconductor innovations, "overseas governments are seeking to displace U.S. leadership through huge government investments in both commercial manufacturing and scientific research."[64] Their efforts include stealing trade secrets from American companies that make the world's most advanced semiconductors.

Boise, Idaho-based Micron provides as much as a quarter of the world's Dynamic Random Access Memory (DRAM) integrated circuits, which are used in everything from personal computers to the U.S. military's next-generation thermal weapon sights.[65] In 2018, the U.S. government indicted Chinese state-owned Fujian Jinhua Integrated Circuit Company for stealing Micron's trade secrets[66] and added Fujian Jinhua to its Entity List, barring the export of any U.S.-origin goods to the company.[67] The theft began after Micron turned down an acquisition offer from a Chinese company.[68] Before this intellectual property theft, China did not possess DRAM technology, but instead of investing in research and development, it "conspired to circumvent Micron's restrictions on its proprietary technology," according to the indictment.[69]

Nor was this American company the only target of Chinese operations. Dutch company ASML, a global supplier to the semiconductor industry, was also the victim of commercial espionage but quickly denied any "national conspiracy." ASML's CEO said, "We resent any suggestion that this event should have any implication for ASML conducting business in China. Some of the individuals (involved) happened to be Chinese nationals."[70]

This defensiveness is perhaps understandable given the limited recourse available to companies that are victimized by Chinese

government–supported espionage. After the Department of Justice accused Chinese military hackers of cyber-enabled espionage and trade secrets theft against U.S. Steel,[71] the company has tried to bring a case before the U.S. International Trade Commission against Chinese firm Baosteel for selling a high-tech steel similar to its own products, but U.S. Steel faces a problem. It is asserting that Baosteel stole proprietary technology, but the indicted hackers worked only for the Chinese military, never for Baosteel.[72] The global trade system and mechanism for enforcing the rules are not set up to address China's military–civil fusion.

Additionally, the U.S. legal system is not well suited to combating China's exploitation of the rules-based system for its geopolitical and military gain.[73] For example, instead of undergoing a Committee on Foreign Investment in the United States (CFIUS) process, which likely would have resulted in a negative review,[74] Chinese firm Wanxiang waited until A123 Systems went bankrupt and purchased the company's technology for fast-charging lithium-ion batteries.[75] When high-end microchip producer ATopTech went bankrupt, Chinese firm Avatar Integrated Systems used the judicial system to block U.S. competitor Synopsys from raising CFIUS concerns[76] and purchased ATopTech's technology.[77]

The bankruptcy process is not the only area in which China has figured out how to maneuver around the CFIUS process. The U.S.–China Economic and Security Review Commission warned in a May 2019 report that CFIUS and export control regulations "have been unable to adequately assess and address the risks of increased technology transfers to China." As a result, China has been able "to pursue investments in critical U.S. technologies that could jeopardize U.S. technological innovation and national security."[78]

China participates in more than 10 percent of all venture capital deals in the United States and in 2015 alone invested $11.5 billion in early-stage technology deals.[79] Investments in emerging technology, including artificial intelligence, augmented reality/virtual reality, robotics, and financial technology, represent about 40 percent of China's overall investments.[80] Put succinctly, because innovation occurs in the private sector, "state competitors and non-state actors will also have access to them, a fact that risks eroding the conventional overmatch to which our Nation has grown accustomed," as the National Defense Strategy recognized.[81]

Meanwhile, Beijing requires foreign companies interested in selling into the Chinese market to form joint ventures with local firms and uses "the administrative licensing and approvals process to require or pressure the transfer of technology" from foreign firms to their Chinese counterparts, according to an in-depth U.S. Trade Representative study of China's unfair trade policies.[82] The American Chamber of Commerce in China has similarly warned that Chinese government authorities often demand "unnecessary disclosure" of confidential technological and other information.[83] European companies report feeling similarly compelled to give away critical technology to gain access to the Chinese market.[84]

In short, China uses all means to acquire sensitive, national security–related technology at the expense of America's economy and military capabilities. China uses illegal means like industrial and cyber espionage and forcible technology transfers as well as legal ones like strategic investment.[85]

As the United States considers how these economic battle campaigns could affect the outcome of military engagements, it is wise to consider that World War II could have ended differently had such adversarial practices been in place at that time. General Dwight Eisenhower attributed U.S. victory to Andrew Jackson Higgins, a small-boat builder who adapted his shallow-draft boat designs to fulfill the U.S. military's request for a small vessel that could transport both troops and vehicles from ships to the beach.[86] Higgins's story is a combination of individual ingenuity and the American military's ability to gain an advantage over the adversary by deploying next-generation weaponry and matériel onto the battlefield.

- What would have happened if the Axis Powers had stolen Higgins's boat designs before he could get his product into the hands of the U.S. military?

- What would have happened if, when he applied for his patent, Japanese government–affiliated entities had beaten him to the punch and filed a patent using designs they had stolen?

- What if, during the interwar period, Higgins had decided to sell into the European market but had been forced to form a joint venture with German firms and transfer critical technology to a government the U.S. would soon face on the battlefield?

Controlling the data of the battlefield is akin to controlling the commanding heights. With such control, one can see the gathering armies, their supply lines, and their points of weakness. China is engaged in "eco-political terraforming" to achieve such a position by planting its equipment throughout the global infrastructure and then leveraging that equipment to gather, manipulate, or otherwise control the vast amounts of data moving through the system.

The import of the Huawei issue is the import of the future of high-speed bidirectional data transmission, which is critical for the functioning of a modern military and a modern economy. With an estimated 75 billion devices connected to the Internet by 2025, who controls the telecommunications architecture and infrastructure ultimately can control the data those devices carry. The road that is being built to carry that data is 5G, and the U.S. government does not wish to see those personal, consumer, technological, and military data travelling that road to Beijing.

Yes, the build-out of 5G infrastructure is ideal for China's eco-political terraforming strategy.

Building a Secure Infrastructure for National Security Data Transmission

With a challenge as large as the one presented by China's eco-political terraforming, the solutions to the problem of preserving U.S. military superiority necessarily come from all corners of the government. While the "whole of government" mantra sounds nice, it has become synonymous with "whole of little." The battlefield of the 21st century will truly demand a more unified approach.

Fifteen years after the United States unleashed its financial furies against its adversaries, Congress added the Secretary of the Treasury as a statutory member of the National Security Council,[87] but battles of the latter half of the 20th century and the beginning of the 21st have not taught policymakers the importance of other elements of the U.S. government like the Department of Commerce and the Federal Communications Commission (FCC). These agencies and others will be central to Washington's ability to defend its economic, defense, and overall national security interests against its adversaries' campaigns.

In May 2019, for example, the FCC rejected an application by state-owned China Mobile to provide international service for U.S. callers,[88] citing a recommendation from the Commerce Department to deny the application because of national security and law enforcement concerns.[89] The FCC also issued a proposed rule banning the use of federal funds by local municipalities to purchase equipment from "companies that pose a national security threat to United States communications networks or the communications supply chain."[90] The FCC is awaiting input from the Commerce Department with respect to which companies would fit the ban's criteria.[91] The Commerce Department, for its part, is attempting to define emerging technologies and introduce export controls to prevent the sale of these technologies to adversaries.[92]

Most recently, the President issued an executive order banning all U.S. persons from purchasing information communication technology from firms controlled by a foreign adversary and deemed to pose "an unacceptable risk to the national security of the United States or the security and safety of United States persons."[93] The executive order itself does not

name specific companies and technologies and does not mention U.S. adversaries by name, but it is widely seen as addressing Chinese technology companies in general and Huawei in particular.[94] To emphasize this point, on the same day, the Commerce Department added Huawei to its Entity List.[95]

Federal agencies, meanwhile, are working with U.S. allies to create lists of trusted suppliers in an effort to cultivate viable alternatives to Chinese products. As Department of Homeland Security Cybersecurity and Infrastructure Security Agency Director Christopher Krebs has testified, allied coordination would "drive the dynamics that could move the market" to address "China's predatory industrial policy approach."[96]

Coordination creates market incentives for companies to innovate and create more secure products. Without these incentives, U.S. companies might not be able to compete with Chinese firms' discounted prices and thus not be able to convert innovation into commercial success and commercial success back into additional innovation, which in turn would leave the U.S. at a disadvantage across a broad range of security interests. The Prague 5G summit in May 2019, for example, set out a nonbinding but common approach to ensuring that 5G decisions consider not only economic, but also national security concerns.[97] More broadly, a consortium of likeminded nations that identifies both trusted vendors and the companies and technology that pose risks to critical infrastructure and communications systems would protect the integrity of networks and data on which the U.S. and allied military capabilities depend.

Conclusion

The U.S. government's recognition that the private sector is a conduit through which adversaries conduct cyber-enabled economic warfare and other cyberattacks[98] and that the future information and communications infrastructure must therefore have security at its core is welcome but insufficient. Without robust defense and concerted counteroffensive investments, hostile adversaries will rapidly erode our military and political strength.

The United States is now in a peer competition, and if our adversaries are embedded in both our publicly and privately owned and operated critical infrastructure, the U.S. military cannot fully trust its warfighting capability. Mutually Assured Destruction was a central tenet of Cold War deterrence in the nuclear age. Much is now being written about how to achieve deterrence in a cyber-enabled world.[99] If the U.S. is to maintain the advantage over adversaries who try to undermine our ability to trust our own systems, and if it is to eliminate or mitigate vulnerabilities to such attacks, perhaps the adversary must also be skeptical of the integrity of his own weapons and communications systems. Call it Mutually Assured Military Standoff if you will.

In any event, it is abundantly clear that competition—and outright conflict if and when it occurs—between great powers will incorporate the full range of tools available to major states, including economic and cyber measures that directly attack both the military's might and the citizenry's willpower. To ensure its standing as the world's largest free-market democracy, the U.S. must not only recognize the importance of the economy to our ability to defend ourselves, but also take the necessary steps to prepare for this domain of 21st century state warfare.

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The Competitive Advantages and Risks of Alliances

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Winston Churchill once famously quipped, "There is only one thing worse than fighting with allies, and that is fighting without them." So it goes for the complex web of security relationships that the United States maintains with states around the globe. Alliances and partnerships between sovereign states are often exasperatingly difficult to manage; domestic politics, burden sharing, and diverging strategic considerations create friction points that threaten to collapse them altogether.[2]

Despite the enormous amount of time and attention that U.S. leaders devote to maintaining alliances, allies and partners often make policy choices that are at odds with U.S. foreign and national security priorities. Further, the Founders admonished us to beware of "entangling alliances" that could embroil the United States in conflicts and conflagrations that were not necessarily in our interest.[3] It is hardly surprising, therefore, that successive Administrations going back at least to 1949 have grumbled about equitable sharing of the security burden and have approached the topic of alliances overall with a note of ambivalence.

Yet since the end of World War II, successive Administrations have also determined that, despite these philosophical reservations and everyday frustrations, the contemporary system of U.S. alliances and cooperative security partnerships has conferred a number of strategic advantages that make the hassle worth its attendant risks. This "hub-and-spoke" alliance system is unique in human history; it has evolved into an unprecedented set of institutions and collaborative patterns that undergird a higher degree of global stability among sovereign states than history might otherwise have predicted.[4]

Militarily, the system allows the United States to advance its interests, perform expeditionary operations, and "defend in depth" at considerably lower cost than would otherwise be possible. Economically, it has allowed the United States to set the rules of international trade and finance and, on balance, remain well positioned to reap the advantages of that system. In aggregate, the system of alliances and security partnerships that the United States currently leads has afforded enormous strategic advantages to both the U.S. and those states that participate in it.

Evolution of the U.S.-Led International Security System

To understand alliances today, we need first to understand how we got here. Thucydides tells us that alliances have been an enduring feature of war and conflict for thousands of years.[5] Multilateral military arrangements allow states (and their historical analogues) to aggregate their capabilities and collaborate on common security challenges.

Since the signing of the Treaty of Tordesillas between Spain and Portugal in 1494—an event that some strategic scholars point to

as the beginning of the modern global system[6]—alliances have been formed between nation-states and their proxies in order to wage war against common adversaries. Alliances at that time were essentially agreements by European empires to combine military and economic assets in pursuit of political objectives. The European continent was the stage for many of these conflicts between states. However, colonies provided both critical resources as well as logistical bases for European capitals, and as global empires gradually expanded and grew in strategic importance, European territories around the world were drawn into supporting these alliances and were themselves made the subject of imperial competition.

The world wars during the first half of the 20th century brought the imperial system of global order crashing down. The European colonial powers no longer had the wherewithal either to maintain their global possessions or to lead the international system. As the United States became the dominant global power in the wake of those wars, it shaped the global system in a manner more consistent with its own anti-imperial values.[7] It did this by building its security and strategic relationships in two primary ways: through formal strategic-political institutions such as the United Nations and the North Atlantic Treaty Organization (NATO) and by working with newly sovereign states rather than by taking over the possession of colonial territories.

In the aftermath of World War II and as the Cold War with the Union of Soviet Socialist Republics (USSR) took shape, the U.S. and its security partners decided to integrate economic instruments into their security calculations.[8] As the theory went, doing so would make states more resilient against the specter of Communism and Soviet expansionism. Hence, European reconstruction was accompanied by the Marshall Plan and NATO. NATO itself was designed with the economic and social policy compatibility of its member states in mind.

Globally, the Bretton-Woods system, including the World Bank Group and the International Monetary Fund (IMF), would help to reconstruct European economies, facilitate trade among free-market economies, and, when possible, help newly independent states transform themselves from colonial territories to full-fledged participants in the international economy.[9] Security relationships with the United States, including the U.S. extended nuclear deterrence umbrella, helped to make allies in Europe and Asia capable of withstanding Soviet influence operations.[10]

The design of an international system that benefited a wide variety of stakeholders was not an entirely altruistic calculation by U.S. post–World War II leaders. The war and the nuclear age that followed it underscored the fact that the continental United States was no longer protected by the Atlantic and Pacific Oceans.

Looking to the experience of Europe and Asia during the war and anxious to avoid a conflict that would comparably damage the American homeland, defense planners pursued a strategy of "defense in depth."[11] By positioning U.S. forces and capabilities forward in territories closer to adversaries, conflicts could be fought and won without directly affecting the continental United States. Basing agreements and alliance commitments, enabled in part by friendly economic relations and a common desire to contain the spread of Communism, were reached between the United States and a variety of countries in order to implement this defense-in-depth strategy. By the end of the Cold War, the United States had constructed a network of security relationships with sovereign states that was generally supportive of U.S. leadership of that system.

The end of the Cold War and the collapse of the Soviet threat around which the U.S. security system was organized led to a degree of soul-searching among scholars and policymakers: Why maintain these alliances and security relationships absent the threat they were designed to counter?[12] These concerns proved short-lived, however, as allies and partners began to organize their security relationships and priorities around the collective management of regional crises and threats,

particularly in the Middle East, Africa, and Southeastern Europe.

The United States used its existing alliance and security partnerships to adopt an expeditionary defense posture, retaining some key sites abroad that were critical for force projection (such as Ramstein Air Force Base in Germany) while closing bases and infrastructure that were no longer deemed necessary. (Such overseas bases have also been critical to managing regional "rogue" states such as Iraq, North Korea, and Iran—the latter two primarily through deterrence and forward-stationed troops and the former through active containment measures such as no-fly zones.)

The terrorist attacks of September 11, 2001, brought home the fact that there were key threats to the U.S. homeland that were not state-based: Ungoverned spaces provided the terrain for violent extremist groups to organize and metastasize into threats with a global reach. As the United States, in response, began to wage campaigns in Afghanistan, Iraq, and eventually Syria, the Department of Defense (DOD) subsequently expanded its programs to "build partner capacity" by working with fragile states in order to help them expand their capacity to govern and also, critically, their ability to eliminate threats posed by violent extremist organizations within their territory. As then-Secretary of Defense Robert Gates noted:

> Building the governance and security capacity of other countries was a critical element of our strategy in the Cold War.... But it is even more urgent in a global security environment where, unlike the Cold War, the most likely and lethal threats—an American city poisoned or reduced to rubble—will likely emanate from fractured or failing states, rather than aggressor states.[13]

The American expeditionary military posture, including key staging and logistical sites, has remained critical to enabling U.S. counterterrorism and capacity-building operations in theaters around the world. The security networks that the United States constructed as part of this strategic shift have also helped the U.S. to achieve other transnational security objectives, including nuclear counterproliferation.

The Russian annexation of Ukraine's Crimean Peninsula in 2014, along with near-simultaneous island building by China in the South China Sea, led U.S. policymakers to conclude that these powers are willing to use military tools to advance their strategic objectives and, in the process, damage the interests of the United States and its allies and partners. This emerging "strategic competition" with other powers has added to the scope and scale of the challenges with which the U.S.-led security order—already busy managing North Korea and Iran and countering violent extremists—must grapple. As the 2017 National Security Strategy 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. At the same time, the dictatorships of the Democratic People's Republic of Korea and the Islamic Republic of Iran are determined to destabilize regions, threaten Americans and our allies, and brutalize their own people. Transnational threat groups, from jihadist terrorists to transnational criminal organizations, are actively trying to harm Americans. While these challenges differ in nature and magnitude, they are fundamentally contests between those who value human dignity and freedom and those who oppress individuals and enforce uniformity.[14]

This has led to a hybrid of the defense in depth and expeditionary military postures. The European Deterrence Initiative (EDI), for example, is a U.S.-led effort to:

1. Continue to enhance our deterrent and defense posture throughout the theater by positioning the right capabilities in key locations in order to respond to adversarial threats in a timely manner.

2. Assure our NATO allies and partners of the United States' commitment to Article 5 and the territorial integrity of all NATO nations.

3. Increase the capability and readiness of U.S. Forces, NATO allies, and regional partners, allowing for a faster response in the event of any aggression by an adversary against the sovereign territory of NATO nations.[15]

Simultaneously, the U.S. has conducted counterterrorism and capacity-building operations in Afghanistan, in Iraq, and to some extent in Syria, using logistical infrastructure in Europe and the Middle East. None of this would be possible were it not for robust U.S. strategic and security relationships with allies around the world.

In summary, since the end of World War II, the United States—in contrast to the global powers that preceded America's rise—has worked to establish an international security system of sovereign states and international institutions rooted in relatively advantageous economic relationships. After the end of the Cold War, that system adapted to perform crisis management tasks. In the wake of the September 11 attacks, the system broadened still further as the United States partnered with fragile, weak, and failing states to improve the capacity of their security institutions to manage threats emanating from their territories before they could become global threats. In this network of formal and informal security relationships, the U.S. serves as the central foundation (the hub) for a global defense and military architecture (the spokes) that manages regional and international security challenges.[16]

Defining Alliances

Given the centrality of alliances to United States defense and security planning, as well as to grand strategy in general, it is somewhat surprising that contemporary examples of alliances remain rather poorly understood. Part of the confusion stems from the variety of ways in which scholars define the term "alliances."[17] Insofar as there is consensus, it is generally held that alliances are some sort of agreements between states to render military support against an external threat under predetermined conditions.[18] It is also generally understood that states make alliances in order to aggregate their military capabilities relative to external threats.

All of this makes sense to some degree: The overwhelming bulk of analyses of alliance structures, processes, formation, and so on have been derived primarily from cases involving Western European states, their empires,[19] or both and often focus on historical periods up to the end of the Cold War, with comparatively little attention paid to alliances in the period following the Cold War.[20]

Thus, confusion surrounding the definition of "alliances," coupled with a lack of analysis of military alliances in the post–Cold War era, has limited our understanding of contemporary multilateral military alignments, contributing to an overall confusion about the utility and risks of the U.S.-led global security system. For example, up until the end of World War II, the terms "alliance" and "coalition" were interchangeable, as both referred to acts by states to prosecute military operations jointly against a common threat.[21]

Parsing out coalitions from alliances has not always been a terribly important distinction to make: Alliances were often formed with the specific intention of prosecuting immediate or prospective coalition warfare or to prepare for the eventuality that warfare might occur. Furthermore, alliances, particularly during the Cold War, had a sense of unanimity to them; it was unthinkable that not all NATO allies might respond to an incursion by the Warsaw Pact, vagaries in Article V notwithstanding.

This is not generally the case today. Contemporary international organizations and alliances are often formed without the specific goal of collaboratively conducting military operations, and when international organizations or other institutions *do* decide to undertake multilateral military operations, they often do so utilizing a subset of their membership. Not all NATO members have participated in all of NATO's post–Cold War operations.

Today, this U.S.-led hub-and-spoke system includes a variety of different strategic arrangements, most of which do not fit commonly accepted definitions of alliances. These arrangements include:

- International institutions, such as the United Nations Security Council and the Organization for Security and Cooperation in Europe (OSCE), to contend with security challenges;
- Multilateral military organizations like the North Atlantic Treaty Organization (NATO) alliance itself;
- Explicit agreements between states, such as the mutual defense pact between the United States and the Republic of Korea, to provide mutual military support in times of crisis;
- Participation by states, such as those that contributed to the International Security Assistance Force in Afghanistan, in military coalitions;
- Strategic alignments between states, such as the U.S. relationship with Israel, that are not underpinned by a treaty arrangement; and
- Bilateral, informal partnerships with other states.

It is difficult to determine the utility of these multilateral alignments without an appreciation of their various forms and how they contribute overall to U.S. and global security. In the first instance, motivations for different states' participation in this system vary, which is why these relationships range from highly formalized treaty-established agreements on the one end to informal security cooperative arrangements on the other. Some are designed to assist states as they grapple with internal security challenges. Others are focused on deterring and, if necessary, defeating an external threat.

Some states with adversarial relationships join multilateral security institutions at least in part in order to tether (and be tethered to) their adversaries, thereby (counterintuitively) advancing their own national security interests. The involvement of Greece and Turkey in NATO is one such example.[22] Some states choose to participate in multinational military coalitions in order to advance interests that have little to do with the mission or operation in question.[23] A variety of states participating in the NATO-led International Security Assistance Force in Afghanistan, for example, did so in order to affirm their solidarity with other NATO countries or their bilateral relationships with the United States.[24]

From a policymaking standpoint, understanding this wide variety of motivations is critical. Without an appreciation for why and how states join these arrangements in the first place, it is difficult to make policy judgements about the level of risk they might be willing to shoulder in the event of multilateral military operations or other activities—or, indeed, for what type of security challenges they would consider employing military force at all.

Our standard conception of alliances and their *de facto* focus on military aspects of statecraft are becoming dangerously outdated, in part because they are rooted in *realpolitik*-inspired notions of military strength and capability aggregation. While these are, of course, essential aspects of alliances, they by no means capture the sum total of the role alliances play in contemporary international relations and strategic policymaking. As noted, more often than not, formal alliances are undergirded by

close economic and political ties that serve as a key way to ensure the continued harmonization of the signatory parties' overall political and strategic views. The more formal the alliance arrangement is, the more likely it is to be complemented by a trade agreement or close economic ties, many of which arguably benefit the United States.[25] While most NATO-watchers are well versed in that alliance's Article 4 (crisis planning) or Article 5 (collective defense) Treaty of Washington provisions, Article 2 has been all but forgotten:

> The Parties will contribute toward the further development of peaceful and friendly international relations by strengthening their free institutions, by bringing about a better understanding of the principles upon which these institutions are founded, and by promoting conditions of stability and well-being. *They will seek to eliminate conflict in their international economic policies and will encourage economic collaboration between any or all of them.*[26]

This logic—that economic interdependence must underpin security institutions for them to be successful in the long term—is arguably why the U.S. sought the development of trade relationships among postwar democracies.[27] It is also why global economic institutions such as the World Bank and IMF were established alongside the United Nations Security Council.[28] Less formal security arrangements are generally accompanied by sales of U.S. defense equipment and other matériel to partner countries; in fact, foreign military sales were at one time a gauge by which U.S. versus Soviet global influence was measured.[29]

This aspect of international relations does not always function perfectly (hence the trade wars with Japan in the late 20th century), but on balance, it has served to create an interdependent group of states, led by the United States, that resolve issues among each other in a peaceful manner. It has also created a series of relationships that, although challenging to manage on a day-to-day basis, are surprisingly durable in the long run. Whether this will continue to be the case in the future is a major question among strategists today.

The Contemporary Hub-and-Spoke Security System: Risks and Advantages

The alliance system that the U.S. began to construct at the end of World War II is unique in human history and has afforded the United States a number of important strategic and economic advantages. If today's world is characterized by strategic competitions with other great powers, however, as the 2017 U.S. National Security Strategy suggests, the question becomes whether the U.S. will continue to find that the advantages of the hub-and-spoke system are enough to justify its perpetuation.

The hub-and-spoke system possesses both risks and advantages to the United States that policymakers must consider as they evaluate its contemporary and future utility. The key risks include:

- **Burden-sharing.** Questions about whether allies are truly shouldering their collective security responsibilities are perennial in alliance management. In a NATO context, such questions have been raised since the founding of the alliance in 1949. Very few states today spend as much on their defense programs as the United States does, and many NATO allies struggle to meet an agreed-upon goal of 2 percent of gross domestic product (GDP) on defense.[30]

  Some would ask what use an alliance is if other states do not have sufficient military capabilities to advance common objectives? Others contend, however, that earlier NATO discussions of burden sharing included the moral dimensions of allied solidarity in the face of an existential expansive Communist threat. According to this view, today's debates would therefore be better characterized as debates about cost sharing rather than burden sharing.

In any event, debates swirl around whether allies are paying their fair share.

- **Entanglement.** Within asymmetric alliances, most allies are fearful that the United States will either abandon them in a crisis (abandonment) or involve them in a crisis in a manner that they would not otherwise choose (entrapment). As the Founders warned, entanglement in the affairs of other states and their security challenges is a concern for the United States as well. To what extent are U.S. views of strategy and foreign policy choices influenced by allies and partners? Might we have the same perception of the Russian or Iranian threat were it not for our close allies in those regions? What are the risks of being drawn into a conflict that might prompt nuclear escalation?

- **Inappropriate Security Partnerships.** As the hub-and-spoke network of security relationships has expanded in order to prosecute counterterrorism and capacity-building strategies since September 11, 2001, questions have arisen regarding the efficacy of many of these partnerships. At the heart of the issue is whether building security forces in states with fragile governments—by, for example, providing training, equipment, and institutional support—might actually make the United States *less* secure in the long term.

  For one thing, partners on the ground may have short-term and long-term interests that are very different from those of the United States and may use their enhanced military capabilities to go beyond the objectives for which the assistance was intended. U.S. security assistance to Mali led to the provision of professional military education and training. A separatist rebellion launched in late 2011 by members of the minority ethnic Tuareg community aggravated intramilitary and political tensions in the country, leading to a military coup by junior officers in March 2012 that was spearheaded by Captain Amadou Sonogo, who had been a recipient of that training,[31]

- **Strategic Insolvency.** Some observers of U.S. defense policy are increasingly concerned that the gap between America's defense spending and its global responsibilities is widening. According to this view, budget unpredictability exacerbated by the 2011 Budget Control Act ("sequestration"), along with readiness issues, nearly two decades of war, personnel retention, and other factors, has left the DOD ill prepared to meet its own goals as articulated in the 2018 National Defense Strategy. Elements of this argument can be found in theories of imperial overstretch;[32] the National Defense Strategy Commission (NDSC) calls it a possibility of "strategic insolvency."[33] Within the foreseeable future, the U.S. may no longer have the capabilities to defend its allies in more than one theater without significantly reinvesting in its defense program, significantly scaling back its level of ambition, or both.[34]

The principal advantages of the hub-and-spoke system include:

- **Global Reach.** One of the key reasons for building the U.S.-led defense architecture in the first place was to be able to fight the nation's wars far away from the American homeland. This rationale still holds. The United States would not have been able to plan and execute operations around the world like its move into Afghanistan, which occurred within a month after the September 11 terrorist attacks, were it not for its network of military bases and access agreements in the U.S. European Command and U.S. Central Command areas of responsibility.[35]

- **Lower Costs.** Despite the considerable amount of political hay being made from

burden-sharing issues, the financial costs that the U.S. would have to shoulder to accomplish its strategic objectives absent its hub-and-spoke system would likely be significantly higher. Allies often facilitate the presence of U.S. forces stationed on their soil through in-kind payments. South Korea, for example, contributed the lion's share of the costs associated with building Camp Humphreys ($9.7 billion of a $10.8 billion project) and annually pays approximately 50 percent of the nonpersonnel costs for the stationing of U.S. troops.[36] Further, historically speaking, imperial predecessors appear to have spent a considerably larger share of their annual budgets on the maintenance of their global military posture.

While not a perfect comparison, it is still worth observing that by some estimates, the United Kingdom spent upwards of 37 percent of its annual governmental budget on its military between 1860 and 1914.[37] During the same period, the majority of Western European countries, Russia, the U.S., and Japan spent, on average, 32 percent of their annual governmental budgets on their militaries.[38] In other words, "[t]axes collected by the British government were used basically to defray military expenditure and to pay interest on a national debt which had accumulated as a consequence of past wars fought to acquire and defend the empire."[39] By comparison, the U.S. spent 14.75 percent of its annual budget (both mandatory and discretionary) on the defense program in 2017.[40]

- **Exercises and Interoperability.** The hub-and-spoke system has created a wide variety of opportunities for U.S. servicemembers to engage with their foreign counterparts to advance strategic, operational, and tactical interests collectively and ensure that servicemembers from different countries can fight together effectively. NATO, for example, has the International Military Staff (IMS) and a series of standardization agreements and exercises that help to improve interoperability among member states and partners. These preparations during peacetime help to build meaningful capabilities that can be drawn upon during crises and conflict.

  Even though Operation Iraqi Freedom was an ad-hoc coalition, for example, most experts agree that it would not have been possible to operate coherently were it not for NATO's decades of efforts to improve interoperability among its members, many of which participated in that coalition. Also, many multilateral military exercises occur outside of U.S. territories, which has the additional advantage of giving U.S. servicemembers key opportunities to understand the contours of a theater or battlespace before conflict occurs, which in turn enables better planning and preparation for an outbreak of hostilities.

- **Coalition Participants.** Another proven benefit of the hub-and-spoke system has been the willingness of other states to contribute troops, financial resources, or both to U.S.-led military coalitions. At the height of the Afghanistan campaign, 50 nations contributed troops to the International Security Assistance Force.[41] Similarly, allies and partners have contributed to U.S.-led wars and operations in Korea, Vietnam, the Persian Gulf, Somalia, the Balkans, Libya, Iraq, and Syria. In addition to defraying the costs in terms of both blood and treasure that are associated with prosecuting these missions, these contributions have also served to underscore their international legitimacy.[42]

Given this balance sheet of risks and advantages, successive U.S. Administrations have determined that reinvesting in this hub-and-spoke system continues to benefit American interests. The amount of time and attention

that day-to-day management of this system entails—on any given day, dozens of tactical-level and strategic-level issues between sovereign states must be juggled based on shifting notions of security and defense that change over time along with strategic circumstances—might suggest to a casual observer that these relationships are fragile, but the historical track record suggests the opposite. The dissolution of the Soviet Union actually led to an *expansion* of the hub-and-spoke system and has enabled the United States to prosecute expeditionary operations alongside a wide variety of coalition partners.

Looking to the future, however, there are reasons for concern. The U.S.'s key competitors have studied America's defense strategy or approach to waging war and appear to have concluded that fighting the United States conventionally is a losing proposition. Instead, Russia and China appear to be using a combination of military and nonmilitary tools (such as, for example, Moscow's seizure of the Crimean Peninsula and Beijing's assertion of a claim to the nine-dash line territories in the South China Sea) to achieve their objectives.

Another key tactic that these adversaries appear to be using is an attempt to disrupt the U.S.-led hub-and-spoke security network. Due to China's coercive economic policies, combined with its military reforms and expeditionary presence, some of America's allies such as Australia are facing a stark strategic choice: whether to invest in a relationship with China or with the United States.[43] Others, such as Italy, have determined that no apparent conflict exists between embracing Chinese Belt and Road investments and observing their obligations to the European Union (EU) and NATO.[44] Likewise, Russia's disinformation operations appear to be designed, among other things, to sow doubt in European capitals as to the utility of the institutions that the U.S. has helped to create since World War II, including NATO and the EU.[45]

Complicating matters, Moscow and Beijing appear to be collaborating to achieve their shared objective of displacing the United States as the center of the hub-and-spoke system. As the 2019 Worldwide Threat Assessment released by the Director of National Intelligence notes, "Russia and China seek to shape the international system and regional security dynamics and exert influence over the politics and economies of states in all regions of the world and especially in their respective backyards."[46]

Their apparent objective in doing so is to advance an authoritarian vision of governance and world order.[47] This stands in stark contrast to the international order that the United States has fought hard to achieve over the past 70 years and that, on balance, takes human freedom and individual liberty as a starting point for political organization. From this perspective, the strategic stakes could hardly be higher.

Conclusion

Both nature and power abhor a vacuum, and both Beijing and Moscow appear to be happy to fill any space created by a U.S. retrenchment—perceived or actual—from the hub-and-spoke system. The United States therefore appears to be at a crossroads. It can either continue to view its complex network of security relationships through a transactional, cost-sharing lens, or it can instead reconsider the broader strategic value of the hub-and-spoke network as the key mechanism through which Washington can counter its great-power competitors.

Indeed, allies contribute to the U.S. and the furtherance of its interests in any number of ways, and their contributions go beyond mere dollars and cents. Regional access, prepositioning of forces and supplies, political-strategic relationships, and interoperable forces together create a "warm start" in the event of a crisis. Further, the U.S. gains intelligence and situational awareness from its global security relationships that it would not otherwise have.

Perhaps most important, however, by reinvesting in its global web of security relationships, the U.S. simultaneously is sending a message to its competitors that they will not

be able to pursue their own arguably coercive agendas unchallenged. Should the U.S. let the hub-and-spoke system languish, the costs of acting alone—in diplomatic, military, and economic terms—are likely to be prohibitive. Compounding the problem, adversaries would likely take advantage of an erosion of U.S. security relations to strengthen their positions at America's expense.

Despite the hub-and-spoke network's advantages, just as questions about the appropriate U.S. role in the world remain up in the air, so too does the question of retrenchment from this system versus reinvigoration of it also remain unsettled. At least for now, however, the hub-and-spoke system will undoubtedly remain a foundational element of American strategy—if we choose to keep it.

Endnotes

1. Any views expressed in this article are strictly those of the author and do not represent the views of any organization with which she is affiliated.
2. Dwight D. Eisenhower, *Crusade in Europe* (New York: Doubleday, 1948), p. 4, as quoted in Robert H. Scales, Jr., "Trust, Not Technology, Sustains Coalitions," *Parameters*, Vol. 28, No. 4 (Winter 1998–99), https://ssi.armywarcollege.edu/pubs/parameters/articles/98winter/scales1.htm (accessed July 13, 2019).
3. David Fromkin, "Entangling Alliances," *Foreign Affairs*, Vol. 48, No. 4 (July 1970), pp. 688–700, https://www.foreignaffairs.com/articles/1970-07-01/entangling-alliances (accessed July 13, 2019).
4. "Hub-and-spoke" is often used to describe the U.S. system of bilateral alliances in Asia, while NATO is referred to as a "multilateral" system. These terms generally refer to formal alliance relationships; as this essay considers the totality of U.S. global security arrangements and how they have evolved over time, "hub-and-spoke" is an appropriate metaphor to describe this complex network of security relationships that has the United States at its center.
5. Thucydides, *The History of the Peloponnesian War*, trans. Richard Crawley (London: J.M. Dent, 1910).
6. George Modelski, "The Long Cycle of Global Politics and the Nation State," *Comparative Studies in Society and History*, Vol. 20, No. 2 (April 1978), pp. 214–235.
7. Kori Schake, *Safe Passage: The Transition from British to American Hegemony* (Cambridge, MA: Harvard University Press, 2017), esp. Chapter One. The United States has, of course, been imperfect in its application of these values and principles; the U.S. annexed Hawaii, for example.
8. "It is imperative that [there be] a much more rapid and concerted build-up of the actual strength of both the United States and the other nations of the free world. ¶ The execution of such a build-up, however, requires that the United States have an affirmative program beyond the solely defensive one of countering the threat posed by the Soviet Union. This program must light the path to peace and order among nations in a system based on freedom and justice.... Further, it must envisage the political and economic measures with which and the military shield behind which the free world can work to frustrate the Kremlin design by the strategy of the cold war.... The only sure victory lies in the frustration of the Kremlin design by the steady development of the moral and material strength of the free world and its projection into the Soviet world in such a way as to bring about an internal change in the Soviet system.... ¶ In summary, we must, by means of a rapid and sustained build-up of the political, economic and military strength of the free world, and by means of an affirmative program intended to wrest the initiative from the Soviet Union, confront it with convincing evidence of the determination and ability of the free world to frustrate the Kremlin design of a world dominated by its will...." Conclusions and Recommendations" in *NSC 68: United States Objectives and Programs for National Security (April 14, 1950): A Report to the President Pursuant to the President's Directive of January 31, 1950*, National Security Council, April 7, 1950, https://fas.org/irp/offdocs/nsc-hst/nsc-68.htm (accessed July 15, 2019).
9. World Bank, "History," http://www.worldbank.org/en/about/archives/history (accessed July 15, 2019), and International Monetary Fund, "History: Cooperation and Reconstruction (1944–71), https://www.imf.org/external/about/histcoop.htm (accessed July 15, 2019).
10. *NSC 68: United States Objectives and Programs for National Security*, p. 68.
11. Stacie L. Pettyjohn, *U.S. Global Defense Posture, 1783–2011* (Santa Monica, CA: RAND Corporation, 2012), pp. 49–96, https://www.rand.org/content/dam/rand/pubs/monographs/2012/RAND_MG1244.pdf (accessed July 15, 2019). Prepared for the U.S. Air Force by RAND Project Air Force.
12. Wallace J. Thies, *Why NATO Endures* (New York: Cambridge University Press, 2009).
13. U.S. Department of Defense, "Remarks as Delivered by Secretary of Defense Robert M. Gates, The Nixon Center, Washington, D.C., Wednesday, February 24, 2010," http://archive.defense.gov/speeches/speech.aspx?speechid=1425 (accessed June 17, 2019).
14. *National Security Strategy of the United States of America*, The White House, December 2017, pp. 2–3, https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf (accessed July 15, 2019).
15. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller), *Department of Defense Budget Fiscal Year (FY) 2020: European Deterrence Initiative*, March 2019, p. 1, https://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2020/fy2020_EDI_JBook.pdf (accessed June 17, 2019).
16. See note 4, *supra*.

17. Compounding the confusion, different scholars have sought to categorize them in different, often overlapping ways. Bruce Russett captures this ambiguity well when he lays out how different scholars—Hans Morgenthau and Kalevi J. Holsti—approach the topic of alliances. He explains that Morgenthau categorizes alliances according to whether they are (1) mutual or unilateral; (2) temporary or permanent; (3) operative or inoperative, depending on their ability to coordinate members' policies; (4) general or limited in their distribution of benefits; and (5) complementary, identical, or ideological in their scope of interest. Holsti, by contrast, organizes alliances along the following lines: (1) the situation in which commitments are to become operational, (2) the type of commitments undertaken, (3) the degree of military cooperation or integration, and (4) the geographic scope of the treaty. Bruce M. Russett, "An Empirical Typology of International Military Alliances," *Midwest Journal of Political Science*, Vol. 15, No. 2 (May 1971), p. 264.
18. Stephen M. Walt, *The Origin of Alliances* (Ithaca, NY: Cornell University Press, 1987), pp. 12–13, and Glenn H. Snyder, *Alliance Politics* (Ithaca, NY: Cornell University Press, 2007), p. 4. In Walt's conception, they can be formal or informal; in Snyder's, they are formal arrangements.
19. The major exception to this is Walt's *The Origin of Alliances*, which looks at alliance formation in the Middle East from 1955–1979.
20. There is, of course, an enormous body of post–Cold War work exploring the particular policy and strategic dimensions of key alliance relationships, such as NATO or U.S. bilateral defense relationships in Asia. Yet the insights and assumptions regarding the formation and maintenance of those alliances are often informed by studies of alliances that predate the end of the Cold War (or, in the case of constructivism, very shortly thereafter).
21. Brett Ashley Leeds, Jeffrey M. Ritter, Sara McLaughlin Mitchell, and Andrew G. Long, "Alliance Treaty Obligations and Provisions, 1815–1944," *International Interactions*, Vol. 28, No. 3 (July 2002), pp. 237–260, (accessed July 15, 2019).
22. Patricia Weitsman, *Dangerous Alliances: Proponents of Peace, Weapons of War* (Stanford: Stanford University Press, 2004).
23. Kathleen J. McInnis, *How and Why States Defect from Contemporary Military Coalitions* (New York: Palgrave Macmillan, 2019).
24. Ibid.
25. Glenn Snyder refers to this as the "political penumbra" of alliances. Further, a RAND study notes, "In our analysis of aggregate U.S. bilateral trade, we find solid evidence that U.S. security commitments have significantly positive effects on U.S. bilateral trade. For example…a doubling of U.S. personnel commitments overseas could increase U.S. bilateral trade by as much as 15 percent, depending on the service, while a doubling of treaties could expand U.S. bilateral trade by 34 percent overall." Daniel Engel, Adam R. Grissom, John P. Godges, Jennifer Kavanagh, and Howard J. Schatz, *Estimating the Value of Overseas Security Commitments* (Santa Monica, CA: RAND Corporation, 2016), p. x, https://www.rand.org/content/dam/rand/pubs/research_reports/RR500/RR518/RAND_RR518.pdf (accessed July 15, 2019).
26. North Atlantic Treaty, Article 2, April 4, 1949, last updated April 10, 2019, https://www.nato.int/cps/en/natolive/official_texts_17120.htm (accessed July 15, 2019). Emphasis added.
27. G. John Ikenberry, *After Victory: Institutions, Strategic Restraint, and the Rebuilding of Order After Major Wars* (Princeton, NJ: Princeton University Press, 2001) pp. 162–214.
28. Ibid. See also I. M. Destler, "America's Uneasy Relationship with Free Trade," *Harvard Business Review*, April 28, 2016, https://hbr.org/2016/04/americas-uneasy-history-with-free-trade (accessed June 18, 2019).
29. Robert E. Harkavy, *Bases Abroad: The Global Foreign Military Presence* (Stockholm: Stockholm International Peace Research Institute, 1989), p. 5.
30. Press release, "Wales Summit Declaration Issued by the Heads of State and Government Participating in the Meeting of the North Atlantic Council in Wales," North Atlantic Treaty Organization, September 5, 2014, https://www.nato.int/cps/en/natohq/official_texts_112964.htm#def-exp (accessed June 18, 2019).
31. Martin Vogl, "Mali Coup Leaders Partially Reopen Airport," Associated Press, March 26, 2012, http://archive.boston.com/news/world/africa/articles/2012/03/26/mali_protesters_seek_return_to_order_after_coup/ (accessed July 15, 2019), and Simon J. Powelson, *Enduring Engagement Yes, Episodic Engagement No: Lessons for SOF from Mali*, Thesis, Naval Postgraduate School, Monterey, California, December 2013, p. 56, https://calhoun.nps.edu/bitstream/handle/10945/38996/13Dec_Powelson_Simon.pdf?sequence=1&isAllowed=y (accessed June 18, 2019).
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