The *Index of U.S. Military Strength*: Ten Years in Review

Dakota L. Wood

The future cannot be predicted, but it is knowable. Trends are not linear or unchangeable as they stretch into the future, but they do illuminate truths and stubborn consistencies in behavior, interests, and the realities of war and what is needed to prepare for it so as to deter it or win it when forced to engage in it. That is the focus of this essay.

A decade of reporting on anything is enough time to get a feel for trends: whether something is headed in the right direction or you have something about which you should be worried. When it comes to the U.S. military and the ability of the United States to defend its interests in the world that *is* rather than the world we *wish* we had, the trends irrefutably show that the U.S. has something about which to be worried.

The ability of a military force to win in battle is only partly a function of its training, morale, and modernity of equipment. Success in war is also a function of how much capability a force has (its capacity) relative to its enemy and the setting within which the battle occurs. If the battle is close to home, it is much easier for the force to be resupplied, reinforced, or supported with long-range weapons. Usually, a fight close to home or near allies gives the force access to bases, ports, and airfields. Conversely, the farther the fight is from home and from allies and supporting infrastructure, the harder it is for the military to continue fighting or even operating as combat exacts its toll. Supplies of munitions, fuel, food, and repair parts begin to dwindle. It gets harder to replace destroyed equipment and combat platforms. The morale of the force becomes more difficult to buoy as the men and women involved suffer the ravages

of battle while knowing that relief is distant, contested, and limited by time and space.

If allies are net contributors, U.S. shortfalls can be mitigated. This presumes, of course, that allies can sustain their own efforts in the first place. Unfortunately, recent history says they cannot. Every ally that has supported coalition efforts in Afghanistan, Iraq, and elsewhere has needed help getting people, equipment, and supplies to the theater and to sustain the flow of logistical resupply over time. The U.S. is one of a very few countries equipped with long-distance cargo aircraft and the aerial refueling planes needed to establish an air bridge to and within an operational theater.¹

Allies and Adversaries

Since almost all major military actions since the end of the Cold War have taken place far from Europe—the 1990s crises in the Balkans and the current war in Ukraine being the exceptions—U.S. and allied forces have not had the benefit of ports, airfields, and support bases that were close at hand; they have had to build their own or gain permission from a nearby country that was willing to allow its infrastructure to be used for such operations. In other words, the U.S. has had to support not only itself, but the allies it has called upon to contribute to such efforts.

The value of allies fighting alongside U.S. forces is more than the raw combat power they provide; the political validation of military actions is often essential, and allies typically bring national and operational intelligence capabilities and regional connections that make the overall force more capable. But in military terms, allies tend to be a logistical burden on combined military action rather than a relief to U.S. capabilities. Thus, knowing whether U.S. allies are increasing their ability to contribute to combined efforts or are falling further behind is quite important.

Knowing the trends among likely adversaries is similarly important: Are they improving their capabilities through investments in various forms of military power, or is their condition eroding over time? It is nearly impossible to predict whether an expansion in capability or the modernization of weapons translates into battle competence and military advantage. These are revealed only in actual combat. But one can be fairly certain that the more equipment a competitor fields, the longer he will likely be able to sustain operations because a large inventory of materiel enables him to replace combat losses, a large inventory of munitions enables him to apply volume-of-fire against his enemy, and large investments to improve the capacity, capability, and (presumably) readiness of his force imply seriousness about military power.

Russia's war against Ukraine is instructive. Though Russia's extremely poor performance has surprised most analysts and observers, the sheer size of its inventory of vehicles, aircraft, people, and especially munitions has enabled it to sustain its assault on Ukraine since late February 2022 in spite of strategic and operational incompetence. Western support has enabled Ukraine both *not to lose* and to impose substantial losses on Russia, but Russia has leveraged its vast quantities of materiel to remain in the fight, even pulling 1950s vintage tanks from storage.² One can scoff at such relics being committed to modern combat, but a T-54 tank on the battlefield is still better than a modern British Challenger II sitting in a vehicle lot in England.

The point here is that investments in military forces that expand capacity can offset shortfalls in quality (to an extent) and competence. Russia's military leaders have badly mismanaged both the invasion and many of the operations that have taken place since then, yet the Russian military still occupies one-fifth of Ukraine, has destroyed much of the country, and has imposed several hundred thousand casualties, both military and civilian, on Ukraine and itself.

Capacity of force covers a multitude of sins in competence and capability. Referring again to the Russia–Ukraine war, Russian forces have often averaged 60,000 rounds a day of artillery fire³ to the Ukrainians' 6,000 rounds,⁴ a 10-to-one advantage in volume even though Ukraine has often shown itself to be more innovative in action and has been supported by more advanced Western munitions and artillery (rocket and cannon) systems. Quantity can have a quality of its own.⁵ It is somewhat unfortunate, then, that the West—including the United States—places so much emphasis on quality that the increased cost results in the fielding of few platforms and weapons. The resulting force may be very modern but still have difficulty sustaining operations when attrition becomes a major factor.

Ten years of *Index* reporting⁶ clearly shows two things:

- America's likely nation-state adversaries—China, Russia, Iran, and North Korea—have consistently invested in large quantities of military capability while also attempting to pace or surpass U.S. quality, and
- They are succeeding in some areas.

This is especially true with respect to munitions and for a compelling reason: Advances in relevant technologies (sensors, guidance systems, propulsion, and explosives) have made anti-platform weapons and munitions more effective at dramatically less cost than the platforms they are meant to destroy. This leads to the problem of salvo density (can one defend against a large quantity of incoming munitions?) and cost-imposition strategies (how good does a platform need to be, and at what cost, to survive against a barrage of comparatively inexpensive, precision-guided munitions?) that can place "better" militaries at a significant disadvantage. In fact, it is quite possible for advanced military forces to price themselves out of competition if the country is not willing to sustain a defense budget large enough to support *capacity* of capability.

Again, the Russia–Ukraine war, though not predictive of future war, is illustrative: Weaponized, remotely piloted drones costing several hundred to perhaps a few thousand dollars have been used consistently to destroy multimillion-dollar armored vehicles, including main battle tanks. Does this mean armored vehicles are obsolete? No, but it does suggest that any modern force will have to account for equipment inventories that include enough armor to absorb such losses while also being equipped with updated defensive capabilities that mitigate such an attack vector.

The expense of war seems always to increase, not decrease, and expense increases even more with distance. This reality has implications for force capacity as well as for the geographical positioning of forces and the ability of countries' industrial bases to equip, repair, and replace assets in a timely manner.

It is certainly the case that America's competitors have been hard at work building capacity (larger forces and the industrial base that makes them possible) while also modernizing their forces over the past decade. The evidence is indisputable.

Ten years ago, the *Index* reported growing concerns within the West, and particularly within the U.S., about modernization efforts in China and Russia. Both countries had witnessed what the U.S. was able to do in Operations Desert Shield and Desert Storm (1990–1991), the first a six-month buildup of U.S.-led coalition forces in Saudi Arabia that enabled the second, a two-pronged offensive into Kuwait to drive out Iraqi forces sent there by Saddam Hussein to claim the country as a province of Iraq.

Initiated with a 42-day air campaign of more than 100,000 attack sorties, followed by a massive ground campaign that lasted a mere 100 hours,⁷ the war saw the first widespread use of precision-guided munitions (PGMs) and stealth aircraft. The rapidity, devastating effectiveness, and scale of Operation Desert Storm were a grand testament to the force built in the 1980s to defeat Soviet and Warsaw Pact forces in Europe. It was followed in the mid-1990s by NATO operations in Bosnia and Herzegovina in which PGMs were again used with astonishing accuracy.

After the terrorist attacks of September 11, 2001, the U.S., assisted by a broad coalition of partner countries, launched operations into Afghanistan, nearly seven thousand miles from New York City; Shanksville, Pennsylvania; and Washington, D.C., the sites where a total of 2,977 Americans were killed by al-Qaeda terrorists. That the U.S. was able to launch combat operations so far from home—initially, special operations forces supported by precision air strikes and, later, a large-scale deployment of conventional forces—and sustain operations for several years spoke to the capability of the U.S. military, something that no other military was able to contemplate much less execute. That America was also able to launch a second major operation from Kuwait into Iraq in 2003 doubly emphasized the importance of quantity.

Taking notice, China and Russia committed to modernizing their military power and professionalizing their forces, shifting from conscript militaries possessing aged, early Cold War equipment to forces loosely modeled on Western designs and reorganized to facilitate the type of joint, combined arms operations the U.S. preferred and with which it had arguably been successful in achieving initial war aims.

China: Power Projection and Provocation

Since 2015, China has significantly reorganized its military and reoriented it from an inward-looking force concerned primarily with internal security, with priority given to the army, to an outward looking, power projection–capable force that emphasizes air, naval, and strategic rocket forces. To solidify its claims over contested maritime features and waters, it undertook construction of artificial islands in the South China Sea and around the Spratlys (begun in 2014).⁸

In 2017, Beijing struck an agreement with Djibouti, a small country on the horn of North Africa, to construct China's first foreign base,⁹ a naval base that gives it a perch on the strategically important Bab al-Mandab Strait that connects the Red Sea with the Gulf of Aden and the Arabian Sea and through which flows approximately five million barrels of oil and petroleum products each day.¹⁰

By 2020, China had enjoyed many years of sustained double-digit growth in its investments in defense capabilities, modernizing nearly all capabilities across all of its services. It also increased its military activities around Taiwan in response to that island's 2020 election results that brought an independence-minded president into office, rammed and sank a Vietnamese fishing boat with one of its coast guard vessels, placed a sophisticated communications relay satellite into orbit, and landed a second probe on the moon.

Since 2022, China has grown its navy to a fleet of more than 360 ships; fielded fifth-generation stealth fighters (the J-20 and J-31, copies of the U.S. F-22 and F-35, respectively)¹¹; developed a stealth bomber similar to the B-2; deployed four new Jinclass nuclear powered ballistic missile submarines; initiated construction of three fields of intercontinental ballistic missiles that will triple China's inventory of nuclear-tipped ICBMs to 300; increased its stockpile of nuclear warheads to 400 or more; and developed a hypervelocity glide vehicle designed to evade U.S. missile defense capabilities.

With respect to Taiwan, China has increased its provocative, testing probes of and incursions into Taiwanese airspace and sea space in each of the past four years, penetrating Taiwan's airspace 380 times in 2020, 960 times in 2021, and 1,727 times in 2022.

In 2022, China's air force numbered 1,700 combat aircraft, 700 of which are considered fourth generation (equivalent to a U.S. F-16, F/A-18, or F-15). In 2022, it expanded its amphibious assault ship capabilities and quantities of long-range strike aircraft, cruise missiles, and bombers, all of which would be essential to any operation to take Taiwan by force or to cow it into submission. As if to prove the point, China operated 14 ships around the island in August 2022, and 12 ships and 91 aircraft rehearsed a blockade in April 2023. Chinese fishing and coast guard vessels constantly encroach within Taiwan's 12 nautical mile limit. China is obviously serious about improving the capability and capacity of its military, driven by clarity of purpose and national objectives.

Russia: Expansion and Aggression

Russia—China's neighbor, sometimes friend, but more often historical competitor—has been equally aggressive and intent on improving its military posture over the past decade. In 2014, Russia infamously seized Ukraine's Crimean peninsula, absorbing the bulk of Ukraine's navy, the major port of Sevastopol, and the Sea of Azov.¹² In 2014 and 2015, Russia increased its support for rebels in Ukraine's Donbas region, restive Serbs in the Balkans, and disruptive activities in the Caucasus.

Russia also increased its investments in the Arctic, conducting large exercises in northern Arctic waters and orienting two-thirds of its navy toward that region. By 2024, Russia had reactivated, built, or improved six bases, 14 airfields, and 16 deepwater ports and fielded 14 arctic-capable icebreakers (10 times the number possessed by the U.S.¹³) along its northern coast.

From 2018 to the present, Russia has made substantial investments in missiles of all types as well as underwater weapons (for example, the Poseidon nuclear-tipped and nuclear-powered torpedo¹⁴); air and missile defense systems; anti-satellite capabilities; and a new RS-28 Satan 2 ICBM. During this period, Russian officials were accused of poisoning political enemies, and the government expelled diplomats and ordered the closure of the U.S. consulate in Saint Petersburg; strengthened relations with Egypt, Syria, Venezuela, and Iran; and committed to a creeping occupation of Montenegro.

As of February 2023, some 13,000 Russians had settled in Montenegro (a NATO member since 2017) since the start of the war against Ukraine one year earlier, arriving overland through Serbia. As was the case in Crimea and Donbas, Russia can be expected to push out or forcibly remove locals who are not to its liking and emigrate its own people to establish a population that is favorable to Moscow. Such actions occur below the level of war, do not draw a response from the West, and ultimately establish effective Russian control of an area.

Russia's efforts to improve its military capabilities and the readiness of its forces were also reflected in very large military exercises. Snap (no-notice) exercises became common, augmenting announced mobilizations like the Zapad series in which Russia would deploy forces close to Ukraine for weeks of high-intensity training.

A major exercise in 2021 was especially worrisome because it was accompanied by intense rhetoric aimed at Ukraine. The exercise included combat enablers like expanded medical care and large quantities of blood supplies that have not normally been part of such an exercise; lasted much longer than usual; and included as many as 300,000 personnel (depending on how people are associated with the event) and 35,000 combat vehicles, 900 aircraft, and 190 ships. When it ended, Russia left a large amount of equipment and various support capabilities in place. When it invaded Ukraine in February 2022, Russia was able to leverage the materiel it had left close to the Russia–Ukraine border.¹⁵

Iran and North Korea: Growing Nuclear and Missile Capabilities

Iran and North Korea were similarly investing in capabilities and provocations to achieve their various objectives.

Iran was doggedly consistent in its behavior over the past decade. It was reliably supportive of terrorist organizations in the Middle East, notably Hezbollah and Hamas, emphasizing actions against Israel (mostly rocket attacks) and combat activity in Syria in support of Bashar al-Assad's efforts against rebel challengers nominally supported by the West. As if to culminate a decade of *Index* reporting on the threat that Iran and its terrorist proxies present to the region, Hamas viciously attacked Israel on October 7, 2023, specifically targeting civilians, killing approximately 1,400 and injuring many more. Israel responded by declaring war on Hamas and undertook a military campaign of its own to eliminate Hamas as a threat to the country and its people.¹⁶ Encouraged by Iran, the escalation of attacks from Hamas and Hezbollah on Israel, in addition to provoking Israel's military response, threatens to broaden the war to involve more combatants and escalate the war's intensity-a perfect illustration of the very concern this *Index* has with the destabilizing effect that terrorist groups can have on regions of critical importance to the U.S.

Iran was certainly consistent in its harassment, interdiction, and occasional seizures of commercial ships moving cargo and petroleum products from the Persian Gulf through the Strait of Hormuz into the Gulf of Oman and larger Arabian Sea. In 2020, Iran allegedly damaged four tankers near the United Arab Emirates (UAE) and attacked two tankers in the Gulf of Oman. It escalated such activities over the next two years, harassing, attacking, or interfering with at least 18 ships transiting the area.

In 2020, in reprisal for the U.S. killing of General Qasem Soleimani, the leader of the Iranian Quds Force and interlocutor with Hezbollah, Hamas, and other terrorist organizations, Iran launched a missile attack against an Iraqi base that was hosting U.S. forces. It mounted another such an attack (this time by proxy) in 2022, equipping Houthi forces with two missiles with which they attacked the Al-Dhafra air base in Saudi Arabia, home to 2,000 U.S. service personnel.

Militarily, Iran was relentless in expanding its inventory of missiles—for many years the largest in the Middle East—and making qualitative improvements, especially in areas linked to its nuclear program. In 2020, it launched a military satellite into orbit using a vehicle (rocket) with features needed for a long-range military missile rather than a lift body for commercial payloads. A year later, the government revealed a new launch vehicle that could be launched from a mobile pad and was suitable for military rather than commercial or scientific use.

Iran also continued to obstruct international monitoring of its nuclear program, refusing to reinstall International Atomic Energy Agency (IAEA) monitoring devices it had unilaterally disabled in 2022. In February 2020, Iran was assessed to have 1,500 kilograms of low enriched uranium; in 2023, its stock of uranium had been enriched to 60 percent, the quantity (122 kg) sufficient to produce three nuclear warheads if enriched further to 90 percent.¹⁷

North Korea was also busy over the decade of *Index* reporting. As early as 2015, it was assessed as being able to miniaturize a nuclear warhead, which would give it the ability to place a usable nuclear weapon atop a long-range missile, thus presenting a profound threat to any country within the missile's range. In that same year, some analysts concluded that the regime's KN-08 missile had the range to reach the United States: In other words, North Korea had the potential to attack the U.S. directly with a nuclear weapon. Since then, the government ruled by Kim Jong-un has made every effort to improve its portfolio of nuclear weapons and the means to deliver them.

In 2017, North Korea had two successful tests of a road-mobile ICBM that could reach America. By 2022, the country was testing the Hwasong-17, the world's largest road-mobile ICBM and likely able to carry three to four nuclear warheads. In January 2023, Kim Jong-un vowed to "exponentially increase" the production of nuclear weapons. In the preceding year, the North Korean military conducted at least 69 ballistic missile tests, eight cruise missile tests, and at least one hypersonic missile test. In addition, from 2014 to 2023, the regime launched numerous missiles with a variety of ranges into the seas around South Korea and Japan and engaged in the most inflammatory diplomatic rhetoric against all powers that it perceived as threatening its viability.

Intermixed, of course, were relentless efforts to attack Western governments and institutions with malware either in the hope of disrupting the normal operations of governments, industry, and private citizens or for more mundane reasons like cyber-theft of intellectual property or to infect computer systems with ransomware so as to extract payment. Though the actions of these adversaries have differed in their specifics across the years, they generate a common insight: Countries do what they want to do to achieve their objectives regardless of U.S. desires. Each of these threats to U.S. interests has methodically and consistently invested in its military power, expanding capacity, deepening inventories, and improving the modernity of its forces. Each is more capable today than it was 10 years ago.

Russia might be the exception given the losses it has sustained in its 18-month war against Ukraine, but even in this case, there is serious cause for concern. War generates experience and demands adaptation. Those who are not engaged in war adapt from an academic understanding informed by observation, experimentation, simulation, and exercises. Such adaptation lacks urgency and can lead to presumed solutions that fail under the stress of real-world application. In Russia's case, its losses have been absorbed by its land forces, but they have adapted along the way, even if that has meant reverting to old but proven Soviet practices that emphasize volume of fire, obstacles, and entrenchment over maneuver. Untouched are its submarine force, long-range bombers, and nuclear weapons-the tools that are of greatest concern to the U.S. homeland.

The Operating Environment: Europe

As we have seen, the countries posing the most substantial threats to U.S. interests have improved their position over the past decade. What of U.S. allies and the environment within which America's military forces would undertake combat operations? The answer is sobering: Unfortunately, our allies have not been as focused and committed as our adversaries have been.

In 2014, only four of NATO's member countries met the benchmark objective of investing 2 percent of GDP in their national defense and spending 20 percent of that 2 percent on equipment. Germany invested only 1.3 percent, and most of that went to personnel. France and the United Kingdom were reducing their spending on defense: In the U.K., the government proposed to cut defense by 7.5 percent. All member countries were struggling with debt and high unemployment. NATO, as an organization, was struggling to define itself in terms of mission, its purpose for being. The Cold War was long over, and the war on terrorism, initiated by the terrorist attacks of September 11, 2001, had lost its unifying imperative. In 2014, the U.S. had no armored brigades in Europe.

The following years were shaped by high unemployment, national debt crises, nationalism, unchecked migration across Europe from North Africa and the Middle East, and the occasional terrorist attack in a major European city. NATO was plagued by poor readiness within the forces contributed to it by member countries. Perhaps the worst offender was Germany, long the industrial heart of Europe and locked into competition with France to see which country would be most influential within the European Union (EU).

In 2017, Germany could field only two battalions that were deemed combat ready. In 2018, Germany had no working submarines, there were 21,000 vacant positions within its military, and only 95 of its 224 Leopard II main battle tanks were in service. By 2020, the military condition of Germany and the U.K. had worsened, and Turkey had been bounced from the F-35 program because of its purchase of the S-400 air defense system from Russia: The U.S. could not accept having its premier fighter regularly surveilled by a Russian-made air defense radar system.

In 2018, Great Britain left the EU—the much-reported Brexit divorce within Europe. Though Britain retained its status as a NATO member, it was at odds with its European neighbors, leaving Germany and France to "call the shots" in continental affairs. This made Germany's status as a military power all the more critical.

In 2020, Europe saw a 50 percent increase in Russian activity probing NATO member air and sea spaces, and the COVID lockdown had wreaked havoc on military readiness. Germany's readiness continued to plummet, especially across its aviation community; France was almost wholly distracted by internal security problems; and the U.S. had stated its intention to withdraw almost all of its forces from Germany, sending some to Poland but bringing most back home.

In 2021, Germany had only 13 tanks available for deployment, half of its military pilots were not NA-TO-certified, and it was revealed that German warships relied on Russian navigation systems. Great Britain enacted additional defense cuts, and NATO had largely withdrawn from operations in Afghanistan, depriving it of even that combat experience in a war that pitted modern Western forces against poorly equipped Taliban insurgents.

By 2022, NATO acknowledged that Russia posed the most significant challenge to European security—dramatically shown by Russia's invasion of Ukraine that February, although China was a rising threat given its penetration into Europe's markets, tech sector, and physical infrastructure like ports. With the war raging in Ukraine, NATO organized itself to coordinate support to the embattled country.

While the U.S. reinvested in its presence on the continent, Germany continued to struggle with its modernization plans, and the U.K. was barely able to field a single army division composed of just one armor brigade and one maneuver brigade. The once magnificent British Royal Navy had shrunk to a mere 20 surface combatants: two aircraft carriers, six destroyers, and 12 frigates. In 2023, the entire British military—army, navy, air force, and marine corps—numbered 150,350 personnel,¹⁸ smaller than the U.S. Marine Corps alone (currently 174,550). Its army of 79,350 soldiers¹⁹ is the smallest Great Britain has fielded since the 1700s.²⁰

In contrast, Poland surged ahead with substantial investments in its military forces, defense industrial base, and purchase of foreign-manufactured military equipment. It also extended an open invitation to the United States to station permanently based forces in the country.

As Poland's investment in its military rose to 4 percent of GDP and Latvia reintroduced military conscription, Germany was having second thoughts about its 2022 pledge to invest an additional €100 billion in its military.

Finland became the 31st member of NATO in 2023, bringing with it a highly capable defense force but adding its 830-mile border with Russia to NATO's list of responsibilities. Sweden will also join NATO, although Turkey is slow-rolling the accession process.

Meanwhile, Russia was using more artillery ammunition in two days than existed in the entirety of the U.K.'s stocks²¹—certainly an alarming reality for most NATO members who had allowed their defense production capabilities to wither since the end of the Cold War.

The Operating Environment: The Middle East

Over the past decade, the Middle East remained what it almost always has been: characterized by

religious and political rivalries, terrorism, instability, and competition for influence by the world's major powers (the U.S., Russia, and China) driven by the global importance of the energy that flows from the region. When the first edition of the *Index* was published in early 2015, the Syrian civil war had already resulted in nearly 200,000 deaths and the displacement of 9 million refugees, and the Islamic State in Iraq and Syria (ISIS) was on the rise. Since that time, ISIS has been defeated in practical terms, but not before laying waste a good portion of Western Iraq and Eastern Syria and generating affiliate terrorist groups in Africa and Central Asia.

The Obama Administration engineered an agreement with Iran in which it was to pause its nuclear program in exchange for the release of \$100 billion in frozen assets and relief from some sanctions. (Importantly, the agreement did not require the dismantlement of Iran's nuclear enrichment capabilities nor any corresponding reduction in its development of ballistic missile capabilities, the means by which it would most likely deliver a nuclear weapon. It was later proven that Iran secretly continued its nuclear program in deeply buried facilities and barred international inspection of known facilities that were meant to ensure compliance.) Upon taking office, the Trump Administration withdrew from this flawed agreement just a few vears later. The COVID-19 pandemic played havoc with the economies of countries in the Middle East, just as it did globally, and governments were increasingly feeling the pressure of the explosive growth of their youth cohorts. In 2022, two-thirds of the region's population was under 30 years old and faced few employment options, educational opportunities, or various government-subsidized services-the makings of domestic problems unless carefully managed in the years ahead.

Nevertheless, from a defense/security point of view, the U.S. enjoyed relatively good relations with the assortment of countries hosting or working with the U.S. military, including Saudi Arabia, Kuwait, the UAE, Qatar, and Oman, thereby ensuring good productive access to this key region and enabling various U.S. operations in Iraq, Syria, and the Persian Gulf area.

The Operating Environment: The Asia-Pacific

The Asia-Pacific region was much the same: restive (but without the level of terrorism and rampant instability found in the Middle East) while affording the U.S. excellent access to basing and strong working relationships with key allies (in this case, Japan and South Korea) but under the overhang of growing security challenges (in this case, China and North Korea). Unlike the Middle East or even Europe, the vast distances of the Indo-Pacific region and the distances between basing and support options and likely scenes of action emphasize the additional challenges accompanying any military action of meaningful size and duration.

The U.S. has enduring interests in the broad expanse of the Indo-Pacific. In 2018, 40 percent of global trade goods moved through the Asia market. Sitting astride shipping routes is the Philippines, with which the U.S. has had strained relations, although things improved in 2018, enabling 261 planned activities involving U.S. and Philippine forces. To the south, the U.S. and Australia worked to enhance bilateral relations, and Australia supported an increase in the U.S. military presence to 1,500 personnel on a rotational training/exercise basis. By 2023, U.S. Marines were training to the full agreed upon force size of 2,500 personnel.

Sadly, in 2021, the U.S. suffered a self-inflicted wound in the precipitous and chaotic withdrawal from Afghanistan where U.S. forces had been operating for 20 years, first to exact revenge for the September 11, 2001, terrorist attacks, deposing the Taliban regime that had been harboring al-Qaeda and its leader Osama bin Laden, and later to support the stand-up of the Afghan military with the responsibility both to protect Afghanistan's interests and to support America's by denying use of Afghanistan as a sanctuary by terrorist groups like al-Qaeda.

Whether the U.S. should have fully withdrawn its forces, which had been reduced to just 2,500 by January 2021, is a decision that will be debated for many years. The U.S. contingent had suffered no casualties in the preceding 18 months, and the U.S. presence did enable it to shape Afghan policies and gather intelligence on Iran, Pakistan, and a variety of terrorist groups operating in the region. What is indisputable is that the withdrawal was ordered and executed in a way that resulted in the emergency evacuation of 120,000 people, the deaths of 13 U.S. servicemembers from a suicide bomber, the rout of Afghan security forces by the Taliban, the fall of Afghanistan's government, and the seizure of power by Taliban leaders. All of this combined to damage U.S. credibility and the perception of U.S. competence.

Whether the Afghan debacle incentivized Russia to invade Ukraine or China to become more aggressive toward Taiwan is hard to know, but perceptions of weakness can prompt people who are inclined to action to take advantage of perceived opportunities. This is at the heart of deterrence: the belief that a competitor can thwart one's ambitions. This extends to perceptions of military power. The U.S. may say it has the world's most capable military, but friends and foes also review U.S. acquisition programs, budgets, flight hour programs, ship availability, personnel shortfalls, and munitions inventories. To the extent that America's allies are militarily weak, it falls to the U.S. military to ensure that the country's interests are defended.

All of which brings us to the status of the U.S. military and how it has changed over the past decade.

U.S. Military Strength: Evolution or Devolution?

The inaugural *2015 Index* addressed the status of the U.S. military in FY 2014 with this summary:

Overall, the *Index* concludes that the current U.S. military force is adequate to meeting the demands of a single major regional conflict while also attending to various presence and engagement activities...but it would be very hard-pressed to do more and certainly would be ill-equipped to handle two, near-simultaneous major regional contingencies.

The cumulative effect of such factors [as problems with funding, maintenance, and aged equipment] has resulted in a U.S. military that is marginally able to meet the demands of defending America's vital national interests.²²

In general, the services were hobbled with forces that were too small relative to the task of defending U.S. interests in more than one place at a time, and most of the force's equipment was old: Aircraft averaged nearly 30 years old, more than half of the Navy's ships were more than 20 years old, and the primary equipment used by the Army and Marine Corps had been purchased in the 1980s or earlier. Service efforts to correct such deficiencies were



U.S. Military Strength Dwindles While Threats Continue to Rise

constrained by the Budget Control Act of 2011 (BCA), which arbitrarily capped annual spending on defense and reduced military spending by approximately \$1 trillion over a 10-year period.²³

The leaders of the services have been consistent over the past 10 years in explaining why new programs were needed and the challenges they faced in recruiting, modernizing, and managing the workload of forces required to deploy repeatedly. But when asked what the impact might be if a requested level of funding wasn't provided or a procurement program was canceled, they usually answered with something like "Well, Senator, we would have to operate at increased risk" without ever clearly explaining what "risk" meant or what national security interest might be harmed in a specific way.

Within the *Index*, risk is placed in the context of enduring national security interests and the historical use of military forces to defend those interests in a major conflict. Within this framework, it is easier to see how shortfalls in capacity or forces assessed as not ready for combat can increase the risk to the nation. As already noted, if America's friends were strong or its enemies were weak, America's need for a robust military might not be as great, but the 10-year record of reporting shows that both factors are troubling: America's adversaries continue to gain strength even as its key allies remain troublingly weak militarily. Hence the importance of understanding the status of America's own military services. **U.S. Army.** In 2011, the Army enjoyed an end strength of 566,000 soldiers; in 2013, it fielded 45 Brigade Combat Teams (BCTs). By 2014, its end strength had dropped to 510,000, and the number of BCTs had fallen to 38—a loss of 56,000 soldiers (10 percent of the force and equivalent to two divisions of combat power). Of those 38 BCTs, only two were reported as ready for combat. A year later, end strength had fallen by an additional 20,000 soldiers and a BCT, leaving the Army with only 31, which is where it stands today. In 2017, the Army reported only three BCTs as "ready to fight tonight."

Over the following years, the service clawed back some readiness. In FY 2023, it reported that 83 percent of the Army was "ready," although it also reported that BCTs were funded to only 73 percent of training and flying hours for Combat Aviation Brigades were down 13 percent. It seems odd that readiness rates were at their highest in the decade when resources for training and readiness were down, but that's what the Army has reported.

To address its problem with aging equipment the M1A2 Abrams main battle tank and M2/M3 Bradley Fighting Vehicle, among others—it has several programs in development, but these will not mature for several years. Meanwhile, its artillery (cannon and rocket) is outranged by every major competitor and most allies. Army procurement accounts were cut by 7 percent in FY 2022, R&D accounts were cut by six percent, and military construction funds fell to a historically low level. Compounding the allocated funding problem was inflation, which resulted in a loss of \$74 billion in purchasing power from FY 2019 to the Army's current budget request for FY 2024.

Perhaps the hardest problem facing the Army is recruiting. American youth have shown little interest in joining the military. In FY 2022, the Army fell 25 percent short of its recruiting objective, failing to recruit 15,000 new soldiers. For FY 2023, the Army requested to have its end strength reduced by 33,000 soldiers, anticipating that it will fall short in new accessions this year as well, leaving it with a force of just 452,000 soldiers—far short of the 540,000 to 550,000 the Chief of Staff of the Army felt was needed in FY 2018. The Army's plan has been to thicken, or slightly overstaff, its BCTs rather than grow more of them, but these manpower problems will instead result in understaffing.

U.S. Navy. If the Army is struggling to staff its formations and replace its equipment, the Navy is caught in a maelstrom, unable to maintain a consistent, compelling argument for the size and shape of the fleet it should sail and chronically underfunded even for the 30-year shipbuilding program it is currently trying to execute. The poor condition of its shipyards adds to its ship availability woes, including a serious maintenance backlog.

At 297 ships, the Navy is roughly half the size it was near the end of the Cold War, and it has not shown any appreciable ability to change that condition. In FY 2014, the Navy had 282 ships. The number dropped to 271 in FY 2015 and climbed to 300 in FY 2020 before losing steam and falling to its current 297. This is in spite of a sustained argument since FY 2018 for a fleet of 355 manned ships, although the Navy's plan at that time would not have realized that goal until 2050. The service adjusted its approach to achieve its objective by 2034, but only by planning to extend the life of all of its Arleigh Burke-class destroyers to 45 years or more, a potentially unrealistic goal given that the expected service life of such warships historically has not exceeded 30 years.

During the Cold War, the nearly 600-ship fleet allowed the Navy to maintain approximately 100 ships at sea on a regular basis. The Navy maintains that same level of deployed presence but with a fleet half the size, doubling the workload for sailors and ships, which translates into increased maintenance and repair costs (and resultant delays in returning ships to sea and backlogged maintenance actions for ships needing repair) and a heightened risk of burnout for the force. It is a vicious circle that cannot be broken without dramatic increases in funding that enable more ships to be built and/or a reduced demand for ships to be deployed, which would mean a reduced U.S. naval presence in key regions around the world.

In January 2017, no aircraft carriers were deployed. The U.S. Navy has no dedicated mine countermeasures ships or any frigate-like ships (a role that was supposed to be filled by Littoral Combat Ships that have underperformed relative to expectations and are now being retired far in advance of their planned service life). In 2023, the Commandant of the Marine Corps expressed to Congress his regret that Marine Corps forces were unable to assist with disaster relief operations in Turkey or the evacuation of U.S. citizens from Sudan because there were no amphibious ships available.²⁴ He also made clear both that "there is no plan to get to the minimum requirements [for 31 amphibious ships]" under the Navy's 30-year shipbuilding plan and that the prospects for commensurate funding within the defense budget were not good.²⁵

In FY 2023, it was not uncommon for ships to be undermanned by 15 percent. U.S. Navy end strength fell by 1,300 sailors; shipyards remained in a poor state of repair; every project to correct such deficiencies was delayed or over budget; and the Navy, given the paucity of resources and the strategic importance of ballistic missile and fast attack submarines, prioritized submarine construction over that of surface ships. Two major ship collisions in 2017²⁶ and the loss of a major amphibious assault ship²⁷ due to an incompetently handled fire while pierside in 2020 called into question the U.S. Navy's ability to get the basics right, to say nothing of its ability to project naval power in support of securing national interests or even to present a compelling case for how it intended to correct this array of problems.

U.S. naval power appears to be in chaos relative to national interests and the otherwise positive impact of naval engagement and deterrent value of a strong naval force, and there are few glimmers of hope for rapid correction in the near future.

U.S. Air Force. If the Army is struggling and the Navy is lost at sea, the Air Force appears to believe that threats to the United States, at least those that would have to be addressed by air power, are not

likely to manifest themselves until the 2030s. How else to explain dangerously low readiness among pilots and squadrons and the prioritization of future capabilities over ensuring that the current Air Force is able to field airpower that is relevant to current challenges?

In 2014, 17 of the service's 40 active-duty, combat-coded squadrons were temporarily shut down because of sequestration (the lopping off of funding imposed by the BCA). By 2015, the Air Force was the oldest (in average age of aircraft) and smallest it had been since becoming an independent service in 1947. The following year, the average pilot flew 150 hours or less, a significant drop from the 200plus hours Cold War predecessors flew. By FY 2017, there were only 32 squadrons in the Active Component; only 106 F-15Cs (averaging 33 years old); fewer than 100 operationally available F-22s; and a paltry four combat-coded squadrons assessed as fully mission capable.

Conditions got worse in the following years.

By 2018, the average pilot was flying less than twice per week, and the Air Force was short 2,000 pilots. To compensate for this, in 2019, the service began to move pilots from non-flying billets to operational squadrons. Part of the problem with pilot readiness was the availability of aircraft. Limited numbers of aircraft mean limited opportunities for pilots to fly. Knowing this problem, the following year, the service oddly began to invest more in research and development for a next-generation aircraft, which it hoped would be produced in the 2030s, than in procuring greater numbers of F-35s, the only U.S. fifth-generation aircraft already in production. Investing in the latter would ameliorate the trend of the service's problems with old and unready aircraft and, therefore, its problem with pilot readiness. Instead, the service elected to spend more on future aircraft that will not be available until the late 2030s.

2018 was also the year that the service released its massive study reporting on its deep analysis of how much airpower the country needed to secure national interests. "The Air Force We Need" (TAFWN) called for a larger force and for pilots to fly more to be more proficient. This would mean a larger budget. The Trump Administration supported this, increasing the Air Force budget 31 percent over the FY 2017–FY 2021 years. In spite of this, U.S. Air Force procurement of aircraft remained flat while research, development, test, and evaluation (RDT&E) more than doubled. In spite of *current* need as documented by the Air Force itself, the service invested in the future to have a capability that might take 10 years or more to realize rather than addressing its current problems.

In FY 2022, procurement shrank an additional 10 percent, dropping from \$28.4 billion to \$25.6 billion, while RDT&E climbed to 70 percent more than procurement. The number of readily available combat-coded fighters dropped to 885, the average age of all aircraft rose to 29.4 years, and the average fighter pilot flew only 2.5 hours per week. This translates into an embarrassing 129 hours per year, which is significantly less than the number needed to obtain, much less maintain, combat proficiency. According to the Air Force's FY 2024 budget documents, funding for flying supported 1.07 million flying hours, 8 percent less than was funded during the locust years of sequestration. But the service has shown itself unable to fly even those hours. In 2022, the service failed to fly 23,000 hours because it funded (and continues to fund) just 85 percent of the spare parts needed to fly the 1.12 million flying hours funded in that year.

If it adheres to its current trajectory, the Air Force will reduce its fleet by almost 25 percent over the next five years. Alarmingly, the average age of aircraft has risen to 30 years; F-15Cs are now at 38 years; the KC-135 refueling fleet averages more than 60 years; and the service's replacement refueler, the KC-46, continues to be plagued by technical problems, which means 23 percent of the fleet will be unavailable until the late 2030s.

As currently postured, the Air Force's fleet of air superiority fighters is one-fifth the size of its Cold War ancestor: 81 operationally available F-22s compared to 400 F-15Cs. And the service is still short 650 pilots.

U.S. Marine Corps. Of the services, the Marine Corps appears to have the firmest grasp of what it needs to be and what it needs to do to be prepared for war. Though generating controversy within its retired community, the Corps' Force Design 2030 (FD 2030) project has established a rationale and objectives for substantial change across the service driven by changes in the threat environment, the evolution of combat-relevant technologies, and a determination to return to the Corps' primary mission: projecting combat power via the sea.

Since the publication of FD 2030 in early 2020, the Corps has aggressively implemented changes that have included the introduction of unmanned air and ground systems; long-range missiles to target ground, air, and sea-based platforms; and new information-sharing tools. Adjustments in its aviation inventory have reduced the numbers of some aircraft like attack helicopters in favor of higher-end drones for surveillance and targeting, and the Corps' combat formations (most notably the infantry battalion's size, configuration, and capabilities) are being reviewed and reorganized.

The Corps' air arm is almost completely modernized-its attack helicopters replaced, a new heavy lift helicopter soon to make its debut, the old CH-46 helicopter replaced by the MV-22 Osprey, and the F-35 quickly replacing the Corps' inventory of 1980s-design AV-8B Harriers and F/A-18 Hornets. With the Corps having retired its entire inventory of tanks, the age of its ground equipment is shaped by its 1970s-vintage amphibious assault vehicles (AAV-P7, though they have been iteratively updated over the years), which have been restricted from water operations but are still useful on land; its light armored vehicle (LAV, also rather old, having been introduced in the early 1980s); and the acquisition of the amphibious combat vehicle (ACV), initially a placeholder replacement for the AAV but increasingly likely to be a primary combat vehicle for the service. Primary weapon systems for its ground force have been comprehensively updated from small arms and anti-armor weapons to artillery (cannon and rocket) and anti-air missiles. The Corps is also adding an anti-ship missile.

However, the Corps remains too small, even to be the one-war force it accepts as its role. In FY 2012, at the end of sustained operations in Iraq and the continuing mission in Afghanistan, the Corps numbered 202,000 Marines. In FY 2014, end strength and number of units began to fall: 189,000 Marines and 25 battalions in FY 2014; 184,000 in FY 2015 and FY 2016 with 23 battalions; and 177,249 Marines and 22 battalions in FY 2022.

If the Corps does indeed execute distributed, low-signature, reduced logistical demand operations with smaller units composed of slightly older, more experienced Marines, it will still need capacity to be able to sustain operations when attrition is a factor or even to compensate for lengthy operational employment close to enemy forces. **U.S. Space Force.** In 2019, the Trump Administration, with the support of Congress, established the U.S. Space Force (USSF). All Department of Defense space capabilities, functions, support, and personnel were transferred from the Air Force, Army, and Navy and consolidated within the new service. By all accounts, the transfer of responsibilities, control of space assets—terrestrial (ground stations) and space-based (satellites)—and service to customers (for example, the geographic combatant commands) went well. The USSF's challenges come in the form of aging satellites and, akin to its sister services, a shortfall in capacity.

The plethora of space-based systems that constitute America's ability to leverage the domain have uniformly performed their functions well beyond planned service life, but there does come a point where a satellite must be replaced, and this is where U.S. space programs fall short: the timeliness of bringing new systems into service. Fortunately, the Space Development Agency, which was recently absorbed into the Space Force, has begun to field satellites at an accelerated pace, adding 23 tracking and communications satellites in the past year alone. The commercial space sector also has advanced at a remarkable pace and now launches the majority of missions for the U.S. government, but there are some functions that should remain within the control of the government, and it is in this area that concerns are mounting.

While the U.S. is still outpacing China and Russia in launches, China is gaining. In FY 2023, the U.S. launched 118 missions, China launched 24, and Russia sent 18 packages into orbit. But what these competitors say they are going to do and what they end up executing can be much different. For example, in FY 2022, China announced that it would undertake 22 launches but actually made 62.

Demand for space-based capabilities is growing at a pace that the USSF cannot currently match. Not surprisingly, the U.S. government is increasing its contracts with commercial providers to make up the difference, but the Space Force needs more assets, more people, and more funding if it is to execute its important mission properly.

U.S. Nuclear Portfolio. Age and capacity are common themes across defense entities, and this is certainly the case with respect to America's nuclear establishment and portfolio of capabilities. In particular, the infrastructure that undergirds all

nuclear efforts is quite old, as is the collection of people who constitute expertise in this field.

In FY 2014, nuclear modernization programs were moribund. There was a broad consensus that the viability of America's nuclear deterrent depended on assurances that the various components would work as intended when needed. This included the weapons themselves; delivery vehicles (aircraft and missiles); testing apparatus; manufacturing facilities; and the pool of people with the required expertise. The areas of understanding and technical assurance began to generate doubts within a little more than a decade after the U.S. self-imposed a moratorium on yield-producing experiments.

"[I]n the past," according to the late Major General Robert Smolen, some of the nuclear weapon problems that the U.S. now faces "would have [been] resolved with nuclear tests." By 2005, a consensus emerged in the NNSA, informed by the nuclear weapons labs, that it would "be increasingly difficult and risky to attempt to replicate exactly existing warheads without nuclear testing and that creating a reliable replacement warhead should be explored." When the U.S. did conduct nuclear tests, it frequently found that small changes in a weapon's tested configuration had a dramatic impact on weapons performance. In fact, the 1958–1961 testing moratorium resulted in weapons with serious problems being introduced into the U.S. stockpile.28

The U.S. has not conducted a yield-producing experiment since 1992. In 2018, the Trump Administration's Nuclear Posture Review (NPR) recognized that China and Russia were actively exploring new weapon designs-something the U.S. was not doing. In 2020, the nuclear establishment was required to be able to conduct a nuclear test within 24 to 36 months of being tasked with doing so. However, the continued deterioration of technical and diagnostic equipment and the inability of the National Nuclear Security Administration (NNSA) to fill technical positions created substantial doubt that this could be done. At that point, more than 40 percent of the workforce was eligible for retirement over the next five years, highlighting the talent-management problem within the nuclear enterprise.

The 2022 Index reported on the problematic nature of a tripolar world. China was working to expand its nuclear weapons capacity to more than twice its current size by the end of the decade. Russia was consistently violating various non-proliferation and nuclear arms reduction treaties and was committed to developing new designs for weapons at all levels of use: tactical, operational, and strategic. Against the backdrop of China's and Russia's aggressive modernization, the U.S. was mired in policy debates, self-imposed restraints, inadequate funding, and a persistent degradation of facilities, talent, and production capabilities throughout the nuclear establishment.

By 2023, Russia had ended any pretense of adhering to New START, formally suspending its commitment to the treaty. China was now known to be tripling its ICBM launch capacity. Some reports had emerged that Iran was enriching uranium to 83.7 percent purity (just shy of the 90 percent needed for a weapon) and probably had enough fissile material for at least one bomb.²⁹ Happily, Congress was continuing a few years of strong support for U.S. nuclear modernization; whether that continues remains to be seen.

At present, nuclear options are too limited, the U.S. nuclear knowledge base is increasingly theoretical and academic rather than drawn from experience, and the workforce continues to age. Although the various components are relatively healthy at present—delivery vehicles, exercises and testing, a few modernization programs underway, and renewed interest in both the executive and legislative branches—there is no margin for delay or error when it comes to the viability and assuredness of America's nuclear weapons portfolio.

Missile Defense. "By successive choices of post–Cold War Administrations and Congresses," the *2019 Index* reported, "the United States does not have in place a comprehensive ballistic missile defense system that would be capable of defending the homeland and allies from ballistic missile threats." Instead, "U.S. efforts have focused on a limited architecture protecting the homeland and on deploying and advancing regional missile defense systems."³⁰

In 2018, America's missile defense capability was beset by limited investment, canceled programs, and limited capacity to handle multiple targets and was mostly focused on a very limited threat from one direction (North Korea) and perhaps a limited strike from China.³¹ The U.S. possessed no ability to intercept a missile in its boost phase and still has no such ability in 2023. Funding, a reflection of policy and interest, has been volatile and inconsistent, varying from one year to the next and subject to change.

By 2021, China, Russia, and North Korea were investing in multiple independently targeted reentry vehicle (MIRV) options, cruise missiles equipped with nuclear warheads, advanced decoys, and countermeasures that make a successful intercept more complicated. The more advanced competitors—China and Russia—were also making progress with hypersonic glide vehicle programs.

In March 2023, General Glen VanHerck, Commander, U.S. Northern Command and North American Aerospace Defense Command, testified that North Korea had "tested at least 65 conventional theater and long-range nuclear capabilities over the last year." Iran tested a 2,000-kilometer ballistic missile and displayed what was advertised as a hypersonic missile. In 2021, China was known to have tested a fractional orbital bombardment system (FOBS) that included a deployable hypersonic glide vehicle (HGV), enabling China to launch the weapon into space and keep it in low earth orbit until ready for a de-orbital maneuver to use the maneuverable HGV to attack a target.³² Lacking any predictable trajectory as would be the case with a conventional ballistic missile, an HGV makes intercepting the weapon extremely difficult.

Efforts are being made to improve the U.S. missile defense posture at locations in Europe, Guam, and Alaska, but such efforts appear to lack a sense of urgency and robustness. They certainly do not match the pace at which adversaries are improving their ability to threaten the U.S. and its interests.

Conclusion: A Pattern of Substantial Erosion

The upshot to all of this—the trends seen across all of the military services and critical enablers like missile defense and the strategic deterrent provided by nuclear weapons—is that U.S. military strength has substantially eroded over the past decade.

- All elements have shrunk in capacity,
- Nearly all platform-based capabilities have grown older, and

• Most functional components have become less ready.

Where the United States would have been able to engage Soviet forces on a global scale in the 1980s, the current U.S. military would be hard-pressed to handle a single major conflict. To repeat an earlier point, if U.S. allies were strong, ready, and competent, shortfalls in the American military portfolio might not be so worrisome; the same would be true if America's competitors were weak or less aggressive. But on both counts—among both allies and competitors—trends do not favor U.S. interests and make the military's weakened state all the more alarming.

If the U.S. is to protect its interests, it must have a military that is large enough, modern enough, and ready enough to be equal to the task and relevant to the nature of the world *as it is today*, not 10 or 20 years from now. If the U.S. is to shape world affairs to suit its interests instead of merely reacting to significant changes, thus ceding initiative and opportunity to opponents, it must possess the means to deter bad behavior, reassure friends and allies, and defeat enemies that actively threaten the U.S. homeland, Americans abroad, and America's economic, political, and security interests in regions that are key to its future.

At present, the condition of the U.S. military introduces substantial risk in all of these areas.

As is true of any other crisis—an automobile accident, storm damage, or a medical emergency—the time, place, and severity of war cannot be predicted, but we know they happen. The prudent person prepares for such eventualities by investing in insurance, adopting healthy and safe practices, or stockpiling to mitigate the consequences of a significant disruption. Throughout its history, the U.S. has found itself at war about every 15 to 20 years: The record is indisputable. Wars can occur because of policy decisions (wars of choice) or because they are forced on the U.S. by, for example, threats to key interests or by treaty obligations (wars of necessity). In either case, either the country is ready or it isn't.

At present, the country is not ready, at least not to the extent that it might mitigate the profound costs of a large war. Weakness may be provocative as well, tempting would-be aggressors to take actions or to accept risks from which they might otherwise have been deterred.

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	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Overall Power Score	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Weak	Weak
			OPERA	OPERATING ENVIRONMENT	IMENT					
Overall Operating Environment	Moderate	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable
Europe										
Alliances	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Excellent	Excellent
Political Stability	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Excellent
U.S. Military Posture	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Favorable	Favorable	Favorable	Favorable
Infrastructure	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable
Overall	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable
Middle East										
Alliances	Moderate	Favorable	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Political Stability	Unfavorable	Unfavorable	Very Poor	Very Poor	Unfavorable	Unfavorable	Unfavorable	Unfavorable	Unfavorable	Unfavorable
U.S. Military Posture	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Overall	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Asia										
Alliances	Favorable	Excellent	Excellent	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable
Political Stability	Moderate	Moderate	Favorable	Moderate	Favorable	Favorable	Moderate	Moderate	Moderate	Moderate
U.S. Military Posture	Moderate	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable
Infrastructure	Moderate	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable
Overall	Moderate	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable	Favorable

2015 2016 Overall Threat Elevated Elevated Overall Threat Elevated Elevated Overall Threat Aggressive Aggressive Russia Aggressive Aggressive Behavior Aggressive Aggressive Capability High High Threats to U.S. Vital Interests Aggressive Aggressive Interest Aggressive Aggressive Capability High High Interests Aggressive Aggressive	2017 2017 High Formidable High al Gathering	2018 THREAT High	2019	2020	2021	2022	2023	2024
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Elevated Aggressive Aspirational		Gathering	Gathering	Gathering	Gathering	Gathering	Gathering	Gathering
Aggressive Aspirational		High	High	High	High	High	High	High
Aggressive Aspirational								
Aspirational	e Hostile	Aggressive	Hostile	Aggressive	Aggressive	Aggressive	Aggressive	Aggressive
	al Capable	Capable	Capable	Capable	Capable	Capable	Capable	Capable
Threats to U.S. Vital Interests Elevated Elevated	High	High	High	High	High	High	High	High
Af-Pak Terrorism								
Behavior Aggressive Aggressive	e Testing	Aggressive	Testing	Testing	Testing			
Capability Capable Gathering	g Capable	Capable	Capable	Capable	Capable			
Threats to U.S. Vital Interests Elevated High	High	High	Elevated	Elevated	Elevated			
China								
Behavior Aggressive Aggressive	e Aggressive	Testing	Aggressive	Aggressive	Aggressive	Aggressive	Aggressive	Aggressive
Capability Gathering Gathering	g Gathering	Formidable	Formidable	Formidable	Formidable	Formidable	Formidable	Formidable
Threats to U.S. Vital Interests High	High	High	High	High	High	High	High	High

TABLE 1

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
			F	THREAT (CONT.)						
North Korea										
Behavior	Aggressive	Hostile	Aggressive	Aggressive	Testing	Testing	Testing	Aggressive	Testing	Testing
Capability	Capable	Gathering	Gathering	Gathering	Gathering	Gathering	Gathering	Gathering	Gathering	Gathering
Threats to U.S. Vital Interests	Elevated	Severe	High	High	High	High	High	High	High	High
				POWER						
U.S. Army										
Capacity	Marginal	Weak	Weak	Weak	Weak	Weak	Weak	Weak	Weak	Weak
Capability	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal
Readiness	Weak	Weak	Weak	Weak	Strong	Very Strong	Very Strong	Very Strong	Very Strong	Very Strong
Overall	Marginal	Weak	Weak	Weak	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal
U.S. Navy										
Capacity	Marginal	Marginal	Marginal	Marginal	Weak	Weak	Weak	Weak	Very Weak	Very Weak
Capability	Weak	Weak	Weak	Weak	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal
Readiness	Strong	Marginal	Strong	Marginal	Marginal	Marginal	Marginal	Marginal	Weak	Weak
Overall	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Weak	Weak
U.S. Air Force										
Capacity	Strong	Very Strong	Strong	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal
Capability	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal
Readiness	Strong	Marginal	Marginal	Marginal	Weak	Marginal	Marginal	Weak	Very Weak	Very Weak
Overall	Ctrond	Marginal	Marcinal	Marcinal	Indipad	Marcinal	Marcinal	IcuitateM	1/01/11/01/	114/

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TABLE 1	Index

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
			•	POWER (CONT.)	0					
U.S. Marine Corps										
Capacity	Weak	Weak	Weak	Weak	Weak	Weak	Marginal	Marginal	Weak	Weak
Capability	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Strong	Strong	Strong
Readiness	Marginal	Marginal	Marginal	Weak	Weak	Marginal	Marginal	Strong	Strong	Strong
Overall	Marginal	Marginal	Marginal	Weak	Weak	Marginal	Marginal	Strong	Strong	Strong
U.S. Nuclear										
Warhead Surety/Nuclear Stockpile	Marginal	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong
Delivery Platform Reliability	Strong	Strong	Strong	Strong	Marginal	Marginal	Strong	Strong	Strong	Marginal
Warhead Modernization	Weak	Weak	Weak	Weak	Weak	Marginal	Marginal	Marginal	Marginal	Marginal
Delivery Systems Modernization	Weak	Weak	Marginal	Strong	Strong	Strong	Strong	Strong	Strong	Strong
Nuclear Weapons Complex	Weak	Weak	Weak	Weak	Weak	Marginal	Marginal	Marginal	Marginal	Marginal
National Labs Talent	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal
Force Readiness	Marginal	Marginal	Marginal	Marginal	Marginal	Strong	Strong	Strong		
Allied Assurance	Strong	Marginal	Marginal	Marginal	Strong	Strong	Strong	Strong	Strong	Strong

U.S. Space Force

u.s. space rorce	
Capacity	
Capability	
Readiness	
Overall	

SOURCE: Dakota L. Wood, ed., 2024 Index of U.S. Military Strength (Washington: The Heritage Foundation, 2024), https://www.heritage.org/military.

🔺 heritage.org

Marginal

Strong

Weak

Weak <mark>Marginal</mark>

Weak <mark>Marginal</mark>

Weak Marginal

Weak <mark>Marginal</mark>

Weak <mark>Marginal</mark>

Weak Marginal

Weak Marginal

Nuclear Test Readiness

Overall

Marginal Marginal Marginal Marginal

Weak Weak Weak

Weak Weak Weak Weak Ten years of assessing the deteriorating condition of the U.S. military reveals that short-term political interests almost always displace sustained annual and key long-term investments that are essential to ensuring the viability and effectiveness of military power. This is true not just for the U.S., but even more so for important allies who have allowed their military establishments to decline to dangerous states of unreadiness. Sometimes, a quick injection of attention or funding can result in rapid, positive change, but this is not the case when it comes to military strength. It takes years to build a ship, to recruit and train a soldier, to have pilots who are competent in aerial battle against a capable enemy, and to have larger formations that are effective in joint and combined operations undertaken far from home and that include battle in all domains. When war does happen, desired forces that should be in place a decade in the future are irrelevant. What matters is what the U.S. has at hand in the moment of danger.

The Heritage Foundation's *Index of U.S. Military Strength* has methodically and meticulously tracked and reported the declining state of America's military establishment for a decade. We hope that senior leaders in our government and the American people will take notice and take action to correct this trend and ensure the best possible future both for the American people and for the free world at large.

Appendix

The Index of U.S. Military Strength, 2015-2024

- *2015 Index of U.S. Military Strength*, ed. Dakota L. Wood (Washington: The Heritage Foundation, 2015), http://ims-2015.s3.amazonaws.com/2015_Index_of_US_Military_Strength_FINAL.pdf.
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Endnotes

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The Role of the Military in U.S. History: Past, Present, and Future

James Jay Carafano

The rise of professional militaries in the West is credited with accelerating the process of creating the modern nation-state. In addition to defending the state from external threats, professional armed forces performed internal security, public safety, and administrative functions that helped to establish the legitimacy of its sovereignty.

The United States stood as an exception to that trend. While a professional army was assembled to help win independence from England, it did not help to create the U.S. This was accomplished by the people. In the new republic, national sovereignty was reserved for the people. The government's armed forces, like all of the other instruments of national power, were to be servants of the people, not a means with which to govern them. This concept is foundational to the roles, missions, and actions of the U.S. armed forces past, present, and future. Nevertheless, as the nation evolved, so did the scope and activities of the American military.

Birth of the Republic

Defining appropriate civil–military relations was foundational to the establishment of the United States. The principles for organizing military force were largely drawn from British history, culture, legal concepts, and tradition.

The experience of Britain in the state-formation period of the 17th and 18th centuries was unique. In almost every other instance, militaries emerged as important instruments of domestic control as well as weapons of war. This evolution was not unique to Europe. It was also common in Latin America as well as parts of Africa and Asia. In places where great empires did not have dominion, rulers had limited capacity to marshal military forces either for military campaigns or for internal security. Rulers could either call for levies from lords or assemble militias on the one hand or contract for mercenaries on the other. Neither solution was particularly satisfying to sovereign powers because not completely controlling armed forces compromised both their power and their legitimacy.

The Italian scholar Nicollo Machiavelli (1469– 1527) struggled with the dilemma of the pursuit of power in his political and military writings. He decried mercenaries as rapacious and unreliable.¹ He argued for an army of citizen-soldiers² who would virtuously serve the state, an idea that at the time was well-meant but impractical. What most states did instead was mass resources that allowed for temporary standing armies—either of conscripts or of rented forces from foreign powers like the German Landsknechte.

As the constitutional character of the British state evolved, however, history led Albion on a different path. During the English Civil War (1642-1651), the crown used both the professional army and hired foreign troops to prosecute the war against the forces mustered by a revolt led by leaders in Parliament. After an interregnum (1649-1660), the crown was restored, but James II abdicated in 1688 over another confrontation with Parliament. The Bill of Rights issued when William and Mary were offered the crown enshrined that foreign troops should not be stationed on British soil, the military should be raised only by Parliament, and only a limited standing army should be stationed in Britain and never mobilized against the British people.³ This enshrined in law the concept of "no

standing armies" as well as the rationale for checks and balances so that the government could never use the armed forces as an instrument of tyranny against the people.

It was the British "no standing armies" tradition and the republican concept of the citizen-soldier envisioned by Machiavelli that together served as the intellectual foundation for the American armed forces. The practical lessons from decades of armed warfare between nation-states in Europe, the Americas, and Asia were also considered in deciding how to organize the American armed forces. While the Americans wanted civilian control of the military, they also wanted armed forces that could fight and win. This meant that land and sea forces needed to be under unified military commands that could muster professional troops and matériel for extended campaigns and employ them as effectively as possible.

Thus, during the American Revolution in 1775, the Continental Congress commissioned George Washington as commander in chief of the Continental Army.⁴ Meanwhile, the Congress assumed responsibility for raising and supporting a professional army and naval forces instead of just relying on the colonial volunteer militias to fight for independence.

At the end of the war, the Continental Army watched from their cantonment at Newburgh in upstate New York, waiting for the final peace treaty between the United States of America and the United Kingdom and the evacuation of British forces. There was great consternation in the ranks that the Congress had not delivered on many of the promises made to enlistees. Some argued that the military should refuse to disband until their grievances were addressed or even march on the Continental Congress. Washington quelled the mutiny,⁵ his principal argument being that their loyalty to the nation and to the appointed civilian leaders in the Continental Congress transcended their personal interests.

The practical lessons of the American Revolution did as much as the intellectual scholarship of writers like Machiavelli, John Locke, and others to shape the drafting of the U.S. Constitution that was finally ratified in 1788.⁶ The foundational document had a great deal to say about the roles, missions, and oversight of the armed forces. In fact, there is more articulation of stated and enumerated powers related to defense in the Constitution than there is about any other function of government. 7

The Constitution enshrined civilian control of the military by making the President the commander in chief of the armed forces.⁸ This was more than a symbolic appointment. Below the level of the President, to this day, no single officer has command authority over all U.S. military forces.

In addition to ensuring unity of command and effort in wartime, the Constitution gave Congress the authority and responsibility for raising and maintaining national military forces,⁹ thereby limiting the power of the executive to use or maintain armed forces independently, without reference to Congress. Congress authorized creation of today's Army (under the Secretary of War) in 1789;¹⁰ Navy (under the Secretary of the Navy) in 1794;¹¹ and Marine Corps (serving within the Department of the Navy and under the Secretary) in 1798.¹²

The Constitution also authorized individual states to raise and maintain militias.¹³ This authority was granted partly because the Congress assumed that there would be a small standing Army and Navy in peacetime with most internal security tasks addressed by the states themselves. Laws later evolved for state forces to work in concert with or under the national government. During the War of 1812, for instance, Andrew Jackson had a commission as a major general in the regular United States Army and command of the Seventh Military District. He organized the defense of New Orleans with a combination of militias, volunteers, and a handful of professional forces.

Thus, since the earliest days of the republic, Americans proactively sought to implement all of the concepts they thought essential for the armed forces of a republican state with civilian control, limited professional militaries in peacetime, and armed forces focused on defending against external threats rather than being employed for internal security. The armed forces were primarily for foreign threats and constabulary duties in frontier territories and on U.S. borders. President Thomas Jefferson, for example, deployed naval and Marine forces to safeguard U.S. interests against the states of North Africa. The United States fought two separate wars with Tripoli (1801-1805) and Algiers (1815-1816) and maintained a Mediterranean Squadron in theater that has continued in different iterations down to the present day.

That said, however, the Constitution did not prohibit the use of armed forces in a domestic theater under extraordinary circumstances.14 George Washington as the first President demonstrated that authority in 1794 when he called out troops under federal authority to quell the Whiskey Rebellion, a series of violent protests against the first excise tax imposed by the new government. At the time, before troops could be raised, the Militia Act of 1792 required a Supreme Court associate justice or "the district judge" to certify that law enforcement was beyond the control of local authorities.¹⁵ After that determination, Washington issued a proclamation announcing that the militia would be called out under his command. The troops dispersed the insurrectionists.

In responding to the Whiskey Rebellion, the President declared that he was acting with "deepest regret" and that the military was being employed to restore civil order, not as a political instrument.¹⁶ As President, Jefferson likewise looked to policies demonstrating that military forces were national instruments not to be used to further political interests. For instance, when the U.S. government built its first complement of frigates for the Navy, it ordered that contracts be distributed to several ports in different states to demonstrate that the Administration was not picking favorites. Jefferson established the first federal military academy at West Point in 1802 and distributed appointments among all the states to create opportunities for both political parties to contribute to the Army's officer corps, ensuring that no single political faction dominated the ranks of regular Army officers.¹⁷

The structural decisions made to organize national defense ensured an effective military without consolidating political control of the armed forces. In this respect, the U.S. overcame the principal critique over the capacity of republics to defend themselves, highlighted in Alex de Tocqueville's *Democracy in America*.¹⁸ De Tocqueville had many nice things to say about the new nation and the concept of democracy, but he wondered whether a representative republic could fight wars and deal with protracted security challenges without collapsing over internal squabbling and political factions in a government where authority was divided and organized to provide checks and balances against the independent use of force by the executive.

From the West to the Western Hemisphere and the World

Experience proved that the U.S. could use armed forces decisively to protect itself. In this respect, as the republic grew, strategy and interests did as much as the political constructs laid out in the Constitution to shape the roles and missions of the armed forces.

Again, Washington's action proved formative in developing and employing the armed forces. From the birth of the republic, there was a ferocious debate between political factions over how to defend the new nation. At the time, the global geopolitics that largely affected the fledgling state was the rivalry between France and Great Britain over spheres of influence. This competition extended to the Western Hemisphere where both countries had colonial holdings as well as economic and security interests at stake.

In the U.S., one faction argued for aligning with the British. The other argued for siding with France. Washington argued for what at the time was an even more controversial decision. The U.S., he declared in his farewell address to Congress, should have "no entangling alliance,"¹⁹ eschewing treaty alliances with either Paris or London. Washington did not intend to author an immutable principle of American foreign policy; Article II the Constitution specifically grants government the authority to execute treaties.²⁰ Rather, Washington was making a declaration of grand strategy: an overall expression of ends, ways, and means to secure U.S. interests over the long term.

The U.S. was a fledgling power, Washington reasoned, and the best way to secure American interests was to ensure that they were not intertwined with and overwhelmed by those of either great power (Britain and France), thereby avoiding the risk of the U.S. becoming a vassal state or being drawn into the endless wars between the rival empires. In part, this decision allowed the U.S. to maintain modest armed forces without stressing the finances of the young republic and creating a powerful government institution that might later be used to undermine democratic rule.

Washington's choice became the orthodoxy of American grand strategy until President James Monroe advanced the Monroe Doctrine in his annual message to Congress in 1823.²¹ Monroe argued that European powers were obligated to respect the Western Hemisphere as the United States' sphere of interest. This new strategic formulation was grounded in America's expanding power and interests, particularly with regard to westward expansion and ensuring freedom of the seas for American shipping. Commensurately, the U.S. military added modest expeditionary capability and increased capacity to conduct constabulary operations in new territories. The most muscular employment of U.S. forces in the hemisphere was the Mexican–American War (1846–1848).

Emphasis on hemispheric defense remained the focus of the U.S. armed forces, although there were exceptions. The U.S., for example, still maintained the European Squadron in the Mediterranean; deployed an East India Squadron in 1835 (which became the Asiatic Squadron in 1868); and established the Great White Fleet, a group of Navy battleships that circumnavigated the globe from 1907 to 1909. The U.S. military also maintained a ground-force presence in China throughout the first decade of the 20th century in addition to forces in the Philippines.

Hemispheric defense, however, remained the U.S. military's dominant focus. The armed forces, for instance, were called upon for a punitive expedition in Mexico (1916–1917). The American occupation of Haiti from 1915 to 1934 was justified in part as an attempt to secure avenues of approach to the United States through the Caribbean. Even the U.S. intervention in World War I was justified as based on hemispheric defense, predicated on the need for preemptive action to counter the likelihood of invasion by the German Empire and Mexico.

In fact, until the Japanese attack on Pearl Harbor in 1941, which triggered U.S. entry into World War II, hemispheric defense remained the guiding strategy behind the missions, structure, and manning of the American armed forces.

By the end of World War II, the U.S. had emerged incontestably as a global power with global interests and responsibilities. Strategy was largely structured around fighting the Cold War with the Soviet Union included establishing an independent Air Force branch; building strategic forces (nuclear-armed missiles, bombers, and submarines); permanently stationing major forces overseas; maintaining a global military command structure; and investing in expansive treaty alliances, principally NATO.

With the collapse of the Soviet Union in the early 1990s, the crafting of a consensus global grand

strategy became difficult, but the U.S. still recognized that it needed armed forces with global reach and the capacity to conduct extended campaigns.

The September 11, 2001, terrorist attacks renewed concerns about the defense of the home front and engendered a persistent need for security not seen except in wartime since the early days of the republic, although the military traditionally had provided support to civil authorities—for example, in response to the great San Francisco earthquake of 1906. In another example, in 1929, the city of Tacoma, Washington, experienced a massive power outage.²² The Department of the Navy ordered the USS *Lexington* to respond, and the ship's four giant generators helped to provide electricity for the next several weeks. Only after 9/11, however, did the mission of homeland defense become integral to long-term U.S. strategy.

Strategy vs. Reality

While strategic needs have generally defined the scope, size, and missions of the military over the course of U.S. history, there is a saying: "Strategy can change faster than foster structure." In other words, sudden changes in the geostrategic environment can occur that reveal inadequacy in force planning or introduce dramatic and unanticipated new demands.

The American Civil War (1861–1865) is perhaps the starkest example. For the first half-century of the republic, the armed forces mostly conducted constabulary duties and punitive expeditions on the frontier. It was never envisioned that the military would be required to conduct major campaigns or even operations in a domestic context. When the secession of the southern states plunged the country into conflict, the armed forces had to adapt rapidly, including by employing national conscription to fill the ranks.

The Civil War also saw the first widespread deployment of persons of color in the U.S. Army. By the end of the Civil War, roughly 179,000 black men (10 percent of the force) served in the Union Army. Another 19,000 served in the U.S. Navy.²³ After the war, blacks continued to serve in segregated units. The most famous were the "Buffalo Soldiers," cavalry units that served on the American frontier. Buffalo soldiers also fought in the Spanish–American War and served in the Philippines.²⁴

Another significant departure from tradition was the use of soldiers as federal marshals during

Reconstruction. During the presidential election of 1876, President Ulysses S. Grant dispatched troops to polling stations in South Carolina, Louisiana, and Florida, where electoral votes remained in dispute. Reflecting the ongoing national debate between security and government power within the United States and the appropriate use of the armed forces, this measure precipitated calls for the passage of the Posse Comitatus Act of 1878,²⁵ which prohibited federal troops from enforcing state or federal laws without congressional approval.

Reconstruction was not the first and would not be the last time that the armed forces became mired in political and social controversies. Despite Posse Comitatus, during the 19th century, military forces were often called upon to restore public order. For example, between 1875 and 1918, state militias or federal troops were called out to respond to labor unrest over one thousand times.

Unfortunately, although the armed forces were intended for hemispheric defense, the chaotic attempts to launch an invasion force from Tampa, Florida, proved that the U.S. Army was not up to the task of executing an expeditionary campaign in Cuba during the Spanish-American War in 1898. Further, the War Department struggled to integrate active-duty forces, state militias, and volunteer units. In response, the U.S. Congress passed the Militia Act of 1903²⁶ establishing the modern National Guard from state militias and codifying the circumstances under which state National Guard units could be federalized. Congress also created both Army and Navy Reserve forces, thereby establishing in the modern era three formal components of the armed services:

- The active force (full-time federal troops);
- The National Guard (state forces that could be mobilized under federal service); and
- Reserves (federal troops that were inactive until mobilized for federal service).

As the armed forces struggled with the transformation from an ancillary security force to the principal instrument of American national power, it also had to undergo a significant intellectual transformation. During the Civil War, for instance, the armed forces had an unprecedented requirement to conduct major campaigns including joint operations (involving multiple services). A modicum of military education was gained in the Army and Navy military academies as well as the military service schools.

Military theory and doctrine drew heavily from European experience, especially the Napoleonic wars, and influential writers such as Antoine Henri Jomini.²⁷ Later, the American armed forces were deeply influenced by works such as Alfred Thayer Mahan's *The Influence of Seapower Upon History*²⁸ and Carl von Clausewitz's *On War*²⁹ that emphasized conventional military operations. American military theory and doctrine were also influenced greatly by combat experience, including experience during the Civil War and World War I, where U.S. forces drew heavily from the British and French military establishments' understanding of planning, staff work, and other operational skills.

In preparation for and during World War II, the U.S. armed forces developed skills that far exceeded what was needed for hemispheric defense and would serve as the basis for modern thinking about warfare. For example, before the outbreak of World War II, the Naval War College conducted sophisticated war games for global war.³⁰ Military staffs developed the Rainbow Plans,³¹ which dealt with various global contingencies. The Army Air Corps developed concepts for strategic bombing. By the time the U.S. armed forces emerged from World War II, they had the world's most sophisticated system for the development of professional military education, doctrine, and strategic planning.

In preparing for participation in World War I and World War II, the U.S. also had to scramble to reorganize for new missions that exceeded hemispheric defense. During both wars, for instance, the United States instituted wartime drafts to expand military capabilities. However, the drafts ended when hostilities concluded.

In addition, the services had to develop new capabilities. During World War I, the Army established aviation forces under the Signal Corps. After the war, in 1926, the Army formally established an Army Air Corps.³² The Navy developed submarine and naval aviation forces. In the interwar years, the Marine Corps developed expeditionary amphibious warfare capabilities (which were also adopted by the U.S. Army during World War II).

During the interwar and wartime years, there also were numerous incidents in which the armed

forces and their leaders became mired in political controversy despite the constitutional strictures that sought to insulate the conduct and oversight of the military from partisan political activity. One of the most noteworthy was the controversial decision to use the Army to eject the Bonus Marchers (World War I veterans who marched on the capital in Washington, D.C., demanding cash redemption of their service bonus certificates).³³

Even during wartime, the U.S. military often became embroiled in the challenges of social change. Many of the major U.S. military training bases were in the South in states that had instituted "Jim Crow" laws legalizing unequal treatment of African Americans. The presence of mobilized black soldiers resulted in many incidents. Race riots also occurred overseas in Europe and the Pacific. Despite the tensions of segregation, many African Americans volunteered to serve in the military during World War II.

Women also mobilized in significant numbers to serve in the armed forces, though they were organized in reserve corps under the Army, Navy, Marines, and U.S. Coast Guard. Their service was limited by the fact that they were not allowed to perform combat-related duties.

A Dramatic Transformation

Before World War II, there was vigorous debate over the future of U.S. strategy and how best to protect American interests. This debate was catalyzed by a national organization, the America First Committee, whose leadership included famed aviator Charles A. Lindbergh, the movement's most recognizable spokesperson. Right up until the U.S. entered World War II, the majority of Americans supported the group's basic aim: to avoid becoming involved in overseas wars and instead strengthen the nation's capacity for hemispheric defense.

Days after Pearl Harbor, Lindbergh wrote in his diary: "I can see nothing to do under these circumstances except to fight. If I had been in Congress, I certainly would have voted for a declaration of war."³⁴ Many of the America First Committee's leaders volunteered to serve in the armed forces.³⁵ Lindbergh managed to find ways to contribute to the war effort, even flying combat missions in the South Pacific.

After the Second World War, America's place in the world and the requirement for large, standing military forces were open questions. The postwar world marked a dramatic transformation in the U.S. military that was shaped largely by changing geostrategic conditions and the evolving nature of American power and influence. The concept of hemispheric defense now seemed wholly inadequate. A number of initiatives were undertaken to ensure that U.S. forces had global reach and influence. As the confrontation with the Soviet Union escalated into a Cold War, the armed forces became the primary instrument for the American strategy of containment against the Soviet threat.

The National Security Act of 1947 formalized the roles of the Joint Chiefs of Staff, which had evolved informally over the course of World War II.³⁶ The law created a National Security Council to improve coordination of the armed forces with the other instruments of national power. An independent Air Force was also established. In addition, authority over the armed forces was consolidated. This eventually led to the Department of Defense, which oversaw the secretaries of the Army, Navy, and Air Force.

The Selective Service Act of 1948 served as the basis for the modern Selective Service System.³⁷ As global tensions with the Soviet Union rose, a draft was maintained during peace and war (unprecedented in U.S. history) until 1973.

America's standing armed forces also expanded dramatically. During the course of the nation's history from its founding to World War II, the U.S. averaged 1 percent to 2 percent of national GDP during peacetime, expanded dramatically during wars, but then was quickly reduced to a one-digit or two-digit norm after the conflict. Throughout the Cold War, however, the U.S. averaged between 7 percent and 8 percent of GDP.³⁸ Defense spending was also the lion's share of the federal budget and government research and development (R&D) funding, mostly related to national security, that dwarfed the private sector.

New Age, New Challenges

The notion that maintaining a small peacetime standing force would be sufficient to ensure that the military would not be exploited as an instrument to undermine democratic rule was clearly no longer relevant in a modern age when large standing armed forces were the norm, not the exception. The notion remained attractive—even desirable—but global realities trumped America's historical preferences. The American military establishment grew to such an extent during the first decade of the Cold War that in his farewell address in 1961, President Dwight Eisenhower warned that "[i]n the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex" and "must never let the weight of this combination endanger our liberties or democratic processes."³⁹ Nevertheless, the U.S. political structure proved remarkably resilient in sustaining civilian control of the military, a testament not only to the oversight of Congress and the sense of the American people, but also to the professionalism of the military itself and its commitment to constitutional principles.

Political and social tensions affecting the military were endemic throughout the Cold War. In 1949, a number of active and retired senior naval officers became embroiled in a plot to undermine the Administration's naval policies, an incident that was labeled "the Revolt of the Admirals."⁴⁰ During the Korean War, President Harry Truman ordered the full racial integration of the U.S. military.⁴¹ Truman also sparked a significant confrontation when he fired the senior U.S. commander in the theater, General Douglas MacArthur, for insubordination. In the 1950s, President Eisenhower called out U.S. troops to enforce orders to integrate schools in the South.

The 1960s and 1970s proved even more contentious as the nation was rocked simultaneously by the civil rights and anti-Vietnam War movements. Military forces were frequently called out to quell disturbances. The most shocking incident occurred in 1970 when National Guard soldiers fired on demonstrators at the Kent State University campus, killing four students.⁴²

Military culture struggled to adapt to the tumultuous challenges of Cold War politics and social change and unrest. Two of the most influential books of the time were Samuel Huntington's *The Soldier and the State* (1957)⁴³ and Morris Janowitz's *The Professional Soldier* (1960),⁴⁴ both of which sought to define the military's place in modern American society and reconcile the struggles in contemporary civilian–military relations. But while both were deeply influential and widely read in the military, their prescription to define a professional space insulated from political turmoil, the rapidly changing modern world, and the rapid shifts in demands of and attitudes toward the military largely proved fruitless and inadequate. For much of American history, absent major wars, the American military was comprised of people and institutions that had scant interaction with most Americans. The military drew limited public resources. Sailors were far away at sea, and soldiers were stationed on dusty bases in Texas or far-off garrisons in China, removed from everyday life.

From World War II (when more than 10 percent of American men were in uniform) on, the armed forces and veterans were a ubiquitous part of American life. Moreover, social change intertwined America and its armed forces. In 1978, the women's reserve corps were disbanded, and women were integrated into the regular services (though still excluded from combat roles). Women were also accepted at the nation's military academies. Change also brought new challenges. In the coming decades, for instance, all of the services would face major scandals involving the treatment of women in the military and be dogged by allegations of sexual abuse and violence in the armed forces.

Guns vs. Butter and More

Another significant change in the military's place in American life was the armed forces' impact on fiscal policy. From the American Revolution through the first half of the 20th century, when military forces were modest, defense spending might engender occasional heated controversies and debates but was not a significant factor in the American political economy. That completely changed after World War II. Although the military after the war remained and remains to this day—a global force that required significant funding, the size of the military and its related funding were continually whipsawed, buffeted by politics, the state of the U.S. economy, and global affairs. For example:

- With the conclusion of the Second World War, President Harry Truman (1945–1952) consciously sought to reduce the armed forces, only to reverse course with the outbreak of the Korean War.
- President Dwight Eisenhower (1953–1961) also instituted significant reductions in conventional forces, which he offset in part by increased funding for nuclear arms, a policy that was continued by President John Kennedy (1961–1963).⁴⁵

• President Lyndon Johnson (1963–1969) dramatically increased defense spending to accommodate the war in Vietnam, but he also increased domestic spending, which resulted in a significant negative impact on the economy.

Presidents continued to look for military reductions until President Ronald Reagan (1981–1989) dramatically increased the size of the military, justifying it as necessary to outmatch the Soviet military. Following the end of the Cold War, the military experienced a cascading series of force reductions that continued until the terrorist attacks of September 11, 2001, and the outbreak of war in Afghanistan and Iraq. President Barack Obama (2009–2017) again sought force and spending reductions, only to see that trend reversed by President Donald Trump (2016–2017), who sought to increase readiness; focus on countering China, Russia, and Iran; and establish a new military service—the United States Space Force.

Much of the push and pull in the size, scope, and funding of military forces was the result of more than fiscal pressures, changing geopolitics, and views of how to employ modern militaries. In the wake of the Vietnam War, for instance, the U.S. military came in for scathing criticism. One influential critique, historian Russell Weigley's *The American Way of War* (1973),⁴⁶ argued that American military tradition was overly focused and dependent on the use of brute force in war. Another well-known critique, Harry G. Summers' *On Strategy* (1982),⁴⁷ concluded that the problem was how modern militaries are employed.

The Goldwater–Nichols Act of 1986,⁴⁸ the first sweeping legislative reform since the National Security Act of 1947, was authored to address the inefficiencies and inadequacies of the military in modern warfare. Among the initiatives in the law were measures to improve the conduct of joint operations by improving the ability of the individual services not just to work together, but to develop synergies more intentionally by leveraging each other in an integrated way.

Technology also introduced dramatic changes. The proliferation of silicon microchips engendered a new generation of computer technologies that had an immediate impact on the military. GPS, for instance, enabled the widespread deployment of precision-guided weapons. Technological evolution also affected (and continues to affect) how the military conceptualizes operations. In addition to being joint, forces must also be multidimensional, integrating operations on land, at sea and below the surface, in the air, in space, and in cyberspace.

The U.S. military has also been asked to conduct a wide variety of operations, from conventional warfare to occupation duties, border security, and homeland defense, and to assume an expanding role in space operations. On top of this, while the U.S. armed forces have always been tasked with global missions since World War II, the rise of China, a resurgent Russian threat, and persistent aggression from Iran in the Middle East have led to a lively debate over how to apportion forces and efforts—an especially difficult challenge given the reduction in forces following the end of the Cold War.

In addition, manpower issues have increasingly come to shape the nature of the force. Before the end of the Cold War, reserve components (Army, Navy, Air Force, Marines, and Coast Guard) and National Guard (Army and Air Force) were used predominantly only in wartime. Since the end of the Cold War, the armed forces routinely call on all components of the "total force."

Further, the U.S. military has not employed Selective Service since the 1970s. Instead, the military relies on recruiting and retaining an all-volunteer force. The challenges of sustaining such a force are changing with the demographics of the country, particularly since there is decreasing propensity to serve in the military and fewer American youth are qualified for military service.⁴⁹ Though all military positions have been open to both men and women, the challenge continues to grow.

Another contemporary challenge is the size of the veteran population, which is on a scale not seen since Vietnam. Veterans who have a range of physical and mental health challenges, as well as valuable skills to bring to civilian communities, also have political influence. Historically, large veteran populations after the Civil War, World Wars I and II, and Vietnam have had an economic, political, and social impact on the country in addition to affecting how we provide services and support for future servicemembers. The 9/11 generation most likely will as well.

While the armed forces were buffeted in the post–Cold War world by shifts in focus, demands, funding, and the advent of technologies that affect

military operations, they were also affected by dramatic social change. President Bill Clinton (1993– 2001) generated controversy when he attempted to change policies to allow homosexuals to serve openly in the armed forces. Opposition was substantial and led to a compromise policy known as "don't ask, don't tell." Under President Obama, gays and lesbians were permitted to serve openly in the military, and restrictions prohibiting "gay marriage" were removed.⁵⁰

These shifts have introduced a dramatic cascade of social policy changes that now includes controversy over transsexuals serving in the U.S. military. Further, initiatives like Diversity, Equity, and Inclusion (DEI) and Environmental and Social Governance (ESG) programs have embroiled the armed services in controversial debates over social policies and cultural norms. Proponents of such changes argue that increased diversity within the force will somehow make it stronger, more effective, and more resilient while also aligning it with the demographic profile of American society, but there is no clear evidence that supports these claims. To the contrary, such politically progressive policies appear to hurt recruiting and retention efforts and have spurred strong opposition within the military and among the retired and veteran communities.

Looking to the Future

The history of America's military demonstrates the resilience of democratic structures. Yet it is also clear that the constitutional order governing the military's relationship with the federal government and the American people is not immune from political pressure and destructive influence. The healthy state of civil-military relations can never be taken for granted; nor should the need to check influences and impulses that seek to make military forces a tool of political factions.

U.S. history shows that the roles, missions, structure, and capabilities of America's military forces are regularly subject to change. As the needs of providing for the common defense continue to evolve, so must the armed forces. Consequently, the why, how, and extent of change should be a subject of serious, sober debate. America will remain a global power and will continue to need a military that is up to the task of protecting the homeland and the country's interests on a global scale. The struggles the nation has faced since the end of World War II and the forces that impact them-geopolitics, the economy, technology, and social change-are not going away. The choices that have to be made in the future will be no easier than the choices that had to be made in the past. Nor will the magnitude of the consequences of getting it right or wrong be any less.

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The Military and Society: A Refresher Anna Simons. PhD

What does it mean when the Vice President of the United States tells cadets in a historic speech at West Point that our military is "strongest when it fully reflects the people of America"?¹ Should 42 percent of those in uniform be obese or more than 13 percent be taking antidepressants?² Alternatively, maybe this means 50.5 percent of the force should be female, while American Indians would need to be dismissed because, at a little over 1 percent of the population, they serve in disproportionate numbers.³

Even if we concede that the Vice President was really only alluding to what she could see as she gazed out at the Long Gray Line, the point of a modern professional military is not to *reflect* the society from which it is drawn. Instead, we have a military to *protect* that society—all of us, along with our borders *and* our freedom on the seas, in the air, and across the global commons.

Ironically, if we had compulsory national service with a military option, all sorts of representational goals could have been achieved by now. Imagine, too, for a moment the more serious issues universal service would also address. Would it help restore civic identity? Yes. Tighten the links between civic responsibilities and civic rights? Yes. Get youth to invest sweat equity in their own country? Yes again.

But the U.S. has never had national service, and conscription hasn't been practiced in 50 years.⁴ Few on the political Left or Right are even asking that women sign up for Selective Service. Instead, we have had an All-Volunteer Force since 1973, which has left it up to the services to try to attract the recruits that they need. "All-Volunteer" should raise two questions for "we the people":

- Whom *do* the services need?
- How might we assist since we are the military's ultimate beneficiaries?

To do justice to these two questions requires digging deeper than simply painting the military as too woke or not woke enough. Instead, we had better understand what makes the military's job unique, which in turn means reviewing the U.S.'s security requirements and appreciating what makes *them* unique.

By point of quick comparison, consider Ukraine whose continued independence depends on us and our NATO partners. Or consider any one of those NATO partners. If the U.S. got into serious military trouble, which among them could rescue us? The answer is: none.

No ally or coalition of allies comes close to matching the U.S. in productivity, scale, or resource base. None has the logistical or expeditionary reach to render us meaningful immediate assistance. It is doubtful that any could gear up to offer sufficient eventual assistance, let alone resupply us effectively. We are too distant. We are also too militarily essential to *them*. Thus, we have only ourselves to rely on.

That makes us unique.

Add to this the fact that we are not neutral Switzerland or Lichtenstein. We are more like a Gulliver or a Goliath. We have been a force at large in the world since at least the 1890s (with our acquisition of the Philippines, Puerto Rico, Guam, and temporarily Cuba). We are rich, commercially assertive, and like to promote democracy and capitalism abroad, all of which makes us a target. Indeed, we have more different kinds of adversaries right now than at any point in our history. These range from peoples whose homelands we have helped upend to leaders whose regimes we have said should go.

Revenge is a multigenerational elixir, but *schadenfreude* can be equally motivating. Consequently, our primacy will continue to invite one-upmanship from aspiring powers. But plenty of lesser powers wouldn't mind seeing us taken down a notch or two either. Thus, for all of the legitimate concern about Russia, China, Iran, and North Korea, what about Cuba and Syria—or jihadis and other violent sub-state actors? And shouldn't we also worry about climate-first environmentalists, especially as warnings of our impending ecological demise grow louder?

Coincident with the widening array of people gunning for us are the proliferating means at their disposal, from hypersonic missiles to balloon-borne electromagnetic pulses (EMPs) to weaponized viruses and beyond. Then there are our excessively porous borders, not to mention the 11,000,000 shipping containers offloaded into U.S. ports annually.⁵ Or what about the millions of American passport holders who reside abroad.⁶ Will they become future political hostages like Brittney Griner and Evan Gershkovich? Despite extensive hardening, our embassies can't even protect themselves effectively. If only they could, Washington wouldn't have to evacuate them as often as it does, most recently in Khartoum, Kyiv, and Kabul.⁷

In other words, protecting the U.S. and American interests is not just costly; it is extremely difficult, especially when you factor in how much of our daily business—and daily lives—we conduct online. We Americans have made ourselves dependent on networks and systems that can't be secured, to include the grids that power them. At the same time, we have opened ourselves up to methods of subversion that we can't always detect. And when we do finally forensically figure out what has occurred and the source is a unit in the People's Liberation Army or a cutout associated with the Kremlin, we do remarkably little (and often nothing) to prevent a recurrence.

Because the 21st century aim of subversion won't be to swallow us whole, but rather to weaken and sideline us, it won't matter to our adversaries how our domestic animosities play out. The only thing opponents need to ensure is that our mutual distrust continues to fester and intensify. COVID is the great shining example of how easy this can be. Public health responses to COVID, from the federal level down to local government and even school district levels, created so much chaos that it is doubtful public health officials will ever fully regain the public's trust. COVID's novelty, rapid spread, and virulence contributed to the chaos, but so did the absence of anyone in authority who could rise above the fray as the voice of consistent, calm reason.

Collective national security will similarly unravel without a credible overarching source of information to which all (or even most) Americans will accede in a crisis. I have long contended that this constitutes our greatest national security risk because, as Abraham Lincoln reminded Americans, "a house divided against itself cannot stand."8 However, post-COVID, I would modify my contention: We don't just need a credible overarching source of information. We need credible explanations too. Officials have to be able to explain in plain unvarnished language how they are connecting policy dots and why the decisions they make are in "we the people's" security interests. Nor can their explanations consist of spin or soporifics. We need to hear adult explanations that are balanced, truthful, and free of political spin.

It seems telling that even before COVID, a growing number of Americans prepped—as in prepared for disaster—while ultra-wealthy tech moguls invested eye-popping sums of money to build themselves remote, fortified bunkers rather than lobby for community-wide or national civil defense. The prepper subtext was (and is) that government can't be counted on, society will fall apart, and we will all be left apocalyptically scrabbling for ourselves. Whatever the source of these convictions—classic American paranoia, prescience, or both—preppers' lack of faith in their fellow Americans and their desire to look out only for select family members and themselves speak volumes.

Lack of collective faith or confidence tracks with what military recruiters report when they try to account for recruitment challenges. One of the factors they cite is waning patriotism even in Red States with significant rural populations.⁹ This accords with Jean Twenge's observations in *Generations: The Real Differences Between Gen Z, Millennials, Gen X, Boomers, and Silents—and What They Mean for America's Future*:
In a July 2021 poll, only 36% of 18- to 24-yearolds (all Gen Z) said they were "very" or "extremely" proud to be an American. In contrast, 86% of those 65 or older (Boomers and Silents) said they were proud to be American. John Della Volpe, the director of polling at the Harvard Kennedy School of Government, spoke to hundreds of young people for his 2022 book, Fight: How Gen Z Is Channeling Their Fear and Passion to Save America. When asked to describe the U.S., he found, young Americans in the mid-2010s used words like "diverse," "free," and "land of abundance." A few years later, Gen Z'ers instead said "dystopic," "broken," and "a bloody mess." When he asked Gen Z'ers about moments that made them proud to be Americans, "I got blank stares, or examples of random sporting events like the USA soccer team finally beating Ghana in a 2017 friendly match," he writes.¹⁰

Again, however, as the prepper phenomenon suggests, it isn't just youth who feel disaffected.

From a security standpoint, these disconnects first within society, then between society and the military—aren't just concerning: They're imperiling. The U.S. government spends more money per capita on security than does any other major power. Yet Americans' anxieties are not allayed. Why not? Why can't senior military leaders reassure the public that our military *can* protect us? Or, if the military can't protect us, why can't military leaders level with Congress to explain what *is* required?

Violence, Combat, and the Military's Raison d'être

Although chivalry might be considered an outmoded concept, that is ultimately what we civilians expect from our military. We count on servicemen and women to safeguard us and our property, much as other first responders do—except for the added responsibilities related to the use of force that set the military apart.

The military's overriding purpose is to prepare and stay prepared to wield force. Maybe adversaries can be deterred without the use of actual violence, but deterrence requires that others know you both can and will use punishing force, which is why readiness needs to be maintained around the clock and why combat skills across all domains matter. What these skills consist of must necessarily vary by type of unit, but at base, physical fighting strength still matters and will always matter. This will hold even if (or when) it becomes possible to wage war exclusively through bytes and bots, since whoever is responsible for pushing the proverbial button will need to be physically protected, as will the entire digital architecture (or, at the very least, the one wire or device that tethers the technology to us).

There is a second reason why dagger-betweenthe-teeth/crawl-across-the-scorched-earth combat capabilities remain essential: Violence is the one form of human communication that requires no cross-cultural translation. Violence is viscerally compelling. It is also incomparably effective. The U.S. and NATO's preferred means of innovation might be technological, but just because the U.S. and NATO strive for precision and try to adhere to just war principles¹¹ does not mean that others do as well. Others, with different values and/or resource constraints, innovate quite differently. They innovate in terms of what they can do with and to other human beings-from using widows as suicide bombers to purposely orphaning children in order to turn them into child soldiers.

Nor is it as though old practices ever entirely disappear. Since the turn of the 21st century, we've seen piracy revived, villages gassed, hostages beheaded, and dams deliberately breached. Or what about rape and famine? Humans have proven both that there is no limit to the unconscionable things they will do *to* one another unless they are stopped and that the only way to stop them is through an equally unsparing but more targeted and overwhelming use of force.

Attrition

Wielding force is dangerous. So is training to wield force, never mind training to use force precisely and judiciously. Consequently, attrition is an enduring military problem. It is worth remembering that while illness, injury, and death are ever-present dangers during wartime, attrition occurs during peacetime too. Accidents happen during training and off-duty hours alike—all of which makes *interchangeability* a military necessity. What do I mean by *interchangeability*? The ability of one person to fill in for another quickly.

The need for interchangeability rarely receives the attention it deserves, but it is especially germane in ground combat units, which need to be robust enough to accomplish their mission while still remaining small enough to function as an independent cohesive whole. Since no one can operate a .50 caliber machine gun *and* perform a battlefield intubation *and* operate a radio all at the same time, all squads, platoons, and teams have a fixed (as in clear, preestablished) division of labor. Soldiers and Marines specialize only once they are interchangeably proficient at critical "shoot, move, and communicate" skills. The unit can't survive unless everyone is equally physically capable of essential combat tasks. Attrition necessitates mutual, interchangeable reliability.

However, interchangeability doesn't just require that everyone be physically, mentally, and emotionally reliable. It also demands trust among those in the unit. Individuals have to be confident that those on their left and right, as well as those leading them, are proficient. This helps to explain the importance of standards. *Can* A carry B away from danger? *Can* C shoot as accurately as D and E? So long as standards remain as stringent as worst-case scenarios demand, they reassure all members that everyone in the unit *can* perform in expected ways. Thanks to standards, units are likewise able to absorb new members without undue disruption in the face of loss. Grim as this is to contemplate, nothing is more essential to ultimate success.

Being able to trust others reflexively is key for two reasons.

- When *in extremis*, no unit can afford to have members who have to second-guess one another because they see the world differently or prioritize differently. Instead, everyone has to be sure that they share a common mindset and will respond as expected, *especially* when everything falls apart.
- It is not enough just to know that others can haul, heave, climb, swim, and/or otherwise cover distance under heavy loads. Can they also keep their heads under pressure? This is no less vital.

In other words, similarity isn't a problem; divergence is. Divergence shreds dependability, which is why the criteria that matter are ability, attitude, and allegiance. They matter most because they matter to performance. Everything else that outsiders think they should be able to see, because they want to *see* diversity, is immaterial to what prevailing in combat requires.

Connecting the Dots

The contradictions between military necessity and societal desires, along with civilians' expectations of the military, should be self-evident. In the same ways that countries aren't equally interchangeable—no one is going to rescue the U.S. in a crisis; only we Americans can do that—people are not built or wired the same. Nor can they be made to be interchangeable. Some will always be better at some things than others are. But this does not mean that the military overall should not be more diverse than it is—in unit roles and responsibilities and in its division of labor.

Politicians and general officers love to proclaim that "our military is the strongest in the world." But simply saying so is not enough. Adversaries need both to fear us and to know we mean what we say. They need to count on our responding regardless of the means they use to inflict harm. Otherwise, we (and our allies) remain ripe for subversion, cyberattacks, EMPs, and other not exactly direct but nonetheless devastating body blows-a la COVID-which is why the one form of diversity the military should herald is the myriad ways in which it can strike back. This is the only display that matters to our adversaries. In fact, the more attention the services pay to skin tones and pronouns, the easier we make it for adversaries to use our differences over these differences against us.

Because the military will always need more combat power than ground forces alone can supply, one size cannot and should not fit all. The Air Force can't be the Navy, and the Navy is not the Marine Corps. Special Operations Forces might need a preponderance of Type A personalities, but too many Type As in tight quarters on a submarine would likely be a disaster. The only rule of thumb should be the attrition/interchangeability rule of thumb: Every effort should always be made to bolster reflexive trust, and changes that would undermine that trust should never be introduced. For instance, Space Guardians whose careers will be spent indoors should no more need to meet Airborne physical fitness standards than members of the 82nd Airborne Division should have to learn how

to repair satellite antennae in space. Nor should we want different units or branches to approach problem-solving similarly.

In fact, the military will fail if it has too much sameness across the board. Basically, diversity is militarily vital when it comes to varied capabilities across the total force; trying to manufacture it within units, on the other hand, jeopardizes the capabilities-based integrity that those *in* the unit need to know their unit has.

Given the need for a wide array of skill sets and aptitudes, the gazillion-dollar question then becomes: Which essentials do all members of the military need to share, and which should be unit-specific and specialty-specific? On the face of it, this might appear to be an easy question to answer. For instance, everyone in uniform should be emotionally stable, willing to work, and loyal to the U.S. They should also have an affinity for teamwork and a respect for hierarchy. Right now, however, the services can't be sure how deep-rooted any such sentiments are.

Of course, young people's attitudes are not their responsibility alone, but they do create challenges. Take hierarchy. The idea that someone deserves unearned deference just because they are older is an increasingly antiquated notion. Also, compared to previous generations, fewer young people today have been raised *having* to obey authority, yet the military remains a gerontocratic (age-based and experience-based) hierarchical institution. Rank is supposed to—nay, *has* to—cue obedience. Without obedience, chains of command can't function, and command, control, and coordination become impossible.

Since age has been integral to every society's division of labor from time immemorial, it isn't surprising that gerontocracy became the military's foundational organizing principle. To this day, it provides several advantages. For one, seniority makes throughput, as well as up-and-out, easy and does so by promising a fair shake to everyone. In addition, experience really does matter. There is a learning curve to being able to handle large numbers of people and complex situations adroitly. Rank, which is meant to serve as a proxy for ability and experience (and not just age), is integral to authority, while the only way for discipline to be internalized and transmuted into *self*-discipline is by compelling young people to do things they

otherwise wouldn't want to do or don't think they can do. Authority enables this.

At the same time that the military has its needs hierarchy and obedience—young people have builtin propensities too. For instance, young people are classically impatient. They especially dislike hypocrisy and unfairness. Yet for tens of thousands of years, youth have more or less been locked in, forced to wait their turn because those senior to them have controlled the levers of power and the keys to success. This helps to explain why all of us who are now chronologically "senior" deferred to our seniors once upon a time when we were young adults: Back then, we had no choice.

Recently, however, the tables turned.

Societal Sea Changes

For the first time in human history, adults today willingly and even routinely defer to youth. Not only do adults turn to their children (and younger employees) for tech help and advice, but as the term "peerent" implies, it seems that parents would rather be their kids' friends than their disciplinarians. Nor is this the only sociological shift underway that has profound implications for the military.

For instance, the idea of *a* career no longer rates the way it once did. In the business world, switching jobs or even quitting a career midstream is no longer stigmatized. In fact, no one seems to be expected to stick with anything if they don't want to; nor does follow-through rate as significantly as it once did. Even the relatively recent concept of "work–life balance" is being further tilted away from work so that enjoying life, with breaks for fun, increasingly takes precedence.

Well before the appearance of COVID, employers, teachers, coaches, and others who worked with young people were already voicing concern (or bewilderment) about underdeveloped work habits and social skills. The pandemic is blamed for having intensified these deficiencies, though again, young people can't be held accountable for how they were (or were not) raised. Instead, when society at large lacks clear standards, *it*—meaning we—bears responsibility for what we castigate as young people's lack of direction, confidence, reliability, grit, and so on.

At the same time, just a cursory look at the literature about generational differences makes it clear that previous generations not only *felt* more rooted, but were collectively grounded. By this I mean that up through the mid-1990s, most young Americans were taught (or at least exposed to) similar things regardless of how or where they grew up, whether in rural or urban settings, in intact or single-parent households, and irrespective of ethnic or religious background. Schools transmitted canonical versions of American history and literature, and kids grew up sharing a common popular culture too. In contrast, from entertainment through education, everything has become more dissolute. Just consider the proliferation in private schools, parochial schools, charter schools, and home schools—never mind the variation this leads to across curricula.

To complicate matters even more, it is hard to think of any hobby, sport, or other activity that hasn't been made more difficult, competitive, or costly to access—with sports camps for elementary-aged children, as many different types of bicycle as there are surfaces, skateboards that cost between \$40 and \$200.¹² Even science can't be done with just a pencil, paper, and powers of observation anymore.

One impact of so much complexity and diffuseness is that what young people know (or don't know), what they know how to do (or not), what they have already been exposed to (or not), what they are capable of (or not), what they do or don't believe, what they expect from life, from adulthood, from one another, and so on are so widely divergent that the military can no longer count on any shared foundational understanding with regard to anything. This uneven preparation raises two urgent questions:

- Without a common base, what can the military use to instill commitment to a common purpose, which is so essential to mutual reliability, or cohesion, teamwork, and effectiveness?
- From what can, or should, it fashion a common, red-white-and-blue identity?

Here is where, counterintuitively, today's dissimilitude is not necessarily wholly negative. It may even represent an opportunity. After all, militaries have always needed to do some remediation. Could the U.S. military now help to re-even the playing field for recruits and future officers at accession? Could it use innovative teaching and training techniques not only to build a broader, firmer, shared foundation, but in such a way as to help young Americans better sort and bin themselves?

Tellingly, the military's most elite units usually do a better job of screening for who they think they need than even private industry's most exclusive firms do. They do so partly by recognizing that there is no more effective way to encourage people to select themselves out than to expose candidates to what will be expected of them on the job. In addition to being the fairest, most meritocratic, and most equitable approach to determining who does and doesn't belong where, assessment and selection via exposure grants individuals equal agency: Everyone can strive to do their best, or not.

While cost might be one objection to combining civic and education repair with granting young people the opportunity to mature their sense of themselves, the rejoinder is: What is the alternative? Not only do society's lapses need to be remediated somehow, but if the military doesn't do so at the outset of everyone's service, it can't short-circuit the mis-"fit" costs incurred when individuals end up where they don't belong—to include doing things they shouldn't, which is a growing problem.

In fact, talk to colonels in command of brigade-sized units today, and it is stunning to hear how much time they spend having to respond to and manage abuse allegations, domestic violence cases, drug problems, thefts, suicides, murder-suicides, and a range of other behavioral breakdowns-few of which are caused by military service. But because these problems manifest themselves while individuals are in uniform, they demand a military response. Among the significant collateral costs is time taken away from being able to check on training or get to know, let alone be able to mentor, promising young leaders. Even worse, this is driving out officers and senior non-commissioned officers who spent the past 20-plus years deploying back and forth to combat zones in Afghanistan and the Middle East and are choosing to retire rather than accept promotion because, as they put it, they do not want to be and have not been trained to be social workers.

A second potential objection to the military stepping into the breach to make up for society's shortfalls (especially since teaching anything has become so politically charged) is: What would the military teach? Of course, the military has long been in the teaching business; it has always taught skills. But, little realized by the public, the military also provides more continuing education than any other employer in the country, especially to officers. As for relevant educational subjects, there should be nothing controversial about suggesting civics. For instance, what roles and responsibilities does the Constitution enumerate—especially since servicemembers swear an oath to support and defend the Constitution? What about roles and responsibilities *in* the military, between the military and other government agencies, between civilian and military leaders, or between the U.S. and other countries, and so on?

Or what about history, geography, and enough STEM¹³ awareness to foster an appreciation for how things work, all of which could be woven into field training and other exercises? These topics matter because despite young people's facility with bits and bytes, knowledge and understanding cannot be acquired just by clicking through hyperlinks. They require content and context. Unfortunately, we have permitted (or even encouraged) too many young people to be overly dismissive of both, which is imperiling. Take history. Without a firm grounding in the chronology of events-chronology, which is the totally apolitical unreeling of time; events, one damned thing after another-it is impossible to contextualize the present accurately, never mind the past. It also becomes too easy to fall prey to whatever story sounds best, regardless of how inaccurate it is, especially since corroborating "proof" floats free (and frequently fact-free) online.

To the military's credit, critical thinking and analytical methods have come to be considered key components of professional military education. Even in my former department (defense analysis), our tagline was that we didn't teach students *what*, but *how to think*. However, methods do people little good if they don't possess a fundament of knowledge first. Worse, applying critical thinking skills can make people sound smarter than they are. Or perhaps a more diplomatic way to put this is that smart questions can make the asker sound impressive, but when it comes to answers, can he or she distinguish which are most accurate? Or what about discerning who's an expert?

Expertise introduces a particularly pressing challenge for today's military since it isn't possible for even the most senior leaders to be expert about Islamists *and* China, or Iran *and* North Korea, just as it isn't possible to be knowledgeable about underwater acoustics *and* aeronautics. If we look ahead, what will happen when generalist senior leaders have to be able to determine who is or isn't worth listening (or turning) to for advice and credible information in areas or regions about which they know little? Afghanistan and Iraq offer just a foretaste. With "fake it till you make it" salesmanship increasingly suffusing academe, research institutions, and think tanks, and not just broader society, senior leaders will be in even greater trouble.

This is why it is important to underscore that the only way to prevent relentless self-promotion from occluding real expertise is to recommit to high standards, facts-based analysis, and appreciation for performance-based merit. Or, as in combat, so in military preparation and preparation *of* the military. This must all be of a piece.

Not Like Any Other Institution

Although the military will always be buffeted by whatever is trending in society, the services have a much greater ability to resist contorting themselves to keep up than they seem to realize. The military also has more going for it than it seems to realize provided its leaders remind legislators, civilian leaders, and the public that its overriding raison d'être is to protect us.

The military, we must remember, is not like any other institution or calling. Nor should it try to be. Instead, it can and should make more (much more) of opportunities that are available only to those who serve. Here I don't just refer to a steady paycheck and benefits, but also to purpose, belonging, identity, service, and getting to see the world—which have long been the classic standbys, along with the prospect of combat for those who sign up for the combat arms. Other standbys include structure, job security, and the prospect of a career, all of which are fast disappearing from civilian life.¹⁴

Thus, no matter how passé it might seem right now for someone to want to stay committed to *a* line of work, never mind *an* enterprise over the course of 20 or 30 years, this kind of security is bound to prove increasingly attractive as artificial intelligence (AI), market churn, and global volatility wipe out everyone else's first, second, and third attempts to forge a meaningful life. Moreover, that the military has always built so many jobs into a single career means that service is comprised of variety and, even better, servicemembers get to do new things without having to figure out next steps on their own.

Even more immediately attractive, especially for those who are young, who don't yet have families, and who want to try new things, is getting to do things civilians don't get to do, whether with real weapons, cyberweapons, in planes, out of planes, from ships, under water, in space, etc.—or, to return to what sets the military apart, the prospect of daring and danger. Daring means being prepared to do what others can't in the face of danger, whether this is heading toward it, rescuing others from it, or fomenting it for adversaries.

As dated as it sounds, what defense requires in any guise is chivalry—the protection of civilians and daring. Combat just happens to require both to an acute degree.

I mention combat again because it is critical to remember why we have a military—we have adversaries. Adversaries are why we need the military to excel at combat, which is the only thing that stands between us and harm. I mean this literally, because ultimately protection boils down to the *literal* saving, sparing, or taking of life.

While the primary reason we have a military is to prevail in combat, the corollary reason we have a military is to deter bad actors from threatening America. Since the advent of nuclear weapons, *deterring* conflict has struck most Americans as exceedingly important. Given the range of adversaries and life-altering threats we face today, deterrence is more important than ever. This alone should make us exceedingly mindful of what represents both the first line of deterrence and the last line of defense: namely, the integrity of the military itself.

Consequently, for self-protective reasons alone, we Americans should do what we can to prevent the

services from adopting policies that alienate young people who want to volunteer but who increasingly hesitate because they fear that political agendas are taking precedence over the tough but meritocratic standards that enable them to trust authority and one another. If the services don't stand for—or stand up for—retaining rigor, it is hard to imagine what will then serve to hold the military together, especially in light of unrelenting partisan pressures or if the country should experience more partisan violence than it has thus far.

The military's most obvious source of strength is that it *doesn't* reflect society. It can't. It *has* to remain different to protect the rest of us.

Conclusion

One final observation: The officers I taught attributed bad policies, misguided decisions, and inane bureaucracy to leadership issues so often in class that I would inwardly roll my eyes: How could everything be a "leadership issue?!" But after more than two decades of watching everything they have had to contend with, I have come around to their point of view.

Leaders *are* the issue. By this I mean that if generals and admirals with three and four stars on their shoulders can't make clear how much of our future rides on combat and combat-support capabilities and what these need to consist of (as well as what they can't consist of, despite intensive lobbying done on behalf of unnecessary technology, platforms, and social reengineering), then they will be cheating young Americans out of the better future all leaders promise. Worse, if senior military leaders persist in being unwilling to speak truth to power—or speak truth *in* Washington—they will further diminish the value of the rank they wear, and that will be bad for all of us, civilian and military.

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The U.S. Defense Industrial Base: Past Strength, Current Challenges, and Needed Change

Maiya Clark

The United States faces threats from its rivals and from rogue actors, and it maintains a military of land, sea, air, and space forces to counter those threats. This *Index of U.S. Military Strength* provides analysis of those military forces' adequacy. The military, however, is only the most visible element of national defense; beneath the surface, a much larger industrial capacity serves to undergird that military power.

This industrial capacity—the defense industrial base—consists of the government-owned and privately owned factories, foundries, shipyards, and ammunition plants that produce defense end items. It also includes the businesses and government institutions that produce those items, from prime contractors with hundreds of thousands of employees and billions of dollars in annual revenue down to small businesses that make individual components for larger defense systems and innovators that create new technologies, whether startups with defense-relevant emerging tech or academia and research universities. The defense industrial base also includes the workforce that powers this sector.

In the past, U.S. industrial might as a whole underwrote U.S. military strength and success. Manufacturing underpinned the national economy. When urgent national security threats emerged, leaders prioritized defense investments, and private industry and government facilities responded to this demand signal—accomplishing incredible feats like producing nearly 300,000 aircraft and 86,000 tanks in World War II.¹ Industry could respond because latent production capacity already existed, either for defense-specific items or for commercial items that could be converted to defense production. Government capabilities existed as a result of previous wartime mobilizations.

Today, America's national defense remains just as dependent on the nature of its economy; those ties, however, do not make the U.S. as secure as they once did. The U.S. economy is now based primarily in knowledge and services: Manufacturing accounted for only 8.7 percent of U.S. jobs in 2015, compared to 32 percent in 1953.²

Despite the current deficiencies in the defense industrial base, leaders in Congress and the executive branch have not yet chosen either to increase federal funding for defense or to make the difficult trade-offs (such as cutting entitlement spending) that would be necessary under such an increase to enable a restoration of this key capability.

The global threat environment is growing more hostile as the economic and cultural factors that historically have supported U.S. military strength decline. Not only have manufacturing and key industrial processes moved overseas, but—even worse—they have moved to China, America's chief rival. The U.S. is in a "new Cold War" with China even as the two countries' economies are deeply intertwined.

U.S. military strength therefore cannot rely on the economic conditions and assumptions of the past—those conditions no longer exist, and any attempt to recreate them would require heavy government intervention in the economy with all of the inefficiencies and injustices that such intervention entails. Rather, leaders must pursue the development of a strong U.S. military and resilient defense industrial base within today's economic environment, utilizing innovative policies to ensure that defense production can meet America's demands in today's changing security environment.

History of U.S. Defense Production

The U.S. has produced defense items since before the American Revolution. Though this could hardly be called an "industrial base," as it predates industrialization, the U.S. produced weapons and built ships for the Revolutionary War and the War of 1812. The earliest defense industries in the U.S. based their businesses around arming the combatants of imperial wars in Europe.³ Then, during the American Civil War, the North's superior defense production capacity contributed in a major way to its eventual victory.⁴

The U.S. produced weapons that were eventually used in World War I, but because it lacked defense-specific production capacity, by the time its industry was able to produce items like tanks and artillery pieces, the war was nearly over. For example, although poison gas was first used in the war in 1915, when the U.S. joined the fight in 1917, the Army could still not produce its own gas masks and instead had to borrow respirator equipment from British and French forces.⁵

The first real test of U.S. defense industrial capacity was World War II. In the years before the war, the U.S. had developed a great deal of manufacturing capacity, as well as latent capacity, as a result of policies that were designed to mitigate the Great Depression. The U.S. also had a large workforce and plentiful available labor for the same reason. While this industrial capacity was not being used for defense production at the time, political and business leaders saw that the war unfolding in Europe in 1939 and 1940 would require much more participation from the United States. Leaders in the auto industry in particular saw that their manufacturing capacity would need to be mobilized for wartime production. Both allies and the U.S. government sharply increased their purchases of defense goods, from aircraft to uniforms. Industry responded to this surge in demand for defense goods by converting their commercial manufacturing capacity for items like washing machines and record players to the production of war matériel.6

The relatively unsophisticated nature of the matériel being produced meant that manufacturing capacity for consumer goods could shift to war production fairly easily. Military Jeeps were just trucks, and bombs were merely steel and explosives. Even more complex end items like planes were made of components that could be produced in commercial factories: For example, Frigidaire, an electric refrigerator manufacturer, produced propellers, hydraulic aircraft controls, and machine guns for combat aircraft.⁷

The combination of factors that allowed the U.S. to mobilize successfully for World War II would continue to define U.S. defense industrial capacity for most of the rest of the 20th century. A large domestic industrial capacity in general, and a large defense industrial base in particular, combined with the will of political and business leaders and a commitment to spending and contracts for defense to produce an Allied victory.

The same framework held true for much of the Cold War: The U.S. continued to be a manufacturing powerhouse through much of the 20th century, and the U.S. defense industry consistently outmatched that of the Soviet Union for technological supremacy. Leaders also recognized the importance of defense during this time because the threat of the Cold War becoming a hot war with the Soviet Union was often foremost in the American consciousness (schoolchildren practiced sheltering under their desks in the event of nuclear attack, for example). There was a clear adversary against whom the United States had to arm itself.

Leaders also spent significant amounts of federal funds on defense: Defense spending reached 10 percent of GDP and higher during the 1950s and climbed again to 8.6 percent at the height of the Vietnam War and 5.7 percent during the Reagan defense buildup of the 1980s.⁸ The combination of industrial capacity, strategic focus and political will, and federal dollars allocated to defense allowed the U.S. to compete during—and eventually win the Cold War.

With the fall of the Soviet Union in 1991, the U.S. entered a period of relative geopolitical stability in which it was the world's only remaining great power. Without a clear national security threat, the U.S. lacked the strategic focus that had defined the Cold War and the World War II era before it. Defense spending dwindled during this "unipolar" era, and the U.S. defense industrial base responded by consolidating and shrinking. During the same period, the nature of the global economy began to change. Commercial manufacturing increasingly moved overseas as firms aimed to take advantage of lower labor costs in developing countries. In 1960, foreign consumer goods accounted for 8 percent of Americans' purchases, but they accounted for 60 percent in 2010.⁹

These changes are understandable given the conditions of the time. The U.S.'s lack of strategic focus during this era is explainable because there seemed to be no clear threats to U.S. national interests as there were during the Cold War. Some reductions in defense spending made sense during this era as leaders sought to capitalize on a post–Cold War "peace dividend." The move of manufacturing overseas was the natural consequence of economic conditions at the time. Unfortunately, all three of these trends are still visible in the makeup of the defense industrial base today in ways that leave the United States less secure.

Defense Production Today

The defense industry in the United States today reflects both the legacy of World War II and the legacy also of the 1990s and 2000s.

Defense Production Capacity. The U.S. defense industry has atrophied. Prime contractors have consolidated from 51 firms down to five.¹⁰ While this consolidation does not necessarily indicate a smaller defense industry, the broader ecosystem of defense subcontractors and suppliers has also shrunk: In the past five years alone, the defense sector has lost a net 17,045 companies.¹¹ The number of people employed in defense-related work has shrunk by two-thirds, from 3 million workers in 1985 to 1.1 million in 2021.¹²

Reduced defense spending during the 1990s and early 2000s drove some of this consolidation. In a 1991 meeting now known colloquially as the "Last Supper," then-Secretary of Defense Les Aspin informed the CEOs of the major defense prime contractors that the U.S. government would be spending less on defense, that the firms could not expect to do the same amount of business that they had done during the Cold War and especially during the 1980s defense buildup, and that they should consider consolidating in order to survive.¹³ During this era, mergers and acquisitions (M&A) activity transformed the defense industry, particularly at the prime contractor level, leaving only a handful of firms performing work for which dozens of firms had previously competed.

The Broader Economy. Beyond the defense industry, the nature of the American economy is very different from what it was in the World War II era. Many of these changes have been the natural result of market forces, but they have negative implications for national security.

The U.S. is no longer primarily a manufacturing or industrial economy. In 1950, manufacturing jobs accounted for 33.7 percent of U.S. employment; today, they account for only 8.4 percent of employment.¹⁴ This shift has profound implications for defense production. The nation was able to mobilize domestic manufacturing capacity to produce matériel for World War II, but far less latent manufacturing capacity is available today.

In addition, the modern economy is globally interconnected to a degree that would be hard for businessmen of the 1940s to imagine. A car assembled in South Carolina is likely made of components manufactured in dozens of other countries, and those components likely contain raw materials sourced from dozens of other countries as well. This interconnectedness means that mobilization of U.S. production will depend on suppliers based in myriad other countries—countries that may not have an interest in helping the U.S. increase its defense production or may even have an active interest in stopping it.

The U.S. economy is not just globally interconnected; as opposed to the Cold War era when the nation was relatively able to operate independently, it is heavily reliant on its chief rival and pacing threat. China is the top supplier of imported goods to the U.S.,¹⁵ produces 78 percent of rare earths imported by the U.S.,¹⁶ and produces 10 times as much steel and more than 40 times as much aluminum as the U.S. produces.¹⁷

While manufacturing capacity for defense goods and manufacturing capacity writ large are not the same thing, manufacturing capacity and capabilities can still potentially be mobilized over time to fill defense manufacturing needs. However, defense systems are far more complex than they were 80 years ago. An F-35 is closer to a flying supercomputer than it is to a World War II fighter aircraft.

Another problem in U.S. society today is that not all firms that are able to perform defense-related work have workforces whose ideologies completely align with the national security interests of the United States; in some cases, they do not feel that working with the U.S. military serves their interests or aligns with their values. For example, in 2018, more than 4,000 Google employees signed a letter protesting the company's involvement in Project Maven, which used artificial intelligence to improve drone strike targeting. In response, Google adopted a set of ethical principles governing its use of AI technology that forbade its participation in weapons or surveillance programs.¹⁸ Other firms have demonstrated an unwillingness to have their products used for military purposes: Elon Musk's StarLink satellite system, for example, has imposed periodic limitations on the use of its services in Ukraine.¹⁹

Leaders' Commitment to Defense. Defense industrial strength in the past required political will and leadership just as much as it required industrial capacity. Today, Members of Congress and consecutive presidential Administrations have recognized that China poses the greatest threat to U.S. national security. The 2018 and 2022 National Defense Strategies both acknowledged this threat and made it the chief focus of U.S. strategy. Congress similarly has focused its rhetoric and even some of its legislative authority on the China challenge.

Rhetoric is largely ahead of defense spending, however. The defense budget as appropriated by Congress has grown since 2015, but not in a way that would indicate a fundamental shift to renewed great-power competition.

Three presidential Administrations have struggled to shift the U.S. strategic focus to the Indo-Pacific. The Department of Defense (DOD) uses what it calls a "sizing construct" to determine the size and types of forces that are needed to maintain America's defense. When the Obama Administration announced its "Pacific pivot," the DOD also shifted from the decades-old force sizing construct of being able to meet two "major regional contingencies" (MRCs) to a "one-plus" MRC construct-a shift that diminished capacity rather than increasing it. The DOD's force sizing construct drives its war planning scenarios, and these scenarios in turn inform the military's requirements process, determining the amount of manpower and equipment that each service will need.

There is reason to suspect that budget is driving national security strategy rather than strategy driving budget in the DOD. The public has little visibility into DOD war planning scenarios—which can be a good thing; such information should be protected—but the limited information available seems to indicate that stockpiles of weapons, munitions, and raw materials are inadequate. Within two months of Russia's invasion, the U.S. had sent a third of its Stinger missiles and a quarter of its Javelin missiles to Ukraine.²⁰ If those amounts of stocks are consumed that quickly in what (compared to a contest with a near-peer competitor) is a regional war, it is hard to imagine that those munitions reserves will be sufficient for potential wartime needs.

What the Threat Environment Requires

The U.S. has entered a new era of great-power competition with China. This competition—characterized by The Heritage Foundation as a "new Cold War"—exists across multiple domains, from the economy to freedom of navigation.

The domain of greatest concern in this discussion, however, is military competition. China has modernized its military in the past decades. It has exceeded the United States in certain categories like hypersonics. Through espionage and intellectual property theft, China has stolen technologies that are found in the F-22 and F-35 aircraft and incorporated them into its own fifth-generation fighter aircraft, the J-20.²¹ The People's Liberation Army Navy (PLAN) has more battle force ships than the U.S. Navy, and its battle force "is expected to grow to 420 ships by 2025 and 460 ships by 2030."²²

The China threat requires that the U.S. bolster its own defense capabilities and ensure the capabilities of its allies in the region. An early step will be to facilitate the arming of Taiwan with modern weapons to deter a Chinese invasion or to fight China if deterrence fails. At current U.S. production rates, however, Taiwan will not receive the weapons it needs in the necessary time frame.

More generally, there is a sense that the DOD's planning scenarios do not account for the realities of war with and deterrence of China. In such a situation, the DOD must honestly assess global threats, the DOD and the executive branch must use that information to develop a force structure that mitigates risk and a budget that pays for it, and the legislative branch must appropriate the necessary funding.

Acquisition as National Security

In the past, acquisition decisions have attempted to balance effectiveness, cost, and time. Today,

however, acquisition also needs to account for the current, diminished state of the defense industrial base with a goal of not only purchasing matériel in the short term, but also developing a greater capacity to produce that matériel over the long term.

Spending Money to Get Capacity. The U.S. has been buying defense systems at essentially peacetime levels for decades, and the resulting industrial base cannot now support the demands of great-power competition. To create needed manufacturing capacity, the DOD must sign longer-term contracts with industry for key platforms and munitions. These contracts will necessarily cost more and must specify requirements for industry to be able to surge production for future requirements, and DOD must periodically validate industry's ability to do so. This accomplishes both the obvious goal of procuring those items and the subtler objective of building the capital equipment, facilities, and workforce that are necessary to continue producing those items. Developing manufacturing capacity takes years: Better to begin now than to wait until war begins.

The DOD needs to begin thinking beyond simply procuring items it needs. Far more attention must be paid to developing and maintaining production capacity. The ability to manufacture key defense items is a good, separate from the good of the defense items themselves. The U.S. needs the ability to surge production of munitions, fighter aircraft, and ground vehicles in addition to possessing these items themselves in order to be safe. Contracts will have to reflect this by requiring contractors to maintain certain latent production capacity, which will likely make those contracts more expensive.

To increase defense production capacity while minimizing the burden on the U.S. taxpayer—and to better arm our allies—the U.S. should encourage more Foreign Military Sales (FMS). Currently, the FMS process is structured for peacetime and involves lengthy bureaucratic processes. These delays are severe enough that allies have recently chosen to buy their weapons systems elsewhere. For example, Poland recently chose to buy tanks from South Korea instead of the U.S.²³ Both the State Department and the DOD have announced new changes aimed at accelerating slow FMS processes with new internal deadlines for key processes; special expedited treatment in cases involving direct U.S. defense interests (arming Taiwan, for example); and a new "FMS Continuous Process Improvement Board" reporting to the Secretary of Defense.²⁴

The greatest cause of FMS delays, however, is a lack of capacity in the defense industrial base. To remedy that, more aggressive contracting strategies that require contractors to increase capacity and deliver faster will be needed.

Identifying Specific Risks. Beyond the general issue of limited defense manufacturing capacity, different specific risks exist in the supply chains for different acquisition programs. Ensuring a strong industrial base will require strategic thinking, in addition to investment, to mitigate these risks. Currently, policymakers' understanding of these issues is largely anecdotal. The American public knows about 155 mm shells, Javelins, and Stingers only because the war in Ukraine "pulled the sheets off the bed."

There is no routine mechanism for policymakers to understand these risks. Even the DOD's own annual industrial base reports (publication of which the Biden Administration has delayed for years despite annual publication being required by law) are unhelpful because they have anecdotal information but no metrics. Without better assessment of industrial base vulnerabilities, efforts to strengthen the industrial base will be immethodical and potentially wasteful of scarce resources.

One risk that currently impacts defense production is the DOD's lack of supply chain visibility. The DOD cannot address problems it does not understand. Supply chain visibility refers to the ability of the customer (the DOD in this case) and the prime contractor to "see" clearly into the lowest tiers of their supporting supply chains.

In the current acquisition system, no single actor has full visibility into supply chains for defense programs. The DOD delegates this responsibility to prime contractors, and prime contractors typically follow the government's example and include supply chain management in their contracts with their first-tier subcontractors, extending their knowledge only one layer deep. Those subcontractors follow suit in their contracts with second-tier subcontractors and so on down the chain. As a result, prime contractors usually understand their supply chains only down through the first few tiers; beyond that, they trust their subcontractors to manage their subcontractors and so on.

Greater visibility into defense supply chains would reveal current risks like dependence on

China for raw materials and even certain components. As a case study, in September 2022, the DOD halted deliveries of Lockheed Martin's F-35 after finding that a cobalt and samarium alloy used in magnets for the plane's turbomachine pumps was made in China. The DOD discovered this violation only after Lockheed Martin was notified by Honeywell (the maker of F-35 turbomachines), which was told by its lube pump supplier, which was told by its magnet supplier that the firm had used an alloy manufactured in China in violation of DOD acquisition regulations.²⁵

In this case, dependence on China carried a significant yet comparatively small cost: delayed deliveries of a vital defense system while a new, compliant supplier was found. However, similarly imperfect knowledge of defense supply chains extends across the entire defense industrial base and carries huge risk. If the U.S. went to war with China, economic ties between them would be completely severed. The Pentagon would quickly learn which defense components were made in China because contractors suddenly would not have access to them. Production of key weapons could grind to a halt at a time when those weapons are desperately needed.²⁶

Another common supply chain vulnerability is single-source suppliers for defense system components. In many cases, there is only one company making a subsystem or component for a defense system. This creates potential choke points in manufacturing capacity: For example, an aircraft manufacturer may have more capacity to increase production in its final assembly plant, but its limiting factor on production is a sub-tier supplier's limited capacity to produce landing gear assemblies.

A lack of redundancy also makes the supply chain more fragile: If a sole-source supplier is no longer able to produce a given component, it can shut down production for the entire system. A good example of this risk is the explosion that occurred at the U.S.'s only black powder mill in Minden, Louisiana. The plant was offline for two years after the explosion occurred, forcing contractors to draw from black powder stockpiles in order to produce the munitions that use black powder to ignite more powerful explosives.²⁷ Again, what makes these situations all the more dangerous is that the DOD normally does not understand its own vulnerability until a problem develops—and then it is too late to address it. The DOD needs better visibility into the defense industrial base with a greater understanding of the supply chains that link the entire ecosystem in order to mitigate risk. Fortunately, there are tools today to gather, maintain, and analyze this information (such as artificial intelligence and even blockchain technology) that did not exist in earlier eras of U.S. defense production. These data tools should be applied to a risk management framework that assesses both the probability of a defense supply chain disruption and how consequential such a disruption would be. With more granular information, the DOD could better target its limited resources to areas of the defense industrial base that require the most urgent attention.

Mitigating Risk. Vulnerabilities in the defense industrial base should be mitigated in ways that account for the unique facets of each sector, and even each acquisition program, and the particularities of their weaknesses. However, just as there are common threads linking all these defense industrial base vulnerabilities, there are common mitigations that can make up a "tool kit" for defense policymakers.

One important type of tool is multiyear and block-buy contracting. Whereas typical procurement processes require the DOD to use a contract for each year's purchases, multiyear procurement authorities allow the DOD to buy and commit funding for up to five years' worth of an item in one contract with penalties to the government if it breaks this purchase commitment. These longer-term commitments give contractors the stability they need to invest in facilities and workforce. Multiyear contracts also generate savings for the government because optimizing production over a longer-term period creates efficiencies. Multiyear and blockbuy contracts should be used more often to reap these benefits.

Another, more interventionist tool is Title III of the Defense Production Act (DPA), which grants authority to the President to "create, maintain, protect, expand, or restore domestic industrial base capabilities" using funds allocated specifically for that purpose. These authorities have been used to incentivize businesses to enter the defense space or to expand their capabilities and have served both to create domestic production capabilities for items typically procured from overseas and to strengthen the fragile domestic supply base.²⁸ For example, in 2020, the DOD announced multiple DPA Title III funding awards to domestic rare earth element producers to expand their mining and refining capacity, thereby creating a more secure supply chain for defense applications of these materials. More recently, President Biden used DPA authorities to build up domestic hypersonic weapons manufacturing capacity. Such tools have value for very urgent national defense needs, but should be used only when market forces and DOD procurement practices are unable to generate the necessary conditions for a particular defense industrial production capability.

An Acquisition Strategy for a New Era. Today, acquisition success is measured according to three variables: cost, schedule, and performance. A fourth factor—resilience—must be added to this paradigm. The terms of every defense contract should take into account the risks to production of that platform or munition. For certain items, they should also require the contractor to maintain surge production capacity; facilities should no longer be optimized to produce the exact amount required for immediate needs and should instead have built-in latent capacity. The DOD (and Congress) should spend the extra money required to maintain that surge capacity, and the new emphasis on resilience should be taught to the acquisition workforce through training at Defense Acquisition University.

Conclusion

The story of allied victory in WWII—and of U.S. military superiority in the decades that followed in addition to the great feats of arms, can also be understood in terms of U.S. industrial might: the strength of its defense industrial base, undergirded by a thriving manufacturing economy and defense-focused leadership. Because those economic and political conditions do not exist today, the defense industrial base is not well-positioned for a new era of great-power competition.

Improving defense industrial performance does not mean recreating former economic and political conditions. It means working within conditions today and leveraging new technology to strategically grow and strengthen targeted U.S. defense industrial capacity.

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Understanding the Defense Budget

Frederico Bartels

Like the familiar drawings that appear to be a duck or a rabbit to different people, when people talk about the defense budget, it often seems they might be talking about completely different things. There are many different accounts and permutations of what could properly be considered the U.S. "defense budget." From a narrow view of the direct resources under the control of the Department of Defense (DOD) to a much broader view of discretionary versus mandatory spending, many nuances need to be considered if one is to have an informed discussion or understanding of the U.S. defense budget.

This essay is meant to provide a better understanding of the resources that are dedicated to our national defense. The goal is not to give a definitive answer, but rather to give people the information they need to arrive at conclusions that are as well-informed as possible. In addition to definitional elements, where individuals are located within the U.S. national security apparatus plays a key role in how they define the defense budget.

All of these perspectives, however, should use the Constitution of the United States as their starting point.

The Constitutional Foundation

In the Preamble to the Constitution of the United States, the Founders state that the government has the responsibility to "provide for the common defence."¹ This is restated in Article 1, Section 8, as one of Congress's enumerated powers.² The Heritage Foundation's *Guide to the Constitution* calls this purpose "obvious—after all, it was by this means the United States came into being."³

The crucial political question is: How we are to define what it means to provide for the common

defense, how much "defense is enough," and how much we as a nation are willing to pay for that defense? The constitutional need to provide for the common defense is the starting point for understanding the role of the armed forces within the American political context, but it is not the final word by any means. What *is* clear is that defense unlike many of the other activities that are currently undertaken by the federal government—is a fundamental constitutional responsibility.

Providing a common defense is understood in the Constitution as a function that can be performed only by the Union and thus resides unambiguously at the federal level. Many governmental functions, such as the provision of public security by localities or the state-level provision of identity cards, can and should be conducted and administered at lower levels of government. Common defense is not such a function.

Many organizations at the federal level have a role in our national defense, and there are substantial differences in what could be considered the defense budget that reflect the perspective of the organization or person talking about the defense budget. Many countries, for example, consider expenditures associated with support to veterans as part of their defense budget, while the United States has a separate Department of Veterans Affairs that is not usually considered part of the defense budget.

What Is the Defense Budget?

When discussing the defense budget, one should always begin by defining the terms being used. Depending on who is talking about the defense budget and the message being highlighted, different numbers can be used. In many cases, the choices being offered depend on how the specific institutions

U.S. Defense Budget

In Millions of Budget Authority	2022	2023	2024	2025	2026	2027	2028
050 National Defense							
Discretionary							
051 Department of Defense-Military	776,639	848,813	842,009	859,709	877,709	896,210	915,010
053 Atomic energy defense activities	29,107	31,560	32,846	34,009	34,740	35,489	36,100
054 Defense-related activities	10,578	10,990	11,523	11,602	11,871	12,001	12,390
Total, Discretionary	816,324	891,363	886,378	905,320	924,320	943,700	963,500
Mandatory							
051 Department of Defense-Military	19,092	11,363	21,482	21,569	21,854	22,271	22,333
053 Atomic energy defense activities	2,850	2,168	2,298	2,399	2,494	2,564	2,589
054 Defense-related activities	548	564	594	514	514	514	514
Total, Mandatory	22,490	14,095	24,374	24,482	24,862	25,349	25,436
Total, National Defense	838,814	905,458	910,752	929,802	949,182	969,049	988,936
700 Veterans Benefits and Services							
Discretionary							
701 Income security for veterans	77	152	77	79	80	83	84
702 Veterans education, training,							
and rehabilitation	61	66	66	68	69	71	72
703 Hospital and medical care for veterans	102,596	123,612	125,732	117,416	120,121	122,881	125,706
704 Veterans housing	232	284	320	327	335	342	350
705 Other veterans benefits and services	9,918	11,304	12,285	12,568	12,854	13,150	13,454
Total, Discretionary	112,884	135,418	138,480	130,458	133,459	136,527	139,666
Mandatory							
701 Income security for veterans	139,638	152,394	151,675	181,557	193,802	206,865	220,408
702 Veterans education, training,					47.000		
and rehabilitation	14,962	8,995	8,543	11,579	13,896	14,301	15,422
703 Hospital and medical care for veterans	938	5,704	19,208	21,719	24,835	26,325	27,466
704 Veterans housing	1,375	211	-168	-156	-138	-120	-105
705 Other veterans benefits and services	416	1,183	3,112	2,943	2,784	2,713	2,771
Total, Mandatory	157,329	168,487	182,370	217,642	235,179	250,084	265,962
Total, Veterans Benefits and Services	270,213	303,905	320,850	348,100	368,638	386,611	405,628
Retirement							
602 Federal Employee Retirement and Disability							
Mandatory, Military Retirement	66,724	74,169	78,224	80,715	83,014	85,347	87,694
902 Interest received by on- budget trust funds							
Mandatory, Military Retirement	-84,276	-68,848	-51,711	-46,635	-58,528	-62,994	-60,938
951 Employer share, employee							
retirement (on-budget)							
Mandatory, Employing agency							
contributions, military retirement fund	-36,578	-39,521	-45,577	-46,570	-47,478	-48,326	-49,239
Total, Mandatory Military Retirement	-54,130	-34,200	-43,377 - 19,064	-12,490	-47,478 -22,992	-40,320 - 25,973	-49,239 -22,483
	·						
Total, Discretionary	929,208	1,026,781	1,024,858	1,035,778	1,057,779	1,080,227	1,103,166
Total, Mandatory	125,689	148,382	187,680	229,634	237,049	249,460	268,915
Total	1,054,897	1,175,163	1,212,538	1,265,412	1,294,828	1,329,687	1,372,081

SOURCE: Table 21-12, "Net Budget Authority by Function, Category, and Program," Office of

Management and Budget, Budget of the U.S. Government FY 2024: Analytical Perspectives, https://

www.whitehouse.gov/wp-content/uploads/2023/03/24-1_fy2024.xlsx (accessed September 9, 2023).

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Budget Authority, in Millions of Current Dollars	FY 2022	FY 2023 Enacted	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Army	182,937	190,824	185,334	187,077	189,358	191,835	195,005
Navy	223,012	244,697	255,998	258,371	263,035	263,611	268,895
Air Force	223,126	248,879	259,070	263,099	267,493	273,743	280,148
Defense-Wide	166,654	178,753	163,035	166,286	173,306	182,895	186,862
War Outyear Placeholder				6,000	6,000	6,000	6,000
Total	795,730	863,153	863,437	880,833	899,193	918,085	936,910

Department of Defense Funding, by Military Department

SOURCE: U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2024*, May 2023, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2024/FY24_Green_Book.pdf (accessed September 9, 2023).

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define the terms, and the implications are not immediately obvious.

Even within the executive branch, the Office of Management and Budget (OMB) and the Department of Defense have different concepts of the "defense budget." Congress has still another definition because it is organized by committees and focuses its attention on the different appropriations and authorization bills.

There is an initial division between discretionary and mandatory spending in the defense budget just as there is in the overall federal budget. Discretionary spending is the element of the budget that is annually debated and appropriated by Congress. Mandatory spending, on the other hand, is not debated annually and is defined largely by formulas that govern the various benefit programs operated by the federal government such as Social Security and Medicare.⁴ The defense budget includes both mandatory and discretionary funding, but most defense dollars are classified as discretionary.

Table 2 contains different possible combinations of what could be considered colloquially as the "defense budget." This table is based on OMB's projections and categories, which can provide a fuller picture because it incorporates both mandatory and discretionary spending and contains data on every government agency. Realistically, the defense budget for fiscal year (FY) 2024, for instance, could be said to be as low as \$842 billion if you focus just on discretionary spending controlled by the Department of Defense or as high as \$1.2 trillion if you include Veterans Affairs and other possible mandatory spending.

Of the many possible ways to consider the defense budget, it is important to highlight a few of the ones that are most commonly used in the executive branch. The first one, known as 050, encompasses the DOD, Atomic Energy Defense Activities within the Department of Energy,⁵ and other defense-related activities. This category was utilized in the Budget Control Act of 2011 to cap discretionary spending. It was also used in the legislation that raised the debt ceiling in 2024. Another important category, known as 051, is the DOD's portion of the national defense budget within OMB tables. It constitutes the major portion of 050 but is usually discussed and debated separately from the other functions within the category and is often referenced as the "defense budget."

Within the DOD itself, different sets of numbers are used to define the defense budget. As one would expect, the first is the 051 category because these are the funds under the DOD's control and include both mandatory and discretionary spending. Category 051 numbers can be described as the defense budget, and in many reports and news stories, these are the numbers that are most often used. Table 3

In Millions of Current Dollars	FY 2022	FY 2023 Enacted	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Military Personnel	178,094	183,057	199,570	215,793	221,377	226,433	233,143
Operation and Maintenance	320,208	352,786	330,751	318,410	325,895	338,835	348,154
Procurement	153,644	167,084	170,348	175,305	185,976	186,280	191,335
RDT&E	119,347	140,650	145,791	145,480	141,332	144,026	142,475
Military Construction	13,376	16,714	14,734	16,344	15,532	13,370	12,956
Family Housing	1,549	2,354	1,941	1,890	1,617	1,806	1,862
Revolving and Management Funds	10,828	1,718	1,683	1,550	1,524	1,536	1,567
Trust, Receipts, and Other	-1,316	-1,210	-1,380	62	-59	-202	-582
War Outyear Placeholder				6,000	6,000	6,000	6,000
Total	795,730	863,153	863,437	880,833	899,193	918,085	936,910

Defense Funding, by Public Law Title

SOURCE: U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2024*, May 2023, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2024/FY24_Green_Book.pdf (accessed September 9, 2023).

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shows the budget for the Department of Defense broken down by military department, which is different from the OMB data in Table 2.

One additional set of numbers that is commonly discussed and characterized as the defense budget is the funding appropriated by Congress. Because the Constitution specifies that Congress must appropriate every dollar that is withdrawn from the Treasury, appropriations bills are among the most crucial pieces of legislation that are passed in any fiscal year.

The Department of Defense receives resources mainly through two distinct appropriations bills: Defense Appropriations and Military Construction, Veterans Affairs, and Related Agencies Appropriations. This division reflects the different public law titles and the characteristics of appropriated dollars that compose the defense budget.

The defense appropriations bill includes military personnel; operations and maintenance, procurement; research, development, testing, and evaluation (RDT&E); and revolving funds as shown in Table 4. Military construction appropriations include mainly military construction funds and family housing. Table 4 depicts funding (both appropriated and projected) for various fiscal years broken down by public law title.

Beyond the appropriations bill, the same resources that the Department of Defense receives are also authorized by the National Defense Authorization Act (NDAA), a bill that has been passed and has grown in length for more than 60 consecutive years. The DOD is one of the very few federal departments that reliably has its funding both authorized and appropriated.⁶ The NDAA is sometimes referred to as a defense policy bill because it does not actually appropriate dollars to the DOD; it sets policy and establishes limitations on how the appropriated dollars will be used through the fiscal year. The NDAA includes important measures that have both financial and practical implications for how the nation provides for the common defense.

Altogether, there are several ways to talk about and represent the defense budget. The first thing

Where Does All the Money Go?

SOURCE: Office of Management and Budget, Historical Tables, "Table 3.2-Outlays by Function and Subfunction: 1962-2028," https://www.whitehouse.gov/omb/ budget/historical-tables/ (accessed September 9, 2023).



that an informed reader should do is understand who is communicating so he or she can understand what that person means by the defense budget.

It is also important to know that defense is not the biggest item in the federal budget; entitlements have that distinction.⁷ Nor is defense spending the primary factor driving the nation's financial problems, especially the explosive growth in public debt and the annual federal budget deficit. In addition, current plans have the relative burden of defense decreasing over time as the economy grows. Understanding the broader context of the federal budget is therefore very important when considering the defense budget.

The Burden of Defense on the Federal Budget

As in all things related to the budget, it is important to understand the burden of any financial expense relative to the available resources and the importance associated with the tasks that are being resourced. When commentators focus narrowly on discretionary spending, defense is usually noted as commanding a huge share of the budget. However, when one looks at the whole of the federal budget, the picture is guite different. This difference is portraved in Chart 2.

In the context of the whole federal budget, in FY 2022, national defense as defined by the OMB consumed 12 percent of the federal budget. This is by no means an insignificant amount, but it is dwarfed by other federal expenditures, including health care insurance and provision, income security, and many

other governmental functions for which Washington is currently responsible.

Medicare, Medicaid, and other health care spending accounts together comprise the biggest portion of the budget: 27 percent. Social Security constitutes the second biggest element at 19 percent. Income Security-a collection of programs such as Civil Service Retirement and Disability, Earned Income and Child Tax Credits, the Supplemental Nutrition Assistance Program, and Housing Assistance–follows closely at 18 percent. The 12 percent representing the broader national defense enterprise is followed closely by net interest on our debt, which currently stands at 8 percent, although the burden of servicing our national debt through interest payments is likely to increase as interest rates in the United States rise.8 Every other function of the federal government, from the administration of justice to the collection of taxes, accounts for the remaining 16 percent. It is important to keep in mind how the government truly allocates taxpayers' dollars when considering the defense budget.

It is also important to understand the size of the federal government's obligation when compared to the nation's gross domestic product (GDP). Chart 3 portrays how much of the nation's GDP is consumed by three different categories of federal spending that include both mandatory and discretionary spending: defense, non-defense, and interest on our national debt. This picture conveys two important messages:

CHART 3

Non-Defense Spending Consuming More GDP

SPENDING AS A PERCENTAGE OF GDP



SOURCE: Table 8.4, "Outlays by Budget Enforcement Act Category as Percentages of GDP: 1962–2028," Office of Management and Budget, *Historical Tables*, https://www.whitehouse.gov/omb/budget/ historical-tables/ (accessed September 9, 2023).

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- The relative burden of our national defense has declined steadily over the past 60 years and
- The portion of government resources allocated to the provision of non-defense services and goods has increased substantially over time.

Chart 3 also provides a valuable baseline for the cost of interest on our national debt over the past 60 years—a consideration that has become increasingly relevant as interest rates have risen in the past few years.⁹

All in all, the relative burden of defense has gone down over the past 60 years. Put another way, defense has become more affordable for the country.

Trajectory of the Defense Budget

The Department of Defense organizes and reports on its budget in multiple categories and with multiple ways of displaying the information in a yearly document, the *National Defense Budget Estimates*, commonly known as the "Green Book" because of its seafoam green cover pages.¹⁰ Many of its tables contain data back to FY 1948. Many also contain estimates for the coming four fiscal years.

The Green Book also provides three different categories of resources: budget authority (BA); total obligational authority (TOA); and outlays. The simplest differentiation of these is that budget authority includes the new yearly resources that the department can obligate; total obligational authority counts resources appropriated in previous years that can be obligated in a different fiscal year; and outlays are actual disbursements made by the Treasury on behalf of the DOD. Of these, budget authority is the term used most frequently in public debate because it reflects the resources appropriated in the current fiscal year.

There is another differentiator that is relevant to understanding the data provided by the DOD: current versus constant dollars. Current dollars represent the face value of an item in the present, as if you are spending money today to buy that item. When people reminisce about a bottle of Coke in the 1950s costing less than a dollar, they are talking about current dollars. Constant dollars, on the other hand, represent a price relative to a past price in a given base year, usually the current year-for example, how much a bullet cost in 1978 adjusted to be in 2024 dollars-thus accounting for the effect of inflation over time. Currently, there is a broader appreciation of this difference because of the recent spikes in the inflation experienced by the public.

The Department of Defense was created in 1947, and Chart 4 contains both mandatory and discretionary budget authority in FY 2024 constant dollars for the DOD since FY 1948. Because of its normalization with constant dollars, the chart provides a more informative picture of the resources that have been allocated to the DOD and, more important, of the relative resources that it had available over time to purchase goods and services. The constant dollar number is an approximation that is derived from an economic understanding of rising costs and inflation. It is not a perfect representation

CHART 4

Total Defense Spending



SOURCE: U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2024*, May 2023, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2024/FY24_Green_Book.pdf (accessed September 9, 2023).

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of the historical value of the dollar, but it provides a useful perspective.

Chart 4 reveals four distinct peaks and troughs in the defense budget during the past 70 years: the Korean War, the Vietnam War, the Reagan military buildup, and the global war on terrorism. These increases reflect different periods in our recent history when there was a renewed attention and commitment to the military driven by both internal and external events. In these periods, the nation allocated more resources to its military. All are followed by reductions in defense spending, reflecting the nation's sense that a danger had passed and it could invest less in its military.

Each of these waves reflects a combination of geopolitical pressures and internal politics. It is worth noting that the Korean War generates a more abrupt peak and trough, while the other peaks are smoother and take longer both to materialize and to dissipate. In the end, the defense budget is the product of political debate and considerations and thus reflects the political environment and how the leadership interprets and reacts to it. During the Korean War, there was a quick spike that peaked in FY 1952 with \$844 billion allocated to the Department of Defense. It is followed by the end of the war and a sharp drop in FY 1955 to \$479 billion. It is worth noting that the data start in FY 1948 during the post–World War II era when military expenditures were severely reduced. Between FY 1948 and FY 1950, the DOD's budget fluctuated at around \$238 billion a year—a low point even when compared to the aftermath of the Korean War.

The next peak comes in FY 1968 during the Vietnam War when the Department of Defense had a \$719 billion budget. After that peak, there was a slow and consistent decline until FY 1975 when the department's budget reached a trough of \$489 billion. This decline lasted for about five fiscal years. Then, in FY 1980, the department's budget began an upswing that peaked in FY 1985 at \$775 billion, largely under the Reagan Administration's military buildup. Between FY 1986 and FY 1998, the defense budget once again consistently declined, reaching a low of \$502 billion in FY 1998. After FY 1998, the defense budget started to climb again, a climb that was accelerated by the September 11, 2001, attacks and the nation's subsequent response to them with wars in Afghanistan and Iraq. It peaked in FY 2008 with \$971 billion allocated to the DOD. Interestingly, there was a quick drop in FY 2009 to \$944 billion, then an increase in FY 2010 to \$966 billion before another sustained decline that lasted until FY 2015 when the defense budget reached \$733 billion.

Since FY 2016, there has been some increase in the defense budget, but it is still far from either a peak or a trough. In the past eight years, there have been slight increases and slight decreases with an annual average of \$828 billion. There is not enough direction or time to serve as the basis for a concrete determination about the trend of the defense budget in recent years.

Fundamentally, the defense budget's increase in constant dollars reflects our nation's changed expectations of what the Department of Defense should do, how it should do it, and the availability of technology. The DOD's mission has expanded significantly in the decades since the department was created. Today, the department not only prepares and fight wars, but also runs recruiting stations spread out across the country, runs schools and supermarket chains and medical facilities, and purchases billions of dollars of services and goods every year. Even small military bases provide multiple services from small sandwich shops to facilities that maintain extra-large airplanes.

Today's DOD is expected to be able to mobilize within a moment's notice and deploy almost anywhere in the world. Maintaining this level of preparedness and planning takes a substantial number of resources, both in manpower and in material. The United States' armed forces have prepositioned stocks in strategic locations around the world, which is what allowed American forces in Korea to transfer equipment to Ukraine.¹¹

The DOD also has unique requirements both in terms of security and in terms of material conditions that are fundamentally different from those of the commercial sector. Any DOD information technology system will have to handle access by at least three different types of users—military, civilian, and contractors—with different levels of access to information, even if they are only accessing unclassified information. The infrastructure required by our armed forces is incredibly detailed and prescriptive because they deal with matters of life or death. It goes hand in hand with our society's expectation that our armed forces will value the lives of our servicemembers and the individuals who interact with them.

This is what Americans have come to expect from their armed forces, and it does carry a price tag.

The Defense Budget and the Military Departments

The Department of Defense is composed of three military departments-Army, Navy, and Air Force-and multiple agencies and field activities that are grouped under a budgetary category called defense-wide. Each of the five military services resides within one specific military department: The Department of the Army oversees the U.S. Army; the Department of the Navy, the U.S. Navy and U.S. Marine Corps; and the Department of the Air Force, the U.S. Air Force and U.S. Space Force. The agencies and activities provide support functions to all of the military departments and services. Examples include the Defense Logistics Agency, the Defense Financial and Accounting Service, and a majority of the medical care expenses and many of the intelligence functions within DOD.12

These organizations collectively are known as the "fourth estate," and most of their efforts represent efforts to consolidate and standardize some support activities that are common to all military departments. Each of these organizations within the DOD receives a portion of the defense budget.

There are many public discussions about the share of the budget that each of the military departments receives and whether such distribution should be equitable. However, the portion of the budget that each receives is not equal to the shares that others receive and has fluctuated greatly over time.13 Depending on the technological developments of the time and the external threats to which the armed forces were responding, the share received by each of the services has ebbed and flowed to account for the different challenges. The Army, for example, received a higher proportion of defense dollars in the years following the September 11, 2001, terrorist attacks because of the land wars in Iraq and Afghanistan, while the Air Force received a substantially larger share when it was establishing itself and there was an emphasis on

air power and nuclear weapons under President Dwight Eisenhower.

Another aspect of the budget that deserves attention is the growth of defense-wide accounts that are associated with defense agencies outside of the military departments. They started as a few individual programs that were later centralized and as specific business functions that were made uniform and have since then expanded, progressively consuming a larger portion of the budget. The growth of these accounts since FY 1948 is depicted in Chart 5. These accounts have grown from a low of 0.7 percent of the defense budget in FY 1952 to a peak of close to 21 percent in FY 2022.

This is not to say that resources should not be allocated outside of the military services. The point is that there is a large portion of the defense budget, which has been consistently rising in recent years, that is controlled by different agencies and activities rather than by any of the military departments. During his tenure as Secretary of Defense, Dr. Mark Esper tried to consolidate the budget, shifting budget authorities and oversight over the defense agencies and field activities to the Chief Management Officer,¹⁴ but the office was not given enough time to mature and properly control the resources of the fourth estate.¹⁵

The common argument that each of the military departments receives a third of the defense budget and that it is a zero-sum game among the services is inaccurate. It does not consider the changes that take place over time and the significant role of defense agencies and field activities within the budget.

Changing Nature of the Defense Budget

Since the end of World War II, the decrease in the number of members of the Armed Forces and the increased presence and complexity of technology have forced a substantial change in how the DOD allocates its resources. Chart 6 shows how the number of total active military personnel has decreased substantially from a peak of 3.6 million in FY 1952 to a low of 1.37 million in FY 2015. The last time the United States had 2 million individuals in its armed forces was in FY 1991. The U.S. has been reducing the active members of its armed forces since FY 1987.

The data also reveal how the DOD has invested a higher proportion of its resources in the category of non-pay items, which in this instance amounts to

CHART 5

Growth of the Fourth Estate

SHARE OF TOTAL DEFENSE SPENDING, BY DEPARTMENT



NOTE: Due to transfers between defense accounts during the Persian Gulf War, the defense-wide figure for 1991 is shown as the interpolated value between 1990 and 1992.

SOURCE: U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2024*, May 2023, https://comptroller.defense.gov/Portals/45/Documents/ defbudget/FY2024/FY24_Green_Book.pdf (accessed September 9, 2023).

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operations and investment—in other words, what it costs to equip and operate the force. In hypersimplified terms, pay is the cost of establishing the force and non-pay is the cost of using that force.

This is consistent with the technological evolution that the United States has experienced as a society over the past 70 years as the tools of war have become increasingly capable, complex, and costly. Every tool and machine that we have at our disposal today is undoubtedly more capable than those that our parents and grandparents had at their disposal. That is also true in the military where the information technology revolution has influenced everything from how people communicate to how weapon systems operate. These systems and support services are more complex, more capable, and more expensive to maintain and operate. Additionally, servicemembers have higher expectations with CHART 6

Changing Drivers of Defense Budget



SOURCE: Office of Management and Budget, *Historical Tables*, "Table 8.4—Outlays by Budget Enforcement Act Category as Percentages of GDP: 1962–2028," https://www.whitehouse.gov/omb/ budget/historical-tables/ (accessed September 9, 2023).



CHART 7

Cost per Active Military Personnel



SOURCE: U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2024*, May 2023, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2024/FY24_Green_Book.pdf (accessed September 9, 2023).

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SOURCE: Brendan W. McGarry, "Defense Primer: Planning, Programming, Budgeting and Execution (PPBE) Process," Congressional Research Service In Focus No. IF10429, updated December 15, 2022, https://fas.org/sgp/crs/natsec/IF10429.pdf (accessed September 9, 2023).

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respect to what their organization provides them: An officer in 1970, for example, would have no expectation of having an individualized computer issued by the Army.

It should also be noted, however, that the peak level of resources available for operations and investments was between FY 2007 and FY 2011 when the country was heavily engaged both in two wars in the Middle East and in developing the new technology that was necessary to prosecute those conflicts.

When it comes to pay, the decrease in the size of the force has not been matched by a proportional decrease in the amount dedicated to pay. In other words, as a practical matter, the level of resources allocated per servicemember has increased over time. This reflects the amount that is spent on salaries and benefits as well as other services provided to servicemembers that are not funded with resources labeled as pay.

Chart 7 reflects the increased compensation that has been required to account for the compensation the military must offer to remain competitive with the private sector. As Americans generally and servicemembers in particular have become more educated and productive, especially with the consistent introduction of new technologies, they have commanded higher wages in the market, and this is reflected in the relative increase of pay within the DOD.

The Defense Budget as Lagging Indicator

The defense budget is built through a unique process. The Department of Defense utilizes a

system called Planning, Programming, Budgeting and Execution (PPBE) to build and execute its budget. This system was developed in the 1960s and is showing some cracks.¹⁶ The PPBE process defines how the DOD builds its budget and dictates the timelines for resourcing decisions. As illustrated by Figure 1, development of the services' budgets starts at least two years before the fiscal year that they are intended to fund. This guarantees that the budget will present a projection of the future that is tied to past projections and assumptions. Thus, incorporation of a relevant innovation that was developed during the period between composition of the budget and the start of the fiscal year would be a notably challenging exercise.

Modifying resources that were programmed years in advance would be equally challenging because they represent real costs that would be incurred by a program or organization. Whether for good or ill, this makes the defense budget quite inflexible, and large movements of funds and changes in programming take several fiscal years to become fully apparent. It is common for new Administrations to say that it will take a few budget cycles to implement the changes desired at the Pentagon.¹⁷ Thus, the defense budget will always be a lagging indicator of the ongoing challenges being faced by our military. The PPBE system makes budgetary decisions very "sticky" and is inherently biased toward maintaining the status quo.

Further, because the budget is about allocating taxpayers' dollars, the decisions that are made both

inside and outside the department are ultimately political in nature. The final resolution of the defense budget rests with Congress, an inherently political body. However, politics also permeates the other levels of decisions involved in making the defense budget. The leaders who manage internal DOD programs will often base their actions on their expectation of what the services will do with their budget submissions, and the services will often base their actions on what they think the Office of the Secretary of Defense will do. In turn, the Secretary of Defense will anticipate and respond to the actions of the Office of Management and Budget, the President, and Congress. These interactions occur several times a day during all phases of the budget process.

There should always be continuous process improvement in the allocation of precious defense dollars. One such effort currently underway is the congressionally established Commission on Planning, Programming, Budgeting, and Execution Reform (PPBE Commission). Established by the FY 2022 NDAA and composed of 14 commissioners appointed by congressional leaders and the Secretary of Defense,¹⁸ it has conducted a variety of sessions to engage with the different individuals and organizations that participate in the PPBE process.¹⁹ The commission is scheduled to submit its final report in March 2024.

Conclusion

Regardless of the details and the process, determining the defense budget will necessarily be a political exercise that will have to take account of multiple divergent priorities and preferences. The political nature of such a determination makes it even more important that everyone involved has a clear understanding of the terms being discussed. After all, a 1.2 percent increase in the 050 line is very different from a 1.2 percent increase in the discretionary dollars controlled by the Department of Defense.

Endnotes

- 1. Constitution of the United States, Preamble, https://constitution.congress.gov/constitution/ (accessed August 10, 2023).
- 2. "Congress shall have Power to...provide for the common Defence and general Welfare of the United States." Constitution of the United States, Article 1, Section 8.
- 3. Forrest McDonald, "Preamble," in The Heritage Guide to the Constitution, https://www.heritage.org/constitution/#!/articles/0/essays/1/preamble.
- 4. For a useful discussion of this question, see Brian Riedl, "What's Wrong with the Federal Budget Process?" Heritage Foundation *Backgrounder* No. 1816, January 25, 2005, https://www.heritage.org/budget-and-spending/report/whats-wrong-the-federal-budget-process.
- 5. The department lists seven categories of such activity: "(1) Naval reactors development; (2) Weapons activities, including defense inertial confinement fusion; (3) Verification and control technology; (4) Defense nuclear materials production; (5) Defense nuclear waste and materials by-products management; (6) Defense nuclear materials security and safeguards and security investigations; and (7) Defense research and development." See U.S. Department of Energy, Office of Management, Directives Program, "Atomic Energy Defense Activity," https://www. directives.doe.gov/terms_definitions/atomic-energy-defense-activity#:-:text=Any%20activity%20of%20the%20Secretary%20performed%20 in%20whole,%283%29%C2%A0Verification%20and%20control%20technology%3B%20%284%29%C2%A0Defense%20nuclear%20materials%20 production%3B (accessed August 11, 2023).
- 6. Once dollars are appropriated, federal agencies can start to spend them. Authorizations are not legally necessary, but they play an important role in budgeting because they authorize the existence of programs and organizations. For a discussion of unauthorized appropriations, see Justin Bogie, "Time to End 'Zombie' Appropriations," Heritage Foundation *Issue Brief* No. 4583, June 24, 2016, https://www.heritage.org/budget-and-spending/report/time-end-zombie-appropriations.
- 7. See, for example, The Heritage Foundation, Budget Blueprint for Fiscal Year 2023, 2022, https://www.heritage.org/budget/.
- Natalie Sherman, "US Interest Rates Raised to Highest Level in 16 Years," BBC News, May 4, 2023, https://www.bbc.com/news/ business-65474456 (accessed August 10, 2023).
- 9. The dramatic spike in 2020 and 2021 followed by a decrease in 2022 is due to the federal government's increased expenditures during the coronavirus pandemic.
- For the FY 2024 edition, see U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller), National Defense Budget Estimates for FY 2024, May 2023, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2024/FY24_Green_Book.pdf (accessed August 10, 2023).
- 11. Reuters, "Pentagon Asks U.S. Forces Korea to Provide Equipment for Ukraine," January 19, 2023, https://www.reuters.com/world/pentagon-asksus-forces-south-korea-provide-equipment-ukraine-2023-01-19/ (accessed August 10, 2023).
- 12. See Bradley Penniston, "Explainer: What Is the Pentagon's Fourth Estate?" *Defense One*, updated May 12, 2021, https://www.defenseone.com/ threats/2020/02/what-pentagons-fourth-estate/162939/ (accessed August 11, 2023).
- 13. Frederico Bartels, "Carving Up the Defense Budget," *Daily Caller*, May 7, 2021, https://dailycaller.com/2021/05/07/bartels-carving-up-defense-budget/ (accessed August 10, 2023).
- 14. Jared Serbu, DoD CMO Gains New Cachet as 'Secretary of the Fourth Estate,' Federal News Network, July 9, 2020, https://federalnewsnetwork. com/on-dod/2020/07/dod-cmo-gains-new-cachet-as-secretary-of-the-fourth-estate/ (accessed August 10, 2023).
- 15. Frederico Bartels, "Congress Should Not Terminate the Pentagon's Chief Management Officer...Yet," Heritage Foundation *Issue Brief* No. 5092, July 17, 2020, https://www.heritage.org/defense/report/congress-should-not-terminate-the-pentagons-chief-management-officeryet.
- 16. Frederico Bartels, "Improving Defense Resourcing: Recommendations for the Commission on Planning, Programming, Budgeting, and Execution Reform," Heritage Foundation *Issue Brief* No. 5257, March 24, 2022, https://www.heritage.org/defense/report/improving-defense-resourcing-recommendations-the-commission-planning-programming.
- A good example can be seen in Secretary of Defense Mark Esper's description of the first budget released during his tenure. See Aaron Mehta, "Mark Esper on the 'Big Pivot Point' that Will Define the 2022 Budget," *Defense News*, February 10, 2020, https://www.defensenews.com/smr/ federal-budget/2020/02/10/mark-esper-on-the-big-pivot-point-that-will-define-the-2022-budget/ (accessed August 10, 2023).
- 18. S. 1605, National Defense Authorization Act for Fiscal Year 2022, Public Law No. 117-81, December 27, 2021, Title X, Section 1004, https://www.congress.gov/117/plaws/publ/91.pdf (accessed August 11, 2023).
- See Appendix 1, "Commission on PPBE Reform Community Engagement," updated as of February 21, 2023, in Commission on Planning, Programming, Budgeting, and Execution Reform, *Status Update*, March 2023, https://ppbereform.senate.gov/wp-content/uploads/2023/03/ PPBE-REFORM-COMMISSION-STATUS-UPDATE-MAR-2023-Public.pdf (accessed August 10, 2023).