Backgrounder

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# Thinking About a Day Without Sea Power: Implications for U.S. Defense Policy

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**Abstract:** *America is a maritime power, and a strong U.S. Navy is both in America's long-term interest and essential to the nation's prosperity. Yet U.S. sea power is in decline. If not reversed, this decline could pass the tipping point, leaving the country economically and strategically unable to reverse course, which would have profound economic and geopolitical consequences. Members of Congress and the Navy need to work together to develop long-range technology road maps, foster innovation, and properly fund and manage shipbuilding to ensure that the future Navy has the size and capabilities needed to protect and advance U.S. interests around the world.*

Not since the end of World War II has America more urgently needed honest and clear thinking about its enduring national interests and a bipartisan commitment to build up the civilian and military capabilities necessary to protect them.

Yet Washington is increasingly looking inward. Policymakers spend enormous energy arguing about tactics without thinking about strategy. They react to today's events rather than planning for the future. Without a common purpose and driven by the desire to save money, they take steps that will reduce military spending in the short term but vastly increase the danger and cost to America in the long term.

The margins of U.S. military superiority are narrowing for every military service and in every domain. After the Cold War, military overmatch had seemingly become an American birthright and helped to uphold

## Talking Points

- Modern American sea power is the most flexible, adaptable, useful, and powerful naval force the world has ever known.
- Congress and the Navy need to rebuild their relationship to help the nation build and afford the fleet it needs.
- The oceans are critical to international trade, with $40 billion in oil passing through strategic chokepoints daily and $3.2 trillion in yearly commerce passing through undersea cables.
- More than 95 percent of U.S. international trade is transported by water, with $5.5 billion in goods moving in and out of American ports on a daily basis. The U.S. Navy is essential to guaranteeing the security of this shipping.
- A significant reduction in U.S. naval capacity would harm the American economy financially and reduce employment.
- Failure to invest in the fleet and maintain steady growth in the number of ships in the Navy's inventory will only embolden U.S. adversaries.

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the implicit contract that most Americans have had with the all-volunteer military: that U.S. forces would never be put in a "fair fight." This is simply no longer the case, as indicated by America's recent experience in Iraq and Afghanistan and potential challenges from Iran and China.

Before some of America's core defense capabilities disappear without discussion or debate, Congress and the services would be wise to step back and examine the costs and benefits of these long-held capabilities, many of which are fundamental to U.S. military primacy. Understanding a world without these U.S. advantages will highlight their essential role both in creating and maintaining the economic and geopolitical position that America enjoys today and in fostering U.S. prosperity in the future. Congress should use this thought exercise to inform its oversight of the services and to restore the legislative branch's legitimate role in policymaking.

## Providing Security That Protects and Bolsters the U.S. Economy

Modern American sea power—represented for the purposes of this paper by the U.S. Navy and its expeditionary land force, the U.S. Marine Corps—is the most flexible, adaptable, useful, and powerful naval force the world has ever known. The ascendance of American sea power since the fall of the Soviet Union has been so benign and complete that many nations have forgone traditional investments in their own naval forces,[1] confident in the peace and stability provided by the United States or convinced of the futility of trying to challenge so powerful a force head-on:

> [T]he strong tendency toward counterhegemonic balancing in the European system during the last five centuries has not been replicated in the global maritime system. High concentrations of naval power (and in the economic correlates of naval power) tend to generate alliances with the leading power rather than against it. The decision of many of the strongest powers in the contemporary system to ally with the United States rather than against it in the Cold War and post–Cold War periods is fully consistent with behavior in the global system for the last five centuries.[2]

***Policymakers in the United States, friendly and allied governments, executive officers of international conglomerates, and would-be competitors are all affected by the daily operations of the world's most pervasive and successful naval power.***

The overwhelming majority of world commerce moves virtually unmolested across the great expanse of the maritime commons. This is as near a "given" on the international scene as can be conjured. So engrained is this sense of security in the free flow of goods across the world's oceans that the activities of a relatively insignificant group of brigands off the East African coast have caught the world's attention, forcing many to consider for the first time the impact of sea power on their lives.

American sea power is taken for granted. Policymakers in the United States, friendly and allied governments, executive officers of international conglomerates, and would-be competitors are all affected by the daily operations of the world's most pervasive and successful naval power, but few ever consider what the world would be like without it. Exploring this question is the central aim of this paper.

1. Barrett Tillman, "Fear and Loathing in the Post-Naval Era," U.S. Naval Institute *Proceedings*, Vol. 135, No. 6 (June 2009), p. 16, at *http://www.usni.org/magazines/proceedings/2009-06/fear-and-loathing-post-naval-era* (May 4, 2011); Karen Rasler and William R. Thompson, "Technological Innovation, Capability Positional Shifts, and Systemic War," *The Journal of Conflict Resolution*, Vol. 35, No. 3 (September 1991), p. 412; Jack S. Levy and William R. Thompson, "Balancing on Land and at Sea," *International Security*, Vol. 35, No. 1 (Summer 2010), pp. 7–43; Daniel Whiteneck, Michael Price, Neil Jenkins, and Peter Swartz, "The Navy at a Tipping Point: Maritime Dominance at Stake?" Center for Naval Analyses, March 2010, at *http://www.cna.org/sites/default/files/research/The%20Navy%20at%20a%20Tipping%20Point%20D0022262.A3.pdf* (April 14, 2011).
2. Levy and Thompson, "Balancing on Land and at Sea."

The U.S. Air Force recently considered the operational implications of a "Day Without Space." The exercise vividly demonstrated the U.S. military's dependence on the communications and surveillance infrastructure provided by the nation's satellites. Out of operational necessity, forces turned to backup networks, some of which current operators had long since forgotten how to operate nimbly. This eye-opening exercise has caused military planners to think more profoundly about air operations in a space-denied environment. However, as difficult as such operations may have been, backups were available. These backups may have become technologically outmoded and may be less secure from enemy intrusion, and their operators may need to call upon skills long since atrophied, but in the end, the backups existed.

## Implications of the Loss of Preponderant Sea Power

How the United States might replace its preponderant sea power—if that day ever comes—seems less straightforward. Indeed, the question seems almost ludicrous. The United States is a maritime nation, bordered by two oceans and for much of its history protected by them. Over the past 60 years, the oceans have been highways for worldwide trade that has helped to lift more than a billion people out of poverty,[3] and those sea lanes have been patrolled by the U.S. Navy, the world's preeminent naval power.

The U.S. Navy's global presence has added immeasurably to U.S. economic vitality and to the economies of America's friends and allies, not to mention those of its enemies. World wars, which destroyed Europe and much of East Asia, have become almost incomprehensible thanks to the "nuclear taboo" and preponderant American sea power. If these conditions are removed, all bets are off.

For more than five centuries, the global system of trade and economic development has grown and prospered in the presence of some dominant naval power. Portugal, Spain, the Netherlands, the United Kingdom, and now the U.S. have each taken a turn as the major provider of naval power to maintain the global system. Each benefited handsomely from the investment:

> [These navies], in times of peace, secured the global commons and ensured freedom of movement of goods and people across the globe. They supported global trading systems from the age of mercantilism to the industrial revolution and into the modern era of capitalism. They were a gold standard for international exchange. These forces supported national governments that had specific global agendas for liberal trade, the rule of law at sea, and the protection of maritime commerce from illicit activities such as piracy and smuggling.[4]

A preponderant naval power occupies a unique position in the global order, a special seat at the table, which when unoccupied creates conditions for instability. Both world wars, several European-wide conflicts, and innumerable regional fights have been fueled by naval arms races, inflamed by the combination of passionate rising powers and feckless declining powers.

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This thought experiment cannot go so far as to conjure "a day without the U.S. Navy," because it strains credulity to believe the nation would ever do without one. Yet for much of its history, the country had little more than a coastal defense force. In other periods, America has maintained small, far-flung cruising squadrons that in no way compare to the combat power arrayed continuously in the Middle East and the Western Pacific for the past two decades. The relevant question is: "What would a

3. Paul Collier, *The Bottom Billion: Why the Poorest Countries Are Failing and What Can Be Done About It* (New York: Oxford University Press, 2007).
4. Whiteneck *et al.*, "The Navy at a Tipping Point," p. 10.

day without preponderant American sea power be like?"

Building the current level of American sea power has taken enormous resources and many decades,[5] and the size of the fleet is not likely to be dramatically reduced in the near term. More likely, incremental cuts based on faulty premises and a lack of strategic direction will, over time, diminish American sea power as the country's vision of itself becomes more modest and its sense of destiny and centrality is reduced. While ill-considered procurement reductions will slowly reduce the number of ships and aircraft in the Navy, financial decisions could also erode the Navy's ability to deploy credible and relevant forces persistently, regardless of how many ships the Navy may have.

***With ship design times of 20 years or longer and service lives of up to 50 years, the fleet could degrade to a point at which the country will be economically and strategically unable to reverse course.***

Today's Navy is experiencing extreme levels of stress.[6] While the fleet has shrunk by about 15 percent since 1998,[7] the number of ships deployed overseas has remained constant at about 100. Each ship goes to sea longer and more often, resulting in problems such as the well-publicized shortfalls in surface ship condition.[8] With no surge capacity left in the fleet, each new casualty ripples through the schedules of dozens of ships. With the end of supplemental funding, Navy maintenance funding will be cut by almost 20 percent this year. In this context, a relatively small additional reduction in maintenance funding could render a Navy with 250–280 ships capable of keeping only 50 to 60 ships at sea.

Even if the Navy can sustain today's number of ships or even grow slightly over the next decade as predicted by current Navy shipbuilding plans, the fleet will increasingly be composed of smaller and less capable littoral combat ships and logistics ships, such as Joint High Speed Vessels. This trend toward a fleet for engagement and maritime security could be enabled by the country's increasingly modest vision of itself and the erosion of its sense of destiny and centrality. With ship design times of 20 years or longer and service lives of up to 50 years, the fleet could degrade to a point at which the country will be economically and strategically unable to reverse course. The nation and the most versatile element of its military power would then continue to decline to second-rate status.

An absolute decline in American sea power would probably span decades, but the examples of the Soviet Union and previous naval powers unable to deploy and maintain a robust fleet demonstrate how rapidly a navy can become hollow and unable to influence events abroad. As the U.S. fleet evolves toward a less capable mix and the costs of maintaining aging submarines, destroyers, and carriers mount, the U.S. Navy could easily find itself with an effectively smaller fleet in the future. Newer, smaller ships would ply waters abroad, while the combat power that helped to win two world wars and deter the Soviet Union would remain at home in a reduced operating status for financial reasons. This would leave the Navy and the nation ill-prepared for a future economic and security crisis.

## A Thought Experiment

"Advancing the clock," a construct used in wargaming, is a useful method for evaluating the

5. One unofficial internal Navy estimate pegged the Navy's capital investment (replacement value in today's dollars) at $1.2 trillion.
6. Admiral Gary Roughead, remarks at Surface Navy Association National Symposium Banquet, Arlington, Va., January 13, 2011, at *http://www.navy.mil/navydata/people/cno/Roughead/Speech/SNA%20Speech%20by%20Chief%20of%20Naval%20Operations%20Jan%2013%202011%20FINAL.pdf* (May 9, 2011).
7. Department of the Navy, Naval Historical Center, "U.S. Navy Active Ship Force Levels, 1917–," January 23, 2002, at *http://www.history.navy.mil/branches/org9-4.htm* (May 13, 2011).
8. William H. McMichael, "New Command Targets Surface Ship Maintenance," *Navy Times*, November 8, 2010, at *http://www.navytimes.com/news/2010/11/navy-surface-maintenance-command-established-110810w/* (November 19, 2010).

effects of a decline in sea power. This paper posits a scenario in which events are accelerated, not as a prediction of how the future will play out so much as to bring about a set of events that are useful for thinking about the challenge at hand. For the purpose of this paper, these circumstances play out over five years and result in a dramatically reduced Navy and Marine Corps that would field one-quarter of the forces currently in the inventory.

Obviously, if these events did transpire, the United States might have much larger problems than its reduced Navy. However, the scenario demonstrates the extent to which sea power is a mirror of America's greatness and the extent to which America's future is tied to the great oceans that break on its shores.

It is difficult to consider a chain of events that would lead to a Navy that is a fraction of its present size (approximately 70 ships), and it is inconceivable that such a decline would happen over a relatively short period of time. However, the dramatic decline of the Soviet (and subsequently Russian) Navy after the Cold War demonstrates how quickly a great naval power can contract. The events that led to the decline of the Soviet Union and its navy were (from some points of view) catastrophic, and the events of this scenario would be similarly damaging.

**Scenario: Severe Degradation of U.S. Naval Capabilities.** The primary reason to consider a near-term scenario is that, if the U.S. gradually declined over the course of decades, another nation could slowly rise in its place and assume much of the world leadership that the United States currently exercises. The changes produced by such a decline would occur slowly and incrementally, with each successive step deviating only slightly from the status quo. Currently, although China may have the resources to assume world leadership, it appears disinclined to assume that role quickly, and no other nation possesses the means or the will to do so.

Therefore, in considering the present value of sea power, it is more useful to create a scenario in which U.S. sea power declines quickly and radically rather than one in which it is slowly superseded. In essence, this scenario divines the worth of an asset by evaluating the impact of its absence.

The scenario described here is inspired by work done by Decision Strategies International (DSI) for the U.S. Navy's Strategic Planning Process, with which one of the authors was loosely associated in 2006–2007.[9]

In this scenario, events unfold in a world that is very unstable and unsafe. International cooperation declines dramatically as countries hoard natural resources and the U.S. struggles against the strength of other resource-rich and economically robust regions of the world.

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Like the recession of 2008, the main trigger for this catastrophe is the international finance system. In 2020, several major European nations default on their debt, causing a flight of private money from the formal financial systems of the European Union (EU), the U.S., and Japan. Contagion in the financial markets plunges the world economy into global depression. Virtually every major Western nation finds itself in horrific economic straits, and only nations without expansive social safety nets are able to meet current obligations. Those with robust social welfare programs face aging populations, smaller workforces, and drastic cuts in services that spill over into all sectors of their economies. The U.S. economy contracts from $20 trillion in 2020 to $12 trillion in 2025.

During this time, two separate U.S. presidential Administrations seek and obtain significant cuts in the size of the U.S. armed forces. Homeland security becomes the sole focus of the Department of Defense, with policymakers concentrating primarily on port

9. While leading the team that developed *A Cooperative Strategy for 21st Century Seapower*, the current U.S. maritime strategy, then-Commander McGrath (U.S. Navy) used DSI's alternative futures methodologies to stress-test a number of emerging central themes in the strategy.

and border security, land-based strategic nuclear forces, anti-terrorism, and managing civil unrest.

Islamic terrorism accelerates the turn inward, which had abated in the second decade of the 21st century, as terrorists take advantage of the weakened condition of the West, especially the United States. Two "dirty bomb" explosions in 2021 accelerate the worldwide redeployment of U.S. military forces to home bases as the nation demands protection from terrorism. By 2025, U.S. international influence has all but disappeared, and U.S. efforts to counter Islamic terrorism garner little worldwide support due to economic and political interests.

While the worldwide depression is devastating, it is less so in China, which in 2015 began to rebalance its economy aggressively toward domestic consumption. A China–Russia entente dominates the international distribution of resources and is ascendant economically. A global "basket currency" replaces the dollar as the reserve currency of choice, and Southeast Asia leads in technology development.

Global maritime trade declines dramatically due to rising oil prices, terrorism, and piracy, and international cooperation to provide enhanced security does not materialize. With the decrease in long-haul international trade, regional trade blocs become the dominant mode of commerce. Even as the depression reduces demand, supply is reduced further. The United Nations is ineffective and ignored, a relic of an age of international cooperation long since past.

Worldwide competition for declining energy resources increases, exacerbated by a global decline in energy innovation as commercial investment slows dramatically. Industrial nations with domestic access to energy engage in power politics, creating even more conflict in an already unstable world. In this environment, Americans are not embraced internationally, and the U.S. military loses many of its basing rights as it redeploys to the United States.

**Implications for Naval Force Structure.** In 2025, the Navy consists of 70 deployable ships. The rest of the fleet is either mothballed or kept pierside as a result of the worldwide depression. All aircraft carriers and all but six attack submarines are sidelined as the Navy cuts back dramatically on expensive nuclear engineers and pilots. Additionally, the Navy completely deemphasizes projecting power and sea control beyond territorial waters. It maintains a fleet of four ballistic missile submarines, with one in maximum readiness and capable of launching its missiles, including the possibility of pierside launch.

While deemphasizing power projection decimates the carrier force, the amphibious force is cut less severely, both because of the flexibility of these platforms and because they are highly valued for their usefulness in defense support to civil authority missions, such as disaster relief and internal security.

All forward-deployed forces redeploy to the naval bases in Norfolk, Virginia, and San Diego, California. A third naval base in Bangor, Washington, remains open to support the four remaining ballistic missile submarines. A greatly diminished U.S. Coast Guard maintains a presence in Hawaii. All other naval bases are closed.

The fleet of 70 ships consists of six attack submarines, four ballistic missile submarines, eight aviation-capable amphibious ships, eight other amphibious ships, 15 destroyers, and 29 small combatants. In addition to these 70 ships, the Navy operates two hospital ships, which are in heavy domestic demand. The Navy does not operate a logistics force because all fueling, provisioning, and arming is done in port.

The Navy's operational mandate is homeland defense, and its activities have become largely indistinguishable from those of the Coast Guard. Some Members of Congress call for combining the two services. Lacking its traditional mobility provider and the mandate for expeditionary operations, the U.S. Marine Corps is disestablished.

There is one remaining private shipyard suitable for building both conventional and nuclear combatants. Fear of an irreversible loss of specialized shipbuilding trades is at an all-time high. The ship repair business has disappeared, and all depot-level maintenance is conducted in two heavily subsidized public shipyards. The U.S.-flagged merchant marine consists solely of vessels engaged in Jones Act[10] trade, and there is no commercial shipbuilding in the United States.

The U.S. Navy ceases to conduct exercises with allies and partners, although it does cooperate in maritime security operations with Canadian maritime forces.

**Global Implications.** Under a scenario of dramatically reduced naval power, the United States would cease to be active in any international alliances. While it is reasonable to assume that land and air forces would be similarly reduced in this scenario, the lack of credible maritime capability to move their bulk and establish forward bases would render these forces irrelevant, even if the Army and Air Force were retained at today's levels. In Iraq and Afghanistan today, 90 percent of material arrives by sea, although material bound for Afghanistan must then make a laborious journey by land into theater.

China's claims on the South China Sea, previously disputed by virtually all nations in the region and routinely contested by U.S. and partner naval forces, are accepted as a *fait accompli*, effectively turning the region into a "Chinese lake." China establishes expansive oil and gas exploration with new deepwater drilling technology and secures its local sea lanes from intervention. Korea, unified in 2017 after the implosion of the North, signs a mutual defense treaty with China and solidifies their relationship.

Japan is increasingly isolated and in 2020–2025 executes long-rumored plans to create an indigenous nuclear weapons capability.[11] By 2025, Japan has 25 mobile nuclear-armed missiles ostensibly targeting China, toward which Japan's historical animus remains strong.

China's entente with Russia leaves the Eurasian landmass dominated by Russia looking west and China looking east and south. Each cedes a sphere of dominance to the other and remains largely unconcerned with the events in the other's sphere.

Worldwide, trade in foodstuffs collapses. Expanding populations in the Middle East increase pressure on their governments, which are already stressed as the breakdown in world trade disproportionately affects food importers. Piracy increases worldwide, driving food transportation costs even higher.

In the Arctic, Russia aggressively asserts its dominance and effectively shoulders out other nations with legitimate claims to seabed resources. No naval power exists to counter Russia's claims.

India, recognizing that its previous role as a balancer to China has lost relevance with the retrenchment of the Americans, agrees to supplement Chinese naval power in the Indian Ocean and Persian Gulf to protect the flow of oil to Southeast Asia. In exchange, China agrees to exercise increased influence on its client state Pakistan.

The great typhoon of 2023 strikes Bangladesh, killing 23,000 people initially, and 200,000 more die in the subsequent weeks and months as the international community provides little humanitarian relief. Cholera and malaria are epidemic.

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Iran dominates the Persian Gulf and is a nuclear power. Its navy aggressively patrols the Gulf while the Revolutionary Guard Navy harasses shipping and oil infrastructure to force Gulf Cooperation Council (GCC) countries into Tehran's orbit. Russia supplies Iran with a steady flow of military technology and nuclear industry expertise. Lacking a regional threat, the Iranians happily control the flow of oil from the Gulf and benefit economically from the "protection" provided to other GCC nations.

10. The Merchant Marine Act of 1920 (P.L. 66-261), a statute that regulates maritime commerce in U.S. waters and between U.S. ports.
11. Japanese leaders have publicly acknowledged Japan's capability to produce nuclear weapons. The first major occasion was during a parliamentary debate in 1994 when Prime Minister Tsutomu Hata stated, "It is certainly the case that Japan has the capability to possess nuclear weapons, but has not made them." Terry McCarthy, "Japan Admits It Can Make Atomic Bomb," *The Independent*, June 18, 1994, at *http://www.independent.co.uk/news/world/japan-admits-it-can-make-atomic-bomb-1423293.html* (April 5, 2011).

In Egypt, the decade-long experiment in participatory democracy ends with the ascendance of the Muslim Brotherhood in a violent seizure of power. The United States is identified closely with the previous coalition government, and riots break out at the U.S. embassy. Americans in Egypt are left to their own devices because the U.S. has no forces in the Mediterranean capable of performing a non-combatant evacuation when the government closes major airports.

Led by Iran, a coalition of Egypt, Syria, Jordan, and Iraq attacks Israel. Over 300,000 die in six months of fighting that includes a limited nuclear exchange between Iran and Israel. Israel is defeated, and the State of Palestine is declared in its place. Massive "refugee" camps are created to house the internally displaced Israelis, but a humanitarian nightmare ensues from the inability of conquering forces to support them.

The NATO alliance is shattered. The security of European nations depends increasingly on the lack of external threats and the nuclear capability of France, Britain, and Germany, which overcame its reticence to military capability in light of America's retrenchment. Europe depends for its energy security on Russia and Iran, which control the main supply lines and sources of oil and gas to Europe. Major European nations stand down their militaries and instead make limited contributions to a new EU military constabulary force. No European nation maintains the ability to conduct significant out-of-area operations, and Europe as a whole maintains little airlift capacity.

**Implications for America's Economy.** If the United States slashed its Navy and ended its mission as a guarantor of the free flow of transoceanic goods and trade, globalized world trade would decrease substantially. As early as 1890, noted U.S. naval officer and historian Alfred Thayer Mahan described the world's oceans as a "great highway… a wide common," underscoring the long-running importance of the seas to trade.[12]

Geographically organized trading blocs develop as the maritime highways suffer from insecurity and rising fuel prices. Asia prospers thanks to internal trade and Middle Eastern oil, Europe muddles along on the largesse of Russia and Iran, and the Western Hemisphere declines to a "new normal" with the exception of energy-independent Brazil.

For America, Venezuelan oil grows in importance as other supplies decline. Mexico runs out of oil—as predicted—when it fails to take advantage of Western oil technology and investment. Nigerian output, which for five years had been secured through a partnership of the U.S. Navy and Nigerian maritime forces, is decimated by the bloody civil war of 2021. Canadian exports, which a decade earlier had been strong as a result of the oil shale industry, decline as a result of environmental concerns in Canada and elsewhere about the "fracking" (hydraulic fracturing) process used to free oil from shale.

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State and non-state actors increase the hazards to seaborne shipping, which are compounded by the necessity of traversing key chokepoints that are easily targeted by those who wish to restrict trade. These chokepoints include the Strait of Hormuz, which Iran could quickly close to trade if it wishes. More than half of the world's oil is transported by sea. "From 1970 to 2006, the amount of goods transported via the oceans of the world…increased from 2.6 billion tons to 7.4 billion tons, an increase of over 284%."[13] In 2010, "$40 billion dollars [*sic*] worth of oil passes through the world's geographic 'chokepoints' on a daily basis…not to mention $3.2

12. A. T. Mahan, *The Influence of Sea Power upon History, 1660-1783*, 12th ed. (Boston: Little, Brown and Company, 1890), p. 25, at *http://www.gutenberg.org/files/13529/13529-h/13529-h.htm* (May 4, 2011).
13. North Atlantic Treaty Organization, Allied Command Transformation, "The Global Commons—Maritime Workshop," USS *Enterprise*, Norfolk, Va., September 30, 2010, at *http://www.act.nato.int/images/stories/events/2010/gc/maritime_readaheads.pdf* (May 4, 2011).

trillion…annually in commerce that moves underwater on transoceanic cables."[14] These quantities of goods simply cannot be moved by any other means. Thus, a reduction of sea trade reduces overall international trade.

U.S. consumers face a greatly diminished selection of goods because domestic production largely disappeared in the decades before the global depression. As countries increasingly focus on regional rather than global trade, costs rise and Americans are forced to accept a much lower standard of living. Some domestic manufacturing improves, but at significant cost.

In addition, shippers avoid U.S. ports due to the onerous container inspection regime implemented after investigators discover that the second dirty bomb was smuggled into the U.S. in a shipping container on an innocuous Panamanian-flagged freighter. As a result, American consumers bear higher shipping costs. The market also constrains the variety of goods available to the U.S. consumer and increases their cost.

A Congressional Budget Office (CBO) report makes this abundantly clear. A one-week shutdown of the Los Angeles and Long Beach ports would lead to production losses of $65 million to $150 million (in 2006 dollars) per day. A three-year closure would cost $45 billion to $70 billion per year ($125 million to $200 million per day). Perhaps even more shocking, the simulation estimated that employment would shrink by approximately 1 million jobs.[15] These estimates demonstrate the effects of closing only the Los Angeles and Long Beach ports.

On a national scale, such a shutdown would be catastrophic. The Government Accountability Office notes that:

> [O]ver 95 percent of U.S. international trade is transported by water[;] thus, the safety and economic security of the United States depends in large part on the secure use of the world's seaports and waterways. A successful attack on a major seaport could potentially result in a dramatic slowdown in the international supply chain with impacts in the billions of dollars.[16]

As of 2008, "U.S. ports move 99 percent of the nation's overseas cargo, handle more than 2.5 billion tons of trade annually, and move $5.5 billion worth of goods in and out every day." Further, "approximately 95 percent of U.S. military forces and supplies that are sent overseas, including those for Operations Iraqi Freedom and Enduring Freedom, pass through U.S. ports."[17]

**General Conclusions.** This simple thought experiment is designed to highlight the impact of the loss of preponderant American sea power. Because this is a scenario-based excursion, it is important to retain perspective. In order to create this absence of sea power, a Hobbesian nightmare had to be imposed, although a slow erosion of naval power in the next decade could leave the country dramatically unprepared for something less than Hobbes might conjure.

Certainly, America would have many important needs if such a scenario became reality. Yet the scenario's description shows the extent to which America's power as a maritime nation depends on its ability to field and operate a global fleet that

14. Admiral Gary Roughead, remarks at University of Chicago Conference on Terrorism and Strategy, Washington, D.C., October 12, 2010, at *http://www.navy.mil/navydata/people/cno/Roughead/Speech/101012-UofChicagoremarks%20FINAL.doc* (May 9, 2011).
15. Congressional Budget Office, "The Economic Costs of Disruptions in Container Shipments," March 29, 2006, p. 2, at *http://www.cbo.gov/ftpdocs/71xx/doc7106/03-29-Container_Shipments.pdf* (May 4, 2011).
16. U.S. Government Accountability Office, "Maritime Security: National Strategy and Supporting Plans Were Generally Well-Developed and Are Being Implemented," GAO–08–672, June 2008, p. 1, at *http://www.gao.gov/new.items/d08672.pdf* (May 4, 2011).
17. Mackenzie M. Eaglen, James Dolbow, Martin Edwin Andersen, and James Jay Carafano, eds., "Securing the High Seas: America's Global Maritime Constabulary Power," Heritage Foundation *Special Report* No. 20, March 12, 2008, pp. 3–4, at *http://www.heritage.org/research/reports/2008/03/securing-the-high-seas-americas-global-maritime-constabulary-power*.

aggressively protects its interests even as it provides a benign security environment for other nations to enjoy. Put another way, the cost of maintaining a fleet that can project power and presence around the globe—even if it encourages others to underinvest in their naval forces—produces substantial national security and economic benefits for the American people, and these benefits far outweigh the costs of maintaining it.

## What Should Be Done

Sir Walter Raleigh sagely remarked several centuries ago, "Whosoever commands the sea commands the trade; whosoever commands the trade of the world commands the riches of the world, and consequently the world itself."[18] The United States is a maritime nation, and the Navy, Marine Corps, and Coast Guard are the primary guardians of this global status.

The Navy's core competencies, as laid out in various strategies, are to maintain maritime superiority on, below, and above the high seas against all powers, including nation-states and non-state actors. Because the U.S. Navy fulfills its mission so successfully and so benignly, the fleet has not fought a battle at sea since World War II. It is easy for some to overlook this critical mission and to focus on less important priorities.

**Developing a Long-Term Research and Development Plan.** After numerous studies and a half-dozen shipbuilding plans, Navy leaders have correctly concluded that the United States needs a larger fleet—not simply in numbers of ships and aircraft, but also in terms of increased network capability, longer range, and increased persistence. Navy leaders recognize that the U.S. is quickly losing its monopolies on guided weapons and the ability to project power. Precision munitions (guided rockets, artillery, mortars, and missiles) and battle networks are proliferating, while advances in radar and electro-optical technology are increasingly rendering stealth less effective.

Policymakers should help the Navy to take a step back and look at the big picture to inform future investment portfolios. Congress should demand and uniformed leaders should welcome the opportunity to develop long-range technology road maps, including a science and technology plan and a research and development plan for the U.S. Navy. These plans should broadly outline future investments, capabilities, and requirements. The possibilities include:

- A next-generation surface combatant,
- A sixth-generation fighter, and
- Low-observable capabilities beyond stealth.

These plans should also identify and prioritize the need for additional investment in critical capabilities, including:

- More capable anti-ship, land attack, and air-to-air missiles;
- Satellite recapitalization;
- Directed energy and electromagnetic weapons;
- Underwater weapons, including an unmanned underwater vehicle;
- Nanotechnology and solid-state and fiber lasers;
- Biotechnologies; and
- Advanced cyber technologies.

In light of the need for a comprehensive, long-range technology road map for the Navy, Congress should consider adding to its quadrennial requirement for a 30-year shipbuilding plan by directing the Navy to submit a long-range technology road map on a quadrennial basis, two years out of phase with the shipbuilding plan.

> ***"Whosoever commands the sea commands the trade; whosoever commands the trade of the world commands the riches of the world, and consequently the world itself."***

The technology road map should be holistic and should account for the rapidly declining force structure of the Navy's global maritime partners and the potential emergence of new players. The analysis

18. Sir Walter Raleigh, in Suzy Platt, ed., *Respectfully Quoted* (Washington, D.C.: Library of Congress, 1989), at *http://www.bartleby.com/73/2044.html* (May 4, 2011).

should also consider shifting global shipping patterns, including the expansion of the Panama Canal and melting in the Arctic. By some estimates:

> [M]elting of Arctic ice will open up new passages for transit, offering significantly shorter routes between Europe and North America and the Pacific—perhaps up to 40 percent faster sailing times and significant fuel savings and emissions reductions. Seasonal commercial lanes through the Arctic ice could appear within less than five years. The ability to navigate the region will increase the search for and development of significant natural resources including oil. Scientific research in the Arctic will also expand.[19]

Any long-term analysis should also carefully consider the capabilities required in the increasingly contested undersea domain.

Congress should also ask that the Navy provide a "resource unconstrained" fleet composition that is appropriate to meeting the requirements of *A Cooperative Strategy for 21st Century Seapower*, the Navy's 2007 maritime strategy.[20] The study should include an analysis of the capabilities and missions called for in the strategy and identify which ones, given current and planned fleet size and resources, are at risk. This study should include options for additional forward stationing of U.S. Navy vessels and proposals for new classes of ships designed specifically for low-end naval presence missions. Without this type of strategy-driven analysis by Navy leaders, Congress will continue to struggle to determine where to apply diminishing resources within the defense budget and how to justify the additional investments needed in higher-priority areas.

**Building a Modern Congress–Navy Partnership.** After years of outside analysis showing that the Navy was underestimating and underfunding the shipbuilding needed to build anything close to its own requirement for a 313-ship fleet, some Members of Congress are growing skeptical. Navy leaders are not helping their case. Both they and Congress need a strong relationship to help the nation build and afford the future fleet.

To increase confidence in Navy shipbuilding budget estimates, Congress should direct the Office of the Secretary of Defense, the Department of the Navy, and the Congressional Budget Office to use a set of consistent costing methods to reduce the wide variances in cost estimates among Navy shipbuilding plans, defense budgets, CBO estimates, and external analyses. Additionally, Congress should mandate that the Secretary of the Navy certify the design wholeness and cost estimates for any new ship class before authorization of the first hull.

***Without additional resources, the defense industrial base and the nation's conventional advantage at sea could be sacrificed to recapitalize the strategic force.***

The Navy should seek and Congress should approve the appointment of a four-star admiral to a newly created position of Director of Navy Shipbuilding. This person would be appointed for a term of eight years (analogous to the existing Director of Naval Nuclear Propulsion, who oversees all Navy nuclear power). The director would oversee design, acquisition, construction, and life-cycle management of all surface ships, aircraft carriers, and submarines. Current program executive officers for ships, submarines, and aircraft carriers would report to this new executive, who would report in turn to both the Chief of Naval Operations and the Secretary of the Navy.

To relieve additional pressure on the already strained Navy shipbuilding budget, Congress should seriously consider funding the design and construction costs of the Navy's new replacement

19. James Jay Carafano and James Dean, "Breaking an Ice-Bound U.S. Policy: A Proposal for Operating in the Arctic," Heritage Foundation *WebMemo* No. 3168, at *http://www.heritage.org/research/reports/2011/02/breaking-an-ice-bound-us-policy-a-proposal-for-operating-in-the-arctic*.
20. U.S. Department of the Navy, U.S. Marine Corps, and U.S. Coast Guard, *A Cooperative Strategy for 21st Century Seapower,* October 2007, at *http://www.navy.mil/maritime/Maritimestrategy.pdf* (April 5, 2011).

ballistic missile submarine outside of Navy budget controls. These national assets are employed as part of critical strategic missions. Without additional resources, the defense industrial base and the nation's conventional advantage at sea could be sacrificed to recapitalize the strategic force. Alternatively, Congress should consider whether this extremely expensive leg of the nuclear triad should be maintained in the face of decreasing stealth, shrinking nuclear stockpiles, and limited shipbuilding funds.

**Recapturing Innovation and a Sound Industrial Policy.** Despite the fact that "industrial policy" became a dirty word from its association with socialist governments during the Cold War, Congress needs to prevent the loss of innovation in defense-related research and development. Members should already know and be alarmed that the U.S. military has no manned aircraft under development—a first in the history of aviation. Similarly, no surface ships or attack submarines are in the design phase. With development cycles lasting 20 years or longer, elected leaders need to ensure that the Defense Department is not losing critical skills that will be needed to imagine and build the next generation of ships, aircraft, sensors, and weapons for the U.S. Navy.

***Congress needs to consider the potential defense "brain drain" when determining whether or not to shut down major production lines permanently, particularly in shipbuilding and aerospace.***

The critical workforce ingredients needed to sustain an industrial base capable of building next-generation systems are specialized design, engineering, and manufacturing skills. The growth of the defense industry after World War II peaked in the late 1950s when defense production became a leading sector of the national economy, a trend that continued well into the 1980s. This period was also marked by an increased focus on developing advanced defense technologies. By 1960, the federal government was responsible for 58 percent of the nation's research and development investments. This emphasis required a new level of engineering skills and capabilities within the industry to develop the complex defense systems the government sought to build.

Since World War II, the United States has benefited from the skills of a robust defense industrial and manufacturing workforce. For more than six decades, various U.S. defense strategies have emphasized the benefits of a technologically superior military to help to deter and win wars. The U.S. military has pursued this "technical overmatch" for decades in an attempt to deter potential enemies from engaging the U.S. in conflict and to reduce risk and loss of life on the battlefield.

When the Cold War ended in 1991, the sudden apparent dissolution of national security threats prompted a period of intense downsizing and consolidation. Whereas more than 50 major defense firms dominated the market in the early 1990s, only six prime contractors remain today. Contrary to popular perception, 60 percent to 75 percent of work programs in the aerospace and defense industries are performed by sub-prime companies and lower-tier suppliers, not the big defense contractors. These small companies are increasingly vulnerable to the vagaries of defense budgets, and reductions in defense research and development will cause them to disappear along with their tooling and skills.

An expected, the emerging round of consolidation of the defense industry has increased the burden on the small collection of defense companies. The consolidation of major defense contractors has generally reduced the number of available workers. Already at a turning point, the potential closure of major defense manufacturing lines in the next five years with no additional scheduled production could shrink this national asset even further.

While the manufacturing workforce alone should not dictate congressional defense acquisition decisions, Congress needs to consider the potential defense "brain drain" when determining whether or not to shut down major production lines permanently, particularly in shipbuilding and aerospace. More often than not, once these highly skilled workers leave the federal workforce, they are difficult to recruit back and even more expensive to retrain. This dynamic creates significant project gaps.

**Training in Degraded Environments and Congressional Participation in Wargames and Exercises.** Navy leaders should begin earnestly

sponsoring regular and realistic training in degraded environments. U.S. forces should be capable of operating in live-fire exercises without access to the overhead architecture of U.S. space and satellite assets. The U.S. military should know how it will operate without access to U.S. forward bases and allied and foreign airspace.

Congress needs to reengage dramatically in wargaming exercises, particularly Members of Congress who serve on the four defense committees. In these exercises, Members of Congress would not join military members in simulating combat, but rather would react to proposed scenarios of varying depth and scope and determine the policy implications of those decisions and lessons learned.

For example, Members of Congress could participate in a simulation in which Iran acquires nuclear weapons in the next three years, prompting a Middle East arms race, and uses that leverage to hold global oil supplies hostage by shutting down the Strait of Hormuz. In this exercise, Congress and executive branch officials would examine the international and domestic responses to the crisis, evaluate the principal actors' interactions, and simulate the effects on world oil supply, demand, and prices along with instability in the region.

Other ideas for possible exercises include evaluating the U.S. policy options in responding to a cyber attack on U.S. infrastructure, including the energy grid, online financial resources and banking, and the transportation network. Congress could also evaluate options in a world in which the U.S. military must rapidly mobilize personnel beyond the current force.

## Conclusion

Financing the future Navy fleet is simply common sense for a maritime power. A strong Navy is in America's long-term interest and essential to the nation's prosperity. Failure to invest in the fleet, reverse its decline, and maintain steady growth in the number of ships in the Navy's inventory will only embolden U.S. adversaries.

History has seen more than one great naval power (e.g., Spain, Portugal, the Netherlands, and the United Kingdom) become a shadow of its former self when it failed to maintain its maritime preeminence. It is difficult to imagine that the nation desires such a decline—and even more difficult to accept that Congress and the Administration are letting it happen.

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