THE ARSENAL OF DEMOCRACY

TECHNOLOGY, INDUSTRY, AND DETERRENCE IN AN AGE OF HARD CHOICES

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In February 2023, *The Wall Street Journal* published an essay by Robert Kagan with the headline "Challenging the U.S. Is a Historic Mistake." Kagan compared today's China to Nazi Germany and Imperial Japan in its determination to dominate its region and warns that it may meet a similar fate: "Both Japan and Germany, while accomplishing amazing feats of rapid expansion for brief periods of time, ultimately failed in their ambitions for regional hegemony. They underestimated both the actual and potential power of the US."

China today, Kagan argued, is in a weaker economic position in relative terms than the Axis powers were in the early phase of World War II. Moreover, the American public would be likely to react to a Chinese attack on Taiwan with the same "aggressive approach" elicited by the Japanese attack on Pearl Harbor.[1]

As Eyck Freymann and Harry Halem demonstrate in this invaluable survey of the military balance in the Indo-Pacific today, this argument flies in the face of both historical and contemporary reality. First, Kagan's argument implicitly understates the appalling cost of the US-led victory over Japan in World War II, as if a repeat performance against China is something Americans should cheerfully anticipate. Second, he greatly exaggerates the extent to which the US economy of the 2020s could repeat the spectacular military-industrial feats of the

1940s. Third, he completely overlooks how technological advances would make a twenty-first-century Pacific war radically different from that of 1941–45. Fourth, and finally, a series of surveys conducted by the Chicago Council on Global Affairs, including the annual 2024 Chicago Council Survey, find that though Americans have generally warm views of Taiwan, favor Taiwan's inclusion in international organizations, and would support recognizing Taiwan as an independent country, a majority of Americans are unwilling to commit US troops to the defense of Taiwan and would oppose direct US involvement in a military conflict between Taipei and Beijing.

No one ever gets the war of the future exactly right, because it is always partly the war of the past and only partly the new kind foreseen by military prophets. Fictional works such as *Ghost Fleet* and *2034* have attempted to visualize a coming conflict between the United States and the People's Republic of China. As historians who are also well versed in current debates on military capabilities and capacities, as well as keen students of the past three years of war in Ukraine, Freymann and Halem understand that this time will not be altogether different. If the Russian invasion of Ukraine resulted in a cross between *All Quiet on the Western Front* and *Blade Runner*, in Max Boot's phrase, any Sino-American war is likely to be part *Midway* and part *Matrix*.[2]

The familiar part, they argue, will be the contest between rival navies and air forces for control of the two island chains that punctuate the otherwise bewildering vastness of the Pacific Ocean. (As they note, "US Indo-Pacific Command (INDOPACOM) is responsible for 52 percent of the earth's surface. Its AOR [area of responsibility] stretches from the Arctic to the Antarctic, from the Indian Ocean to the west coast of the Americas.") There will be roles, once again, for aircraft carriers and submarines, for the Marine Corps, and potentially for the nuclear weapons that proved necessary to end the war against Imperial Japan. But the war of the future will also feature missiles with a range and accuracy undreamed of in 1945; unmanned drones in the air, on the sea, and beneath the waves; and, crucially, command,

control, and communications systems based on computers and satellites orbiting the earth. "Scouting" is always crucial in air-naval conflict, but the space-based scouting of 2025 would have struck the men of 1945 as science fiction.

China, Freymann and Halem write, leverages "a vast array of more than 490 intelligence, surveillance, and reconnaissance (ISR) satellites equipped with optical, multispectral, radar, and radio frequency sensors." It is "quickly building a formidable fleet of cheap, disposable, high-capability scouting UAS [unmanned aerial systems]," including "several hundred medium-altitude, long-endurance (MALE) and high altitude, long-endurance (HALE) UAS like the BZK-005 and the Wing Loong series, operating from dozens of bases within a few hundred kilometers of potential conflict zones, and these numbers could reach the thousands by 2030."

In particular, China's rapid accumulation of missiles should worry us:

> The PLA [People's Liberation Army] could fire 252 missiles at Kadena [airbase] in a single salvo and 26 at Misawa Air Base in northern Japan. Even Andersen Air Force Base on Guam, the logistical linchpin for US airpower in the region, is within range of China's DF-26 missiles.
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> . . . The PLA Rocket Force (PLARF) maintains more than 3,500 conventionally armed ballistic and cruise missiles centered on the Dong Feng (DF) ballistic missile family. . . . Short- and medium-range ballistic missiles, which make up well over half the arsenal and can reach targets of up to 3,000 kilometers, are primarily positioned to counter Taiwan and US forces in the region. The DF-15 and DF-11 short-range missiles, with ranges under 1,000 kilometers, are concentrated along China's eastern coast for potential Taiwan contingencies. China has also developed several notable anti-ship missiles designed to deny the US Navy access to regional waters. These include the DF-21D "carrier killer," the DF-26D, and the YJ-18 anti-ship cruise missile

> (ASCM), which is specifically engineered to overcome the Aegis Combat System air defenses aboard US Navy combat ships. . . .
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> . . . According to the DOD, China now has the "world's leading hypersonic missile arsenal," with advanced conventional and nuclear-armed systems. At the core of China's capabilities are the DF-17 medium-range ballistic missile (MRBM), equipped with a hypersonic glide vehicle (HGV), and the formidable DF-27 ICBM [intercontinental ballistic missile] . . . . China demonstrated its technical sophistication in 2021 by testing an ICBM-range HGV that traveled 40,000 kilometers around the earth using a fractional orbital bombardment (FOB) system—technology that could be used to evade US missile defenses.

By contrast, the United States today "likely has around 3,000 JASSMs [joint air-to-surface standoff missiles] and around 350 LRASMs [long-range anti-ship missiles] in its stockpile. . . . Public-domain wargames suggest that in a war over Taiwan, US forces could run down this stockpile in as little as two weeks." The greater average range of China's missile force poses a fundamental threat to US Pacific predominance, potentially denying the US Navy access to the Philippine Sea and the Taiwan Strait. Indeed, it may prove—the authors are equivocal—to have rendered aircraft carriers obsolete.

Where writers such as Kagan comfort themselves with the notion that the United States would spring back into military-industrial life in response to Chinese aggression, Freymann and Halem show the parlous state of US naval logistics ("The Military Sealift Command [MSC] has too few ships of the right sizes. . . . The US Merchant Marine . . . has been hollowed out"), of the defense-industrial base (monthly production of 155-millimeter artillery shells has doubled since February 2022—enough for two weeks of war), and of the procurement system (exemplified by the F-35 and *Ford*-class carriers, both late and wildly over budget). This is a story of old hardware and old men. Unfortunately, the new hardware made by younger men also

has its problems. Because US drone manufacturer Skydio relied on Chinese components, Beijing was able to sanction it in October 2024.

Freymann and Halem urge US investment in new unmanned surface vessels, "vastly greater numbers" of unmanned aerial systems, additional submarines, small satellites and more defenses for them, and nuclear modernization. They praise recent drone-warfare initiatives such as Replicator and Hellscape but want much, much more. Yet they acknowledge that for fiscal, political, and structural reasons, these investments are unlikely to be made—and certainly not at the pace needed if there truly is a Chinese plan to resolve the Taiwan Question in two years' time.

At the same time, though the word *technology* figures prominently in this work's subtitle, the authors appropriately caution:

> It is important not to focus too narrowly on capabilities—the systems, technologies, and operational techniques for achieving US objectives in specific scenarios. Mindful of the increasingly dangerous global context, the United States must also ensure that it has sufficient *capacity*—the scale and endurance to sustain large-scale operations over time, deploy sufficient forces across multiple theaters, and maintain readiness for multiple simultaneous conflicts.

This technology versus numbers debate is decades old. Someone once said, "If you want a new idea, read an old book." A favorite of that genre is James Michener's *The Bridges at Toko-Ri*, his classic 1953 novel of American naval aviation in the Korean War. In it, his fictional admiral, in addition to wondering "Where do we get such men?" presciently muses about the role of technology in future conflict:

> Long ago, Tarrant had begun to argue that some new weapon—rockets perhaps or pilotless planes of vast speed—would inevitably constitute the task force of the future. He had seen so much

> change, indeed had spurred it on, that he could not rely perpetually on ships or airplanes or any one device. But until America was secure behind the protection of some new agency that could move about the earth with security and apply pressure wherever the enemy chose to assault us, it would be wise to have young officers trained to command a sea burdened with ships and speckled with the shadows of a thousand planes.[3]

Simply put, as former Senator Sam Nunn once said: "At some point, numbers do count."[4]

All this raises the question of how far the United States stands a chance of winning a defense-industrial race on China's terms. Might not the correct answer be a second "revolution in military affairs," comparable with the one initiated by William J. Perry, Andrew Marshall, and Harold Brown in the late 1970s, which established an American lead in satellite communications and military computing that the Soviets could not match? Or is that a fantasy when today's rival superpower has already shown itself capable of launching a quantum-enabled satellite? What if the next revolution in military affairs turns out to be, like so much else, made in China?

Not all is lost. As the authors note, "The US Navy's greatest strength—its high-quality submarine fleet—is currently set against the People's Liberation Army Navy's greatest weakness—its antisubmarine warfare capabilities." And: "The [US] Navy has eleven carriers. (The PLA has three and is currently building a fourth.)" True, "the PLA fleet is already larger in ship count, though not yet in tonnage." The Navy has "classified stealth techniques," which could baffle Chinese scouting. The United States also has five treaty allies in the Indo-Pacific region, whereas China's friends lie westward, on the Eurasian landmass. And the Chinese nuclear arsenal, though growing rapidly, is still inferior (currently more than 600 warheads in total, compared with 1,700 deployed US warheads). The problem is that all these advantages could be entirely negated if Chinese (and Russian) antisatellite weapons were able to knock out the intelligence, surveillance, and

reconnaissance networks that provide US forces with comprehensive battlefield awareness; the communications networks that enable global command and control; the positioning, navigation, and timing satellites that support precision weapons and navigation; and the two dozen nuclear early-warning satellites of the US Space Force's Defense Support Program. But as the authors powerfully remind us, a conflict with China will dwarf in scale and intensity recent American naval experience and, in the words of your stockbroker, past performance is not a guarantee of future outcomes. As the post–Cold War US Navy has focused on the real demands of ballistic missile defense and Tomahawk cruise missile land-support and strike missions, critical skills such as antisubmarine warfare, surface combat, and fleet air defense have declined over decades of sailing a largely tranquil sea.

"US deterrence failed in 1941," Freymann and Halem write. "We cannot afford to let it fail again today." That, surely, is the right lesson to draw from World War II in the Pacific. And it is quite clear from *Arsenal of Democracy* that the price of failure would be far higher today than it was in 1941. As recently as twenty-one years ago, US manufacturing value added was 2.5 times greater than that of the People's Republic of China. By 2021, the tables had been entirely turned, and China's manufacturing value added was nearly twice that of the United States.[5]

The unmistakable implication of this unflinching and sobering book is that the United States and its allies now confront an Arsenal of Autocracy. There is no question which arsenal is bigger.