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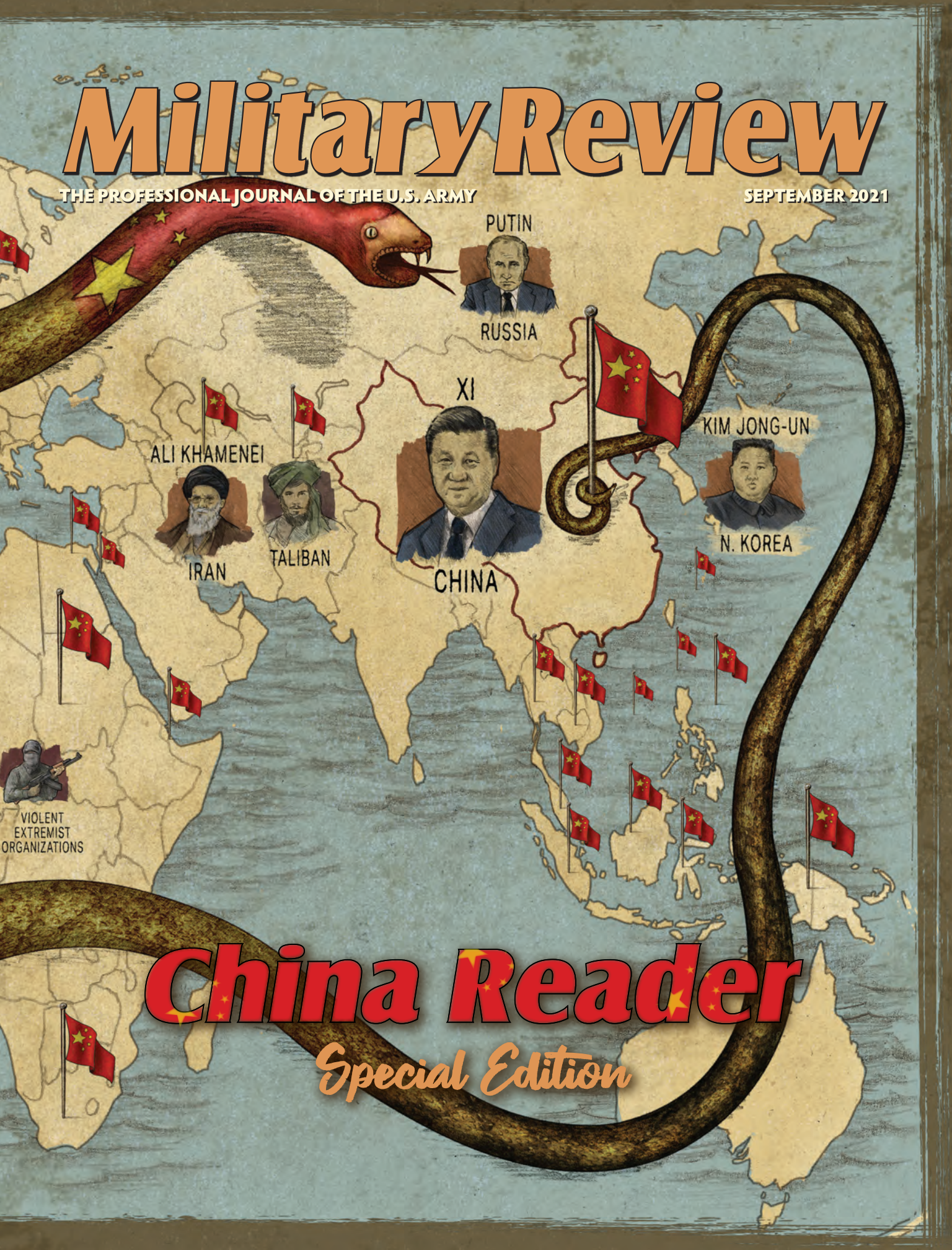

China Reader

Special Edition

Military Review

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By Order of the Secretary of the Army:

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Cover image: This artwork is a dark homage to a proposed concept developed by U.S. Federal General-in-Chief Winfield Scott who recommended to President Abraham Lincoln a Federal strategy to suffocate the Southern state insurrection by blockading or seizing its life sustaining ports during the U.S. Civil War. This plan became known popularly as "Scott's Great Snake" or also as the "Anaconda Plan." The modern day Chinese "Belt and Road Initiative" reflects what appears to be a similar concept on a much grander, global scale. The Communist Chinese Party is undertaking a mammoth effort to develop a trade system in which China envisions itself becoming the global focus of all trade via highly developed land and sea trade routes. Part of this effort includes building or controlling facilities at the choke points of the worlds' most important maritime shipping lanes—which would enable China to threaten competitors and adversaries by either impeding or controlling the transport of oil and other vital resources. (Graphic by Dale Cordes, Army University Press)

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Foreword

In July 2021, Secretary of Defense Lloyd Austin gave a speech in Singapore outlining U.S. interests and relations with nations in Asia. In his remarks, Secretary Austin struck a firm but conciliatory tone toward China noting the following:

> Beijing's claim to the vast majority of the South China Sea has no basis in international law … . We continue to support the region's coastal states in upholding their rights under international law. And we remain committed to the treaty obligations that we have to Japan in the Senkaku Islands and to the Philippines in the South China Sea. Unfortunately, Beijing's unwillingness to resolve disputes peacefully and respect the rule of law isn't just occurring on the water. We have also seen aggression against India … destabilizing military activity and other forms of coercion against the people of Taiwan … and genocide and crimes against humanity against Uyghur Muslims in Xinjiang. Now, these differences and disputes are real. But the way that you manage them counts. We will not flinch when our interests are threatened. Yet we do not seek confrontation. So let me be clear: As Secretary, I am committed to pursuing a constructive, stable relationship with China.[1]

In this speech, Secretary Austin clearly identified the military and diplomatic moves China has made over the last decade that have destabilized international relations in Asia. For the region, the most important of these are the threats to invade Taiwan and the expansion of Chinese bases into the South China Sea, which threaten Japan and the Philippines, important U.S. allies in Asia. But China has also mounted efforts against the U.S. homeland that include theft of U.S. economic property and cyberattacks on a wide array of targets inside the United States. These aggressive actions have recently been complemented by sharp rhetoric from senior Chinese officials that suggest China currently has enough military power and economic, diplomatic, and informational influence to achieve its goals in Asia, to include seizing Taiwan.

For all of these reasons, Secretary Austin has identified China as the United States' primary *pacing threat*, a term used to identify the adversary that has the best chance of mounting a grave challenge to U.S. defense policy in the near future. China has earned this status because it has—or will soon have—the ability to fully compete with American military, economic, political, and technological power. Winning the competition with China will first require that the U.S. Army and its soldiers understand the challenge China poses. This special issue of *Military Review* serves that purpose by offering selected articles on China published by the journal over the last five years. Readers will find that the articles address recent Chinese actions broadly, from possible military actions in Taiwan and the South China Sea to the use of economic and financial power in Asia and the United States. *Military Review* hopes that this issue shows China as an ambitious and innovative state willing to use all the instruments of power to compete. Without question, China has become the *pacing threat* for the United States and its military. ■

Note

1. "Secretary of Defense Lloyd J. Austin III Participates in Fullerton Lecture Series in Singapore," U.S. Department of Defense, 27 June 2021, accessed 30 August 2021, https://www.defense.gov/Newsroom/Transcripts/Transcript/Article/2711025/secretary-of-defense-lloyd-j-austin-iii-participates-in-fullerton-lecture-serie/.

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Returning U.S. Forces to Taiwan

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Extracts from Testimony Given during Confirmation Hearing for Adm. John C. Aquilino, U.S. Navy, Nominated to Service as the Commander of the U.S. Indo-Pacific Unified Command

23 March 2021

Extract from prepared statement during confirmation testimony:

> Admiral Aquilino: "The Indo-Pacific is the most consequential reason for America's future and remains the priority theater for the United States. Residing here are four of the five security challenges identified in the Department of Defense—China, Russia, North Korea, and violent extremist organizations … . Of all the threats we face, Secretary Austin was very clear when he stated, "China is our pacing threat." To meet this challenge, it will take all elements of national power, working together and with a sense of urgency. Together with our allies and partners, our professionally trained and lethal joint military force, postured forward will provide the deterrence required while enabling diplomacy from a position of strength to ensure peace, stability, and prosperity for all in the region … . [p. 13]

Extracts from question and answer period during confirmation testimony:

> Senator Inhofe: … As General McMaster told this committee … . "Taiwan may represent the most dangerous flash point for war." He went on to say because of that very real threat, quote, "it is immensely important to keep forward-positioned capable forces in the Indo-Pacific." So, Admiral, I have been co-chairman of the Taiwan Caucus for quite a while and I have been concerned that a Chinese invasion of Taiwan would represent the hardest test from U.S. military response time. Can you talk about why the U.S. forward-positioning forces are so important, and what do you mean by forward-positioning, and where do the forces need to be?
>
> Admiral Aquilino: … I agree with General McMaster's discussion on the most dangerous concern is that of a military force against Taiwan. To combat that, the forward posture west of the International Date Line is how Admiral Davidson describes it, and I concur with that. Forces positioned to be able to respond quickly, and not just our forces, those forces combined with the international community, with our allies and partners, those nations with common values, those two things would position us very strongly for the deterrence required … . [pp. 22–23]
>
> Senator Fischer: … What do you believe are China's goals … ?
>
> Admiral Aquilino: … I think the [Chinese] goals are to supplant U.S. security leadership in the region overall, whether they be in the South China Sea or on the northern border of India, and generate a change to the international rules beyond what the nations all agree to, under the 1982 UNCLOS treaty, and

Adm. John C. Aquilino, U.S. Navy, testifies before the Senate Armed Services Committee 23 March 2021 in Washington, D.C. (Screenshot taken from a Department of Defense video)

ultimately to change those rules to the benefit of the PRC. Ultimately, it would change the view of the region from those who believe in a free and open Indo-Pacific to those that might want a more authoritarian might-equals-right closed Indo-Pacific. [p. 35–36]

Senator Fischer: If I could ask you more about the islands in the South China Sea. The President of China, in 2015, stated, quote, "Relevant construction activity that China is undertaking does not target or impact any country, and there is no intention to militarize," end quote. Would you agree that this is a false statement, that it has been proven false?

Admiral Aquilino: Yes, Senator, I would. It has certainly been evident to me that when we listen to the words that come from the PRC we have to look at not just words, and listen to words, we have to look at deeds. And your example of the islands in the South China Sea are probably the best examples. All of those islands have been militarized, whether it be with missiles, jammers, but it is in exact opposition to what has been said. … [p. 36]

… the allies and partners that we have are clearly an asymmetric advantage [over China], as the PRC has, I would argue, only one ally or partner, and that is North Korea. So we would continue to work towards increased multilateral operations, if I am concerned [sic] … . We do many things with the ASEAN nations. We do things with our Japanese counterparts and our Korean counterparts in the form of missile defense …

Senator Cotton: Admiral … I want to hear from you about why Taiwan is so critical from a military and strategic standpoint. Why would Beijing so desire to have Taiwan annexed to the mainland, and how would it complicate your military planning if Beijing did invade and annex Taiwan? … From a military and strategic standpoint, why is it so important to Beijing that they annex Taiwan?

Stenographic Transcript
Before the

COMMITTEE ON
ARMED SERVICES

UNITED STATES SENATE

TO CONSIDER THE NOMINATION OF ADMIRAL JOHN C. AQUILINO, USN, FOR REAPPOINTMENT TO THE GRADE OF ADMIRAL AND TO BE COMMANDER, UNITED STATES INDO-PACIFIC COMMAND

Tuesday, March 23, 2021

Washington, D.C.

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To view the full transcript of "To Consider the Nomination of Adm. John C. Aquilino, U.S. Navy, for Reappointment to the Grade of Admiral and to Be Commander, United States Indo-Pacific Command" from 23 March 2021, visit https://www.armed-services.senate.gov/imo/media/doc/21-14_03-23-2021.pdf.

> Admiral Aquilino: … they [China] view it as their number one priority. The rejuvenation of the Chinese Communist Party is at stake, very critical as they look at the problem. From a military standpoint, the strategic location of where it is, as it applies to the potential impact of two-thirds of the world's trade, certainly a critical concern. Additionally, the status of the United States as a partner with our allies and partners also is at stake, should we have a conflict in Taiwan. So those two reasons are really the strategic main concerns that I would see. [pp. 41–42]
>
> Senator Cotton: What would it mean for the PLA's [People's Liberation Army] enhanced capabilities if they were able to turn Taiwan essentially into a military base, if they were able to base aircraft and ships on the island if Taiwan, much like you discussed earlier with those islands they have got in the South China Sea. What advantage would that give to them?
>
> Admiral Aquilino: … it would extend their reach. It would extend the contested environment. It would threaten our allies and partners—think the Philippines. And it extends their reach initially away from their coast and to challenge the entire region, all allies and partners and friends. [p. 42]
>
> Senator Cotton: You spoke earlier about continuing Freedom of Navigation Operations in the South China Sea, despite those militarized, man-made islands. If Taiwan were annexed to the mainland and the PLA navy were based there, would you be able to continue Freedom of Navigation Operations in the South China Sea, or is the fact that Taiwan sits right at the top of the South China Sea significantly impede those operations? [p. 42]
>
> Admiral Aquilino: … we would still execute those operations. It certainly would be at greater risk.
>
> Senator Cotton: And then speaking about the point you made about our allies, if you were sitting in a treaty partners capital, conducting military planning, say Tokyo or Seoul, or for that matter sitting in any Southern Asian capital and thinking the United States might support you in the face of Chinese aggression, if we stood idly by while China invaded Taiwan and annexed it to the mainland, how would you feel?
>
> Admiral Aquilino: Senator, that was my second point. It certainly would impact the credibility of the United States as a partner in the region. [p. 43]
>
> Senator Cotton: Thank you. Last week, Admiral Davidson testified that he thinks the

PLA may have the capability to effectively invade Taiwan in as soon as 6 years, maybe less. Do you agree with that view?

Admiral Aquilino: Senator, there are many numbers out there. I know Admiral Davidson said 6 years. You have to ask him where he made that assessment. There are spans from today to 2045. My opinion is this problem is much closer to us than most think, and we have to take this on, put those deterrence capabilities like PDI in place, in the near term and with urgency. [p. 43]

Senator Cotton: … From a military planning point of view, what is the best time of year, given light, weather, and sea conditions, for the PLA to launch an invasion of Taiwan? Is it the middle part of the spring?

Admiral Aquilino: Yes, sir, that is certainly a better time as it applies to sea state and environmentals. [p. 44]

Senator Kaine: … if we are thinking about our national security challenges in the INDOPACOM, how much of our thoughts should be about a whole-of-government approach rather than just an armed services approach? [p. 45]

Admiral Aquilino: Yes, Senator. We need to engage with every aspect of national power to be able to compete against the PLA. So whether it be diplomacy, whether it be scientific, whether it be informational, every aspect has an ability to generate deterrence, extend the cooperation with our allies and partners…. and needs to expand across all elements of national power. [p. 45]

Senator Warren: … Admiral Davidson also warned that China was on course to double their nuclear stockpile this decade, and he agreed with a claim by one of my colleagues that if China quadrupled their nuclear stockpile they could, quote, "have nuclear overmatch against the United States." Now I want to look into the numbers on this. Last year's report on China's military power shows that their stockpile of operational nuclear warheads is only in the low 200s, far 16 fewer than the approximately 3,800 in the United States' active stockpile. So, Admiral, are you aware of any evidence that suggests that China intends to quadruple its nuclear stockpile in this decade?

Admiral Aquilino: … I think what I would say is there are many opinions on what those numbers are. I think the numbers you quoted are accurate with regard to today. What I would say is we see China increasing at a rate that is faster than anyone previously believed, their nuclear stockpile. So while I cannot directly, at this point, understand their intent or what their end target is, they are increasing. If you were to look at what they have done with their conventional force, I would see no reason why I would expect anything other than to have them continue to increase their nuclear capabilities and aspirations. [pp. 59–60]

Senator Tillis: … we got an update from NORTHCOM and SOUTHCOM on China's engagement, primarily in Latin and South America. Can you give me a quick rundown within your area, or your future area of responsibility in terms of China's relationships, say, today, as compared to 5 or 10 years ago, ostensibly economic or non-military engagement, but we all know there is a military dimension to almost everything that China does. So just a quick rundown of the areas of greatest concern. [p. 61]

Admiral Aquilino: … I think the main point that comes out is China is a global problem. When you talk about their areas of influence and what does it mean globally, there are economic efforts that are underway by China across the globe. There are military efforts underway, and, you know, it furthers their reach. It would allow access, logistic support

in time of crisis. So all of those things are a bit concerning. And for allies and partners across the globe, they have to understand what that means. [p. 62]

Senator Scott: … Do you believe that it is clear that we have got to prevent Communist China from controlling Taiwan, that it would be a strategic necessity for the United States to make sure Taiwan remains not controlled by Communist China, and the loss of Taiwan would devastate our ability to counter the aggressive actions of Communist China?

Admiral Aquilino: Yes, Senator. Again, the policy identifies that through the Taiwan Relations Act we support the defense of Taiwan. Three communiques and six 15 assurances. It would negatively impact our standing in the region if that were to happen, and it would challenge the rest of our allies and partners in the U.S., negatively impacting our ability to operate freely in that area.

Senator Scott: When you look at what Communist China has done with Hong Kong, why haven't they been even more aggressive with Taiwan, do you think?

Admiral Aquilino: I do not know how to answer that one, Senator, judging from intent. I think what I would articulate is we have seen aggressive actions earlier than we anticipated, whether it be on the Indian border or whether it be in Hong Kong or whether it be against the Uyghurs. We have seen things that I do not think we expected, and that is why I continue to talk about a sense of urgency. We ought to be prepared today. [pp. 68–69]

Senator Scott: What else do you think we need to do to make sure that Xi doesn't decide to invade Taiwan? What should we be doing that we are not doing right now?

Admiral Aquilino: Senator, I think an increase in our forward deterrent posture, as identified by Admiral Davidson in the Pacific Deterrence Initiative is a great first start. But capable, lethal forces west of the Date Line, to be able to respond on extremely short notice, combined with synchronization with our allies and partners to ensure that all understand that that is not within the best interests of anyone in the theater. [pp. 69–70]

Senator Manchin: Okay. And speaking of Admiral Davidson, back in 2018, during his confirmation hearing, China was already capable of controlling the South China Sea and any scenario short of war with the U.S. Here we are 3 years later, and we have heard repeated testimony that China has increased its naval forces, its coast guard and other paramilitary forces. So what is stopping them right now from exercising their capability whenever they feel like it, of controlling the South China Sea?

Admiral Aquilino: The U.S. joint forces in the region, Senator, the partner nations? [p. 74]

Senator Sullivan … In 2015, President Obama and President Xi Jinping stood 5 in the Rose Garden, and President Xi Jinping promised the President of the United States and the American people not to militarize the South China Sea. Did President Xi Jinping keep that promise?

Admiral Aquilino: No, Senator, he did not. [pp. 92–94] ■

Lt. Gen. H. R. McMaster, U.S. Army, retired, testifies before the Senate Armed Services Committee 2 March 2021 in Washington, D.C. (Screenshot taken from a United States Senate video)

Extract from Statement of Lt. Gen. H. R. McMaster, U.S. Army, Retired, before the Senate Armed Services Committee Hearing on Global Security Challenges

2 March 2021

For too long the United States clung to the assumption that China, having been welcomed into the international system based on our desire for cooperation and engagement, would play by the rules and, as China prospered, its leaders would liberalize its economy and its form of governance. The 2017 National Security Strategy and the Indo-Pacific Strategy administered a corrective to that false assumption, recognized the need for transparent competition with the Chinese Communist Party's

aggressive policies, and effected what may be the most significant shift in U.S. foreign policy since the end of the Cold War. If any doubts lingered concerning the Chinese Communist Party's intention to extend and tighten its exclusive grip on power internally and achieve "national rejuvenation" at the expense of other nations externally, the CCP's actions in the midst of a global pandemic should have removed them. CCP leaders continued to speak the language of cooperation and global governance while repressing human freedom, exporting their authoritarian-mercantilist model and subverting international organizations. Chairman Xi speaks of "rule of law" while he interns millions of people in concentration camps and wages a campaign of cultural genocide against the Uighur population in Xinjiang. He vows carbon neutrality by 2060 while China continues to build scores of coal-fired plants globally per year. He gives speeches on free trade while engaging in economic aggression, forced labor, economic coercion, and unfair trade and economic practices. He suggests a "community of common destiny" while fostering servile relationships with countries vulnerable to his military or economic intimidation. The Chinese Communist Party's Orwellian reversal of the truth matters to Americans because the CCP is not only strengthening an internal system that stifles human freedom and extends its authoritarian control; it is also exporting that model and advocating for the development of new rules and a new international order that would make the world less free, less prosperous, and less safe. ■


Statement of LTG H.R. McMaster (U.S. Army, retired)

Senior Fellow, Hoover Institution, Stanford University

Before The Senate Armed Services Committee

Hearing on Global Security Challenges

2 March 2021

"If we falter in our leadership, we may endanger the peace of the world – and we shall surely endanger the welfare of this Nation."

– President Harry S. Truman, March 12, 1947

H.R. McMaster

To view the transcript of the "Statement of Lt. Gen. H. R. McMaster, U.S. Army, retired, Senior Fellow, Hoover Institution, Stanford University Before The Senate Armed Services Committee Hearing on Global Security Challenges," visit https://www.armed-services.senate.gov/imo/media/doc/McMaster--Statement%20for%20the%20Record_03-02-21.pdf.

Extract from Secretary of Defense Lloyd J. Austin III's Remarks at the 40th International Institute for Strategic Studies Fullerton Lecture (As Prepared)

27 July 2021

Beijing's claim to the vast majority of the South China Sea has no basis in international law. That assertion treads on the sovereignty of states in the region. We continue to support the region's coastal states in upholding their rights under international law. And we remain committed to the

Secretary of Defense Lloyd J. Austin III gives remarks on "The Imperative of Partnership" 27 July 2021 at the 40th International Institute for Strategic Studies Fullerton Lecture in Singapore. (Photo by Chad J. McNeeley, Department of Defense)

SECRETARY OF DEFENSE SPEECH

Secretary of Defense Remarks at the 40th International Institute for Strategic Studies Fullerton Lecture (As Prepared)

To view Secretary of Defense Lloyd J. Austin III's complete remarks, visit https://www.defense.gov/Newsroom/Speeches/Speech/Article/2708192/secretary-of-defense-remarks-at-the-40th-international-institute-for-strategic/.

treaty obligations that we have to Japan in the Senkaku Islands and to the Philippines in the South China Sea.

Unfortunately, Beijing's unwillingness to resolve disputes peacefully and respect the rule of law isn't just occurring on the water. We have also seen aggression against India … destabilizing military activity and other forms of coercion against the people of Taiwan … and genocide and crimes against humanity against Uyghur Muslims in Xinjiang.

Now, these differences and disputes are real. But the way that you manage them counts.

We will not flinch when our interests are threatened. Yet we do not seek confrontation.

So let me be clear: As Secretary, I am committed to pursuing a constructive, stable relationship with China … including stronger crisis communications with the People's Liberation Army. You know, big powers need to model transparency and communication. And we hope that we can work together with Beijing on common challenges, especially the threat of climate change.

Yet even in times of competition, our enduring ties in Southeast Asia are bigger than just geopolitics. As Prime Minister Lee has counseled, we are not asking countries in the region to choose between the United States and China. In fact, many of our partnerships in the region are older than the People's Republic of China itself. ■

Adm. Philip S. Davidson, U.S. Navy, testifies before the Senate Armed Services Committee 9 March 2021 in Washington, D.C. (Screenshot taken from a Department of Defense video)

Extract from the Statement of Adm. Philip S. Davidson, U.S. Navy Commander, U.S. Indo-Pacific Command, before the Senate Armed Services Committee on U.S. Indo-Pacific Command Posture

9 March 2021

Chairman Reed, Ranking Member Inhofe, and distinguished members of the Committee, thank you for the opportunity to appear before you to discuss the Indo-Pacific Region. The Indo-Pacific is the most consequential region for America's future and remains the Department of Defense's priority theater. This region contains four of the five priority security challenges identified by the Department of Defense and includes frequent natural and man-made disasters, the negative impacts of climate change, rapid population growth, and of course, disease and pandemics.

The Indo-Pacific accounts for 60 percent of the world's current Gross Domestic Product (GDP) and contributes more than two-thirds to the present global economic growth. Trade and investment in this dynamic region are vital to the security and prosperity of the United States

and reflective in more than $1.9 trillion in two-way trade with the Association of Southeast Asian Nations (ASEAN), serving as the number one destination for U.S. foreign direct investment (FDI). In 10 years, the region will host two-thirds of the world's population and two-thirds of the global economy.

Our Nation's vision for peace and prosperity in a Free and Open Indo-Pacific continues to resonate in the region and serves as an important reminder to all nations that the U.S. remains committed to free and fair trade, shared access to global markets, good governance, and human rights and civil liberties. The region's economic prosperity and security are inextricably linked and part of the competitive landscape.

The greatest danger for the United States in this competition is the erosion of conventional deterrence. A combat-credible, conventional deterrent posture is necessary to prevent conflict, protect U.S. interests, and to assure our allies and partners. Absent a convincing deterrent, the People's Republic of China (PRC) will be emboldened to take action to undermine the rules-based international order and the values represented in our vision for a Free and Open Indo-Pacific. The combination of the PRC's military modernization program and willingness to intimidate its neighbors through the use, or threatened use of force, undermines peace, security, and prosperity in the region.

To view the complete transcript of the "Statement of Adm. Philip S. Davidson, U.S. Navy Commander, U.S. Indo-Pacific Command, before the Senate Armed Services Committee on U.S. Indo-Pacific Command Posture," visit https://www.armed-services.senate.gov/imo/media/doc/Davidson_03-09-21.pdf.

U.S. Indo-Pacific Command's approach for addressing Great Power Competition centers on advancing a Free and Open Indo-Pacific by focusing on four critical areas:

1. Increasing Joint Force Lethality
2. Enhancing Design and Posture
3. Strengthening Allies and Partners
4. Modernizing our Exercises, Experimentation, and Innovation Programs

In 2019, I reported to this Committee we had lost a quantitative advantage and our qualitative advantage was shrinking across several domains as the People's Liberation Army (PLA) fields higher quality systems.

However, with this Committee's efforts to establish the Pacific Deterrence Initiative (PDI), along with resourcing our advanced undersea warfare capabilities and 5th generation fighters, I am optimistic you have created the opportunity to Regain the Advantage, but we must remain diligent. PDI provides the foundation for establishing a forward-deployed, defense-in-depth posture that defends our interests abroad, deters aggression, assures allies and partners, and provides flexible response options should deterrence fail. PDI also provides the requisite budget transparency and oversight to ensure resources are prioritized appropriately. Thank you for your continued support.

On top of PDI support, investing in our most critical and resilient resource – our people – is a national security imperative. USINDOPACOM is staunchly committed to promoting the health and well-being of our teammates. …

For the future, combat credible deterrence depends on our ability to achieve four specific outcomes: 1) develop an agile and distributed Joint Force designed to deter and deny our adversaries of their objectives in the first and second island chains; 2) regain positional advantage by evolving our posture and balancing key capabilities across South Asia, Southeast Asia, and Oceania resulting in a more dynamic and distributed presence; 3) establish a network of compatible and interoperable allies and partners who are willing and able to protect their sovereignty from coercion; and 4) reassure our allies and partners of our commitment by revealing the capacity to conduct complex operations and concealing capabilities that provide a decisive advantage. A strategy of deterrence supported by a command climate that places the dignity and respect of each individual as a vital aspect in how we train, maintain, and sustain the force is an imperative for the Joint Force's ability to deploy and perform assigned missions. ■

The Question

Why Would China Not Invade Taiwan Now?

Posed by Tim Willasey-Wilsey, Former Senior Member, British Foreign Office

4 June 2020 | The Cipher Brief

*Reprinted by permission from The Cipher Brief, https://www.thecipherbrief.com/the-question-why-would-china-not-invade-taiwan-now. **Editor's note:** This article reflects the exact wording of the original and has only been modified slightly to conform to usage guidance as noted in* The Chicago Manual of Style.

One of many pieces of nationalist propagandistic artwork created by students of the Sichuan Fine Arts Institute in Chongqing, China, that depict a People's Liberation Army invasion of Taiwan. (Image courtesy of the Sichuan Fine Arts Institute)

The political arguments for an invasion of Taiwan by China have grown considerably stronger in recent weeks. The main constraint now is military. The key question is whether the People's Liberation Army (PLA) is capable of achieving a quick victory over Taiwan.

Western experts were confident that the Soviets would not go into Czechoslovakia in 1968, and Afghanistan in 1979, the Iraqis into Kuwait in 1990, and the Russians into Crimea in 2014. Even the Israelis misread the signals at the start of the Yom Kippur war in 1973. This is not an area where the West has a good record.

A key question now is whether China might risk an invasion of Taiwan. Some analysts have seized on recent clues. Chinese Prime Minister Premier Li Keqiang dropped the word "peaceful" before "reunification" when discussing Taiwan in his annual work report published in May. And President Xi Jinping, speaking to the PLA on 26 May, suggested they should "comprehensively strengthen the training of troops and prepare for war".

This article does not argue that China will invade Taiwan. There are good reasons for the Chinese not doing so. It would be a huge gamble for armed forces which have not been employed in combat during the careers of even their most senior officers. The aircraft carriers and amphibious landing ships are still relatively new. A lot could go wrong. A very public military failure would be a humiliating and possibly career-threatening experience for President Xi Jinping and for the Chinese Communist Party (CCP). Many members of the leadership would doubtless argue for patience.

What this article *does* try to convey are the arguments in favor of acting now rather than waiting. There is likely to be at least one member of the Politburo Standing Committee (PBSC) and the Central Military Commission (CMC) who would make some or all of the following ten points.

- There may never be another moment when the whole world is focused on managing an event of the scale of the coronavirus pandemic. There is not the bandwidth in any Western capital to react to another global crisis. Furthermore, China itself is over the worst of its own domestic COVID-19 outbreak.
- There has always been an intention, voiced in different ways over the years, to unify the country in time for the centenary of the CCP in 2021 and long before that of the People's Republic of China (PRC) in 2049.
- The idea of "one country, two systems" appears to have failed in Hong Kong. The new Chinese clampdown in Hong Kong will kill forever any notion that Taiwan can be lured into a similar arrangement.
- The victory of the Democratic Progressive Party (DPP) in the January 2020 elections has shown that the nationalist spirit is still alive and well in Taiwan. With a four-year term there is no guarantee that a pro-Beijing party will win in 2024, especially after the coming repression of Hong Kong. Nor does the new DPP administration respect the "1992 Consensus", by which a former Kuomintang (KMT) government tacitly accepted that China and Taiwan were a single nation.
- The Trump administration has no appetite for overseas military adventures, and certainly not before the November U.S. presidential election. Trump is not going to war with China, and not over Taiwan. He is far more interested in trade wars and economic advantage.
- The Americans have always been ambivalent about the exact nature of their defense commitments to Taiwan. The 1979 Taiwan Relations Act fell far short of a guarantee to come to Taiwan's assistance in the event of a Chinese invasion. Even President Reagan's "Six Assurances" of 1982 made no mention of U.S. military intervention.
- There is little chance that the U.S. would sail a carrier strike group into or near the Taiwan Strait now that the PLA Navy (PLAN) is equipped with quiet submarines. The loss of a U.S. surface ship could lead to a full-scale war which neither China nor the U.S. would wish under any circumstances.

Tim Willasey-Wilsey served for over twenty-seven years in the British Foreign and Commonwealth Office. His first overseas posting was to Angola during the Cold War followed by Central America during the instability of the late 1980s. Much of his career was spent in Asia including a posting to Pakistan in the mid–1990s. Tim has focused for many years on South Asia and North East Asia as well as the issues of terrorism, organized crime, insurgency, and conflict resolution. He has twice been elected to the Council of Chatham House, UK's premier global think-tank.

- Russia's President Vladimir Putin showed how it should be done when, in 2014, he annexed the Crimean Peninsula. The secret is to achieve victory quickly and then accept the inevitable diplomatic condemnation and imposition of sanctions. But the international community has a short memory. There is even talk now of readmitting Russia to the G7.
- The PLA needs to be used if China is to be recognized as a genuine world power. The Americans have had the Balkans, Iraq, and Afghanistan to demonstrate their military prowess and become proficient with their equipment in action, but the Chinese military have been confined to barracks for too long.
- China could hardly be more globally unpopular than now. Much of it may be unfair but there will be plenty of time to improve diplomatic relations once Taiwan has been safely reunified. And, once reunified, pro-Western countries, like Japan and South Korea, will be more humbled and less likely to believe in the U.S. defense umbrella.

With such a forceful political case made for an invasion, the focus would then turn to the PLA members on the CMC. When asked if they could quickly conquer Taiwan, it would be fascinating to hear their answer.

The Conversation

Editor's note: This column has been modified from its original version. The original document with all guest notes can be found at https://www.thecipherbrief.com/the-question-why-would-china-not-invade-taiwan-now.

I find Mr. Willasey-Wilsey's proposition plausible. Though the Chinese are quintessentially patient, they are also demonstrably opportunistic. I would be surprised if this debate hasn't already begun within the CMC. In the end, I think they will conclude that there are more reasons for them to remain patient on the Taiwan issue. But I hope we have our antennas up.

—Gen. Martin Dempsey (Ret.), Former Chairman of the Joint Chiefs of Staff

There is a cogent argument to be made at the most senior levels in Beijing that this is a perfect moment for a strike on Taiwan. But I would ascribe less than a one in four chance that they make a military move in the immediate future, i.e., before U.S. elections. The risks militarily are far from negligible. The Taiwanese will fight and fight hard. As Sun Tzu says, despite all his elegant tactical and strategic maneuvering, "when on death ground, fight." Madame Tsai, the current president and her national security team will see this correctly as a death ground and they will fight. Second, China has much more to lose internationally from economic sanctions than any other major economy. Coming on top of the COVID fiasco, there will be plenty of international support to really hurt its economy. Finally, I think it is valid to say the U.S. won't want to get into a war over Taiwan; but there are many military options in cyber, South China Sea strikes, special forces, and other means to indicate displeasure in the event of such a move. All of this is a somewhat close call, and from a Chinese perspective there are indeed reasons to "fight tonight" for Taiwan—but my assessment is the Chinese will crack down on Hong Kong, build their fleet, economy, and cyber for another decade, and make their move then against Taiwan—not now. They will play the long game.

—Adm. James Stavridis (Ret.), Former Supreme Allied Commander, NATO

This is an interesting hypothesis. There probably are some hawks in Beijing arguing for the invasion of Taiwan, confident the U.S. would not respond with military might. They would be wrong. Failure to defend Taiwan is not an option. The Taiwan Relations Act of January 1, 1979, mandated by the Congress, is explicit: " … any effort to determine the future of Taiwan by other than peaceful means … (is) a threat to the peace and security of the Western Pacific area and of grave concern to the U.S. … To maintain the capacity of the U.S. to resist any resort to force or other forms of coercion that would jeopardize the security, or the social and economic system, of the people of Taiwan." The President and Congress, with the vast support of the American people, would respond quickly and decisively to an invasion of Taiwan. This is a moral and geostrategic imperative for the U.S. Moreover, an invasion of Taiwan would be a military and economic disaster for China. Taiwan is not Crimea. Militarily, Taiwan has capabilities that, coupled with U.S. support, would repel an invasion, inflicting significant damage on China. Economically, China is experiencing high unemployment, estimated at from 15 to 20 percent of the population, with export orders falling to rates similar to the 2009 global financial crisis. An invasion of Taiwan would devastate its faltering economy, with global opprobrium ending its ambitious Belt and Road and other related initiatives. In short, an invasion of Taiwan would be a catastrophic miscalculation on the part of China.

—Amb. Joseph DeTrani, Former Special Advisor to the DNI and former CIA Director of East Asia Operations

Military Review

RECOMMENDS

China's National Defense in the New Era

The State Council Information Office of the People's Republic of China

July 2019

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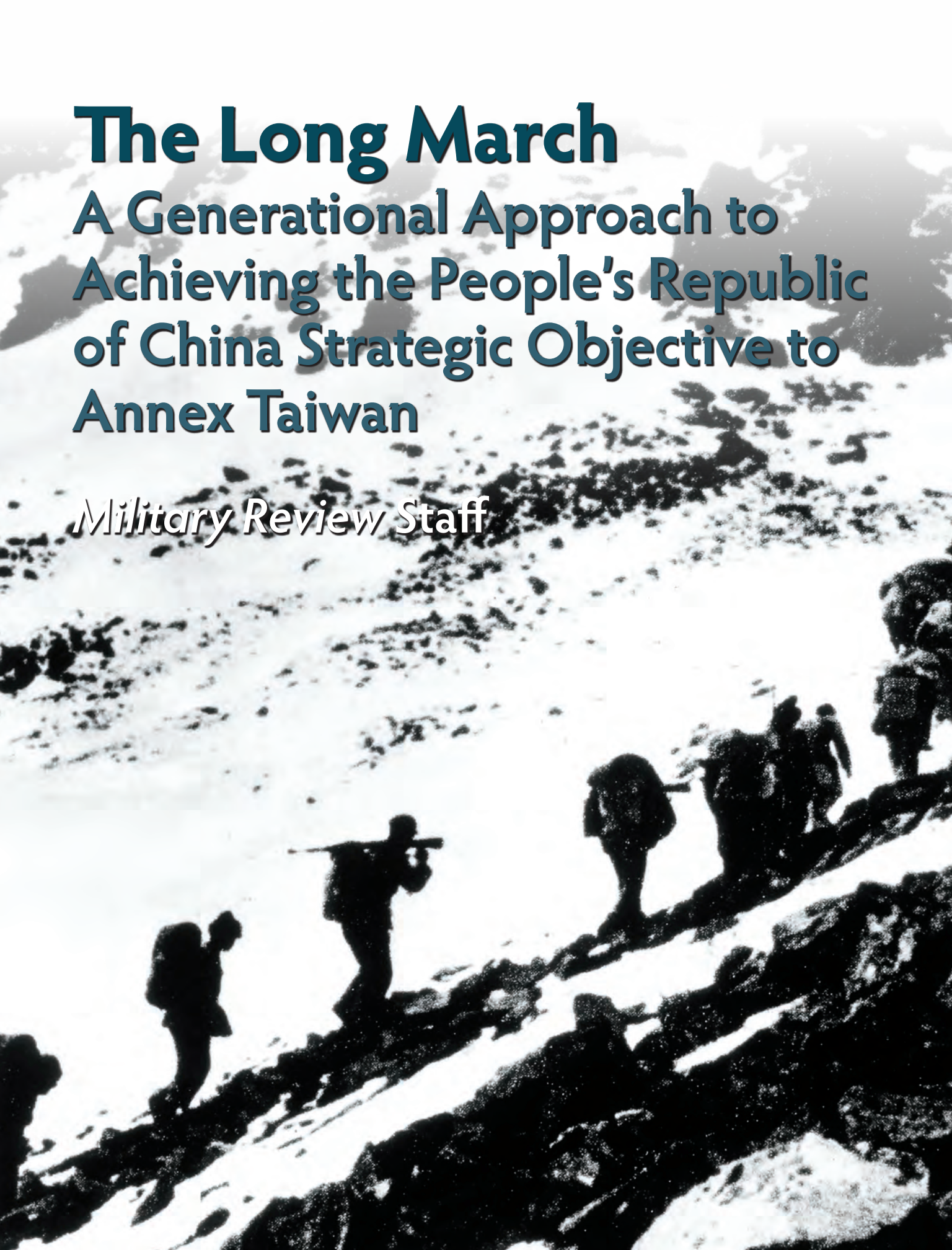
"China's National Defense in the New Era," is an official white paper of the People's Republic of China outlining official policy objectives and initiatives justifying the continuing expansion of Chinese military capability including military outreach to nations globally. It singles out the United States and NATO as nations provoking military expansion and threats to regional peace in Europe, Central Asia, and the Far East. It also tacitly justifies increased militarization of the South China Sea as a matter of national defense. To view an official English-language translation of this paper, visit http://www.xinhuanet.com/english/2019-07/24/c_138253389.htm.

The Long March

A Generational Approach to Achieving the People's Republic of China Strategic Objective to Annex Taiwan

Military Review Staff



Editor's post script: "The Long March" is a frequently invoked phrase in socialist literature that has deep metaphorical significance to the global communist movement in general and to Chinese Maoist communists specifically. The phrase literally refers to the epic journey of the Chinese Communist army, which broke through encirclement by the Nationalist Chinese Army (Kuomintang) in October 1934 and survived by escaping to hiding places in northern China under the leadership of Mao Tse-tung. The trek lasted over a year and covered more than four thousand miles. It was accomplished at the cost of great hardship and suffering, and required great forbearance to complete. Today the phrase "The Long March" is frequently invoked by the PRC as a meaning-packed symbol and supercharged mantra to stress the need for complete devotion to the cause of communism, willingness to endure extreme hardship, and—above all—indefatigable persistence and patience in single-minded pursuit of national objectives that might require decades to accomplish.

In contrast to the symbolism of the Long March, the remnants of the Republic of China's government fled mainland Chain to the island of Taiwan in "The Great Retreat" to escape the advancing Communist People's Liberation Army led by Mao Tse-tung. There the Kuomintang (Chinese Nationalist Party), under the leadership of Pres. Chiang Kai-shek, established what was envisioned as a temporary alternate government headquarters in anticipation of returning to mainland China to recover power

After visiting the Marshall Islands and Tuvalu during her tour named "Sustainable Austronesia: Working Together for a Better Future—2017 State Visits to Pacific Allies," Taiwan's President Tsai Ing-wen makes her last stop at the Solomon Islands 2 November 2017 to meet with Prime Minister Manasseh Sogavare. Under pressure from communist China, the Solomon Islands broke ties with Taiwan in September 2019. (Photo courtesy of Wikimedia Commons)

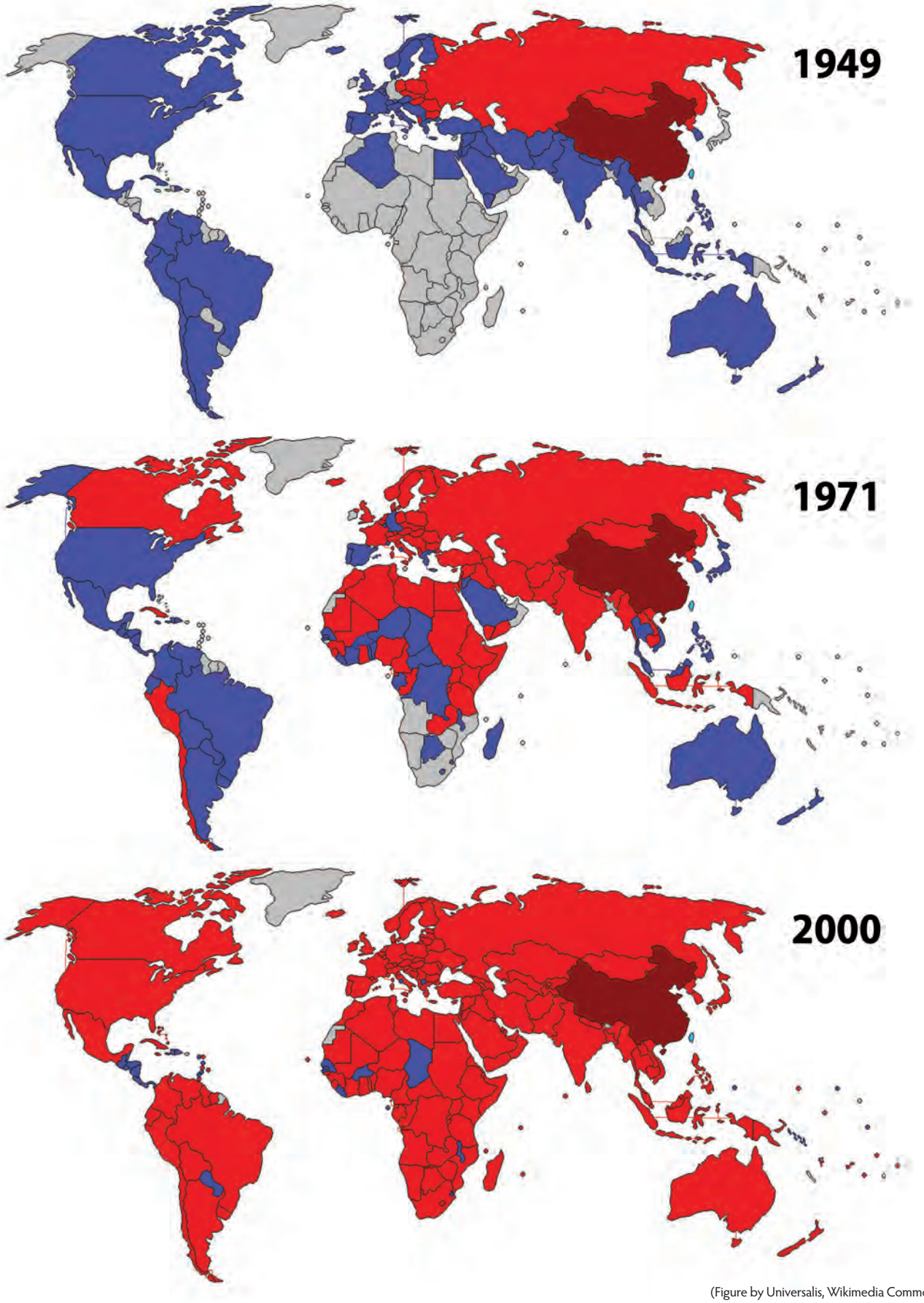
Previous page: During The Long March of 1935, Red Army soldiers cross a mountain in Western China. (Photo by JT Vintage, Glasshouse Images/Alamy Stock Photo)

(Figure by Agence France-Presse. Source: Taiwanese Foreign Ministry, as of 18 May 2020)

Fifteen Remaining Nations with Diplomatic Ties to Taiwan

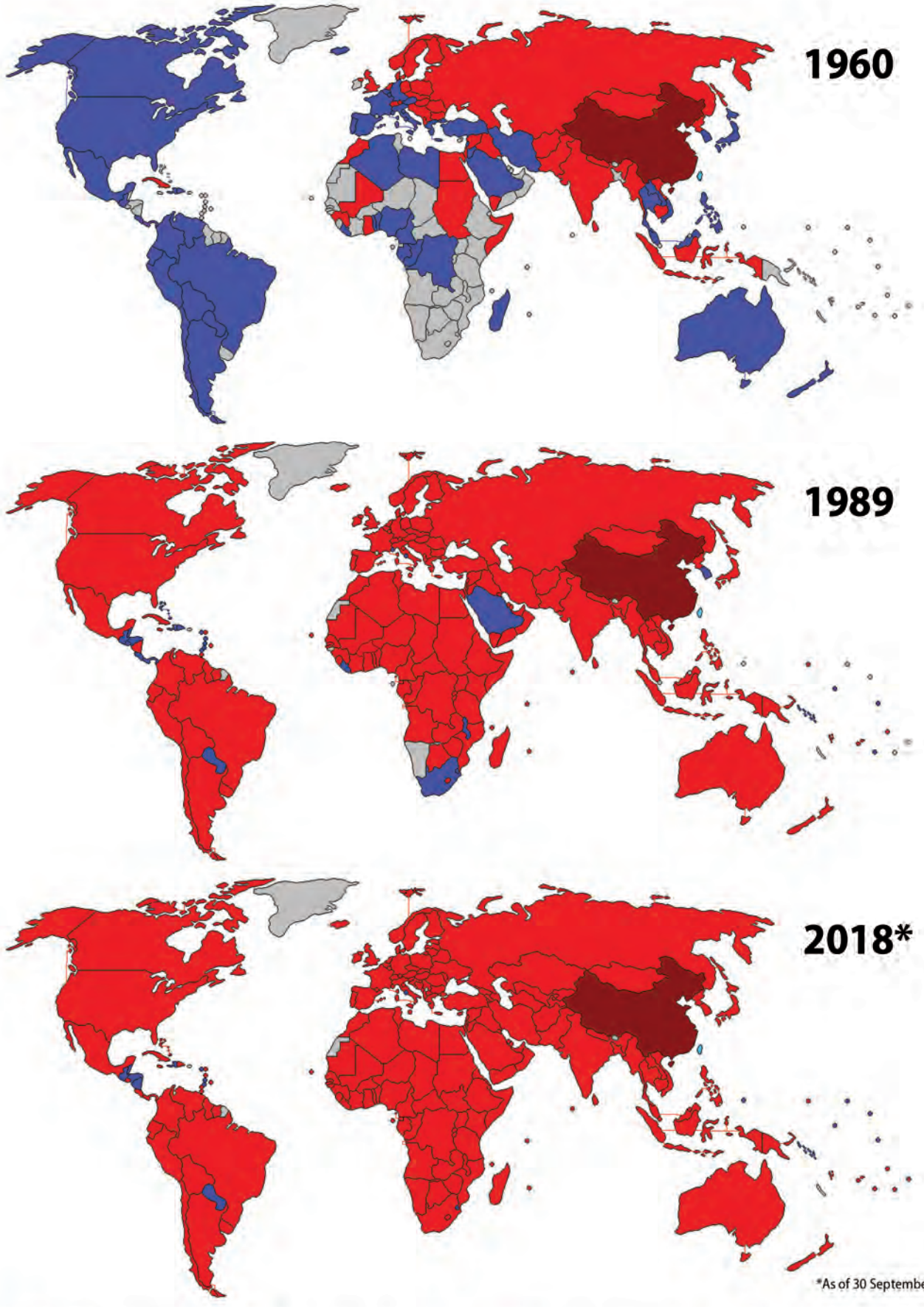
China considers Taiwan a renegade province to be reunified by force if necessary

from the communist Chinese. Subsequently, though the dream of the Kuomintang returning to power in mainland China has gradually disappeared, the result has been that Taiwan evolved to be virtually an alternate country. Notwithstanding, recognizing that Taiwan as a separate entity that operates under a different system of governance will always pose a historical, psychological, and moral challenge to the legitimacy of communist rule in the eyes of the Chinese people broadly as long as it exists, PRC rulers have for decades prepared in many venues in anticipation of any emerging opportunity to annex Taiwan by force. In taking the long view, one of the major impediments to this quest identified by the PRC was the threat of pressure brought by world public opinion generated through the diplomatic ties Taiwan had with other nations, which might manifest itself at inconvenient times in such ways as votes against PRC aggression within the UN, pressure from adverse global media attention, and vulnerabilities produced by tenuous economic ties that could be easily severed. Consequently, the PRC has for decades engaged in a dual pronged simultaneous economic and diplomatic "Long March" against Taiwan aimed at entirely isolating it from diplomatic recognition and economic independence from China for the explicit purpose of ensuring that there would be little if any global political or economic costs should the PRC take military action against Taiwan. The PRC has largely accomplished both objectives of this Long March. With regard to Taiwan's diplomatic standing in the world, the two figures provided illustrate that, where once Taiwan enjoyed diplomatic recognition and economic ties with many nations of the world, it now has formal diplomatic relations with just fifteen nations, most of which are small island countries in the eastern Pacific and the Caribbean. As a result, in the event of a conflict with the PRC, Taiwan would have little if any voice in such diplomatic forums as the UN and few diplomatic ties upon which to call for assistance. Of note, the PRC is continuing its aggressive diplomatic efforts to pressure or entice the remaining fifteen countries to cut ties with Taiwan. ■



(Figure by Universalis, Wikimedia Commons)

The Struggle between China and Taiwan for International Recognition


1960
1989
2018*
*As of 30 September 2018
People's Republic of China (PRC)
Republic of China (ROC)/Taiwan
Countries that recognize PRC
Countries that recognize ROC

Extract from the Annual Report to Congress "Military and Security Developments Involving the People's Republic of China 2019"

Office of the Secretary of Defense

"The report shall address the current and probable future course of military-technological development of the People's Liberation Army and the tenets and probable development of Chinese security strategy and military strategy, and of the military organizations and operational concepts supporting such development over the next 20 years. The report shall also address United States-China engagement and cooperation on security matters during the period covered by the report, including through United States-China military-to-military contacts, and the United States strategy for such engagement and cooperation in the future."

What Is China's Strategy?

China's leaders have benefited from what they view as a "period of strategic opportunity" during the initial two decades of the 21st century to develop domestically and expand China's "comprehensive national power." Over the coming decades, they are focused on realizing a powerful and prosperous China that is equipped with a "world-class" military, securing China's status as a great power with the aim of emerging as the preeminent power in the Indo-Pacific region.

In 2018, China continued harnessing an array of economic, foreign policy, and security tools to realize this vision. Ongoing state-led efforts, which China implements both at home and abroad and which often feature economic and diplomatic initiatives, also support China's security and military objectives:

- China continues to implement long-term state-directed planning, such as "Made in China 2025" and other industrial development plans, which stress the need to replace imported technology with domestically produced technology. These plans present an economic challenge to nations that export high-tech products. These plans also directly support military modernization goals by stressing proprietary mastery of advanced dual-use technologies.
- China's leaders seek to align civil and defense technology development to achieve greater efficiency, innovation, and growth. In recent years, China's leaders elevated this initiative, known as Civil-Military Integration (CMI), to a national strategy that incentivizes the civilian sector to enter the defense market. The national CMI strategy focuses on hardware

modernization, education, personnel, investment, infrastructure, and logistics.

- China's leaders are leveraging China's growing economic, diplomatic, and military clout to establish regional preeminence and expand the country's international influence. China's advancement of projects such as the "One Belt, One Road" Initiative (OBOR) will probably drive military overseas basing through a perceived need to provide security for OBOR projects.
- China conducts influence operations against media, cultural, business, academic, and policy communities of the United States, other countries, and international institutions to achieve outcomes favorable to its security and military strategy objectives. The Chinese Communist Party (CCP) seeks to condition foreign and multilateral political establishments and public opinion to accept China's narrative surrounding its priorities like OBOR and South China Sea territorial and maritime claims.

Recognizing that programs such as "Made in China 2025" and OBOR have sparked concerns about China's intentions, China's leaders have softened their rhetoric when promoting these programs without altering the programs' fundamental strategic goals.

A Comprehensive Approach to Managing Regional Disputes

China seeks to secure its objectives without jeopardizing the regional stability that remains critical to the economic development that has helped the CCP maintain its monopoly on power. However, China's leaders employ tactics short of armed conflict to pursue China's strategic objectives through activities calculated to fall below the threshold of provoking armed conflict with the United States, its allies and partners, or others in the Indo-Pacific region. These tactics are particularly evident in China's pursuit of its territorial and maritime claims in the South and East China Seas as well as along its borders with India and Bhutan. In 2018, China continued militarization in the South China Sea by placing anti-ship cruise missiles and long-range surface-to-air missiles on outposts in the Spratly Islands, violating a 2015 pledge by Chinese President Xi Jinping that "China does not intend to pursue militarization" of the Spratly Islands. China is also willing to employ coercive measures —both military and nonmilitary—to advance its interests and mitigate opposition from other countries.

Building a More Capable People's Liberation Army

In support of the goal to establish a powerful and prosperous China, China's leaders are committed to developing military power commensurate with that of a great power. Chinese military strategy documents highlight the requirement for a People's Liberation Army (PLA) able to fight and win wars, deter potential adversaries, and secure Chinese national interests overseas, including a growing emphasis on the importance of the maritime and information domains, offensive air operations, long-distance mobility operations, and space and cyber operations.

In 2018, the PLA published a new *Outline of Training and Evaluation* that emphasized realistic and joint training across all warfare domains and included missions and tasks aimed at "strong military opponents." Training focused on war preparedness and improving the PLA's capability to win wars through realistic combat training, featuring multi-service exercises, long-distance maneuvers and mobility operations, and the increasing use of professional "blue force" opponents. The CCP also continued vigorous efforts to root out corruption in the armed forces.

The PLA also continues to implement the most comprehensive restructure in its history to become a force capable of conducting complex joint operations. The PLA strives to be capable of fighting and winning "informatized

local wars"—regional conflicts defined by real-time, data-networked command and control (C2) and precision strike. PLA modernization includes command and force structure reforms to improve operational flexibility and readiness for future deployments. As China's global footprint and international interests have grown, its military modernization program has become more focused on investments and infrastructure to support a range of missions beyond China's periphery, including power projection, sea lane security, counterpiracy, peacekeeping, humanitarian assistance/disaster relief, and noncombatant evacuation operations.

China's military modernization also targets capabilities with the potential to degrade core U.S. operational and technological advantages. China uses a variety of methods to acquire foreign military and dual-use technologies, including targeted foreign direct investment, cyber theft, and exploitation of private Chinese nationals' access to these technologies, as well as harnessing its intelligence services, computer intrusions, and other illicit approaches. In 2018, Chinese efforts to acquire sensitive, dual-use, or military-grade equipment from the United States included dynamic random access memory, aviation technologies, and antisubmarine warfare technologies.

Reorganizing for Operations along China's Periphery

China continues to implement reforms associated with the establishment of its five theater commands, each of which is responsible for developing command

strategies and joint operational plans and capabilities relevant for specific threats, as well as responding to crises and safeguarding territorial sovereignty and stability. Taiwan persistently remains the PLA's main "strategic direction," one of the geographic areas the leadership identifies as having strategic importance. Other strategic directions include the East China Sea, the South China Sea, and China's borders with India and North Korea. China's overall strategy toward Taiwan continues to incorporate elements of both persuasion and coercion to hinder the development of political attitudes in Taiwan favoring independence. Taiwan lost three additional diplomatic partners in 2018, and some international fora continued to deny the participation of representatives from Taiwan. Although China advocates for peaceful unification with Taiwan, China has never renounced the use of military force, and continues to develop and deploy advanced military capabilities needed for a potential military campaign.

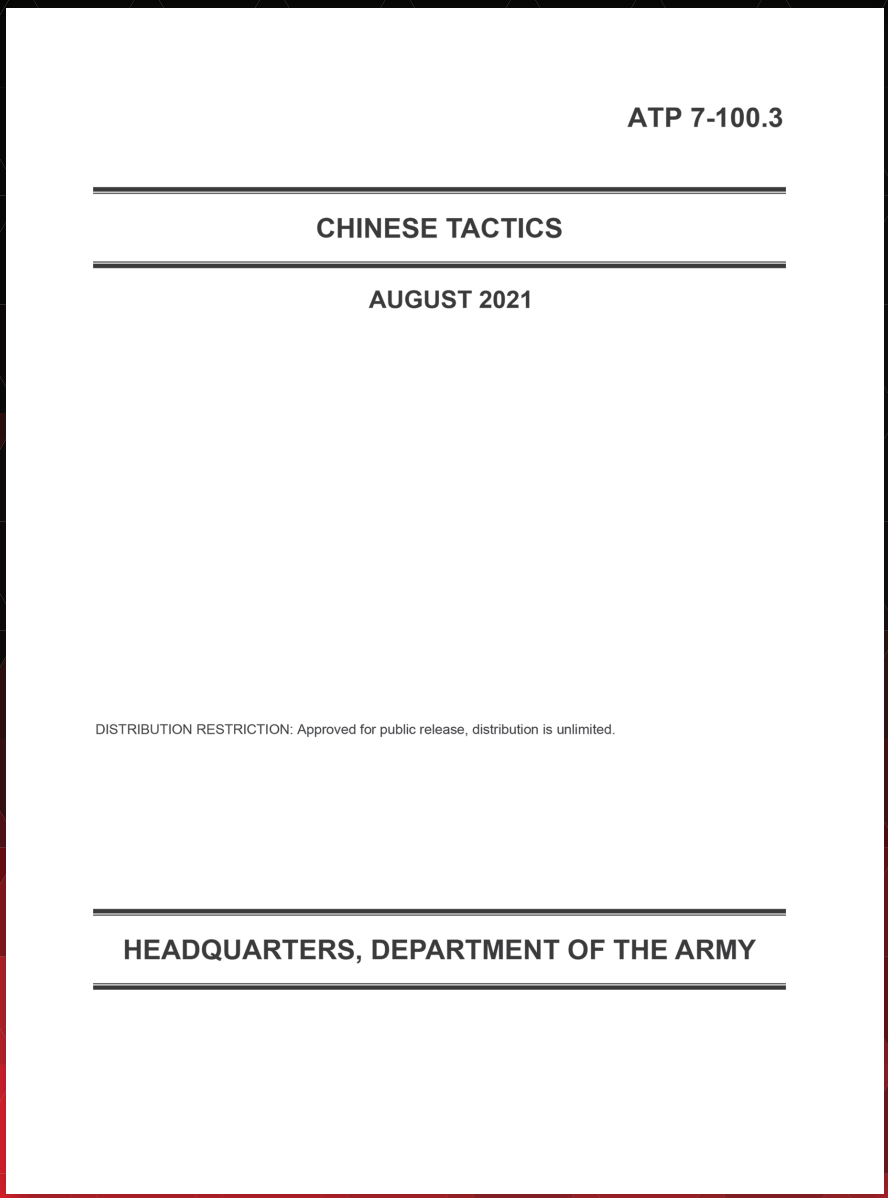
For those interested in examining the entire report, please visit https://media.defense.gov/2019/May/02/2002127082/-1/-1/1/2019_CHINA_MILITARY_POWER_REPORT.pdf. ■

Soldiers of China's People's Liberation Army march 30 July 2017 during a military parade to commemorate the ninetieth anniversary of the foundation of the army at the Zhurihe military training base in Inner Mongolia Autonomous Region, China. (Photo courtesy of Voice of America)

Military Review

RECOMMENDS

Army Technical Publication (ATP) 7-100.3, *Chinese Tactics*, describes China's People's Liberation Army military doctrine with a focus on tactical employment of ground forces in offense, defense, and related mission sets. Other topics include descriptions of task organization, capabilities, and limitations related to military mission and support functions. This document released by the Department of the Army Headquarters provides foundational knowledge for understanding how Chinese ground forces think and act in tactical operations. To view ATP 7-100.3, visit https://armypubs.army.mil/epubs/DR_pubs/DR_a/ARN33195-ATP_7-100.3-000-WEB-1.pdf.



ATP 7-100.3

CHINESE TACTICS

AUGUST 2021

DISTRIBUTION RESTRICTION: Approved for public release, distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

A conference attendee photographs an image depicting global internet attacks on 16 August 2016 during the 4th China Internet Security Conference (ISC) in Beijing. Having reached a level of sophistication today that renders even the most advanced internet protection systems vulnerable to sustained hacking attacks, Chinese government-sponsored internet theft of proprietary information of all kinds (e.g., industrial, scientific, military, economic, and personal) from the United States and other nations has reached pandemic proportions. (Photo by Ng Han Guan, Associated Press)

Steal the Firewood from Under the Pot

The Role of Intellectual Property Theft in Chinese Global Strategy

Capt. Scott Tosi, U.S. Army

In September 2015, the United States and China reached an agreement in principle that specified, among other stipulations, that "neither the U.S. or the Chinese government will conduct or knowingly support cyber-enabled theft of intellectual property [IP]."[1] However, less than two years later, China's use of cyber-enabled IP theft was outlined bluntly in the 2017 National Security Strategy, which stated that "every year, competitors such as China steal U.S. intellectual property valued at hundreds of billions of dollars."[2] This snapshot of cyber-enabled IP theft represents a broader issue of IP theft by China that spans a wide range of methods and means. According to estimates, China's total annual amount of IP theft ranges from $225 billion to $600 billion; moreover, China is responsible for 50 to 80 percent of all IP theft occurring against the United States.[3]

Chinese IP theft has broad implications for the U.S. Army and the Department of Defense (DOD), particularly as U.S. strategic focus shifts from counterinsurgency to large-scale combat operations among great powers.[4] IP theft of Army and DOD equities and research and development threatens U.S. military technological superiority in future decades as China states it "will upgrade our military capabilities," so "that by the mid-21st century our people's armed forces have been fully transformed into world-class forces."[5]

Early Chinese IP Theft: Hide Our Capacities and Bide Our Time

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China's systematic targeting of foreign IP began at the outset of its modernization under Deng Xiaoping in 1978, when it implemented the Four Modernizations (agriculture, industry, science and technology, and defense). China elicited economic and technological development from the United Nations Development Programme and World Bank that same year, and within a decade it began sending millions of Chinese students abroad to study. Four Modernizations included two major efforts designed to establish science and technology industries within China. The first, the National High-Tech Research and Development Program, sought to emphasize science and technology at Chinese universities under the direction of a central government committee and the People's Liberation Army (PLA). The second, the Torch Program, sought to bring back thousands of Western-trained Chinese academics.[6] Together, these programs served as the government's early attempt to centralize science and technology research and development within the Communist Party of China (CCP) and the PLA in order to establish the early forms of the state-owned enterprises (SOE) that work hand-in-hand with the CCP, PLA, and foreign private enterprises to acquire technology.

As early as 1998, Chinese theft of U.S. IP had grown problematic enough to warrant the creation of the House Select Committee on U.S. National Security and Military/Commercial Concerns with the People's Republic of China. In 1999, the committee released a report that highlighted the efforts by China, as early as the 1970s, to target U.S. national labs to acquire sensitive technology.[7] The report also highlighted the primary means of acquisition at the time: illegally transferring technology from third countries, exploiting dual-use products, utilizing front companies to illegally acquire technology, using commercial enterprises as cover for technology acquisition, and acquiring interests in U.S. technology companies.[8] However, as China entered the twenty-first century, it looked toward a more aggressive means of sensitive technology acquisition.

Under President Hu Jintao, China launched the "National Medium- and Long-Term Plan for Development of Science and Technology (2006-2020)," or the "indigenous innovation" policy, in 2006. This policy implemented procurement rules that compelled foreign companies to hand over IP in exchange for access to Chinese markets.[9] Furthermore, the indigenous innovation increased domestic technological research and development funding while simultaneously pushing for "enhancing original innovation through co-innovation and re-innovation based on the assimilation of imported technologies."[10] Additional measures within the policy included state-run product testing geared toward studying foreign design and production

Dr. Nita Patel, director of antibody discovery and vaccine development, lifts a vial containing a potential COVID-19 vaccine 20 March 2020 at Novavax Labs in Gaithersburg, Maryland. The FBI has stated that the current Chinese government-directed effort to steal research related to development of a coronavirus vaccine as well as other industrial and military research through hacking has reached an unprecedentedly high level. (Photo by Andrew Caballero-Reynolds, Agence France-Presse)

methods, government procurement policies that blocked products not designed and produced in China to encourage foreign companies to disclose production methods within Chinese borders, and antimonopoly laws protecting SOEs that cooperated either under direct control or in close coordination with the CCP and the PLA.[11] Together, these policies promoted both legal and illegal acquisition of export-controlled IP from the United States and third countries as a quid pro quo for conducting business within mainland China.

A Shift in Chinese Policy: Xi Jinping's Thoughts on Socialism with Chinese Characteristics for a New Era

In his address to the CCP's 19th National Congress on 18 October 2017, Xi outlined his plan for China to become "a global leader in terms of composite national strength and international influence" by 2050, surpassing the United States and the West as the dominant world power both economically and militarily.[12] This tone is in stark contrast to Deng's "24-Character Strategy" of the 1990s, which stated "observe calmly; secure our position; cope with affairs calmly; hide our capacities and bide our time; be good at maintaining a low profile; and never claim leadership."[13] While China's overall goal to rise to prominence on the global stage has not changed from Deng's time to Xi's, the tone and aggressiveness at which economic, technological, and military goals are pursued have changed drastically.

Changes in policy and national law complemented this shift in tone beginning in 2016 with its Cybersecurity Law. Among numerous other changes and restrictions, this law mandates that all business firms that produce "important data during operations within the mainland territory of the People's Republic of China, shall store it within mainland China."[14] If the data is required to be transferred out of China for

business purposes, it must be examined and approved by Chinese authorities prior to release, opening the potential for widespread collection and theft of private data among companies operating in China.[15]

Additionally, China released the National Intelligence Law in 2017, which established an unprecedented level of cooperation between state agencies (such as the Ministry of State Security [MSS] and the PLA), private organizations, and people. Article 7 of the law opens private cooperation with state security, stating, "any organization or citizen cooperate with the state intelligence work in accordance with the law, and keep the secrets of the national intelligence work known to the public. The State protects individuals and organizations that support, assist and cooperate with national intelligence work."[16] Article 12 strikes a similar cooperative tone between state intelligence collection and private enterprise, stating, "the state intelligence work organization may, in accordance with relevant state regulations, establish cooperative relations with relevant individuals and organizations and entrust relevant work."[17]

WANTED BY THE FBI

YANQING YE

Acting as an Agent of a Foreign Government; Visa Fraud; Making False Statements; Conspiracy

DESCRIPTION

Date(s) of Birth Used: July 22, 1990	**Place of Birth:** Longhai, Fujian, China
Hair: Dark Brown	**Eyes:** Brown
Height: Approximately 5'4"	**Weight:** Approximately 110 pounds
Sex: Female	**Race:** Asian
Nationality: Chinese	**Languages:** English, Chinese

REMARKS

Ye is believed to be in China.

CAUTION

Yanqing Ye is a Lieutenant in the People's Liberation Army (PLA), the armed forces of the People's Republic of China, and a member of the Chinese Communist Party (CCP). Ye studied at the National University of Defense Technology (NUDT), a top military academy directed by the CCP in China. It is alleged that, on her J-1 visa application, Ye falsely identified herself as a "student" and lied about her ongoing military service at the NUDT. During Ye's time in the United States on her J-1 visa, she maintained close contact with her supervisor at the NUDT and other colleagues. While studying at Boston University's Department of Physics, Chemistry and Biomedical Engineering from October of 2017 to April of 2019, Ye allegedly continued to work as a PLA Lieutenant completing numerous assignments from PLA officers such as conducting research, assessing United States military websites, and sending United States documents and information to China.

On January 28, 2020, a federal arrest warrant was issued for Ye in the United States District Court for the District of Massachusetts, Boston, Massachusetts, after she was charged with acting as an agent of a foreign government, visa fraud, making false statements, and conspiracy.

If you have any information concerning this person, please contact your local FBI office or the nearest American Embassy or Consulate.

Field Office: Boston

Screenshot of an FBI wanted advisory for a suspected Chinese agent posted in 2020.

The shift in tone under Xi marks a transformation in an increasingly belligerent Chinese foreign policy economically, technologically, and militarily that has reflected the increased IP theft of U.S. technologies. Theft of IP directly complements the PLA's goal to modernize into a global power by the middle of the twenty-first century. The Information Office of the State Council outlined the future goals for the PLA in China's new global role in a 2015 white paper titled "China's Military Strategy." The white paper stated the PLA will "accelerate the modernization of national defense and armed forces … for achieving the national strategic goal of the 'two centenaries' and for realizing the Chinese Dream of achieving the great rejuvenation of the Chinese nation."[18]

Concurrent to military innovation, the Ministry of Industry and Information Technology (MIIT), under the leadership of Premier Li Keqiang, announced its "Made in China 2025" campaign in 2015. Made in China 2025 placed emphasis on emerging technology development, domestic innovation, and a shift from quantity-based production to quality-based production to enable China to become the leading innovative global manufacturer by 2049.[19] The overarching goal is to diminish Chinese reliance on foreign nations for advanced technology and quality goods by producing 70 percent of high-technology materials domestically by 2025.[20] According to a 2018 White House Office of Trade and Manufacturing Policy, Chinese foreign technology investment has been in line with those outlined in Made in China 2025.[21]

> "Chinese indigenous science and technology are not assessed to be advanced enough to independently compete with the U.S. and Western defense industrial base."

While experts argue Chinese SOE defense industries are attempting indigenous innovation and production, China still continues to struggle with critical technology development.[22] PLA modernization, therefore, still requires acquisition of sensitive technology and research and development, which is far more difficult to acquire through legal trade laws under the "indigenous innovation" program than other commercial technologies. Therefore, the CCP and the PLA rely heavily on illegal IP theft to acquire all or portions of critical technology to reverse engineer for domestically produced weapons.

Methods of Chinese IP Theft: Steal the Firewood from Under the Pot

The Thirty-Six Stratagems, a collection of proverbs believed to be from the Three Kingdoms Period of China, outlines a strategy for defeating a superior enemy: "Steal the firewood from under the pot."[23] This proverb outlines the indirect approach of removing the enemy's source of strength—in this case, the technological superiority of the U.S. and Western militaries. This method was summarized in the 2013 revision of *The Science of Military Strategy*, published by the Academy of Military Sciences of the PLA, which stated, "After the outbreak of the Gulf War, the Party Central Committee and the Central Military Commission foresaw that the war situation caused great changes had [*sic*] taken place, and the military's strategic policy of active defense has been adjusted in a timely manner, increasing the use of high technology."[24] The authors continue by outlining the future need for technological parity with or superiority over the West, stating, "The development of science and technology has opened the way forward for the evolution of the form of war."[25]

Under Hu in 2004 and currently under Xi, and highlighted in *The Science of Military Strategy*, the PLA has emphasized efforts on matching the West in high military technology.[26] However, as stated before, Chinese indigenous science and technology are not assessed to be advanced enough to independently compete with the U.S. and Western defense industrial base (DIB), necessitating the theft of current and developing technologies. To achieve this, China utilizes several means, both legal and illegal, for undermining U.S. and Western military technology, research and development, and DIB production methods. The *National Security Strategy* outlines the basic methods China uses to steal U.S. IP: "Rivals have used sophisticated means to weaken our businesses and our economy as facets of cyber-enabled economic warfare and other malicious activities. In addition to these illegal means, some actors use largely legitimate, legal transfers and relationships to gain access to fields, experts, and trusted foundries."[27] The four methods of Chinese IP theft are open source, commercial, academia, and cyber-enabled.

Method 1. Open Source

According to James Mulvenon, open-source collection and databasing of publicly available information is the key resource of science and technology

innovation, stating, "Innovation in China is driven by foreign developments, tracked through open sources."[28] Like all Chinese bureaucratic apparatuses, open-source collection structure is complex and redundant. Organizations such as the Institute of Scientific and Technical Information of China operate under the guise of innocuous databasing and cataloging but target publicly facing science and technology technical documentation for reverse engineering and domestic production, publicly available information on research organizations and their employees for targeting purposes by state intelligence, and incorrectly declassified or mistakenly released classified information.[29] While the system is run similarly to a library-based catalog, it is directed and run by Chinese intelligence experts working at the behest of the party, serving as a shortcut for Chinese industry to develop research and technology, and is cataloged and disseminated in coordination with either private or SOE developers and manufacturers.[30]

The open-source program has, as of 2013, extracted and cataloged over 4.7 billion titles and abstracts, 644 million full-text documents, 1.2 million conference papers, 1.8 million foreign science and technology reports, and 9.8 million microfilmed products.[31] This vast collection of nonclassified, unclassified, and improperly classified public and private information reduces cost, time, and risk to China's military and civil development. The open-source program has been so successful that former Institute of Scientific and Technical Information of China director He Defang boasted that due to open-source collection, "China's researchers reduced their costs by 40-50% and their time by 60-70%."[32]

The implications of such a thorough and targeted collection of open-source information for the Army and DOD are profound. Public accountability and transparency in the United States and Western countries can be used to target military technology development and developers. For example, government contract awards posted almost daily on the DOD "Contracts" news page offer information on technology being developed, costs, contractors, subcontractors, contract lengths, locations, branches served, etc.[33] Additionally, contract awardee websites often provide information on organizational structure, personnel, locations of facilities, and nonclassified or unclassified information on research and development. This information, along with other information from countless other publicly facing government and privately owned websites, provide China with a clear picture of U.S. research and development priorities, long-term intentions, strategies, priorities for the force, and opportunities for collection via other means outlined below.

Method 2. Commercial

While China has moved from a Maoist communist nation during the Nixon administration to a mixed-market economy today, the distinction between private, public, and academia is far less profound than in the United States. Today, SOEs either directly or indirectly owned or funded by the CCP or the PLA constitute an estimated 23 to 28 percent of China's gross domestic product (GDP).[34] Some SOEs and private companies within China work either at the behest or on behalf of the CCP or PLA, either directly or indirectly, to target and acquire U.S. technology for import, reverse engineering, and domestic production that supports CCP or PLA research and development goals.[35] Subcontracts awarded to Chinese companies by prime contractors to U.S. government contracts offer insight into production methods and the capacity and capability to compile and reverse engineer technology to domestically produce high-end technology.

SOEs are linked to U.S. and other Western companies by the China Association for Science and Technology through national technology transfer centers. These centers establish cooperative relationships with American corporations and academic institutes to encourage technology transfers.[36] The CCP and the PLA fund SOEs to employ U.S. and Western science and technology experts, who account for about half of the 440,000 foreigners who currently work in China.[37]

Next page: A variety of Chinese fixed-wing and rotary-wing military aircraft appear uncannily similar in design to those developed by the United States and other countries, including many made by Russia. For example, the Chinese Z-10 helicopter (*above*), which closely resembles the U.S. AH-64 Apache helicopter (*below*) is thought to have been developed from information obtained by a combination of espionage, computer hacking, and transfer of classified trade-secret information through misleading deals with legitimate companies working under the presumption of cooperation with China to develop a "dual use" helicopter. (Photos courtesy of Wikipedia)

Other state-run programs such as 863 Program, funded and run by the Ministry of Science and Technology to develop and acquire high-level technologies, have been implicated in committing espionage, such as the 2011 conviction of Kexue Huang for stealing trade secrets from AgroSciences and Cargill Inc.[38]

As outlined in Made in China 2025, China has shifted industrial focus from cheap, low-quality goods to high quality, technologically driven innovation.[39] To accomplish this, China has shifted government-backed funding from acquiring "core natural resources" prior to the release of the policy to "acquire high-technology areas of the U.S. economy in particular."[40] China utilizes SOEs, private Chinese companies with ties to the Chinese government, and state-backed investment funds to conduct mergers, acquisitions, investment, and venture funding to acquire U.S. high technology.[41] These practices consist of legal, illicit, or sometimes illegal means to solicit, coerce, or outright steal information and technology from U.S. and other nations' private companies. According to an FBI report on China-related prosecutions since 2018, "about 80 percent of all economic espionage prosecutions brought by the U.S. Department of Justice (DOJ) allege conduct that would benefit the Chinese state, and there is at least some nexus to China is around 60 percent of all trade secret theft cases."[42]

Additionally, Chinese companies, to include SOEs, have inserted themselves into U.S. military supply chains, typically at low-level subcontracts, and produced and sold illegal and substandard counterfeit parts to the United States.[43] Recent examples include component parts to the C-130J transport aircraft, the C-27J transport aircraft, the SH-60B multimission Navy helicopter, the Terminal High Altitude Area Defense (THAAD) missile defense system, and the P-8A Poseidon multimission maritime aircraft.[44] As the U.S. military increasingly relies on commercial off-the-shelf information technology equipment, the risk of Chinese companies producing compromised components is compounded, as evidenced by a 2018 Bloomberg report highlighting Chinese efforts to utilize commercial microchips to infiltrate and establish a backdoor into information technology equipment sold to government agencies.[45] Concerns over this issue are so high that in 2018, U.S. President Donald Trump signed a bill banning Huawei and ZTE (major providers of cellular phones to military service members overseas) technology in government contracts.[46]

Seal of the Thousand Talents Program

Method 3. Academia

In addition to open-source and commercial IP theft, China has employed academics to commit IP theft since the outset of Deng's "four modernizations."[47] Starting in 1978 under Deng, China shifted to a more pragmatic approach to modernizing China by sending increasing numbers of students and scientists abroad to learn from Western nations (something that was deemed dangerous under Mao after the Cultural Revolution) as well as attracting foreign talent into China.[48] China's approach to acquiring IP through academia has two distinct approaches: through open and established government-sponsored organizations and through overt and covert use of student populations and professors abroad to illegally acquire IP. Both of these methods effectually turn students and professors into state-sponsored collectors of IP at the direction of the CCP or the PLA.

In the wake of 1989 Democracy Movement, culminating in the Tiananmen Square Massacre, the CCP sought to target domestic and overseas Chinese students to ensure party loyalty. To achieve this, the CCP expanded the existing Chinese Students and Scholarship Associations (CSSAs) abroad to ensure overseas student loyalty to CCP ideology. Additionally, in 2004, the CCP founded the first Confucius Institute, whose stated purpose is to "teach Chinese language, culture, and history at the primary, secondary, and university level around the world."[49] Currently, China operates over 140 CSSAs and 110 Confucius Institutes, all under the direction of the CCP United Front Work Department.[50] According to the 2018 U.S.-China Economic and Security Review

Harvard University Professor Charles Lieber is surrounded by reporters 30 January 2020 as he leaves the John Joseph Moakley U.S. Courthouse in Boston. Lieber, chair of the Department of Chemistry and Chemical Biology, was charged with lying to officials about his involvement with a Chinese government-run recruitment program through which he received tens of thousands of dollars. (Photo by Charles Krupa, Associated Press)

Commission, in reality, CSSAs "receive guidance from the CCP through Chinese embassies and consulates … and are active in carrying out overseas Chinese work consistent with Beijing's United Front strategy."[51] Likewise, Confucius Institutes have been accused of "improper influence over teaching and research, industrial and military espionage, surveillance of Chinese abroad and undermining Taiwanese influence as part of the reunification plan."[52] Both organizations serve to ensure Chinese student populations overseas are acting in accordance with CCP and PLA guidance and wishes.

The Thousand Talents Program, established in 2008 to both recruit non-Chinese scientists and entice foreign-educated Chinese individuals to return to the mainland, has come under open criticism by U.S. agencies for committing IP theft. In 2018, the assistant director of the Counterintelligence Division for the Federal Bureau of Investigation (FBI) stated that the Thousand Talents Program and other similar government-sponsored programs "offer competitive salaries, state-of-the-art research facilities, and honorific titles, luring both Chinese overseas talent and foreign experts alike to bring their knowledge and experience to China, even if that means stealing proprietary information or violating export controls to do so."[53] In January 2020, Charles Lieber, the chair of Harvard University's Chemistry and Chemical Biology Department, was indicted for accepting payment and living expenses from the Wuhan University of Technology after accepting a research grant from the DOD and falsifying statements regarding his participation in the Thousand Talents Program.[54] The Thousand Talents Program and other similar financially enticing programs allow China to capitalize on foreign education systems and technology development by cheaply, and often illegally, enticing scientists and researchers working on sensitive and controlled technologies to transfer foreign IP to China.

Yu Xue exits the federal courthouse 31 August 2018 in Philadelphia. Xue, a cancer researcher, pleaded guilty to conspiring to steal biopharmaceutical trade secrets from GlaxoSmithKline in what prosecutors said was a scheme to set up companies in China to market them. (Photo by Matt Rourke, Associated Press)

In addition to government-sponsored organizations, China has been accused of viewing all Chinese students as potential conduits for foreign technology transfer. Chinese organizations have openly advocated "expanding the role of Chinese scientists living overseas in conducting research on behalf of Chinese research institutes and facilitating technology transfer."[55] Returning overseas Chinese students are often debriefed by government officials on what technologies, research, and scientific personnel they had access to as part of general intelligence collection and to assess the potential to co-opt or recruit students. Additionally, China's MSS has been accused of approaching Chinese students and scientists who are preparing to travel overseas to task them with acquiring information or "performing other operational activity" while abroad, such as establishing covert relationships with academic personnel.[56] The use of overseas Chinese students and professors as collectors of IP poses a major challenge to the openness and transparency of academic institutions outside of China, which must contend with balancing protecting IP and promoting scientific research sharing and collaboration.

Method 4. Cyber Enabled

China uses cyber means to conduct IP theft, both directly through network intrusions and data theft or indirectly through other means such as open-source collection or in support of traditional espionage.[57] Cyber ties the previously discussed methods together because it provides a cheap and easy medium to conduct IP theft in a low-risk environment with relatively little repercussion for actions that would otherwise have major implications such as economic sanctions, arrests, and expulsion of state actors (known persona non grata in international diplomacy) if conducted on foreign soil.

IP theft via network intrusions and extraction of data from the DIB, subcontractors, academia, and government networks offers a cheap, reliable, and low-risk means of acquiring both developing and existing

sensitive military technology for reverse engineering and domestic production in China. According to the 2019 DOD annual report to Congress, "China uses its cyber capabilities to not only support intelligence collection … but also to exfiltrate sensitive information from the DIB to gain military advantage. The information targeted can benefit China's defense high-technology industry [and] support China's military modernization."[58] The report goes on to highlight the severity of the issue, stating, "These cyber-enabled campaigns threaten to erode U.S. military advantages and imperil the infrastructure and prosperity on which those advantages rely."[59]

According to a 2013 report by Verizon, 96 percent of all cyber espionage data breach cases were attributed to threat actors in China.[60] China utilizes state, business, and private cyber actors to compromise and steal $180 billion to $540 billion of IP and trade secrets annually, or 1 to 3 percent of the U.S. GDP.[61] Gen. Keith Alexander, then director of the National Security Agency and then commander of U.S. Cyber Command, stated in 2012, "In my opinion, it's [cyber-enabled intellectual property theft] the greatest transfer of wealth in history."[62]

In 2014, the U.S. Department of Justice charged five PLA officers from Unit 61398, 3PLA, with, among other charges, "economic espionage" and "accessing (or attempting to access) a protected computer without authorization to obtain information for the purpose of commercial advantage and private financial gain."[63] This occasion became an historic first instance of state foreign actors charged with infiltration of U.S. commercial targets via cyber espionage.[64] In an attempt to embarrass and deter future actions by Chinese actors, the grand jury charges represented an open and public acknowledgment by the U.S. government of Chinese state actors actively and aggressively targeting critical military technology. Despite the charges, however, the ramifications and retaliation by the U.S. government remained targeted on specific individuals and highlighted the low-risk and high-reward nature of cyber espionage.

The apex of Chinese cyber activity volume was highlighted in 2013, as FireEye, a private cybersecurity firm, identified a marked decrease in Chinese cyber espionage incidents in the following years. While this was due in large part to the 2014 grand jury warrant and the 2015 U.S.-China Cyber Agreement in principle, FireEye also attributed the decrease to a professionalization and reorganization of Chinese cyber actors.[65] According to Elsa Kania and John Costello, the reduction in quantity of attacks coincides with the reorganization of Chinese cyber assets under the PLA Strategic Support Force, which centralized PLA cyber as a separate service branch under a single command and shifted focus toward a combat-oriented cyber focus. Additionally, the MSS appears to have taken the lead on commercial cyber espionage and directing nonstate actors in focused attacks on U.S. commercial interests.[66] According to a 2016 annual report to Congress, Chinese cyber activity at large has moved away from large-scale amateurish attacks such as those conducted under the PLA prior to 2014 to a more centralized and professionalized force, implying Chinese cyber espionage will be more difficult to detect in the future as the MSS and other Chinese intelligence agencies, instead of the PLA, target vulnerable commercial networks.[67] Rather than the decline in Chinese cyber espionage incidents representing a success in U.S. policy, it actually highlights a potential increase in Chinese cyber actor capabilities and a decrease in U.S. ability to detect threats.

In addition to direct network intrusion and IP theft, China utilizes information networks to target individuals online for carrying out more traditional means of IP theft mentioned previously. Chinese state intelligence actors used LinkedIn to target and clandestinely recruit a former Central Intelligence Agency and Defense Intelligence Agency employee, and the U.S. Department of Justice charged a Chinese intelligence agent in October 2018 for recruiting a General Electric Aviation engineer with whom they made initial contact on LinkedIn.[68] Profiles containing work history, degrees, and areas of expertise offer lucrative targeting information for Chinese agents seeking to acquire IP from specific technology sectors.

Cyber-enabled IP theft, like all other methods of Chinese IP theft, covers a wide spectrum of means and methods and overlaps with the aforementioned traditional methods of IP theft. Cyber-enabled IP theft stands out among other methods due to the volume and ease with which it can be carried out. However, it is worth noting that raw technical data carries little value without the methods, means, and technical expertise required to reverse engineer and domestically produce technology within China, which is achieved primarily through commercial and academic IP theft.

Mitigating Chinese IP Theft: Stemming the Tide

While internal policies and procedures within the Army and DOD may mitigate some IP theft, IP theft covers a wide spectrum across government, private, and academia, and thus the issue cannot be solved by the Army or the DOD alone. To mitigate and prevent IP theft, the DOD must strengthen existing government, private, and academic partnerships, committees, and policies. First, existing government policies, organizations, and authorities can be leveraged to combat IP theft of military technology. However, the Army and DOD must leverage the private sector and amend its contracting policies and regulations to mitigate theft by enforcing stricter information protection standards on contractors and subcontractors. Additionally, the Army and DOD must partner with academic institutes conducting research on critical technology to protect both classified and nonclassified developing or emerging technologies.

> "China utilizes state, business, and private cyber actors to compromise and steal $180 billion to $540 billion of intellectual property and trade secrets annually, or 1 to 3 percent of the U.S. gross domestic product."

Within the federal government, a comprehensive approach must be analyzed to prioritize critical high technologies. A technology that has a shorter lifecycle before becoming obsolete is less critical to defend than a technology that will remain relevant for decades with no foreseeable replacement. Furthermore, the DOD and other government agencies must ensure protection of technologies from "cradle-to-grave," a term used to describe protection of critical technologies from the time of their inception through their fielding, lifecycle, and eventual replacement by new technology. By only defending developing technologies, the DOD risks merely delaying eventual theft of technology and domestic production by adversaries.

Additionally, the DOD and federal government at large must leverage existing policies and organizations to strengthen protection of private sector IP. Two examples include the Committee on Foreign Investment in the United States, which can review foreign acquisitions and mergers of critical U.S. technology; and the National Industrial Security Program, which established policy via DOD 5220.22-M, a DOD operating manual that outlines procedures for private companies working on classified government contracts.[69] By leveraging committees like the Committee on Foreign Investment in the United States, the DOD could address concerns over mergers or acquisitions of high-technology contract or subcontract companies by Chinese companies with direct or indirect ties to the CCP or PLA. Existing policies such as DOD 5220.22-M, Federal Acquisition Regulation, and the Defense Federal Acquisition Regulation Supplement (DFARS) provide frameworks upon which to improve security practices by the private sector and strengthen regulation on subcontractor access to critical and developing technology.[70] By leveraging authorities from external agencies and departments such as the FBI, the Department of Treasury, or the Department of State, the Army and DOD impose regulatory, financial, or criminal action on noncompliant companies within the United States and exert international pressure through international regulatory bodies.

Currently, any university with a federal defense contract working on controlled unclassified information under DFARS 525.204.7012 must comply with National Institute of Standards and Technology (NIST) Special Publication 800-171, *Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations,* to protect controlled unclassified information.[71] DFARS 252.204.7012 established regulatory compliance with NIST 800-171 standards for all contracts awarded after 1 October 2017. However, enforcement of DFARS 252.204.7012 primarily relies on contractor notification to the DOD chief information officer of any deficiencies in complying with NIST 800-171, not on inspections or regulatory checks by any enforcing body. Furthermore, subcontractors are only required to report deficiencies in complying with NIST 800-171

to the prime contractor and not to the federal government, risking that subcontractor compliance on controlled unclassified information is deficient.[72] This reliance on self-reporting by contractors and subcontractors promotes ignoring deficiencies in required federal regulatory guidance and puts companies and the DOD at risk of vulnerable critical technology of information systems. Amending federal regulatory guidance for universities, contractors, and subcontractors working on controlled unclassified information to permit federal regulatory inspections and checks on company compliance would protect against IP theft.

The 2019 addition to DFARS 252.204-7018, which prohibited contractor or subcontractor sales to the U.S. government of end items or components produced by Huawei and ZTE or any subsidiary thereof, established a precedent for enacting regulatory action against IP theft. Additionally, DFARS 252.204-7018 requires prime contractors to include the clause in "subcontracts for the acquisition of commercial items" to prevent prohibited sales of Huawei and ZTE equipment to contractors via subcontracts.[73] Utilizing similar actions against known CCP or PLA SOEs could serve as a deterrent against SOE willingness to engage in IP theft.

No one approach or method will counteract Chinese IP theft of critical military technology. However, by partnering with other federal and state agencies and departments, private companies, and universities, as well as enacting stricter regulatory guidance and enforcement tools, the Army and DOD would more effectively prevent IP theft and retaliate against thefts after they occur. Through a public-private approach, it may be possible to deter IP theft through a combination of prevention, incentives, and retaliation, which make illegal IP theft financially unsustainable.

Conclusion

The implications of Chinese IP theft are readily apparent in the CCP and the PLA's actions, official statements, and doctrine. While the methods and techniques used to conduct IP theft are not unique to the CCP, the scope and frequency of the theft are. Despite the 2015 Agreement in Principle and subsequent retaliatory actions by the U.S. federal government, China has shown little propensity for stemming its IP theft of high technology. IP theft combined with increased military spending by China threatens to close the gap with U.S. military technological superiority and challenge American military dominance. While China may not be able to produce superior quality high-technology weapons and systems for many decades, the threat of parity in even few military high technology areas threatens overall U.S. superiority on the battlefield and leads to a diminished status on the world stage.

The challenges presented by Chinese IP theft are numerous and may require the Army and DOD to step outside their normal operating environment to counter the threat and work with agencies, departments, and partners that are not frequently associated with military action. While isolated incidents of IP theft may appear inconsequential in the present, the consequences of not taking action potentially threaten future lives on the battlefield and U.S. military dominance. Only through proactively preventing Chinese IP theft can the Army and DOD protect their technological dominance and the future of U.S. military superiority. ■

Notes

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Extract from "The FBI and the National Security Threat Landscape: The Next Paradigm Shift"

Christopher Wray, Director, Federal Bureau of Investigation

Remarks prepared for delivery

Council on Foreign Relations, Washington, D.C., 26 April 2019

Changing Threat Landscape

The nature of the threats we face is evolving—criminal and terrorist threats are morphing beyond traditional actors and tactics. We still have to worry about an al Qaeda cell planning a large-scale attack.

But we also now have to worry about homegrown violent extremists who are radicalizing in the shadows. These folks aren't targeting the airport or the power plant. They're targeting schools, sidewalks, landmarks, concerts, and shopping malls, with anything they can get their hands on, and often things they can get their hands on pretty easily—knives, guns, cars, and primitive IEDs [improvised explosive devices]. They're moving from radicalization to attack in weeks or even days, not years, online and in encrypted messaging platforms, not a camp or a cave.

On the cyber front, we're seeing hack after hack, and breach after breach. And we're seeing more and more what we call a "blended threat," where cyber and espionage merge together in all kinds of new ways.

We still confront traditional espionage threats, with dead drops and covers. But economic espionage dominates our counterintelligence program.

More than ever, the adversary's targets are our nation's assets—our information and ideas, our innovation, our research and development, our technology. And no country poses a broader, more severe intelligence collection threat than China.

China has pioneered a societal approach to stealing innovation any way it can, from a wide array of businesses, universities, and organizations. They're doing this through Chinese intelligence services, through state-owned enterprises, through ostensibly private companies, through graduate students and researchers, and through a variety of actors working on behalf of China.

At the FBI, we have economic espionage investigations that almost invariably lead back to China in nearly all of our 56 field offices, and they span almost every industry or sector. The activity I'm talking about goes way beyond fair-market competition. It's illegal. It's a threat to our economic security. And by extension, it's a threat to our national security.

But it's more fundamental than that. This behavior violates the rule of law. It violates principles of fairness and integrity. And it violates our rules-based world order that has existed since the end of World War II.

Put plainly, China seems determined to steal its way up the economic ladder, at our expense. To be clear, the United States is by no means their only target. They're strategic in their approach—they actually have a formal plan, set out in five-year increments, to achieve dominance in critical areas.

To get there, they're using an expanding set of non-traditional methods—both lawful and unlawful—weaving together things like foreign investment and corporate acquisitions with cyber intrusions and supply chain threats.

Federal Bureau of Investigation (FBI) Director Christopher Wray discusses the national security threat landscape 26 April 2019 during an interview with Council on Foreign Relations President Richard Haass in Washington, D.C. (Photo courtesy of the FBI)

The Chinese government is taking the long view here—and that's an understatement. They've made the long view an art form. They're calculating. They're focused. They're patient. And they're persistent.

Overlaying all these threats is our ever-expanding use of technology. Next-generation telecommunication networks, like 5G, and the rise of artificial intelligence and machine learning. Cryptocurrencies, unmanned aerial systems, deep fakes—a lot of stuff I wasn't particularly focused on when I was in the private sector is suddenly blinking red right in front of me, in front of all of us.

And we grow more vulnerable in many ways by the day.

Taken together, these can be called generational threats that will shape our nation's future. They'll shape the world around us. And they'll determine where we stand and what we look like 10 years from now, 20 years from now, 50 years from now.

How We're Addressing the Threat

Our folks in the FBI are working their tails off every day to find and stop criminals, terrorists, and nation-state adversaries. We're using a broad set of techniques, from our traditional law enforcement authorities to our intelligence capabilities.

We've got task forces across the country, with partners from hundreds of local, state, and federal agencies. We've got task forces targeting everything from terrorism to violent crime to cybercrime to crimes against children to crime in Indian country—you name it.

We've got legal attaché offices stationed around the world to focus on joint investigations and information sharing.

We've got rapid response capabilities we can deploy at a moment's notice, for any kind of crime or national security crisis.

And on the nation-state adversary front, along with our partners, we've got a host of tools we can and will use, from criminal charges and civil injunctions to economic sanctions, entity listing, and visa revocations.

But we can't tackle all these threats on our own. We've got to figure out how to work together, particularly with all of you in the private sector. We need to focus even more on a whole-of-society approach. Because in many ways we confront whole-of-society threats.

To view the entire speech transcript, please visit https://www.fbi.gov/news/speeches/the-fbi-and-the-national-security-threat-landscape-the-next-paradigm-shift.

Extract from "China's Impact on the U.S. Education System"

Staff Report

United States Senate, Permanent Subcommittee on Investigations,
Committee on Homeland Security and Governmental Affairs

Executive Summary

When China sought to market itself to students around the world, it looked to its past. Confucius, the ancient Chinese philosopher, is synonymous with morality, justice, and honesty. The Chinese government capitalized on this rich legacy and began establishing Confucius Institutes on college campuses around the world in 2004, including the first in the United States at the University of Maryland. Today, there are more than 100 Confucius Institutes in the United States, the most of any country.

The Chinese government funds Confucius Institutes and provides Chinese teachers to teach language classes to students and non-student community members. In addition to Chinese language classes, Confucius Institutes host cultural events, including Chinese New Year celebrations, cooking classes, speakers, and dance and music performances. These selective events depict China as approachable and compassionate; rarely are events critical or controversial. The Chinese government also funds and provides language instructors for Confucius Classrooms, which offer classes for kindergarten through 12th grade students. Confucius Classrooms are currently in 519 elementary, middle, and high schools in the United States. Continued expansion of the program is a priority for China.

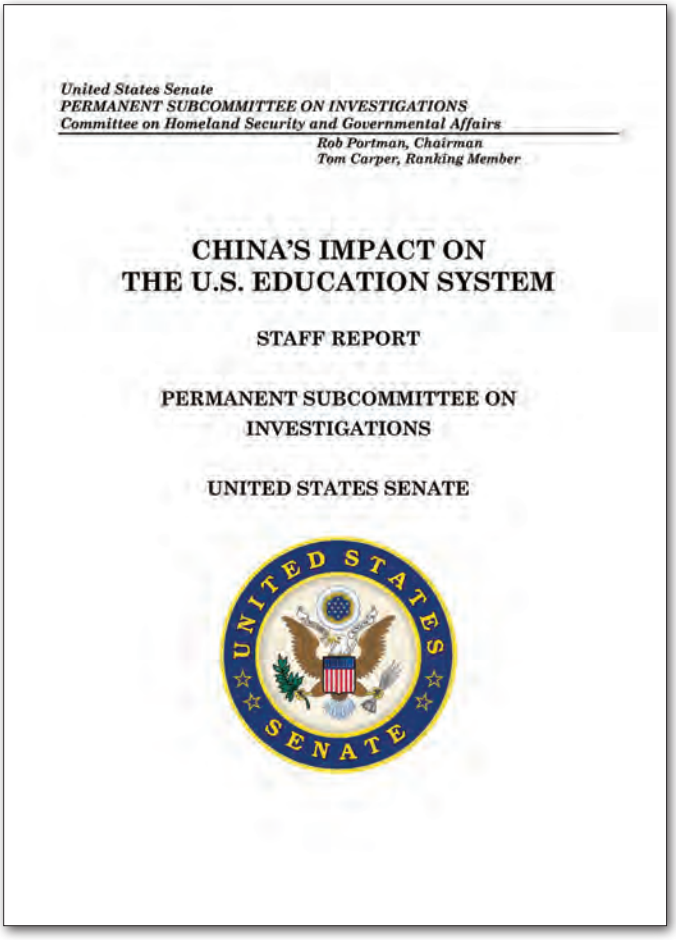
Confucius Institute funding comes with strings that can compromise academic freedom. The Chinese government approves all teachers, events, and speakers. Some U.S. schools contractually agree that both Chinese and U.S. laws will apply. The Chinese teachers sign contracts with the Chinese government pledging they will not damage the national interests of China. Such limitations attempt to export China's censorship of political debate and prevent discussion of potentially politically sensitive topics. Indeed, U.S. school officials told the Subcommittee that Confucius Institutes were not the place to discuss controversial topics like the independence of Taiwan or the Tiananmen Square massacre in 1989. As one U.S. school administrator explained to the Subcommittee, when something is "funded by the Chinese government, you know what you're getting."

Confucius Institutes exist as one part of China's broader, long-term strategy. Through Confucius Institutes, the Chinese government is attempting to change the impression in the United States and around the world that China is an economic and security threat. Confucius Institutes' soft power encourages complacency toward China's pervasive, long-term initiatives against both government critics at home and businesses and academic institutions abroad. Those long-term initiatives include its Made in China 2025 plan, a push to lead the world in certain advanced technology manufacturing. The Thousand Talents program is another state-run initiative designed to recruit Chinese researchers in the United States to return to China for significant financial gain—bringing with them the knowledge gained at U.S. universities and companies.

Contracting with the Chinese Government. The Chinese government runs the Confucius Institute program out of the Ministry of Education's Office of Chinese Language Council International, known as "Hanban." Each U.S. school signs a contract with Hanban establishing the terms of hosting a Confucius Institute. Contracts

reviewed by the Subcommittee generally contain provisions that state both Chinese and U.S. laws apply; limit public disclosure of the contract; and terminate the contract if the U.S. school takes actions that "severely harm the image or reputation" of the Confucius Institute.

The Chinese director and teachers at each Confucius Institute also sign contracts with Hanban. The contract with Hanban makes clear a Chinese director or teacher will be terminated if they "violate Chinese laws;" "engage in activities detrimental to national interests;" or "participate in illegal organizations." In fact, the contract states the Chinese director and teachers must "conscientiously safeguard national interests" and report to the Chinese Embassy within one month of arrival in the United States.


United States Senate
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
Committee on Homeland Security and Governmental Affairs
Rob Portman, Chairman
Tom Carper, Ranking Member

CHINA'S IMPACT ON THE U.S. EDUCATION SYSTEM

STAFF REPORT

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

UNITED STATES SENATE

Resources Provided by Hanban. U.S. schools that contract with Hanban receive substantial funding and resources to establish the Confucius Institute on campus. At the outset, Hanban typically provides a U.S. school between $100,000 and $200,000 in start-up costs, around 3,000 books, and other materials. Hanban also selects and provides a Chinese director and teachers at no cost to the U.S. school. While school officials have the opportunity to interview candidates for these positions, there is little-to-no transparency into how the Chinese government selects the individuals that schools must choose from. Nor did U.S. school officials interviewed by the Subcommittee know if candidates would meet the school's hiring standards. Hanban requires director and teacher candidates to pass English proficiency tests and undergo a psychological exam to determine adaptability to living and teaching in the United States. Beyond that, U.S. schools' understanding of the selection process was limited, at best. *Expansion to Kindergarten through 12th Grade*. China did not stop at expanding at university and college campuses. The next phase of Confucius Institutes involved funding teachers for Confucius Classrooms in K–12 grade school. There are currently 519 Confucius Classrooms operating in the United States with expansion of this program a top priority for China. In the United States, a Confucius Institute receives funding and instructors directly from Hanban and passes it to the K–12 grade school to support affiliated Confucius Classrooms.

The Cost of Confucius Institutes. The investment by China in U.S. Confucius Institutes is substantial. Since 2006, the Subcommittee determined China directly provided over $158 million in funding to U.S. schools for Confucius Institutes. A number of U.S. schools, however, failed to properly report this funding as required by law. The Department of Education requires all postsecondary schools to report foreign gifts of $250,000 or more from a single source within a calendar year of receiving them. Despite that legal requirement, nearly 70 percent of U.S. schools that received more than $250,000 from Hanban failed to properly report that amount to the Department of Education.

The Department of Education last issued guidance to U.S. schools on foreign gift reporting requirements in 2004, the same year the first Confucius Institute opened in the United States. As China opened over 100 additional Confucius Institutes in the United States over the last 15 years, the Department of Education remained silent.

Visa Failures. The State Department is responsible for issuing visas to any Chinese director or teacher entering the United States to work at a Confucius Institute. Some U.S. schools have struggled to comply with the requirements

of the Exchange Visitor Visa (or "J-1"). In 2018, the State Department revoked 32 J-1 Professor and Research Scholar visas for Confucius Institute teachers who were not conducting research, but instead were teaching at K–12 schools. The State Department also found evidence that one Confucius Institute Chinese director improperly coached the teachers to discuss their research during interviews with State Department investigators.

In 2019, the State Department plans to double the number of Confucius Institutes field reviews it completed in 2018 – from two to four.

China's Lack of Reciprocity. In response to the growing popularity of Confucius Institutes in the United States, the State Department initiated a public diplomacy program in China. Since 2010, the State Department has provided $5.1 million in grant funding for 29 "American Cultural Centers" or ACCs in China. Through the ACC program, a U.S. school partners with a Chinese school, much like a Confucius Institute. The U.S. school then uses the grant funds to create a space on the campus of the Chinese partner school to "enable Chinese audiences to better understand the United States, its culture, society, government, language, law, economic center, and values." ACCs are notably different from Confucius Institutes, however, as the State Department does not pay or vet instructors or directors; provide books or materials; or veto proposed events. Even so, the Chinese government stifled the establishment of the ACC program from the start.

In all, the State Department provided 29 U.S. schools with grant funds to establish ACCs with a partner Chinese schools. For some U.S. schools, roadblocks to opening their ACCs appeared immediately. For example, after extensive negotiations, one Chinese school refused to open a proposed ACC, stating it didn't see a need to move forward. An official from the U.S. school seeking to open the ACC, however, believed China's Ministry of Education told the partner school not to proceed with the contract. This official wrote in an email to his colleagues, "This is a typical Chinese political euphemism. Obviously, [the Chinese University] was instructed by [the Ministry of Education] not to proceed with our proposal." The U.S. school returned the grant funds to the State Department.

The ACCs that did open found they needed permission from their Chinese host schools to hold most cultural events. One Chinese host school refused to allow its ACC to host a play about the life of Muhammad Ali. Another denied approval for a lecture series on policy issues facing Americans. One U.S. school official who staffed an ACC told the Subcommittee that members of the local Communist Party often participated in the approval process. Another U.S. school official left the ACC after two sessions of extensive questioning by Chinese police officers regarding her involvement with the ACC and the State Department. When the U.S. school official returned to the United States, a colleague told her that Chinese police interrogation of school officials was common and that she was now just "part of the club."

In all, the State Department documented over 80 instances in the past four years where the Chinese government directly interfered with U.S. diplomacy efforts in China. Interference with State Department officials or events took a number of forms. One example involved a Chinese official telling a U.S. official an ACC no longer existed; the U.S. official easily confirmed the continued existence of the ACC through its U.S. partner school. One U.S. official was told she applied too late to attend the opening of an ACC after submitting the request a month before. In other instances, the Chinese school canceled approved events, sometimes as late as the night before.

In December 2017, the State Department Inspector General found the ACC mission was largely ineffective. In October 2018, the State Department ended all ACC program grant funding in order to conduct an internal assessment of the program. There are currently no plans for future ACC grants.

The Need for Transparency and Reciprocity. Schools in the United States—from kindergarten to college—have provided a level of access to the Chinese government that the Chinese government has refused to provide to the United States. That level of access can stifle academic freedom and provide students and others exposed to Confucius Institute programming with an incomplete picture of Chinese government actions and policies that run counter to U.S. interests at home and abroad. Absent full transparency regarding how Confucius Institutes operate and full reciprocity for U.S. cultural outreach efforts on college campuses in China, Confucius Institutes should not continue in the United States.

For those interested in the entire report, please visit https://www.hsgac.senate.gov/imo/media/doc/PSI%20Report%20China's%20Impact%20on%20the%20US%20Education%20System.pdf or type "Majority and Minority Staff Report–China's Impact on the U.S. Education System" into any internet search engine. ■

Military Review

RECOMMENDS

Threats to the U.S. Research Enterprise: China's Talent Recruitment Plans details how American taxpayer-funded research has contributed to China's global rise over the last twenty years. During that time, China openly recruited U.S.-based researchers, scientists, and experts in the public and private sector to provide China with knowledge and intellectual capital in exchange for monetary gain and other benefits. At the same time, the federal government's grant-making agencies did little to prevent this from happening, nor did the FBI and other federal agencies develop a coordinated response to mitigate the threat. These failures continue to undermine the integrity of the American research enterprise and endanger our national security. To view this report, visit https://www.hsgac.senate.gov/imo/media/doc/2019-11-18%20PSI%20Staff%20Report%20-%20China's%20Talent%20Recruitment%20Plans%20Updated2.pdf.

United States Senate
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
Committee on Homeland Security and Governmental Affairs

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Threats to the U.S. Research Enterprise: China's Talent Recruitment Plans

STAFF REPORT

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

UNITED STATES SENATE

Pivot Out of the Pacific

Oil and the Creation of a Chinese Empire in the Twentieth and Twenty-First Centuries

Capt. Philip Murray, U.S. Army

Oil stands alone as a resource of tremendous strategic value for modern nation-states. Difficult to find, expensive to extract, and often geographically concentrated in remote hinterlands, the quest for oil incites geopolitical anxieties among global powers. Events of the twentieth and twenty-first centuries demonstrate that access to, and possession of, oil resources often greatly enhance the chances of economic and military success. For this reason, the location, volume, and access to oil resources generate great intrigue among global actors. Oil enables military maneuvers, sustains industrial and agricultural output, and fuels domestic transportation networks. As such, oil is a powerful strategic source of strength and vulnerability. National security and energy strategies are often written separately, but in the age of petroleum, they are inextricably linked. Within the field of grand strategy, oil represents the unassailable cornerstone of "means" by which all "ways" and "ends" are accomplished.

In the history of oil-consuming nations, China's experience stands out as uniquely complex. Within the span of more than thirty years (1985 to present), China changed from the fifth largest exporter of oil to the leading consumer of oil imports globally.[1] China's increasing reliance on foreign oil imports has been a cause for concern for the Chinese Communist Party (CCP), the United States, and other leading oil-importing nations. Beginning in 1963, China achieved oil independence, but, in 1993, China began consuming more oil than it could produce domestically (see figure 1, page 55).[2] Chinese strategists view the country's increasing reliance on foreign oil imports as a strategic vulnerability and an extreme constraint on Chinese strategic action. Basing its continued political dominance on continuous economic development, the CCP's options are limited. In the last decade alone, Chinese demand for crude increased to roughly 5.5 million barrels per day, more than that of any other nation. The only option available to China after it became a net importer of crude oil in 1993 was competition on the global market. To the great concern of the United States and other observers, Chinese national oil companies (NOCs) rapidly expanded into the global oil market, and the institutions of Chinese state power followed in support.

Previous page: Composite graphic by Arin Burgess, *Military Review*. Graphic elements courtesy of Vecteezy, www.vecteezy.com.

China's rise as a global power was, by no coincidence, concurrent with its emergence as a major global importer of foreign oil. The transition from exporter to consumer has spurred wide disagreement about the goals and implications of Chinese grand strategy. In contemporary times, China has risen to become the world's largest consumer of oil imports and the eighth largest producer of crude (see figure 2, page 56).[3] From 1993 to the present, the United States and other major actors with interests in the global oil economy have observed Chinese energy security strategy with great suspicion. Much like concerns over Chinese national security strategy, many speculators are concerned that China is pursuing a neomercantilist energy security strategy with the goal of overthrowing the current economic world order.[4]

Meanwhile, official Chinese statements on energy security strategy have emphasized the country's commitment to mutual benefit, international development, and equitable profit sharing among all nations. Analyzing Chinese energy security strategy from the perspective of its NOCs as independent actors provides a better picture of the underlying fundamentals of Chinese grand strategy. In most instances within China's short history as an oil consumer, the NOCs act first in pursuit of their own profit-driven interest, and then national grand strategy follows in support of increased access, profit, and sustained secure energy resources. There is a reason that China was rapidly able to secure, develop, and reap the benefits of international oil-producing nations in the early 1990s, but China did not draft a comprehensive petroleum security strategy until 1997.[5]

Contrary to the views of many contemporary Chinese grand strategy theorists, contemporary

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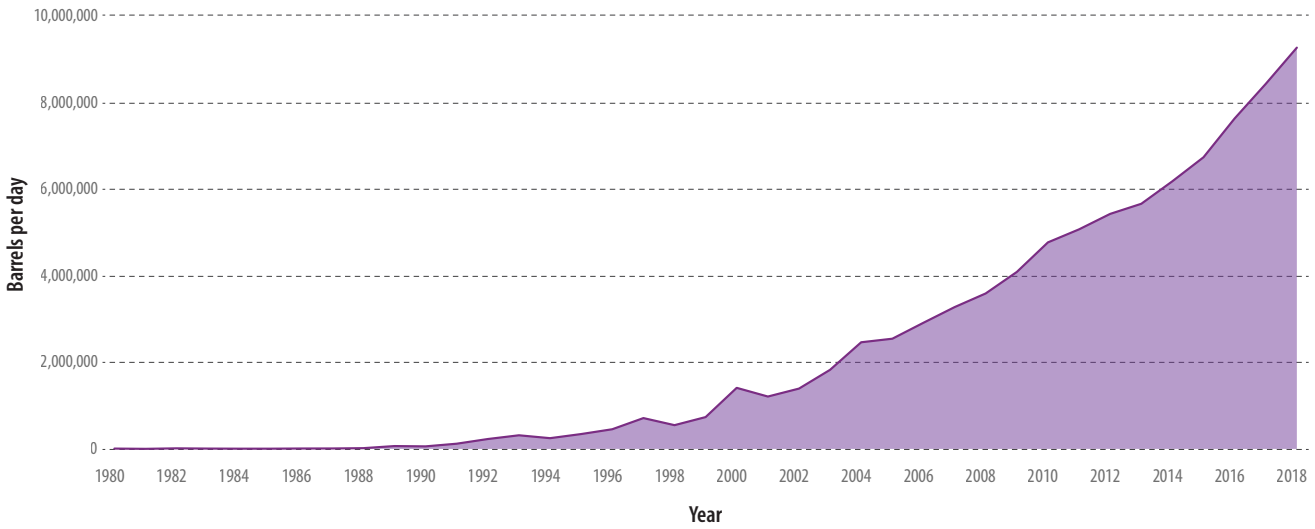
This satellite image of China and its neighboring states was compiled using data from a sensor aboard the NASA-NOAA Suomi National Polar-orbiting Partnership satellite launched in 2011. Each white area on the Earth's surface is a concentrated source of light, providing a good indicator of the extensive requirements for electricity in cities. In its aggressive program to increase its economic development, China has become a major energy consumer and the world's largest importer of oil. (Image courtesy of NASA)



(Figure courtesy of CEIC, www.ceicdata.com; data as reported from the Organization of the Petroleum Exporting Countries)

Figure 1. China's Crude Oil Imports from 1980-2018

Chinese grand strategy is not a replication of an ancient pattern of peculiar behavior and, in fact, is based on profit-driven decision-making and the pursuit of energy security for continued economic development. Though the modern Chinese nation-state is a relatively new creation, the legacy of its pre-modern historical precedents do not imbue it with a uniquely pacifistic approach to foreign policy unlike that of other countries. On the contrary, the pursuit of oil resources abroad to fuel the continued economic growth and prosperity of the emerging modern Chinese nation has necessitated the adoption of a strategy of capitalist informal imperialism abroad. As the author argues below, China's energy security history has serious implications on our understanding of Chinese grand strategy that are not well explained by prevailing theoretical constructs.

The Fairbank Model—Lasting Impact on History and Grand Strategy

Harvard historian John King Fairbank, considered by many to be the eminent authority on twentieth-century Chinese history, developed a theory explaining the Chinese view of the relationship of Chinese foreign relations to grand strategy based on a unique Chinese cultural perception of the world. His theory, laid out in *The Chinese World Order*, remains influential for contemporary political theorization about Chinese grand strategy, and has even undergone a revival since the advent of China's "rise."

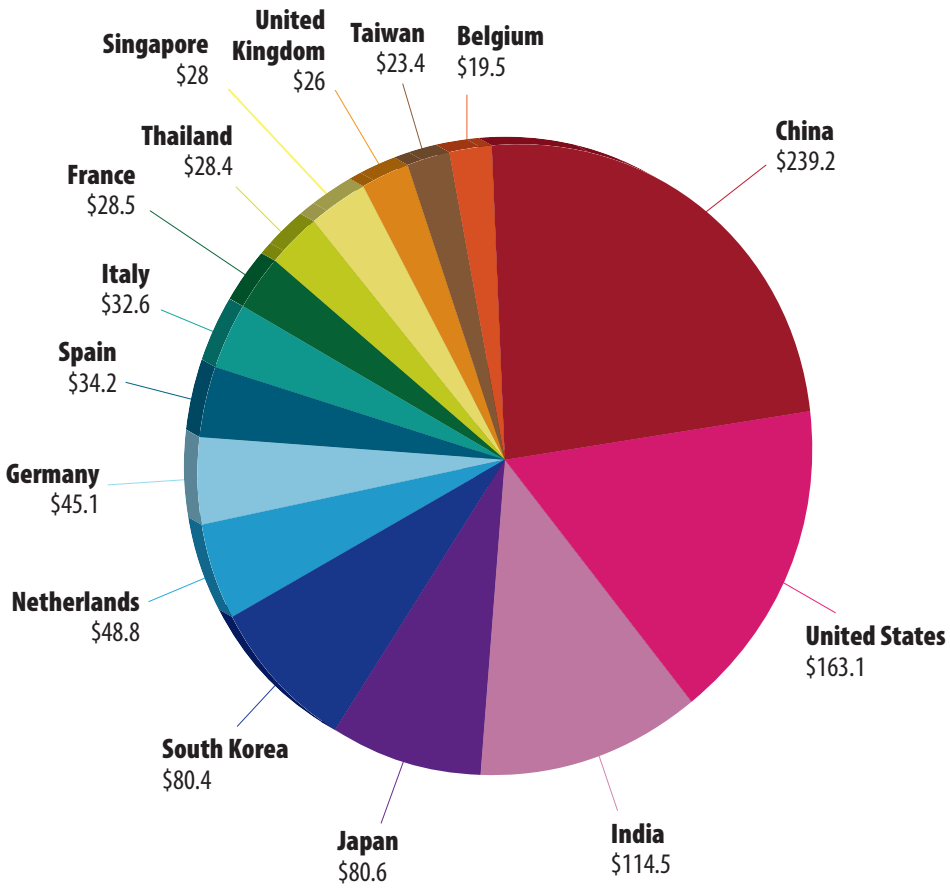
The implications of Fairbank's initial theory of Chinese foreign relations and grand strategy have had far-reaching repercussions on policy makers and grand strategists both within and outside of China. In response, recently published works within the emergent New Qing History school of thought have challenged the fundamental principles underlying Fairbank's thesis. However, while some historians have begun course correcting the field of East Asian history to update Fairbank's model, some grand strategists have not caught up with the new empirical research and interpretation. As a result, although the foundation of Fairbank's theory rests on old, incomplete, and inaccurate historical narratives, it continues to shape outsiders' perceptions of Chinese state policy and grand strategy.

The most popular definitions of grand strategy conceptualize three constituent elements: ends, ways, and means.[6] Far from a purely military calculation on the use of force, grand strategy provides a method of planning that considers the limitations and adversarial impediments on achieving desired political ends. For strategists, history provides foundational knowledge and case studies for the formulation of grand strategy.[7]

To greater or lesser degrees, various strategists adhere to deterministic schools of thought regarding

history, culture, environment, and geography. One consequence is that experienced statesmen such as Henry Kissinger and popular strategy authors like Robert Kaplan expend painstaking analysis in fruitless efforts to explain how the modern Chinese state exercises its unique world order in foreign relations.[8]

Other scholars such as Wu Shicun, president of the National Institute for South China Sea Studies, and Wang Qingxin, professor of East Asian international relations at the State University of New York at Buffalo, also continue to assert claims of a unique Chinese view of world order and practice of foreign relations based on Fairbank's ideas.[9] When it comes to the study of Chinese grand strategy, historical and cultural determinism based on Fairbank's original theory of "the Chinese world order" has dominated the field.



In 2018, these fifteen countries purchased 83.9% of all crude oil imports.

(Figure by Arin Burgess, *Military Review*. Data courtesy of World's Top Exports, http://www.worldstopexports.com)

Figure 2. Top Fifteen Countries that Imported the Highest Dollar Value (in billions) Worth of Crude Oil during 2018

Fairbank argues that the Chinese world order represents a uniquely Eastern (Chinese) model of foreign relations distinct from the European Westphalian international order. As Fairbank states in his preliminary framework, the Eastern model of foreign relations is so distinct and uniquely Chinese that "international and even interstate do not seem appropriate terms for it. We prefer to call it the Chinese world order."[10] This broad concept by Fairbank is often referred to as *Tianxia* (all those under heaven): the concept of universal kinship and Sinocentric cultural political authority that centrally underpins Fairbank's thesis.

For Fairbank, all external polities or Tianxia—that is, polities neighboring "Chinese" states—were irresistibly drawn into participation in the system of Chinese world order. "Chinese" states are those that subsequent Chinese official histories and modern Chinese national historians recognize as legitimate successors in a chain of "Chinese" dynasties. In fact, these states varied as much in their territory, the ethnic makeup of their elites, their ruling ideology, and other factors as did various kingdoms of western Europe in classical through modern times. Fairbank describes this system of relations as a graded and concentrically radiating hierarchy ordered by Confucian ideology. Peripheral polities interacted diplomatically and commercially with the "Chinese" center through what Fairbank named "the tributary system."

Stressing the importance of Confucian hierarchy to the model, the tributary system ritually defines the Chinese world order and confirms the hierarchical superiority of Chinese cultural hegemony. In Fairbank's version, Japan and Korea were understood by "Chinese" imperial courts to be vassal states. Thanks to the power of Chinese culture and ritual subservience to the emperor, "Chinese" civilization could, according to the Chinese World Order theory, control its neighbors within an orbit of peaceful coexistence without resorting to military force.

Fairbank was aware that this model was more ritualistic Chinese conceit than an accurate description of the East Asian past (he knew that the Chinese historical sources describe many wars). However, problematic in its many variations, this theory has spawned and perpetuated a common belief in the "Confucian peace": the idea that international relations in East Asia were historically more peaceful than elsewhere, and, indeed, that Chinese power actually eschews violence and exercises a preference for peaceful/defensive strategies.

The painful truth is that the Chinese World Order model hardly works as an explanation of Chinese and East Asian interpolity relations in the past and carries no significant explanative value for understanding the grand strategy of the People's Republic of China. To fully explain the spectrum of Chinese strategy and actions, the limited power of Tianxia is too simplistic to survive historical scrutiny. Contemporary scholars of Chinese history such as Peter C. Perdue have effectively argued against outdated arguments based on the Fairbank model that assert the tributary system represents a unique strain of East Asian foreign relations.[11] The practice of tributary relations, albeit a ritualized feature of some dynasties' diplomacy, never replaced reliance by states on the East Asian mainland on the use of raw military power and aggressive realpolitik. In particular, the Qing, the immediate imperial predecessors of twentieth-century Chinese republics, built an empire twice the size of their predecessors the Ming through military expansion and savvy diplomacy. The new acquisitions in Mongolia, Xinjiang, and Tibet were manifest imperial possessions, not "tributaries."

The notion of a unitary China stretching back for centuries and managing foreign relations through the Fairbankian Chinese World Order/Tianxia/tributary system model still shapes thinking and has confounded the formulation of an accurate understanding of Chinese grand strategy in contemporary contexts. Byproducts of this exceptionalist misrepresentation are "capitalism with Chinese characteristics," "communism with Chinese characteristics," and "international relations with Chinese characteristics."[12] These commonly used slogans often obfuscate the fact that the Chinese nation-state acts along lines similar to those of other modern post-Westphalian nation-states (a category to which both the Republic and People's Republic of China obviously belong). In no other aspect has the Chinese nation-state's behavior been more emblematic of classic nation-state imperialism than in its pursuit of oil resources.

Fairbank's theories regarding Chinese grand strategy and foreign relations have a persuasive coherency, seductive to historians and strategists alike. It is simpler to work with the notion of one monolithic Chinese strategic modality of behavior than to comprehend a complex, varied Chinese history filled with small but powerful actors such as NOCs.

In no small way, Fairbank's theories have shackled the study of Chinese grand strategy to the confines of historical and cultural determinism, but an evaluation of the history of the Chinese search for petroleum security dispels any notion that Chinese grand strategy is monolithic or even somehow uniquely Sinocentric. The pressures of a global capitalist world order, fueled by petroleum, have inspired strategic behavior closely paralleling that of other world powers. As China became an ascendant great power, Chinese NOCs gained massive economic and political influence to help the Chinese state develop informal imperial connections across the globe.

Chinese Petroleum Security Strategy Becomes Global

The evolution of China from an oil-exporting to an oil-importing nation hastened the speed with which the country became a powerful international actor. The pace of Chinese economic expansion and energy consumption places extreme demands on the CCP and the global oil economy. It has also raised concerns about the exact strategic ends the CCP is pursuing with its global energy security strategy. In response, the Information Office of the State Council released *China's Energy Policy 2012* stating,

> China did not, does not and will not pose any threat to the world's energy security. Abiding by the principle of equality, reciprocity and mutual benefit, it will further strengthen its

> cooperation with other energy producing and consuming countries as well as international energy organizations, and work together with them to promote a sustainable energy development around the world. It will strive to maintain stability of the international energy market and energy prices, secure the international energy transportation routes, and make due contributions to safeguarding international energy security and addressing global climate change.[13]

This statement paints an optimistic image for the future of the global oil economy with a rising China. However, the Chinese ownership of the NOCs and the secrecy with which China conducts business have led many to conclude that every action China's NOCs take is in concert with a CCP grand strategy to overthrow the international economic order. But, in fact, it is the profit-driven actions of Chinese NOCs that have pulled the Chinese state into expansionist tendencies, not a premeditated grand strategy. Furthermore, the buildup of overseas Chinese oil extractive industries mimics the United States' investment model in the Middle East since the end of World War I. That is to say, major petroleum corporations sought access to petroleum resources overseas and then the major institutions of state power followed in support over time.

Assessments regarding Chinese oil security strategy range along a spectrum. Some see an ultranationalistic mercantilist power bent on overthrowing the economic world order, while others see a rising but peaceful giant on a path toward international cooperation. However, contrary to popular conception, China does have a multiplicity of corporate interests and voices of dissent within its institutions of national power. Not unlike any other contemporary nation-state, predicting China's national strategies is highly contingent on ever-changing domestic and global conditions. I tend to agree with authors Philip Andrews-Speed and Ronald Dannreuther's assessment:

> China is pursuing all of these strategic options simultaneously and with varying effect, so that it is not possible to provide a simple picture of a China inexorably integrating with the global international economy and the West, nor of a China seeking definitively to balance against the West or to challenge the West through hegemonic expansion.[14]

However, it is hard to ignore the contingent relationship between the expansion of Chinese NOCs into the global energy market and the subsequent intensification of an informal Chinese empire overseas. If one were to identify a crosscutting ideology common to all the contemporary strategy paradigms, it would be profit-seeking.

Hunt for Oil Sources Drives National Strategy

The CCP did not direct the strategic moves to increase reliance on foreign oil imports or move overseas. In fact, historical experience engendered in the CCP leadership a strong preference for domestic production over all other sources. For example, in the 1950s, China experienced the repercussions of relying on foreign oil after the Soviet Union restricted the sale of petroleum products to gain political influence over Chinese affairs.[15] Increasing Chinese domestic oil production, combined with the global oil crises caused by the Organization of Arab Petroleum Exporting Countries' 1973 oil embargo and the 1979 Iranian Revolution, reinforced the concept that self-sufficiency in oil production was key to sustaining economic development and national sovereignty.[16]

Several factors stemming from the economic and political climate in China in the late 1970s and early 1980s created circumstances that allowed Chinese NOCs to begin laying down industrial roots overseas. First, under the leadership of Deng Xiaoping, a Chinese politician who led the People's Republic of China from 1978 to 1989, the Chinese increasingly began to use market forces as a mechanism to achieve the ambitious goals outlined in their public policy plans.[17] Released in 1981, the Chinese sixth five-year plan represented the first step in the economic reforms aimed at incorporating free market forces into planning.[18] This meant greater autonomy for corporations within the energy sector to make their own business strategies.

Second, the CCP began to rely heavily on the foreign exchange income generated from crude oil sales—approximately 20 percent of all Chinese foreign exchange earning according to the 1983 report *China's Sixth Five-Year Economic Plan (1981-1985)*.[19] The reliance on export income created a hunger for and reliance on the profits generated by the crude oil exporting industry. The CCP's dependence on oil export revenue strengthened the political power of the newly created NOCs in the early 1980s.

Third, by 1985, Chinese production of domestic crude oil became decreasingly profitable for NOCs within China. Dips in the global price of oil following Saudi Arabia's decision to flood global markets in 1985, decreasing volumes of Chinese oil reserves, and increasing production costs (already well above international averages) coalesced to make Chinese domestic crude oil production a less viable source of revenue for Chinese corporations.[20]

However, despite the clear warning signs, the CCP continued to plan for increased domestic production. While the Central Intelligence Agency estimated that Chinese oil reserves were diminishing, the CCP optimistically continued to plan for an average 8 percent annual increase in domestic production during its sixth five-year plan (1981–1985) and an average 4 percent annual production increase during its seventh five-year plan (1986–1990).[21] A 1994 *Oil and Gas Journal* article noted that Chinese exports peaked at 612,800 barrels per day in 1985 and required no imports to support domestic consumption between 1985 and 1987.[22] But, by 1988, exports plunged, and imports picked up by 100 percent per year.[23] Approximately 15 billion yuan renminbi were invested in the discovery of new wells, as well as an unknown number of billions in foreign investment.[24] However, because of the aforementioned rising cost in production and declining reserves, by 1987, most Chinese production had plateaued or was declining due to production costs. Because of this, in 1987, China National Import & Export Corporation (Sinochem), a company engaged in the exporting and importing of petroleum resources, successfully lobbied the CCP to allow investment in foreign oil ventures overseas.[25] At the same time, China

Chinese workers from the Zhongyuan Petroleum Exploration Bureau of Sinopec and Sudanese workers drill an oil well 26 October 2010 in South Sudan, Africa. China has invested billions of dollars in the oil sector and has a large number of Chinese workers in the oil fields in Sudan. The Export-Import Bank of China is receiving one-sixth of South Sudan's oil production to fund a large infrastructure project around the central region of Sudan. China is working with number other African nations to explore for, and develop, oil fields. (Photo by Imaginechina via Associated Press)

National Petroleum Company (CNPC), responsible for onshore upstream production, began its own refining operations with preferences for imported foreign oil.[26] CNPC profits rose so high from its reliance on more affordable foreign oil that other companies followed suit.[27] By 1991, Sinochem had successfully invested in oil facilities in more than five different countries; and in 1993, China produced its first barrel of foreign oil in Alberta, Canada.[28] Chinese NOCs moved to expand overseas operations well before Chinese consumption outstripped domestic production in late 1993.

> From the perspective of foreign observers, China is expanding to different markets in pursuit of a coherent grand strategy and is leveraging all of its institutions of state power to do so.

Because of the strategic value of petroleum and the high volume of tax revenues the oil industry provided, the Chinese NOCs ability to effectively lobby the CCP and bureaucrats in Beijing became unrivaled by other institutions of the Chinese state. In his article "The Structure of China's Oil Industry: Past Trends and Future Prospects," Michal Meidan lists fourteen prominent officials who either started their careers in the oil industry and moved to important government posts or vice versa.[29] Based on information from the Chinese state available to the public, it appears that Chinese NOCs were able to effectively expand operations overseas without orders from the State Planning Committee. Also, it appears that if lobbying failed, or was too inconvenient, the NOCs could just bypass the CCP and the State Planning Committee altogether. An example of this occurred when the Daqing Oil Corporation under CNPC signed an agreement with Tyumen, a Russian city in Siberia, for a joint development project to refine two million metric tons of Russian crude oil per year at Daqing, China.[30] As exemplified in the Tyumen deal, Chinese NOCs became, and remain, influential corporate actors within the People's Republic of China, capable of leveraging total resources of the state to support their own profit-making strategies.

To highlight the point, Chinese NOCs began seeking opportunities for foreign investment and infrastructure purchases even before they became a political or strategic necessity. They did so because it was extremely profitable. Luckily, the foundations they laid starting in the late 1980s allowed the Chinese economy to continue growing unimpeded by oil shortages. Between 1987 and 1996, Chinese oil production increased by only an average 2 percent a year.[31] But foreign oil supplies satisfied the burgeoning demand of a state that today holds the position of the number one oil-consuming nation in the world, right above the United States.

Driven by profit, the overseas investments and petroleum producing operations of Chinese NOCs made themselves a strategic necessity for the Chinese nation-state and the CCP. As such, they continue to leverage their political power to make their personal "going out" strategy dovetail with, or embed into, the official grand strategy of the Chinese state.[32] The implications of this confluence of CCP and NOC strategy manifested itself as greater Chinese involvement in petroleum-producing states, especially those outside of the influence of American hegemony.

A Unique Approach to Petroleum Energy Security or a Familiar Story?

Much like the beginning of Chinese foreign investment in oil, U.S. foreign policy followed the investments of its major oil corporations when configuring grand strategy. After investing heavily in Saudi Arabia's oil fields during the 1930s, the United States partnered closely with Saudi Arabia, and American oil companies jealously guarded their concessions from other foreign oil within the kingdom.[33] Like China later, the United States also emphasized equal profit sharing and mutual benefits for all the oil-producing nations and "oil majors" involved in extractive industries across the Middle East.[34] Furthermore, American involvement in the Middle East came to involve much more than just corporations and profit sharing. Complex diplomatic entanglements and power politics to maintain stability and security for business ensued.

After the Soviet Union's invasion of Afghanistan in 1979, President James Carter Jr. established a doctrine that stated the United States would militarily intervene against any power that attempted to disrupt the free flow of trade within the Persian Gulf.[35] All subsequent U.S. presidents have likewise proclaimed this strategy. Energy historian Robert Lieber aptly points out that the Carter doctrine was an important precursor to the First Gulf War and that the decision to attack Iraq in the First Gulf War was made primarily out of concern for continuity in the global oil market.[36] If one were to read only publicly available news sources and presidential speeches from August 1990 to 1991, one would begin to think that the primary reason for standing up to Saddam Hussein on behalf of Kuwait was concern over international law and humanitarian suffering.[37] However, National Security Directive 45, *U.S. Policy in Response to the Iraqi Invasion of Kuwait*, and National Security Directive 54, *Responding to Iraqi Aggression in the Gulf*, clearly show that oil production and reserves were a leading factor for the United States' decision to go to war against Iraq.[38] Lieber wrote that after Hussein invaded Kuwait, he effectively controlled over 20 percent of the world's oil production and had positioned himself to seize up to 50 percent (via Saudi Arabia/United Arab Emirates).[39]

A comparison to this famous U.S. example shows how the Chinese government is following a path to power similar to that of the United States, rather than striking out on a new path or creating a new Sinocentric world order. China's NOCs lobbied for increased reliance on foreign oil imports—contrary to the CCP's demonstrated preference for self-sufficiency—in order to gain greater profits from increasing domestic demand. Despite CCP apprehension about overreliance on foreign oil imports, the cash flow and strategic value of petroleum made the NOC corporate strategy preferable to other grand strategic options. Within a matter of years, as domestic consumption surpassed domestic production, the entire Chinese state became wrapped up in supporting the NOCs' overseas operations. As Philip Andrews-Speed and Ronald Dannreuther note,

> Many overseas ventures involve not only China's government and its NOCs, but also the state-owned banks and the construction and service companies. This gives the impression of 'China Incorporated' arriving in the host country as part of highly coordinated national strategy.[40]

But the Export-Import Bank of China, now in charge of foreign development efforts, was not created until a year after the first barrel of Chinese oil had been produced overseas in Canada. From the perspective of foreign observers, China is expanding to different markets in pursuit of a coherent grand strategy and is leveraging all of its institutions of state power to do so. However, the history of Chinese NOCs shows that the opposite has been true: other institutions of Chinese state power have been leveraging the Chinese oil industries to support their own corporate strategies.

After overseas investment in oil infrastructure began to expand, the Chinese government created and leveraged such institutions as the Export-Import Bank of China to support the business ventures of the NOCs overseas. A prime example of this dynamic may be seen in infrastructure development within South Sudan. Four years after the first CNPC investment in Sudan, the Chinese government allowed the Export-Import Bank of China to invest 1.15 billion yuan renminbi for further oil exploration as well as generous concession terms for profit sharing of the oil proceeds.[41] As Chinese investment and operations increased in Sudan, so too did other involvement. In his paper "China's Oil Venture in Africa," Hong Zhao notes,

> The number of Chinese workers working in Sudan has tripled since the early 1990s, reaching 24,000 in 2006. Chinese non-oil investments are significant as well, including hydro-electric facilities, a new airport for Khartoum, and several textile plans.[42]

Eventually, the Chinese government found itself diplomatically reliant on the continuation of the Sudanese government for the maintenance of Chinese overseas business ventures and security of their overseas citizenry. This reliance became problematic with the 2003 outbreak of the War in Darfur, a conflict that continues to this day, and the genocide of the non-Arab population in Sudan (in which the Sudanese president was complicit). Subsequently, the Chinese notoriously ignored the United Nations Security Council's embargo on weapon sales to Sudan and sold over $14 million USD worth of military equipment to the Sudanese government between 2003 and 2006.[43] Notably, several Chinese-managed oil facilities were attacked by these militants in 2007 and 2008.[44] Obviously, these circumstances

bear little resemblance to a supposed pacifist, uniquely Chinese approach to foreign relations but rather display familiar features of pathway dependency derived from reliance on foreign oil in the capitalist world order.

The Future of Chinese Grand Strategy

As the Chinese government becomes more entangled with greater oil infrastructure investments and diplomatic relationships with regimes in conflict areas like Sudan, Iran, Iraq, and Yemen, the likelihood for meddling in domestic affairs or outright conflict to maintain the status quo increases. The reliance on foreign oil has necessitated increasing expeditionary military capabilities to support overseas Chinese citizens and investments from disasters or physical threats. As recently as April 2015, the People's Liberation Army Navy was called upon to evacuate Chinese citizens from Yemen when the Yemeni Civil War (2014–present) endangered them.[45] The strategic reliance on Middle Eastern and African oil imports has also required the development of a larger fleet of Chinese ships to defend shipping lanes through the South China Sea. While there has never been an embargo against China by a Western power or multilateral economic organization, Chinese strategists like People's Liberation Army Cols. Qiao Liang and Wang Xiangsui often cite the history of Iran and the First Gulf War as evidence of Western proclivity for economic warfare through embargos and military coercion.[46] Consequently, China views its investment in a blue water navy as a necessity for both its national security strategy and its national energy security strategy.[47]

Additionally, the Chinese have long aspired to drill oil in the South China Sea. As of 2014, the oil extraction in this area contributed only to 5 percent of domestic production and less than 2 percent of total Chinese consumption.[48] However, Chinese and foreign investors remain optimistic about the potential of oil production in the South China Sea. Because of this, the South China Sea retains high strategic value not only as a maritime route for transit of and commerce but also as a potential source of massive oil reserves. None of these strategic decisions related to the South China Sea were made by the CCP with the goal of upsetting the world economic order but rather out of necessity to protect the oil trade supply routes the Chinese NOCs had been building incrementally since the 1980s to make a profit and fuel economic growth.

Viewed in this light, many Chinese strategic decisions can be understood in relation to Chinese demand for petroleum resources and not as part of some larger plot to overthrow the economic world order. Even if the creation of new world order is the expressed "end" that many Chinese grand strategists are attempting to reach, as Michael Pillsbury argues in his book *The Hundred-Year Marathon*, the path leading there will depend on competition over oil resources.[49] Despite talk of win-win scenarios and alternatives to the Western capitalist economic world order through Sinocentric foreign relations, China has built itself an informal empire around overseas petroleum. Thus far, the Chinese strategists are not approaching the problem in a new way but rather are seeking profit where the market affords opportunities. Given the plentiful profits and vulnerability of overseas investments, the Chinese state and the CCP have been highly receptive to implementing the policy suggestions of the state oil lobby, as opposed to taking centralized control of the oil industry and China's grand strategy. ■

Notes

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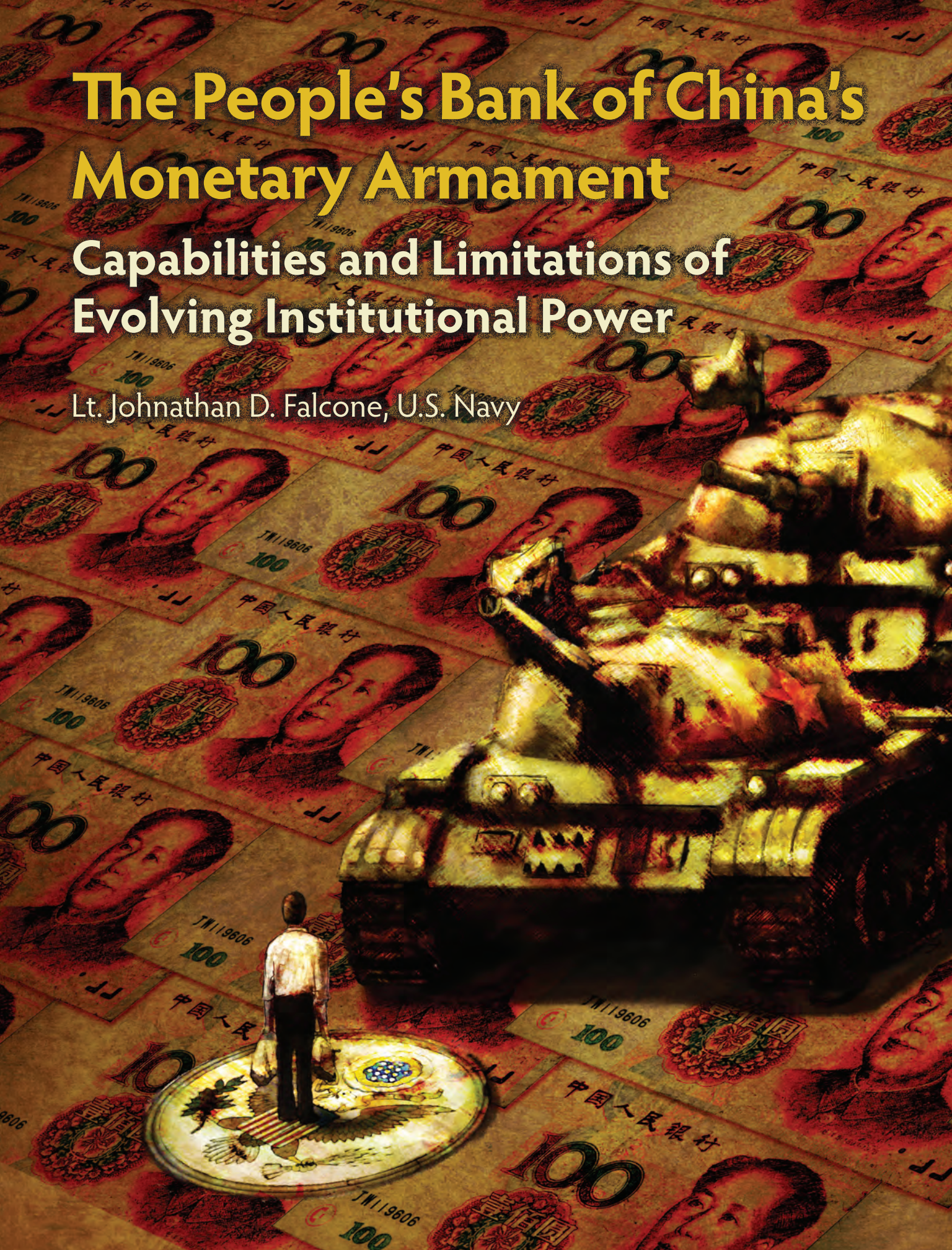
The People's Bank of China's Monetary Armament

Capabilities and Limitations of Evolving Institutional Power

Lt. Johnathan D. Falcone, U.S. Navy



Graphic by Dale Cordes, Army University Press

Two nations, nearly seven thousand miles apart, are engaged in a great-power conflict. Many of the strategies that guide this conflict are undergoing development in the Pentagon, Arlington's five-cornered symbol of military might, and also in its counterpart headquarters found in Beijing's August 1st Building, a Sino-influenced yet Soviet-styled compound. However, arguably the most consequential strategic plans are being developed in the Eccles Federal Reserve Board Building in Washington, D.C., and in the People's Bank of China's Beijing headquarters. The economic front of the present U.S.-China conflict is being executed from these ill-recognized halls of national security policy. Although U.S. military leadership may be vaguely familiar with the consequences of American monetary policy on this conflict, the strategic potential of the monetary policy of China's central bank is largely unknown and much underappreciated. As a result, today's U.S. warfighters may not feel compelled to track Chinese capital flow rates with the same urgency with which they mine intelligence reports for the latest ballistic missile profiles. But given China's central banks institutional subordination to the Chinese Communist Party (CCP) and increasing international impact, its actions must be interpreted as an extension of CCP strategic objectives.

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Many may argue that the financial markets are not legitimate battlespaces, and that real war can only be defined as military "kinetic" conflict. Ironically, the same voices that may be willing to recognize cyber and information warfare as potent nonkinetic forms of conflict, and as new battlespaces, are reluctant to expand their conception of warlike conflict to the economic domain. However, if the consequences of a combatant's deliberate economic actions are comparable to the consequences of kinetic engagement (e.g., social destruction, political and economic collapse, and death), then why is it not equally of concern to a military who has sworn an oath to defend American values? One has to look no further than Ukraine or those countries that experienced the Arab Spring to recognize that economic conditions can undermine society's stability with real national security consequences. In this sense, economic actors have expanded the scope of international conflict to include institutions that can decisively affect economic conditions across borders to achieve the same kinds of political objectives formerly thought to reside exclusively in the domain of armed conflict.

The 2018 *National Defense Strategy* clearly alludes to this emerging warfare domain when it articulates the need for a "seamless integration of multiple elements of national power—diplomacy, information, economics, finance, intelligence, law enforcement, and military."[1] But in our nation's war colleges, where current and future military leaders engage intellectually with the principles of warfare, strategy is still strictly circumscribed by the theories of such classical military thinkers as Antoine-Henri Jomini and Carl von Clausewitz with little attention given to the impact of money in conflict as propounded by economic theorists such as Karl Marx and Robert Gilpin.

In stark contrast, America's strategic competitors including China have fostered a more inclusive understanding of strategic disciplines and warfare's domains. For example, in the highly influential book *Unrestricted Warfare*, published in the 1990s, People's Liberation Army (PLA) theorists Qiao Liang and Wang Xiangsui declared, "There is no longer any distinction between what is or is not the battlefield [to include] social spaces such as the military, politics, economics, culture, and the psyche."[2] Though decades old, this work nevertheless provides insight into the warfare principles that continue to guide the CCP and the PLA. Money flows, financial markets, and macroeconomic decisions have an impact beyond the domestic economy but are synchronized with other elements of national power to aggressively achieve international political objectives. In China, the primary forum for this centrally planned, economic line of attack is the Central Economic Work Conference.

Every December in Beijing, the unassuming Jingxi Hotel hosts CCP leadership and national economic

Black Audis, the vehicle of choice for senior party officials, drive up to the entrance of the Jingxi Hotel in western Beijing. Ordinary travelers have never been allowed past the forty-eight-year-old hotel's drab, Soviet-style exterior. The heavily guarded hotel is where the Communist Party elite meet to make high-stakes personnel decisions and map out future policies. (Photo from *South China Morning Post*)

experts for the Central Economic Work Conference. This annual meeting for party leaders, government officials, and economic policy makers provides a forum to discuss the national economic agenda for the following year. As the 2019 meeting approached, it became apparent that domestic economic growth and the internationalization of the Chinese currency would be the primary agenda items. CCP administrators vocally pushed for additional market-based reforms that previously drove the rise of China's economy. Concomitantly, planners found themselves battling multiple economic headwinds to include a slowing growth rate, a weakening yuan, and continuing trade fears with the United States.

These challenges and the potential economic actions required to overcome reforms intensified the spotlight on the People's Bank of China (PBOC), China's central bank. Historically, the bank was tasked to simply carry out strict credit plans and ensure its provincial branches could underwrite party-directed investment projects. Today, the bank is equipped with monetary policy tools similar to those of other developed nations; yet, it remains another opaque institution employed to achieve party objectives that have the ability to affect China's financial markets, strategic policy objectives, and markets around the world.[3]

Considering China's increasing capital account liberalization and participation in international financial markets, the role and global impact of the PBOC is on the rise. As far as the CCP exerts influence over the institution, PBOC monetary policy decisions are also a reflection of the party's near and long-term interests. From the perspective of U.S. military and political strategists, understanding the PBOC's monetary capabilities and limitations illuminates the strategic repercussions of China's actions in a way that is comparable to the value of tracking the development of more traditional military capabilities associated with great-power

conflict. We will assess the institution's evolving role within the Chinese economy and the changes in its policy tool kit during the market liberalization era. The results of this analysis will show that the PBOC is sufficiently equipped to exert economic influence in international markets to achieve CCP strategic aims.

It is important to note that the lack of transparency from domestic Chinese institutions and the PBOC's recent policy shifts create a unique challenge to gather information related to this subject. First, the nature of the CCP and Chinese authoritarian regime underlies the general lack of transparency. Second, in 2017, major doctrinal changes took place to reflect lessons learned from the 2008 financial crisis.[4] The relatively recent advent of these changes has limited the quantitative-based analytical literature available. As a result, most of the information presented is derived from PBOC reports and documents, PBOC-released policy papers, qualitative academic articles, and Western media analysis.

(Composite graphic by Arin Burgess, *Military Review*)

Evolving Battlespaces and Institutions of Conflict

The characteristics of war have been defined, debated, revised, and restructured for millennia. In 2013, Gen. Valery Gerasimov, chief of the Russian General Staff, published an article in the Russian newspaper *Military-Industrial Courier* that articulated his understanding of modern warfare. In the article, Gerasimov notes that "the very 'rules of war' have changed. The role of non-military means of achieving political and strategic goals has grown, and, in many cases, has exceeded the power of force of weapons in their effectiveness."[5] In March 2019, Gerasimov again alluded to the interdisciplinary nature of military strategy referencing "the emergence of new spheres of confrontation in modern conflicts, the methods of struggle and increasingly shifting towards the integrated application of political, economic, informational and other non-military measures."[6] *Unrestricted Warfare* presaged these sentiments. It proposed a "paradox of weapons development" in that "the more weapons are invented, the smaller an individual weapon's role in war."[7] The book goes on to claim that because of this paradox, future weapons in warfare to achieve national aims will be outside the traditional military realm. These claims suggest that influential voices among America's primary competitors, as defined by the *National Defense Strategy*, do not view military capabilities as the sole means of achieving their objectives. Modern conflict, therefore, not only connotes conventional and irregular military action but also interdisciplinary battlespaces.

Chinese leadership learned from Russia's Soviet predecessors that empires can fall without direct hostile engagement. The Soviet Union's failures during the Cold War undoubtedly informed Gerasimov's perspective. Specifically, he alludes that the Soviet Union's inability to compete in other arenas led to its defeat, despite advanced and capable military technology. Chinese leadership appears to view its current strategic position vis-à-vis the United States as akin to the Soviet Union's Cold War. As such, they have internalized the Soviet Union's failures and are crafting strategy with this lesson in mind.[8] With a vague recognition that the cost to compete militarily with the United States may not be an effective strategy, China has sought "new concept weapons." These weapons include "all means which transcend the military realm, but which can still be used in combat operations. As [China] see[s] it, a single man-made stock-market crash, a single computer virus invasion … that results in a fluctuation in the enemy country's exchange rates … can be included in the ranks of new-concept weapons."[9] China's apparent desire to weaponize economic markets highlights the need for American planners to account for all potential institutions of conflict.

Professor Harry Harding, a political scientist specializing in Chinese foreign affairs, wrote that "since the 1970s, China has called for a new international economic order, in which commodity prices, capital flows, and terms of technology transfer would be adjusted in favor of the interests of the third world."[10] Successfully effecting such a change would require shifting the economic landscape from a great-ocean maritime-centric order to one characterized by Eurasian land and Indian Ocean trade routes. Throughout the 1970s, China took a hard stance to bring about this alternate economic sphere outside of the U.S.-led system. The reform period and increased economic integration moderated China's position and pushed CCP leadership, however unwillingly, to putatively operate within the present economic order. Despite its participation, Beijing remains a fierce critic of Washington's position in the international economic landscape. It has used forums such as the World Bank and vehicles such as the Asian Infrastructure Investment Bank to reveal its ultimate objective: to bring about a fundamental shift in the international financial system that favors its own interests and expansion of influence.[11] Today's PBOC operates at the frontline to achieve that ultimate objective.

Like many other central banks in the world, the PBOC is tasked to "formulate and implement monetary policies" in an effort to "maintain financial stability."[12] Specifically, monetary policy is employed to stabilize "the value of the currency and thereby promote economic growth."[13] Simply put, the bank's policies aim to control the credit environment—the risk associated with money lending—and the money supply—the amount of money available for lending and commercial transactions. Although these policies may appear to be aimed at domestic-focused outcomes,

monetary policy actions have ripple effects abroad and impact overseas commodity prices, credit availability, and capital market access. As China's economic influence and capacity grows, this reach suggests that Chinese monetary policy makers have become increasingly powerful international actors. The institution's primary constraint is its subordination to the CCP by means of the State Council. In other words, the party exercises control over the central bank.

As per the "Law of the People's Republic of China on the People's Bank of China" (Law of the PBOC), the State Council—the executive branch of the Central People's Government—holds authority over the PBOC. This means that the PBOC, unlike most other central banks in the world, is not an independent agency. The Law of the PBOC states that the State Council must approve most major decisions.[14] This governance structure naturally tethers monetary policy to the party's political objectives.

The People's Actual Bank

Throughout the Maoist era, the PBOC was the primary financial intermediary in China. The institution was responsible for both central and commercial banking, and clientele ranged from regular citizens to state-owned enterprises (SOEs) to the government itself. This meant that not only did the PBOC apply what could only be described as rudimentary monetary policy, but it accepted household deposits as well. Above all, acting in its capacity as a central bank within a planned economy, the PBOC kept strict control over the money supply by limiting the amount of loans it underwrote.[15]

When the central government demanded that its banking sector do more than tightly control the money supply, the first set of banking reforms were directly aimed at encouraging economic growth. The banking landscape transformed, and the impacts of this transformation are still seen today. First, the PBOC was separated from the Ministry of Finance in 1976.[16] Then, starting in 1979, commercial banking operations were distributed among the "Big Four" state-owned banks in China: the Agricultural Bank of China was split from the PBOC to provide government financing for rural development; the Bank of China managed the state's foreign currency portfolio and became the primary foreign financing channel; next, in 1984, the Industrial and Commercial Bank of China became the financier of China's SOEs; and finally, the China Construction Bank, formerly a separate arm in the Ministry of Finance, became operationally independent but continued to provide loans to long-term state investment projects.[17] As these commercial operations rolled out of the PBOC and Ministry of Finance, a pattern began to develop. As markets reformed and opened up, economic growth was fueled by monetary policy aimed at increasing the monetary base and access to credit.

Despite these institutional reforms, central planners continued to conduct control over the money supply through "direct credit control" and apply quantitative-based measures rather than market-based measures. Specifically, these measures dictated the amount of financing that was available at the national, provincial, and sectoral levels. This type of control enabled planners to support growth in predetermined regions and business sectors. More than just control the amount of financing available, planners—by way of the PBOC—also dictated the allocation of financing between working capital and fixed-asset investments.[18] Annually, the State Council would codify these financing determinations in a "national credit plan." At that time, this rather blunt policy measure represented the sharpest monetary tool granted to the PBOC.

In 1995, banking operations underwent reform as a result of a rapidly expanding monetary base and inflationary pressures.[19] By 1998, credit ceilings were phased out and an indirect management framework was established. At this point, the central bank began to apply monetary instruments to manage base money and credit to achieve intermediate goals and ultimately policy objectives.[20]

Party Control of the Central Bank

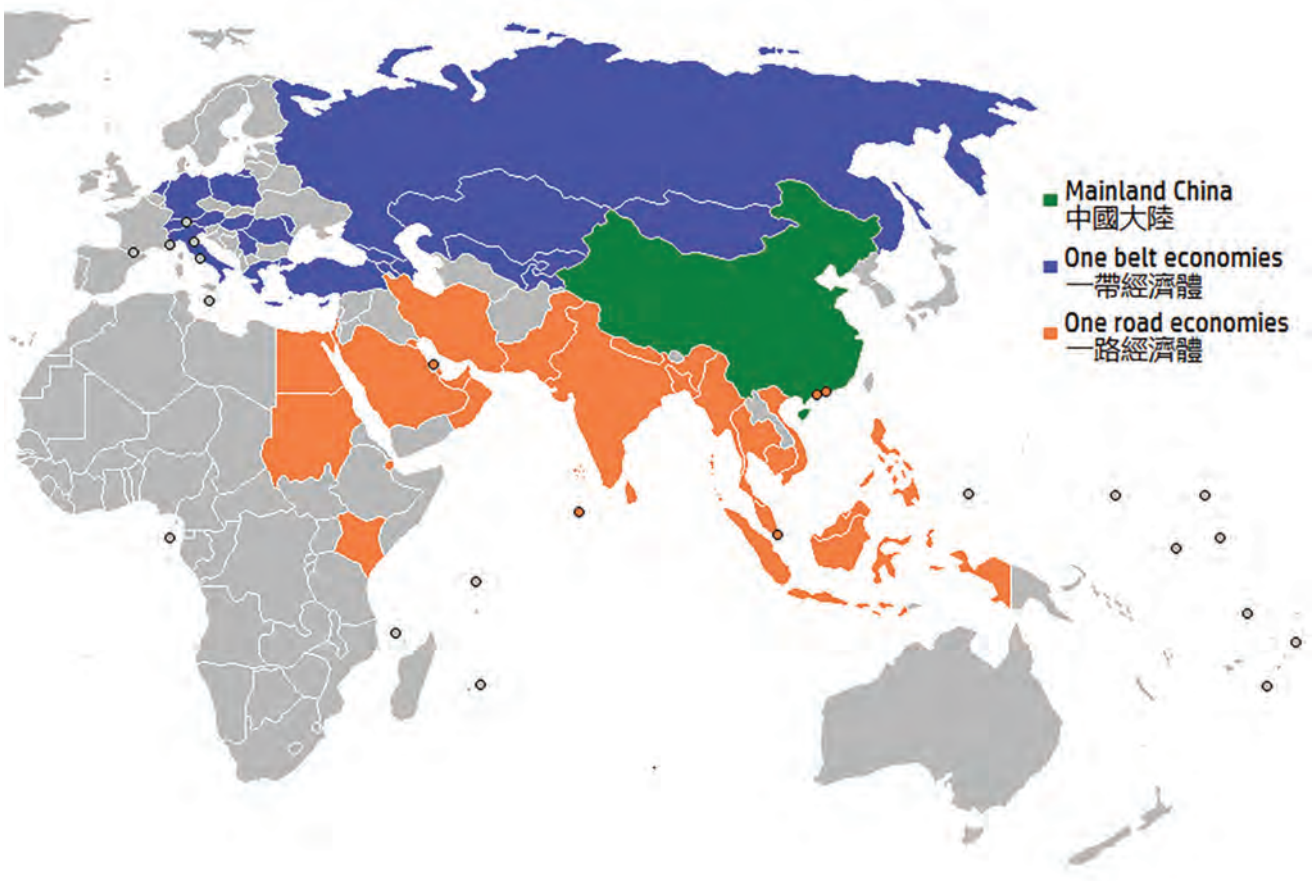
Though somewhat liberalized to provide additional flexibility in terms of bank administration, the PBOC still does not have the freedom to employ monetary strategies outside the purview of government and party leadership. So how is this relationship defined? In 1995, when the PBOC was codified in law, article 5 of the Law of the PBOC states,

> The People's Bank of China shall report its decisions to the State Council for approval concerning the annual money supply, interest rate, foreign exchange rates and other important matters specified by the State Council before they are implemented.[21]

A photo of the People's Bank of China headquarters taken 4 November 2016 in Beijing. (Photo by Max12Max via Wikimedia Commons)

The State Council consists of thirty-five members and is chaired by the premier. The premier is also the second-highest ranking member of the Politburo Standing Committee, subordinate only to the Party General Secretary. Although the PBOC administratively sits in the Chinese government, guidance and influence still originates from the CCP. In fact, the PBOC 2017 Annual Report acknowledges that PBOC actions were "under the leadership of the CPC Central Committee and the State Council."[22] This influence manifests itself in the bank's policy decision-making process, as described by Professor Yiping Huang of Peking University and former member of the Monetary Policy Committee at the PBOC.[23] Most likely, this process begins with the State Council deciding upon key economic policy objectives. Then, the PBOC will follow up with proposed monetary actions to achieve these targets, and finally the State Council will approve or veto this proposal.

Professor Victor Shih, University of California San Diego, adds that "despite the establishment of institutions that resemble those seen in a Western banking system, administrative decrees rather than monetary instruments … still played the dominant role in controlling the money supply."[24] These "decrees" are aimed at achieving economic policy objectives, which include rapid economic growth, a stable currency, and a balanced external account. In the Chinese view, pursuing these objectives has been fundamental to their growth and development. Given the stakes, it is likely that Chinese leadership will continue to exercise political control over the central bank as they perceive it to be imperative to achieving national goals.[25]



(Original figure by Xxjkingdom, modified by Tart via Wikimedia Commons, 9 July 2016)

One Belt, One Road Economies

Exploiting the U.S.-Led Financial System

Today, the PBOC—much like all other institutions in China—focuses on implementing "Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era" (or Xi Jinping Thought).[26] As it impacts economic policy practice, this thought has called for the application of a "double-pillar framework combining monetary and macro-prudential policy."[27] Similar to past objectives of the PBOC, the focus of monetary policy is liquidity in the banking system. But many analysts are now trying to understand this new buzzword, "macro-prudential policy," and what it means for the economy.

The Macro Prudential Assessment (MPA) framework was introduced during the 19th National Congress of the CCP and describes PBOC operations today. It represents China's attempt to balance market reforms and capital liberalization with the exposure to systemic risks that participating in the global economy entails.[28] Fundamentally, Chinese officials are asking how China continues to open up its economy while hedging against uncertainties in the global marketplace.[29] In more direct strategic terms, how China can lean on the structures held in place by the U.S.-led financial system for its present benefit, minimize exposure to risk, and pursue its structural economic objectives. To answer these questions, the MPA framework directly contradicts economic dogma that has been held in place by the U.S.-led system: the policy trilemma, or impossible trinity.

The impossible trinity is a concept in international economics that an economy cannot simultaneously maintain the following three policies: a fixed foreign exchange rate, free capital flows, and an independent monetary policy. In theory, countries choose two of the

aforementioned characteristics but cannot apply all three and maintain economic stability.

For example, an analysis of a country that chooses to have free capital flows and a fixed foreign exchange rate could be useful. According to the impossible trinity, this country has surrendered its ability to conduct independent monetary policy. We see this is true if we consider what would happen if such a country faced inflationary pressures and raised interest rates. An increase in national interest rates would draw investors to purchase the currency because of its higher yielding returns. The increased demand would place appreciation pressures on the fixed currency. Although policy makers could conduct open-market operations or sell foreign exchange reserves to ease this pressure, eventually policy makers would have to give in and allow the currency to appreciate. If they do not, domestic prices would rise, goods would become more expensive relative to the rest of the world, and domestic economic performance would be hampered. When policy makers give way to the pressures created by their independent monetary policy, exchange rate stability will be lost, illustrating the trinity in action.

(Figure by Laurence Chu, Agence France-Presse. Data from Google Finance as of 6 August 2019)

U.S. Dollar Exchange Rate versus Chinese Offshore Yuan, 2014–2019

Three types of policy regimes are born from these compromises:

Free float system. If a central bank wishes to have an independent monetary policy and capital flows (as in the United States), then it cannot have a fixed foreign exchange rate.

Monetary standard. The Eurozone is an example of a group of countries that maintain a fixed, single currency and have free capital flows, but each state is beholden to the standardized monetary policy decided upon by the European Central Bank.

Capital controls system. This system attempts to maintain control over the exchange rate and have monetary autonomy. This is the regime type that the PBOC is currently battling by controlling the amount of capital flows into and out of the Chinese economy. China's "double-pillar" framework, comprised of macro-prudential and monetary policy as described by Xi Jinping Thought, is an attempt to maneuver around the "impossible."

China's central bank has pushed back against this trilemma—typically depicted as an equilateral triangle with equal consideration given to free capital flows, floating exchange rates, and independent policy. Instead, policy strategists at the bank believe that balancing monetary policy making against a "scalene trinity"—placing greater emphasis on cross-border capital flows—would promote greater stability. In other words, China is choosing not to commit to two of the aforementioned factors as a true free-market participant and would rather implement a dynamic policy that observes and reacts to global conditions.[30] Concretely,

it suggests that Chinese policy makers believe that if a country institutes no capital controls (free capital flow), "it could only achieve relatively stable exchange rate and relatively independent monetary policy" because it is impacted by the decision-making of other international players.[31]

China's MPA framework accounts for this reality, and theoretically, has devised a monetary model that can optimize the amount of capital flows, reacting as needed to global market conditions. Party leadership believes that the "double-pillar" framework enables China's financial system to liberalize while protecting its domestic economy from shock.

Undoubtedly, if this alternative monetary model were to succeed, the PBOC will have achieved a true operational success. However, the opportunity for success takes advantage of the U.S.-led, rules-based financial system. Unlike the U.S. dollar, the yuan does not currently impact worldwide flows at the systemic level. It is neither a major reserve currency nor considered a global currency. As such, China can engage in this capital controls experimentation with minimal consequences. If unsuccessful, the CCP and the PBOC can reinstate capital flow restrictions and hedge against any detrimental domestic effects. If successful, the

Economic Warfare in a Nutshell

As a condition for admission to the International Monetary Fund and the World Trade Organization, prospective members agree not to artificially manipulate their national currencies in order to gain an unfair trade advantage in world markets. This is a commitment that China has regularly ignored since admission to those organizations. In order to lower the cost of China's products sold overseas, The Bank of China, which is an appendage of the People's Liberation Army and government, has periodically weakened the value of its currency artificially as an expedient measure to gain trade advantages. The graphic on page 73 highlights that throughout 2019, in response to U.S. efforts to hold China accountable to past trade agreements as well as force compliance with other agreements such as not providing state sponsorship to industrial espionage, it artificially lowered the value of the yuan (basic Chinese unit of money) to make it equate to more than seven yuan to the U.S. dollar making Chinese products much cheaper in the global market. (Graphic by Arin Burgess, *Military Review*)

Chinese monetary model may offer an alternative for developing countries to follow. This may result in an increase in the yuan's global prominence, bolster China's position in international institutions, and undermine U.S. economic influence among developing countries. The irony is that without the present-day stability that the United States affords, the PBOC would be unable to engage in such experimentation. As described in previous sections, the PBOC does not execute monetary policy as an independent institution. Rather, CCP leadership oversees it to support the party's strategic objectives. In turn, its policies drive to achieve the shift in the international economic order that China has desired since the 1970s.

Inside the Monetary Armory

Domestically, the PBOC aims to manage the growth of the money supply and credit to produce conditions that are conducive to "high-quality economic growth."[32] To achieve influence and prosperity through international markets, the PBOC ensures the exchange rate and capital flows promote stability in trade and foreign investment.[33] The bank's website lists the available monetary tools to achieve these objectives. These monetary policy instruments "include reserve requirement ratio, central bank base interest rate, rediscounting, central bank lending, open market operation, and other policy instruments specified by the State Council."[34] Some of these are applied more than others, but they all work in concert to target liquidity, credit, and flows in the system.

Reserve requirement ratio. The reserve requirement ratio (RRR) is the least complicated and most blunt instrument available to the bank. This ratio dictates the amount of deposits that banks must hold relative to their loans outstanding.[35] Through the money multiplier effect, a lower ratio would expand the state's money supply and a higher ratio would reduce it. If the RRR was lowered, liquidity increases because commercial banks have to hold less money in reserves and can lend this to people or businesses. The CPC and the PBOC may want to encourage more lending to combat slowing growth or to make more money available for state-sponsored projects. The PBOC is able to affect this ratio for all financial institutions or for a targeted group.

China's Belt and Road Initiative (BRI) is an infrastructure project aimed at establishing a new "silk road" across the Eurasian landmass. According to the Council on Foreign Relations, "the vast collection of development and investment initiatives significantly expand[s] China's economic and political influence."[36] The United States and other Asian nations have expressed fear "that the BRI could be a Trojan horse for China-led regional development and military expansion."[37] At a minimum, the fundraising and development of these trade routes helps to increase the use of yuan globally.

Unlike the United States, commercial banking in China is dominated by the "Big Four" state-owned banks established during earlier reforms. To finance the BRI, China's SOEs have turned to these state-owned banks for the bulk of their financing.[38] This creates the opportunity to deploy banking tools such as the RRR to help finance these strategic projects. If party officials determine that they want to fund more BRI projects, the PBOC policy makers could be directed to lower the RRR to increase the amount of money available, thus enabling the state-owned banks to lend to SOEs to complete BRI-related projects. Since 2018, the RRR has been cut eight times, and the January 2020 cut released $115 billion into the economy.[39]

The most infamous BRI project was the Hambantota Port Development Project in Sri Lanka that was financed by China's Export Import Bank, a policy bank subordinated to the State Council. This port is strategically located at the southern end of Sri Lanka with access to the Indian Ocean. Although other lenders refused to fund the project citing financial viability concerns, China was willing to provide the loans necessary to complete it. The project, as expected, was a commercial failure, and Sri Lanka could not make its debt payments. As a result of a negotiated deal, China now owns the port and fifteen thousand acres of surrounding land for the next ninety-nine years.[40] Currently, Beijing touts additional large development projects in developing countries such as the Maldives and Djibouti, whose outstanding debt owed to China stands at 30 percent and 80 percent of their national GDPs, respectively.[41]

Central bank loan prime rate and other lending rates. Starting in August 2019, the PBOC announced the loan prime rate (LPR) formation mechanism "to deepen reform to strengthen the market's role in setting interest rates, raise the efficiency of interest rate transmission and lower financing costs."[42] This rate is set by state-owned banks, rural banks, and foreign-funded

banks in a manner similar to other interbank rates. Although this may give the appearance of greater market exposure, banks must submit LPR quotations within a few basis points of the medium-term lending facility (MLF), which is set by the PBOC. In reality, the LPR acts as coordinated guidance to lenders, serving as the primary reference for bank loans and a pricing benchmark for floating-rate contracts.

In addition to the LPR, the PBOC affects facility instruments that have an impact on rates system-wide. These forms of central bank lending include the standing lending facility, MLF, and pledged lending facility. The primary difference between them is time-to-maturity. The standing lending facility is meant to meet the temporary liquidity demands of commercial institutions, similar to the Federal Reserve's discount window, with overnight, seven-day, or one-month maturities. The MLF aims to provide base money to commercial or policy banks. These three-month to one-year facilities help adjust medium-term funding costs of financial institutions and in turn the real economy. Finally, the pledged lending facility is a long-term lending instrument that provides large amounts of financing to support key economic areas and prop up laggards.[43]

Whereas the Federal Reserve interest rate (colloquially, the Fed Rate) is the primary monetary tool in the U.S. armament, this is not the case in China. As just one tool available to the PBOC, adjustments to China's LPR may not connote the same message that an equivalent change in the Fed Rate might. Changes in the Fed Rate may be applied to spur or cool down investment both domestically and internationally. However, because the LPR and other facilities are just one tool available to the PBOC, smaller changes can be made in a more-targeted attempt to encourage small business lending or to affect the exchange rate.

As opposed to the more offensive-minded example in the previous section, rate changes can contribute to an effective defensive economic posture. Consider today's trade tensions. Among the challenges in the U.S.-China trade relationship, one of the most relevant to this discussion is intellectual property theft in key future industries that includes robotics and satellite communications and imagery.[44] In an effort to effect behavioral change, President Donald Trump's administration implemented tariffs on billions of dollars' worth of Chinese goods during trade negotiations. Through changes in the LPR and other rates, Beijing can attempt to offset the impact of American tariffs. For example, if the PBOC lowered the LPR, investors would seek higher interest-bearing instruments elsewhere, which would weaken the yuan relative to other currencies. If the yuan is weaker, Chinese goods become relatively cheaper to the outside world, creating favorable conditions for Chinese exporters. Additionally, the PBOC has the ability to offer targeted preferential rates to affected companies to create favorable internal lending conditions for these domestic businesses. In total, the LPR and other facility rates offer a mechanism to evade the tariffs' effects meant to deter China's economic espionage.

Open market operations. Open market operations (OMO) consist of short-term collateralized loans and borrowing. These operations are conducted via repurchase, sometimes called "repo," or reverse repo agreements to adjust reserve money supply. Repurchases are when the PBOC sells short-term bonds, removing liquidity from the market. Reverse repos do the opposite, adding liquidity to the market through the purchase of short-term bonds from commercial banks. Whereas changes to the RRR are considered blunt actions, OMO is more precise and has an impact on a shorter time horizon. Currently, the seven-day reverse repo is the most frequently used in practice. These operations have a direct and immediate impact on the interbank liquidity conditions and are conducted on a near daily basis.[45]

Through the first two months of 2020, the PBOC has conducted reverse repo operations on eleven different dates injecting over $5.5 trillion worth of yuan into the Chinese economy.[46] The U.S. Federal Reserve also conducts OMO, but these sales and purchases are directly aimed at maintaining the Fed Rate, which has been set. In China, the LPR and OMO are independent monetary functions. As such, when analyzing PBOC actions, it is necessary to observe changes across the toolkit and consider their net effects. In other words, what may appear to be only a moderate change in one instrument might be coupled with a large change in another, significantly impacting any analysis. OMO tends to be that auxiliary monetary tool that amplifies modest changes elsewhere.

In the past, the PBOC conducted OMO only twice per week. Today, OMO can occur daily.[47] This

encourages us to ask why the PBOC needs to conduct these more frequently. Some suggestions are related to China's increased capital outflows, market interventions to stabilize the yuan, and consistent attempts to internationalize the currency.[48] Capital outflows, when domestic Chinese money goes out to foreign markets while inflows are restricted, causes China's money supply to shrink. Similarly, as the PBOC attempts to stabilize the yuan against inflationary pressures, the central bank will sell dollars from its foreign exchange reserves and buy yuan. Again, this action shrinks the money supply. Without compensating action to increase liquidity, credit markets would be impacted, and domestic growth could be stifled. From China's perspective, appropriately managing capital outflows and stabilizing its exchange rates without disrupting the domestic economy is critical to the CCP's long-term objective to increase the yuan's global role. OMO is the most-targeted monetary instrument to accomplish this.

The aforementioned policy tools form the crux of the PBOC's monetary tool kit. The examples illustrate some of the direct impacts that these tools have on financial markets in an effort to undermine or directly strike against the U.S.-led financial order. Predatory lending practices in developing countries undermine the role of Western development banks and grant China access to militarily strategic ports and regions. Currency manipulation enables Beijing to evade consequences of its actions and limits the effectiveness of American economic diplomacy efforts. Market liberalization reforms that take advantage of the opportunities offered by the world's open markets while limiting access to Chinese markets lean on the rules-based system to introduce fractures in the world economy for China's great power benefit.

The derivative effects of simultaneously taking advantage of and undermining free market principles, which helped propel China to the world's second largest economy, must be acknowledged as well. Chinese sovereign wealth funds, funded by the excess foreign exchange reserves built largely through admittance to the World Trade Organization, act as vehicles to capture access to U.S. technology and intellectual property.[49] The development and funding of the Asian Infrastructure Investment Bank challenge the World Bank's role in China's near-abroad.[50] Closer to the U.S. home front, preferential financial terms granted to Chinese "national champions" in the steel industry have incentivized overproduction and have impacted American manufacturing jobs and steel prices.[51] Real estate purchases by wealthy Chinese citizens, totaling over $30 billion in 2018, have distorted housing prices in many American communities.[52] Finally, the Chinese Ministry of Education currently funds eighty-six Confucius Institutes at U.S. colleges to "teach Chinese language and promote culture," a critical soft power tool.[53]

In total, the PBOC's monetary armament has demonstrated the capacity to "weaponize" policy, funding, and economic power across multiple domains. Effectively translating this information into intelligence requires American strategists to look at the sum total of China's economic actions as opposed to evaluating individual policy pursuits. It would be a challenging and foolhardy exercise to analyze PBOC actions in isolation. Further complicating this analysis, the PBOC has historically used multiple monetary instruments to affect single policy objectives. However, context provided by CCP statements, the international financial environment, and regional economic aims may help

Among many economic initiatives, China is developing a Beijing-based cryptocurrency system that it hopes will undermine and replace the current global monetary system that is based on the U.S. dollar. (Graphic elements courtesy of Freepik, www.freepik.com; composite graphic by Arin Burgess, *Military Review*)

transform seemingly innocuous monetary policy action into insights on larger strategic visions.

Strategic Outlook

The international financial system is characterized by economic actors and institutions that facilitate capital flows and global trade. Ostensibly leading and regulating this system are institutions such as the International Monetary Fund, the World Bank, and the World Trade Organization. In reality, however, the U.S. Federal Reserve and its monetary policy decisions wield awesome authority in this arena. The U.S. dollar's role as "a key marker in exchange rate regimes and as an essential reserve currency" has elevated the United States' ability to exert its influence and protect its national security interests through financial markets.[54] Fundamental to the dollar's power is its role and hegemony over oil markets.[55]

After past failed attempts, China successfully launched a crude oil futures contract (colloquially termed the petroyuan). It was introduced on the Shanghai International Energy Exchange in March 2018, and it appears that international traders have been receptive to the instrument.[56] In Singapore and Dubai, the petroyuan's trading volume has surpassed dollar-denominated oil futures.[57] For now, this trade volume remains well below Brent and the West Texas Intermediate crude futures, but it does signal traction in China's efforts to compete in dollar-denominated and dominated oil markets.

The natural result of increasingly traded yuan-denominated oil futures is the further internationalization of the yuan and a rising challenge to the dollar-denominated economic order. A more globally traded yuan would give China more control over its economy and the economies in its near-abroad. Today, the dollar's near-hegemonic status allows it to serve as the world's global currency. As such, many of China's exports are priced in U.S. dollar contracts, and its offshore investment funds are raised in dollars. But if Beijing is successful in making the yuan a global currency through efforts such as the petroyuan, it would offer an even greater economic boost to the world's second-largest economy. Transaction costs for Chinese businesses would be cut, China's economic influence relative to the United States would increase, and Beijing would be empowered and better equipped to offer an alternative to the international financial system currently grounded in U.S. and Western rules. To this end, tracking and identifying PBOC monetary policy initiatives that impact capital flows—making the yuan more attractive to investors, growing use in commodity markets, or increasing the amount of trade denominated in yuan—all indicate China's intention to undermine the current financial system over time.

> "To preserve America's power, it is strategically necessary for the United States and Federal Reserve to maintain influence over the international financial system."

Fortunately, this is not a simple undertaking. For instance, let us examine a scenario where the CCP directs the PBOC to make the yuan more attractive to foreign investors. To accomplish this, the PBOC must decrease the money supply to create an appreciation of the exchange rate. The specific monetary policy tools employed would be a higher reserve requirement ratio or open market repurchases. At first, the currency would become more attractive and appreciate, resulting in a positive capital flow. Then, due to an appreciating currency, exports will become relatively expensive to foreign consumers and could adversely impact the domestic economy, requiring more action to counter these policies. Constant manipulation by the PBOC, however, will have unintended market consequences outside of the CCP's control. Namely, yuan instability in exchange markets will weaken investor confidence. This weakening will subvert the CCP and the PBOC's larger ambitions to internationalize the yuan, despite their intentions to the contrary.

Another factor in the United States' favor is that, for now, the Chinese yuan is not in a position to be a

viable alternative to the dollar. First, the yuan sits sixth among global currency reserves, comprising only about 2 percent of global reserves.[58] Second, Chinese domestic markets are "not deep or liquid enough to absorb vast global flows."[59] In order for the yuan to become a global currency, the PBOC and Chinese system would have to undergo much greater market and governance reforms. At the same time, the United States continues to be considered the world's strongest economy. Ninety percent of foreign exchange trading involves the dollar, nearly 40 percent of the world's debt is dollar denominated, and one-third of global GDP is generated by countries with currencies fixed to the dollar.[60] As such, an effort by the Chinese to use monetary policy to bifurcate the world financial system, one overseen in part by the United States and the other overseen by China, in a single economic assault would be severely limited by the world's entrenchment in the U.S.-led system. More likely, China will tactically and operationally employ the totality of its monetary armament over a long time period to gradually shift the international economic center of gravity.

Conclusion

To conclude, the battlespace in modern warfare has expanded to the economic domain. In order to preserve America's power, it is strategically necessary for the United States and the Federal Reserve to maintain influence over the international financial system. Further, as suggested by this article, minding the PBOC's actions relative to sustaining or undermining the international economic system's structure may signal the CCP's intentions to apply monetary policy for strategic purposes. For the moment, it is likely that America will continue to be in control. Maintaining this in the long term will require forward-leaning action on the international scene. To accomplish this, the United States must be the leading proponent of open markets and fair trade practices, and it must foster existing and new trade relationships. Retracting, or even the appearance of stepping back, from the global marketplace would yield space for alternative leadership to emerge. Military leadership must be ready to define their operations to support these strategic necessities. To be capable of developing operations in these terms, rising and current leaders must be versed in the tenants of economic warfare. PLA commanders have written that the new concept of weapons will cause ordinary people and military men alike to be greatly astonished at the fact that commonplace things that are close to them can also become weapons with which to engage in war. They believe that some morning people will awake to discover with surprise that quite a few gentle and kind things have begun to have offensive and lethal characteristics.[61]

If states in the global market believe that America is no longer providing economic leadership, the same structures that have established and financed America's power may be weaponized against it. Next December's Central Economic Work Conference could be used by the CCP and the PBOC to plan and cultivate the economic relationships to launch and sustain an alternative financial channel. Without a shot fired, America could wake up to a system that is corrosive to its economic, social, and political way of life. ■

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10. Harry Harding, *A Fragile Relationship: The United States and China since 1972* (Washington, DC: Brookings Institution, 1992), 338.

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12. Law of the People's Republic of China on the People's Bank of China (promulgated by the National People's Congress, 31 October 2006, effective 1 January 2007), chap. 1, art. 2.

13. Ibid., chap. 1, art. 2 and 3.

14. Gregory T. Chin, "Understanding Currency Policy and Central Banking in China," *Journal of Asian Studies* 72, no. 3 (August 2013): 527, https://doi.org/10.1017/S002191181300051X. By contrast, the U.S. Federal Reserve decisions need not be approved by any political body.

15. Victor C. Shih, *Factions and Finance in China: Elite Conflict and Inflation* (New York: Cambridge University Press, 2008), 30–45.

16. Chin, "Understanding Currency Policy and Central Banking in China," 527.

17. Shih, *Factions and Finance in China*, 37.

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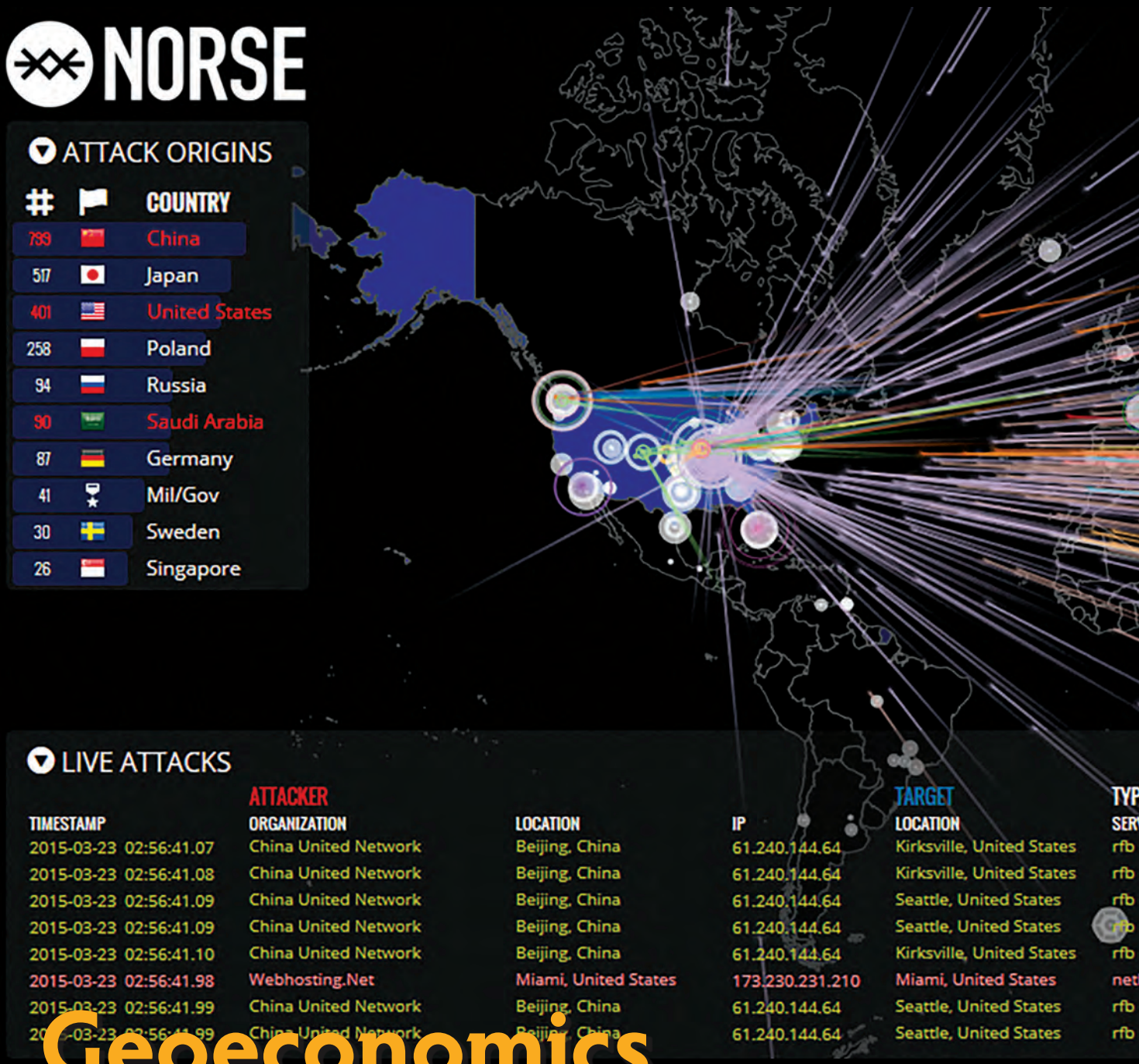
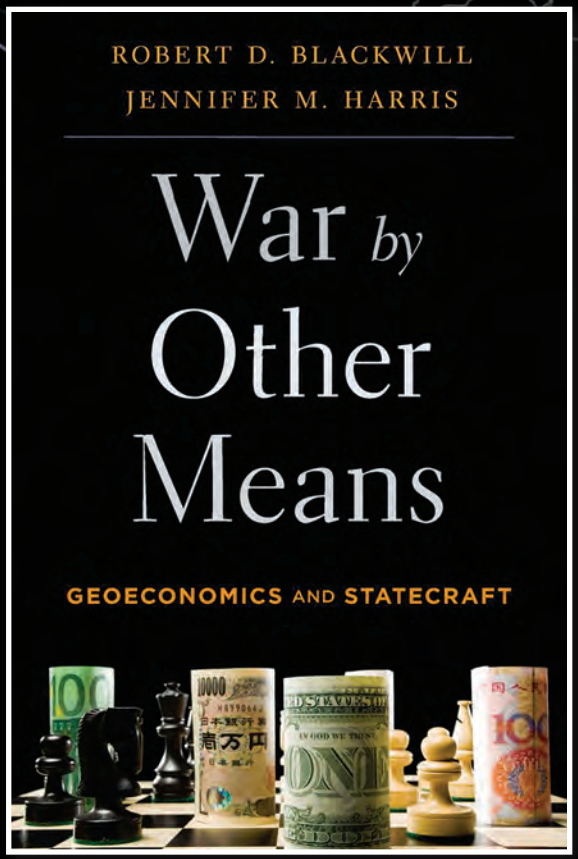


Geoeconomics

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

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



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

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

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

—Sun Tzu

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

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

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

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

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

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

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

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

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

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

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

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

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

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

What is Geoeconomics?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Figure. Economic Instruments

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

Geoeconomic Statecraft

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

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

Blackwill and Harris enumerate seven tools suitable for geopolitical application: trade policy, investment policy, economic and financial sanctions, financial and monetary policy, aid, cyber, and energy and commodities.[45] The first five tools are readily recognized as economic activities, and energy and commodities could just as easily be considered a subset of trade policy—representing perhaps a more critical category of tradeable goods. Cyber's inclusion as an economic instrument seems a bit problematic. The standard economic instruments are shown in the figure (on page 88), highlighting various applications typically designed to provide positive inducement (carrots) or negative actions (sticks). Negative actions are often referred to as coercive economic measures.[46]

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

International investment flows now far surpass cross-border trade flows, and according to the United Nations, the global direct outward investment position was $26 trillion in 2016.[48] Developing countries that need capital for growth now turn to the international markets for the vast majority of their needs. Tom Friedman describes the combination of short-term investors and multinationals investing for the long term (foreign direct investment [FDI]) as the "electronic herd," and the markets that broker these investments as the "supermarkets." He concludes that the "supermarkets have replaced the superpowers as sources of capital for growth."[49]

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

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

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

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

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

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

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

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

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

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

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

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

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

“China’s export-driven economic miracle depends on imports. . . . China cannot cut off this flow, or risk disrupting it through conflict, without crippling its economy.”

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

China and the United States in the Geoeconomic Arena

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Yet, most analysts conclude that sanctions will never succeed in getting North Korea to give up its nuclear weapons. The first round of the current geoeconomic battle was fired by the United States in the form of a grand bargain that proposed to go easy on trade with China in return for Chinese pressure against North Korea. Recently, having judged that effort to be lacking, the United States fired round two by initiating a trade investigation against Chinese technology transfer policies and theft of IPR.[86] In the meantime, South Korea agreed to the deployment of the Terminal High Altitude Area Defense (THAAD) system on its territory, and it was time for China to fire a geoeconomic round. Government-controlled news media urged boycotts of South Korean products and mainland travel agencies canceled group trips to South Korea.[87] "The sales of Kia and its parent Hyundai Motors Co. in China fell 61 percent from March to June," and the plants are operating at only 30 percent capacity.[88] Once again, however, the geoeconomic effect missed the mark as the THAAD system is now completely operational and South Korean reaction to Chinese bullying has gone down badly. For the first time, opinion polls suggest they hold China in lower esteem than Japan.[89]

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

U.S. Geoeconomic Statecraft

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

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

The United States is the number two trading nation in the world, and due to the size of its domestic consumer-based economy, it remains an extremely attractive market for global producers to engage. The Trump administration's populist-driven trade policies have sent a chill through free-trade enthusiasts around the world, and the withdrawal from the Trans-Pacific Partnership (TPP) trade agreement is viewed by many as an economic setback but even more of a geostrategic error. Blackwill and Harris include an extensive discussion of the TPP and argue that the TPP should have been negotiated with much more of a geopolitical focus.[96] But, they nevertheless conclude that "U.S. failure to conclude this deal is far more likely to be seen by our allies and non-allies alike as foremostly a geopolitical failure and a negative test of U.S. staying power in the region."[97]

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

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

The carrot aspect of the trade instrument may be a bit blunted for the time being, but the stick is very active and increasingly effective. U.S. economic sanctions are now largely associated with financial sanctions. As mentioned above, these sanctions are focused on constraining access to the global banking system. The size of U.S. capital markets and the role of the U.S. dollar in international transactions mean the "United States has had a near monopoly on the use of targeted financial pressure over the past ten years."[100] Financial sanctions have also created significant incentives for third parties (e.g., banks) to abide or risk severe consequences, both monetary and reputational.[101]

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

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

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

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

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

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

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

Geoeconomic Grand Strategy: Small Ball vs. Big Ball

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

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

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

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

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

There are two problems with their conclusion. First, their purported "grand strategy" is to make greater use of economic instruments to achieve geopolitical objectives (geoeconomics) in support of U.S. national interests. The argument in the preceding paragraph captures the emphasis on short-term, tactical, and transactional uses of economic instruments. This is all about means, not strategic ends, and certainly not a grand strategic vision. The authors actually introduce the analogy of small ball (tactics) versus big ball (strategy).[124] It should not be a big surprise to the reader that a book titled *War by Other Means* is focused on the means (small ball), not the ends. It represents an excellent review of the various economic instruments of statecraft and their application, but it adds little to considering how to employ these tools in support of an effective grand strategy. The second problem is that continued support of the RBIO remains the most appropriate grand strategy (big ball) for the United States. Economic instruments need to be employed occasionally in support of geopolitical objectives, but their use should take into consideration the potential negative impact it may have on the continued acceptance of the RBIO.

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

Conclusion

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

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

Notes

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

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

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

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10. Robert D. Blackwill and Jennifer M. Harris, *War by Other Means: Geoeconomics and Statecraft* (Cambridge, MA: The Belknap Press of Harvard University Press, 2016), 11; Leslie H. Gelb, "GDP Now Matters More Than Force: A U.S. Foreign Policy for the Age of Economic Power," *Foreign Affairs* 89, no. 6, (November/December 2010), accessed 8 November 2017, https://www.foreignaffairs.com/articles/united-states/2010-10-21/gdp-now-matters-more-force.

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

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

13. Ibid., 4.

14. Ibid., 7.

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

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

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

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

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

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

23. Ibid.

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

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

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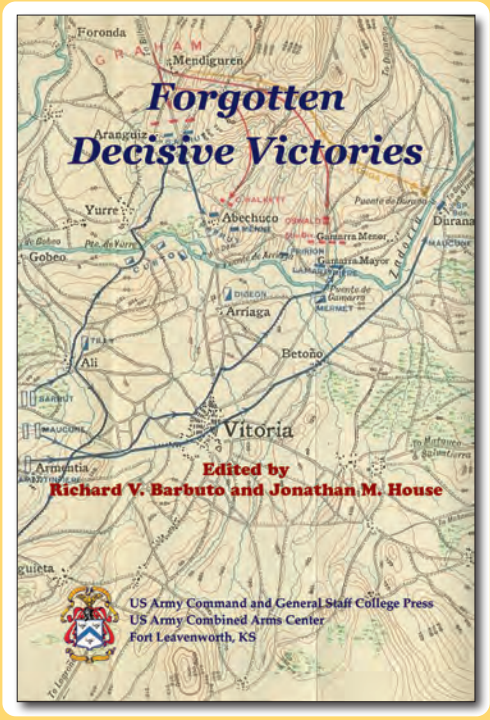

The Army University Press is pleased to announce the publishing of *Forgotten Decisive Victories* by the faculty of the Department of Military History, U.S. Army Command and General Staff College. This anthology is a collection of essays on understudied decisive battles in history, each of which altered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

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

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

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82. Blackwill and Harris, *War by Other Means*, 177.

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Philippine Defense Secretary Delfin Lorenzana (*left*), Chinese Ambassador to the Philippines Zhao Jianhua, and Philippine Armed Forces Chief Gen. Eduardo Ano (*right*) inspect Chinese-made CQ-A5b assault rifles 5 October 2017 during a turnover ceremony at Camp Aguinaldo in Quezon City, Philippines. The weapons and ammunition are part of China's military donation to the Philippines' fight against Muslim militants who laid siege to Marawi in southern Philippines. (Photo by Bullit Marquez, Associated Press)

China's One Belt, One Road Initiative and Its International Arms Sales

An Overlooked Aspect of Connectivity and Cooperation?

Capt. James Daniel, U.S. Army

In 2013, China's leaders proclaimed the One Belt, One Road (OBOR) policy was primarily aimed at integrating China with other Eurasian countries for the purpose of encouraging trade and investment. Since then, in specific examples of arms sales to OBOR countries, China has started to sell drones to Central Asian countries and submarines to Indonesia, and it has provided munitions and armaments of an undisclosed nature to Ukraine. While the OBOR story is centered on economic development, and experts focus on the economic ramifications of regional integration, Chinese arms sales that coincide with OBOR suggest that China's goals extend beyond peaceful development into the realms of strengthening military and defense cooperation as well as possibly developing patron-client relationships. By looking at China's arms trade relationships with OBOR countries by region and accounting for the types of weapons that are being sold, it is possible to understand the connection between China's OBOR policy and its arms sales. Since China has used arms sales in the past as a diplomatic tool, these observations will undoubtedly lead to follow-on questions, which deserve closer attention and analysis as China continues to execute and shape OBOR.

Historical Economic and Political Ramifications of Chinese Arms Sales

To understand the current situation, this article will assess the historical economic and political ramifications of Chinese arms sales to its chosen client countries from the 1980s until the present day. Chinese arms sales to OBOR countries will be assessed based on regional breakdown to include those categorized as Maritime Silk Road (MSR), eastern European, and Central Asian client states.

Limitations. The Stockholm International Peace Research Institute (SIPRI), an independent international institute dedicated to research into conflict, armaments, arms control, and disarmament, maintains an arms transfer database that shows all international transfers of major conventional arms since 1950.[1] However, since the existing SIPRI data includes only major conventional arms transactions that are recorded on international trade registers, and due to China's close-hold culture regarding its international arms sales and state-owned military-industrial complex, researching the OBOR-arms sales connection is limited by incomplete and opaque data. In fact, data on Chinese arms export revenues and state-owned enterprises is so opaque that SIPRI specifically excludes Chinese firms from its tracker of top one hundred arms-producing and military services companies in the world, stating, "Although several Chinese arms-producing companies are large enough to rank among the SIPRI Top 100, it has not been possible to include them because of a lack of comparable and sufficiently accurate data."[2]

Without access to China's reliable small arms export volume, and without the means to determine unrecorded or classified state-to-state transactions, this author is challenged to assess, with a high degree of confidence, results that can measure a complete picture of China's arms sales as an instrument of state power. For example, regarding China's newly established relationships with Central Asian countries, would China risk drawing the ire of its important geopolitical neighbor, Russia, and damage OBOR prospects by selling arms to Central Asian countries or other key countries with which Russia and other friendly states have arms sales relations? Not attempting to claim complete understanding of the complex political and economic relationships at play beyond the scope of OBOR, it is the hope of the author that analyzing this narrowly focused question can shed new light onto China's strategic imperative and provide data points as to how China will choose to interact with future partners as it extends its influence beyond its immediate border and regional footprint.

Historical foundations. During the 1980s, China emerged as a top exporter of conventional arms to developing nations because Chinese arms were readily available, inexpensive to purchase, and easy to maintain and operate.[3] However, Chinese arms export volume fell dramatically during the 1990s, after the conclusion of the Iran-Iraq War and the demonstrated superiority of high-tech Western weapons over inexpensive, low-quality Russian and Chinese arms.[4] It was during this period that China established the procedural guidelines it used

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to make decisions on to whom to sell weapons. China sold its weapons abroad in light of both commercial and strategic considerations to include a desire to

- strengthen foes of rivals,
- expand political influence in regions in which it had long-term strategic objectives such as the Middle East and Southeast Asia,
- maintain its defense industries in the face of diminished domestic procurement,
- procure foreign exchange reserves,
- subsidize research and development programs with the inclusion of foreign recipients in the customer base, and
- stimulate more rapid weapons technology development by competing in foreign markets.[5]

A key aspect of Chinese arms sales is that they are frequently subsidized now as they were in the 1980s and 1990s.[6] Despite Chinese arms being inexpensive and widely available, the Chinese government has refrained from selling weapons to potential foes in previous sales, which indicates the primacy of strategic considerations in Chinese arms sale decision-making.[7]

Current primary Chinese motivations to sell arms abroad are assessed to include arms in exchange for resources and hard currency, cultivation of friendly state relations by hardwiring security and military agreements, and support of Chinese security interests and China's 1980s client relationships. For example, the Iran-China arms for oil relationship rested on China's need for imported oil and a need for Iran to serve as a bulwark against Soviet expansionism.[8] And, in another relevant instance, Myanmar became an important Chinese arms client in the 1990s due to Chinese interest in supporting a similarly minded autocracy in a democratizing world, complicating India's security planning, acquiring access to Myanmar's Indian Ocean naval facilities, and protecting Chinese commercial interests in Myanmar itself.[9]

Recent media syntheses of Chinese arms export data have determined that China's arms exports have increased 74 percent from the latest two five-year periods (2007–2011 and 2012–2016), accounting for 6.2 percent of world arms sales and ranking third behind the United States and the Russian Federation.[10] China conducts sales with over forty-four countries; 60 percent of China's total arms sales are centered on key customer relationships in Pakistan, Bangladesh, and Myanmar. China has also continued its relationship as a major arms supplier to African countries, which together constitute 22 percent of China's total arms export volume.[11] No other major arms exporter expanded its arms sales volume to the extent China did between 2007 and 2016; its efforts to expand its market can be seen in its increased presence as a seller in Latin America, exemplified by the sale of Type 90 multibarrel rocket launchers to the Peruvian army in 2015.[12]

Although China's arms sales during the 2010–2014 period amounted to $15 billion, they paled in comparison with the U.S. and Russian totals of approximately $96 billion and $70 billion, respectively. However, its outreach to new markets suggests that arms sales have and will remain a pillar of Chinese strategy to engage in outreach with countries with which it is interested in expanding both geopolitical and economic ties.[13]

One Belt, One Road Background

In autumn of 2013, China's General Secretary Xi Jinping visited Kazakhstan and Russia while Premier Li Keqiang paid calls to Southeast Asian countries. During his visit, Xi announced an initiative to create an economic belt linking China with Mongolia, Central Asia, Russia, Iran, Turkey, the Balkans, eastern and Central Europe, and ultimately Germany and the Netherlands.[14] While calling on Southeast Asian countries, Li announced China's plans to develop the MSR, which would connect China with Southeast Asian countries via Malaysia, Vietnam, and Indonesia; Bangladesh; India; the Persian Gulf; the Mediterranean; and ultimately Europe, terminating in the Netherlands and Germany.[15] Integrated together, the twin projects became known as the OBOR initiative, through which China would usher in a new age of connectivity and cooperation amongst its immediate neighbors and throughout the Eurasian landmass (see figure, page 106–107).

To fund this initiative, China, through the financial support vehicles of the Asian Infrastructure Investment Bank as well as through the China Development Bank, has allocated up to US$1 trillion that is to be executed over a time span of thirty-five years.[16] By seeking to upgrade and develop new lines of rail, sea, energy, and communications infrastructure, China has the potential to exert its influence over sixty countries with a combined population of over four billion people that together comprise one-third of the world's gross domestic product.[17]

Whether arms sales are directly related to OBOR or not, it is important to ascertain how economic and security interaction between China and OBOR countries is happening. OBOR's official narrative, according to the Chinese State Council, is that OBOR is China's initiative to connect Eurasian countries with China and each other for the purposes of peaceful development and economic integration.[18] However, the expansion of Chinese arms sales to OBOR countries adds another dimension with which to view China's future geopolitical intentions. This hardwiring of economic, security, and diplomatic relations could be a strong sign of a trend set to continue as OBOR develops.

> By seeking to upgrade and develop new lines of rail, sea, energy, and communications infrastructure, China has the potential to exert its influence over sixty countries with a combined population of over four billion people that together comprise one-third of the world's gross domestic product.[1]

China's diplomatic efforts to integrate and exert influence over OBOR countries will be in part underscored by the scope and direction of Chinese international arms sales. Analyzing China's new and strengthened arms client countries by conducting a before-and-after comparison of existing arms trade register data for ten years prior to OBOR's announcement from 2001 to 2012, and after its announcement from 2013 to 2016, will help clarify the relationship between OBOR and arms sales. Historically, China has used arms sales as a tool of diplomacy. How will it use arms sales as a tool of diplomacy in the OBOR context?

While OBOR's potential economic benefits are well publicized, often with allusions to the Silk Road of old that connected China to the Middle East and Europe, the possibility of changes to the political and security status quo remain unclear. Common narratives from foreign observers have noted that OBOR's policy value to China is to spur economic competition and development, resist U.S. influence, and vie for leverage across the Eurasia landmass.[19] Key to achieving the objectives mentioned above is the concept of Chinese neoimperialism. This model involves heavy Chinese investment and subsidized loans to poverty stricken countries in a bid for influence and preferred access to political and economic resources.

Since China's leadership officially announced OBOR as a foreign policy initiative in September and October 2013, according to SIPRI and open source data, its arms sales have expanded to include the OBOR participant countries of Kazakhstan, Uzbekistan, Turkmenistan, Belarus, and Ukraine.[20] Existing relationships prior to the announcement of OBOR that have been sustained and strengthened in terms of arms export volume include the countries of Sri Lanka, Bangladesh, Egypt, Malaysia, Kenya, Iraq (indirectly due to planned rail passing through the country), Indonesia, and Iran.[21] China's increased scope and volume of arms exports ostensibly is due to their low-cost appeal, a lack of Chinese political scrutiny, and having no strings attached. However, the sudden expansion of Chinese arms exports to OBOR countries with which no previous arms relationship had existed prior to OBOR's announcement could hint at China's future geopolitical intentions for OBOR countries as well as a continuation of its influence model of hardwiring defense, economic, and political ties with countries of interest.

Data Analysis and Trends

According to SIPRI data from the international arms trade register covering recorded activity from 2002 to 2012, China placed sixth in the world rankings of major arms exporters by dollar-based revenue (see table 1, page 108).[22] Its major customers included countries such as Iran, Pakistan, Bangladesh, and Myanmar.[23] In the final four years of data, Chinese arms exports expanded dramatically to account for a 100 percent increase year on year from 2008 to 2009. This trend continues through the end of the observation period. Concerned about its image to the

(Figure and information by Mercator Institute for China Studies [MERICS], May 2018)

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Figure. The One Belt, One Road Initiative


Krasnoyarsk
Novosibirsk
Irkutsk
Ulan Bator
Daqing
Jiamusi
Harbin
Alashankou
Ürümqi
Hunchun
Vladivostok
Rason
Chongjin
Beijing
Dandong
Lanzhou
Qingdao
Busan
Lianyungang
Xi'an
Chengdu
Wuhan
Shanghai
Ningbo
Chongqing
Kunming
Fuzhou
Quanzhou
Dhaka
Guangzhou
Calcutta
Payra
Beihai
Zhanjian
Sittwe
Haikou
Kyaukphyu
Vientiane
Laem Chabang
Sihanoukville
Hambantota
Kuala Lumpur
Kuantan
Malacca
Singapore
Jakarta
Darwin
Newcastle
Melbourne
Existing
Planned / under construction
Railroads
Oil pipeline
Gas pipeline
Port
Silk Road Economic Belt
Maritime Silk Road
Economic Corridor
AIIB member states

Table 1. Stockholm International Peace Research Institute (SIPRI) 2002–2012 World Rankings of Major Arms Exporters by Dollar-Based Revenue (in millions)

Rank 2002-2012	Supplier	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
1	United States	4964	5647	6833	6790	7505	7892	6828	6927	8090	9100	9132	79709
2	Russia	5736	5171	6284	5175	5194	5568	6265	5030	6172	8658	8317	67569
3	Germany (FRG)	902	1660	1121	2063	2762	3310	2378	2534	2735	1345	820	21630
4	France	1474	1441	2324	1842	1706	2410	2007	1929	899	1766	1033	18831
5	United Kingdom	1090	744	1206	1060	987	974	967	1050	1151	1025	899	11153
6	China	526	700	400	286	670	505	3636	1140	1477	1274	1599	9212
7	Italy	478	365	263	832	541	725	422	521	529	939	753	6367
8	Netherlands	233	336	218	505	1156	1209	463	486	381	540	805	6333
9	Israel	574	444	679	510	406	544	359	737	655	572	449	5920
10	Ukraine	307	307	198	282	544	626	382	415	479	568	1492	5610
	Others	1632	2334	2081	2193	3384	2939	3464	3551	3240	4354	3054	32225
	Total	17917	19147	21608	21549	24854	26701	24162	24319	25808	30141	28353	264560

(Table generated from SIPRI Arms Transfers Database, http://armstrade.sipri.org/armstrade/page/toplist.php, data accessed 17 April 2019)

international community during the buildup to the 2008 Olympic Games, the data suggests China was very careful to limit its arms export activities. Once the event had been successfully staged and concluded, export revenues could rise without the risk of incurring any negative international attention.

Countries that would be included in the OBOR footprint to include Egypt, Iran, Bangladesh, Indonesia, Iraq, Kenya, Malaysia, Sri Lanka, and Syria all had existing and, in most cases, sustained arms purchasing and licensing agreements from China.[24] Two countries that obtained licenses to import and assemble Chinese weapons domestically were Egypt and Iran.[25] Both of these countries had historical arms transactions with China. Egypt, besides ordering eighty Karakorum-8 training aircraft in 1999 (delivered from 2001 to 2005), was one of the first countries to order Chinese unmanned aerial vehicles (UAVs).[26] Eighteen Aisheng ASN-209 Chinese drones were ordered in 2010 and delivered to Egypt from 2012 to 2014.[27] In the case of Iran, it licensed the right to manufacture antiship missiles, portable surface-to-air missiles (SAMs), and armored personnel carriers.[28] Since only two countries were granted a license to manufacture and assemble Chinese weapons, this indicates China's acknowledgment of both states being friendly to China's interests and is a strong

Table 2. SIPRI 2013–2016 World Rankings of Major Arms Exporters by Dollar-Based Revenue (in millions)

Rank 2013-2016	Supplier	2013	2014	2015	2016	Total
1	**United States**	7647	10312	10184	9894	38037
2	**Russia**	7779	5103	5554	6432	24869
3	**France**	1517	1705	2080	2226	7528
4	**China**	2113	1168	1764	2123	7168
5	**Germany (FRG)**	727	1762	1792	2813	7092
6	**United Kingdom**	1580	1575	1139	1393	5687
7	**Spain**	728	1050	1150	483	3412
8	**Italy**	877	700	692	802	3071
9	**Israel**	432	399	694	1260	2784
10	**Ukraine**	671	640	347	528	2186
	Others	2982	2865	3052	3120	12020
	Total	27053	27278	28448	31075	113854

(Table generated from SIPRI Arms Transfers Database, http://armstrade.sipri.org/armstrade/page/toplist.php, data accessed 17 April 2019)

predictor of future arms transactions. Both states have a strong role in the development of OBOR, Egypt especially as an MSR port of call and because of its possession of the Suez Canal.

Designated OBOR countries to include Bangladesh, Egypt, Indonesia, Iran, Iraq, Kenya, Malaysia, Sri Lanka, and Syria collectively purchased antitank missiles, air search radar, armored personnel carriers, training aircraft, infantry fighting vehicles, fighter aircraft, short-range air-to-air missiles, light transport aircraft, tanks, naval patrol craft, helicopters, portable SAMs, antiship missiles, land-based SAM systems, artillery, and armored recovery vehicles.[29] This suggests China is looking to expand its commercial interests by direct sales or, as with Iran and Iraq, access to oil reserves. China also is likely seeking to shore up its long-term influence by using these conventional weapons sales to develop friendly state relations. While some of these transactions were one-time deals, many of them were organized as initial orders followed by sustained deliveries lasting many years.[30] Many of the export orders that took place in the years leading up to OBOR continued to be delivered after the policy was announced. For the purpose of this paper, which seeks to explain the relationship between OBOR and Chinese arms sales, these long-term and sustained transactions will be identified and isolated.

Compared with the decade preceding the OBOR initiative, in September-October 2013, China accelerated its international arms sales to supplant both the United Kingdom and Germany to place fourth in total worldwide arms export revenues from 2013 to 2016 (see table 2).[31] Based on 2012–2016 data, major importers of Chinese arms continued their defense relationship as Pakistan accounted for 35.14 percent of total Chinese exports, Bangladesh accounted for 17.85 percent, and Myanmar for 10.07 percent (see table 3, page 111).

Countries that continued to transact with China based on existing orders placed in the pre-OBOR era of 2002–2012 included Bangladesh, Egypt, Iran, and Indonesia. These countries and others expanded the scope of their imports, demonstrating a strengthening of their security relationship with China following the announcement of OBOR. States such as Malaysia, Bangladesh, Iraq, Indonesia, Kenya, Sri Lanka, and Syria placed more orders for Chinese arms, which included antiship missiles, naval vessels, SAMs, training aircraft, submarines, artillery, naval ordnance to include torpedoes, naval guns, antiaircraft guns and

associated fire control radar, UAVs and appropriate ordnance, helicopters, naval patrol aircraft, and anti-tank missiles.[32] Most of these countries comprise the region designated as the MSR, and Beijing is clearly willing to provide naval weaponry to them, perhaps in a gambit to expand its client network for intermilitary cooperation and ensure its continued access to critical sea lanes in support of OBOR's development.

By grouping other OBOR countries in an alternate category, those who did not have a preexisting relationship with China and only started to import Chinese arms after the policy was announced in 2013, it is possible to examine China's geopolitical intentions behind the policy. OBOR countries that initiated an arms importing relationship with China after 2013 include Belarus, Ukraine, Kazakhstan, and Turkmenistan.[33] Each of these country's purchases of arms will be examined in greater detail than those already mentioned in previous categories.

Kazakhstan placed an order for two Pterodactyl-1 UAVs in 2015, and these were delivered in 2016. Neighboring Turkmenistan purchased ordnance for the CH-3 UAV in the form of ten AR-1 antiarmor air-to-surface missiles.[34] Both Central Asian states receiving high-tech weaponry with no precedent for doing so indicates that Beijing most likely is looking to secure access to natural resources, to quickly develop friendly relations, and to potentially provide support for antiterrorism operations to secure its own investments in the region.

The countries in this group are all members or associate parties to the Commonwealth of Independent States and traditionally in Russia's sphere of influence. As such, one would expect the dominance of security and defense relationships to be between these countries and Russia, so China's willingness to initiate limited arms sales to these countries is a new development that merits analysis. It could be that because of OBOR, the limited scale of weapons sales, Russian willingness to tolerate minor transactions, the nature of the weaponry itself, and the domestic situations of each of these countries, Chinese weapons are both necessary and attractive from a buyer's perspective.

Central Asian Arms Sales

A 7 July 2015 military affairs article for iFeng, an online news website, roughly titled "China's increased arms sales to Central Asia has resulted in a stern warning from Russia," referenced a report written in Kanwa Asian Defence.[35] The magazine is a publication prepared and disseminated from a registered Canadian organization on Asian defense affairs. A 2015 magazine report indicated that China seeks to use OBOR as a vehicle to execute an energy import/weapons export strategy with Central Asian countries.[36] Specifically seeking to secure supplies of oil and natural gas, the article makes assertions with evidence derived from the Kanwa report that China has signed oil and gas agreements with Kazakhstan, Turkmenistan, Tajikistan, Iran, Turkey, Saudi Arabia, Oman, and Kuwait, while all the mentioned countries have purchased Chinese arms.[37] In addition, the report revealed that Kazakhstan has already employed Chinese-made drones and, furthermore, has submitted purchase-accompanying ordnance orders for Hongqi-9 missiles.[38] This deal was borne out of an arrangement to trade Chinese weaponry for Kazakh natural gas.[39] SIPRI data discussed earlier in the paper seems to collaborate this claim that Kazakhstan did indeed purchase Chinese drones, while no transactional record is available from SIPRI's international trade registers for the Hongqi-9 missiles.

At the same time, Turkmenistan and Uzbekistan were both reported to be in talks with China in the hopes of purchasing Hongqi-9 missiles in exchange for exporting energy resources as well as driving away U.S. military influence from Central Asia.[40] Of particular interest are China's extensive sales of weaponry to Azerbaijan to include rocket artillery, drones, and fighter planes.[41] This conventional weapons trade is indicative of China's desire to develop friendly relations with Azerbaijan and to offer it an alternative to Russian imports.

From an international affairs perspective, the article reports that China not only has engaged in a contest to secure Central Asian energy, but it has also received a stern rebuke from Russia for selling weapons that have the potential to "kill or injure."[42] It can be inferred that from this rare rebuke reported over open media that Russia is uncomfortable with Chinese arms being exported to its neighbors that have traditionally been tied to its own sphere of influence. In a potential foreshadowing in the development of arms exporting relationships with OBOR countries, the article further notes that China has already signed energy-for-conventional-weapons trade agreements with Saudi Arabia, Sudan, Algeria, and Egypt for systems such as self-propelled artillery, drones, and Guardian

Table 3. Top Twelve Importers of Chinese Arms, 2008–2018

	Pakistan	Bangladesh	Myanmar	Algeria	Venezuela	Tanzania	Indonesia	Thailand	Morocco	Nigeria	Iran	Sudan
2008	$250 M	$10 M	$10 M	—	$41 M	—	$3 M	—	—	—	$47 M	$28 M
2009	$758 M	—	$17 M	—	$54 M	$25 M	—	$12 M	—	—	$47 M	$6 M
2010	$747 M	$13 M	$5 M	$18 M	$89 M	—	$2 M	—	$221 M	$156 M	$62 M	$17 M
2011	$578 M	$81 M	$277 M	—	$8 M	$76 M	$8 M	$2 M	$34 M	—	$52 M	$18 M
2012	$583 M	$151 M	$254 M	—	$51 M	$113 M	$65 M	$20 M	$34 M	—	$31 M	$29 M
2013	$719 M	$480 M	$190 M	—	$97 M	$118 M	$74 M	$24 M	—	—	$9 M	$28 M
2014	$413 M	$204 M	$64 M	$68 M	$74 M	$14 M	$35 M	$8 M	—	$57 M	$9 M	$32 M
2015	$620 M	$451 M	$184 M	$247 M	$100 M	$20 M	$41 M	$1 M	—	$22 M	$9 M	$27 M
2016	$751 M	$261 M	$169 M	$499 M	$76 M	—	$42 M	$77 M	—	$36 M	—	$12 M
2017	$559 M	$204 M	$8 M	$17 M	—	$2 M	$37 M	$131 M	—	—	—	$32 M
2018	$448 M	$75 M	$105 M	$33 M	—	—	$30 M	$50 M	—	—	—	$32 M
Total	**$6.426 B**	**$1.930 B**	**$1.283 B**	**$882 M**	**$590 M**	**$368 M**	**$337 M**	**$325 M**	**$289 M**	**$271 M**	**$266 M**	**$261 M**

(Table generated from SIPRI Arms Transfers Database, https://sipri.org/databases/armstransfers, data accessed 16 August 2019; M=numbers in millions [USD] worth of arms; B=numbers in billiions [USD] worth of arms)

1 and 2 long-range self-propelled rocket artillery systems.[43] In terms of trading naval armaments, both Algeria and Iran are noted for buying Chinese-made guided missile corvettes; the latter has also purchased ship-to-ship and ground-to-air missiles, and the two countries have exchanged military technology directly with each other.[44] China, while acknowledging Russia's warning through open media coverage, simultaneously chose to provide ordnance to both Uzbekistan and Tajikistan as drone customers.

An iFeng article, published by the Hong Kong-based Phoenix Satellite Television Holdings, referenced a 2015 Kanawa Defense report that mentioned 60–80 percent of arms transactions between China and OBOR countries involve the use of trade credits in the form of loans that facilitate the exchange of commodities for weaponry.[45] Pakistan proves to be a strong example for employing this model, as it was granted Chinese loans so that it can be encouraged to purchase weapons such as its recent order of four missile guided corvettes and diesel submarines.[46]

Sales to Maritime Silk Road Countries

Countries along the MSR to include Indonesia, Thailand, Malaysia, Sri Lanka, Myanmar, and Bangladesh are all identified as major conventional arms markets for Chinese exports.[47] China has followed the arms for oil and natural gas model with these governments as well.[48] The Kanawa report mentions that China

The Pakistani army tests Chinese-made weapon systems including the A-100 Multiple Barrel Rocket Launcher, the SLC-2 weapons locating radar, and VT-4 tanks during military exercise Azm-E-Nau in 2009. These weapons systems were later adopted into the Pakistani military. Over the past decade, China has supplanted the United States as Pakistan's largest arm supplier. (Photo courtesy of the Inter-Services Public Relations Pakistan)

targeting these MSR countries is no accident; it has "plans to establish naval bases and ports in these countries in order to provide support for submarine operations that are inseparable from the development of OBOR."[49]

It is this added layer and depth of geopolitical analysis that reveals China's further intent to add a security and arms component to its OBOR campaign to connect and cooperate with Eurasian countries. Following the decades old relationship China has had with its major end conventional markets, particularly in Africa and Southeast Asia, weapons sales have proven to be a means for China to obtain much needed raw material commodities while providing a means for it to exert influence over the development of its third-world partnerships. In its most mature relationships, weapons technology is exchanged in addition to conventional arms for energy as was the case with Iran in the 1980s and 1990s. The militarization of the MSR provides a concrete example of how China sees OBOR as a potential means to establish and maintain control of vital sea lanes through which critical natural resources are to be imported. However, not all of China's MSR endeavors have been successful.

A recent example of how China's effort to sell arms to an MSR country was reported in a local television report broadcast by a Chinese domestic media organization, Xiamen Media Group, that did not appear in the SIPRI data. Noted in the report, China initially won a contract to sell three S26-T submarines over South Korean and German competitors to Thailand. However, the Thai government later abruptly cancelled the order. The report, using this example, revealed the difficulties that China has had selling its weapons abroad.[50] The cancelled contract, originally valued at over $1 billion, left Chinese commentators reasoning that it failed because of a technological shortfall, a Thai domestic political consideration, or international considerations.[51] The failure of the Thai contract was not a singular case; in 2013,

Turkey invited competitive bidding for an antiaircraft missile, and China's Hongqi-9 seemed to be the favored contract.[52] Due to perceived U.S. opposition toward the deal through the National Atlantic Treaty Organization (NATO), Turkey abruptly cancelled the contract.[53]

The Xiamen Media Group report recognizes a Chinese objective of OBOR being to establish a cooperative network of arms trade contacts for Chinese exports.[54] For the previous decade prior to 2015, commentators observed that China sold 74 percent of its arms exports to Asian countries, 13 percent to African countries, 7 percent to Middle Eastern countries, and 6 percent to South American countries.[55] Successes of Chinese arms exports include starting to sell weapon parts to Russia, deepening its existing weapons relationships with Pakistan, and building trust with Central Asian and Middle Eastern countries.[56] As a political reality of great powers, whose decisions to sell weapons to friendly states are often interpreted as a signal of trust and intent to deepen a client state's dependence on its arms due to ongoing ammunition and maintenance needs, the commentators agreed that China's way forward is to expand its network of friendly states.[57] While no government official is cited in this report, that it was both synthesized and allowed to broadcast on domestic television reveals a rare case in which sensitive government and international policy is subject to public scrutiny and opinion.

Sales to Eastern European One Belt, One Road Countries

In 2013, Belarus placed an order for six A-200 301 mm multiple rocket launchers that were ultimately produced domestically in 2016.[58] The conventional nature of this transaction suggests that China is likely looking to expand its network of friendly states and tie Belarus into the OBOR network.

Ukraine, while not reported in an international trade register for transacting major conventional weapons systems from China, was mentioned in a 2016 article from the U.S.-based Voice of America organization as having purchased unidentified weapons from Beijing.[59] The article summarized Ukraine's receipt of Chinese military aid despite its risks to China's geopolitical relationship with Russia. The secret nature of this transaction was likely out of sensitivity to Chinese-Russian relations, but it allowed Ukraine to receive much needed aid and for China to transact on a weapons-for-weapons, grain, or technology basis and to cultivate friendly state-to-state relations.

Since several OBOR countries are located along Russia's periphery where potential for geopolitical discord and competition exists, Ukraine's example reveals the extent to which China will go to sell arms as an instrument of international policy for strengthening diplomatic relations. In a shift from condemning Ukraine's Orange Revolution jointly with Russia, from the beginning of 2014 to 15 July 2016, China assumed a neutral position on Russia's annexation of the Crimea while maintaining its military support.[60] As the only non-NATO country providing military assistance to Ukraine in the wake of hostile Russian military action in 2014, China ranks sixth amongst countries calculated by volume of military hardware behind the United States, Canada, Poland, the United Kingdom, and Australia while ahead of France and Turkey.[61] Ukraine publicly announced that while donor countries supplied technological goods, which were sustainment necessities, China's contributions would not be disclosed but summarized by Ukraine's military as "nonlethal weapons," "classified materials," and possibly as "many categories of military hardware."[62] Defense analysts predicted that Chinese hardware assistance could likely include motor vehicles and training jets that could be converted into ground attack aircraft such as the L-15, of particular interest since Ukraine has historically produced its engines.[63] As of late 2015, Ukraine has also entered into talks with China to produce the aircraft within Ukraine's borders under license.[64] In exchange for Ukraine's assistance in providing China restricted technologies that Russia has historically refused to disclose or sell, China has used its arms sales and assistance in part to recompense Ukraine.[65] Deepening economic and political ties evidenced by reciprocal heads-of-state visits, trade volume increases, united manufacturing efforts, and the simplification of bilateral visa procedures culminated with both Ukrainian and Chinese high-level officials declaring Ukraine a critical juncture of OBOR.[66]

Ukraine's Crimean crisis provided China the perfect opportunity to use the tried and tested technique of providing military aid and arms sales as a diplomatic tool to strengthen bilateral relations for the purpose of establishing the foundations for OBOR and to sustain already existing technology for arms transfers. By keeping the nature and precise amount of Chinese aid secret, Ukraine could allow China to save face with Russia by

claiming its aid was nonthreatening. In keeping with China's policy for selling weapons to Russia's neighbors by claiming them to be of a nonthreatening nature, as evidenced in Chinese drone sales to Kazakhstan, obfuscation is a likely indicator of lethal military hardware being provided to the Ukrainian military. In a continued trend from Chinese sales of Hongqi-9 missiles to Uzbekistan and Tajikistan, no SIPRI data from international trade registers exists for any bilateral arms sales or agreements between China and Ukraine. To what extent these patent examples of China disregarding Russia's warnings of selling lethal weapons to its neighbors, including former satellites in which it is engaged in clandestine proxy war, will damage Russian-Chinese efforts at geopolitical cooperation and the OBOR policy remains to be seen.

"While Russia continues to sell its weapons to Central Asia, it has failed to match the lower prices that East Asian sellers such as China, India, or Vietnam are able to offer."

Central Asian Geopolitical Considerations

It is important to note the changes in the Central Asian arms market that are occurring independent of OBOR as well as the changing dynamics of the Russia-China-Central Asia relationship with China's rise. According to Stephen Blank's 2014 *Diplomat* article that covered the Kazakh arms deals, the Russians were considered to be losing ground to the Chinese as a result of the latter's process of importing the former's weapons and "indigenizing" them.[67] So while Russia continues to sell its weapons to Central Asia, it has failed to match the lower prices that East Asian sellers such as China, India, or Vietnam are able to offer.[68]

Blank published another article in the *Central Asia Caucasus Analyst* that explains China's motivation to sell arms to Central Asian countries possibly lies in part because of ongoing worries about Islamic extremism in Xinjiang Province and potential spillover effects from bordering countries.[69] As recent as 2016, Chinese troops conducted joint exercises with the Tajikistan armed forces while the chief of staff of the Chinese People's Liberation Army also made plans to visit Kabul to set up an antiterrorism regional alliance with Tajikistan, Pakistan, and Afghanistan.[70]

Another possible explanation for China's arms sales to Central Asia is the perception that waning Russian economic and political power requires an advance of Chinese power to secure China's safety against terrorism. That Russia provided intelligence to both the Taliban resistance as well as to NATO and the Central Asian states demonstrates to the Chinese that neither Russia nor weak Central Asian governments can be counted on to secure Chinese interests against terrorism.[71] Russia is deemed to lack the funds to support the region while also continuing its heavy-handed behavior such as demanding below market price for commodities and selling them at markup elsewhere.[72] While OBOR is likely to be a major factor in China's decision to sell arms to Russia's Central Asian neighbors, continued political and security rivalry with Russia as well as the potential for instability has perhaps made Chinese involvement necessary. If Russia continues its retreat from Central Asia due to economic weakness and continued tolerance of China's investments and development of OBOR, initial orders for Chinese arms will undoubtedly increase. Even without OBOR, China has too much at stake to not secure political support in Central Asia. Conducting arms sales constitutes one option among many for China to do so.

Conclusion

China's OBOR will be a developing narrative of the twenty-first century. Its potential to change the geopolitical and economic landscape of Eurasia will undoubtedly result in changes in diplomatic relationships and great power strategies. Since September and October 2013, when China's maritime road and economic belt were announced by General Secretary Xi and Premier Li, China's customer base for arms exports has expanded to include OBOR participant countries that previously had no relationship with China. This development, while a result of the interplay of complex

geopolitical considerations between China and Russia as well as China's overall strategy to extend its influence beyond its national and regional borders reflective of Xi's nationalist China Dream policy, is part of a concerted effort by China to build stronger political and security ties with OBOR designated countries. As pipelines, telecommunications lines, roads, and other infrastructural projects "hardwire" country-to-country relations, arms exports are indicative of a maturing and long-term security relationship due to the deliberate decision for a client country to model their military development, organization, and capabilities along the lines of the selling country. The necessity for ongoing maintenance of military hardware as well as the need for continued munitions imports or licenses to manufacture adds another layer of depth for countries with military-to-military relations. Among China's preferred methods to sell its arms to mostly countries designated as emerging or frontier markets are to advance credits for the client country to purchase arms for debt, conduct a quid pro quo exchange of weapons for commodities, or in other cases, arms for cash.

Kazakhstan, Uzbekistan, Turkmenistan, Belarus, and Ukraine were added to China's arms sales base since OBOR. That half of these countries are situated in Central Asia is telling of China's future geopolitical and security intentions. Relationships with designated OBOR countries that existed prior to the policy announcement whose arms export volume has been sustained and strengthened include the designated MSR countries of Sri Lanka, Bangladesh, Egypt, Malaysia, Kenya, Iraq, Iran, and Pakistan.

Since it has been only five and one-half years since the announcement of OBOR and few data points exist that could determine whether the OBOR policy is the driving force behind expanding China's arms sales footprint, the final assessment is inconclusive. Looking forward, it is worth considering China's historical motivations for selling arms abroad in the 1980s and 1990s, and whether China will continue its push to sign bilateral and multilateral agreements with designated countries. China may choose to further assert itself in the former Soviet republics through new agreements and more export volume while carefully managing the risk of upsetting the Russian-Chinese bilateral relationship. Past examples of China's actions in the nonaligned Third World provide the basis for the prediction that China will indeed continue to use arms exports as an instrument of diplomatic policy. While some transactions will be disclosed via international trade registers, China will most likely continue to obfuscate sales with new clients and with whom relationship management is sensitive. While in some cases acting out of pure economic incentive to expand its overseas markets, countries are generally very deliberate in choosing to whom they sell arms. The OBOR policy borne out of the China dream will provide justification for China to continue cultivating its defense relationships. ■

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Military Review

RECOMMENDS

China's Belt and Road Initiative: Motives, Scope, and Challenges is a volume of essays published in 2016—three years after China's Belt and Road Initiative was announced—that provides an especially helpful, succinct background tutorial for readers unfamiliar with the initiative The authors analyze the original stated economic, political, security, and developmental goals China hoped to achieve, the prospects for success in achieving those goals, the challenges confronted, and the opportunities and potential risks it presented for the United States, China's neighbors, and the rest of the world. To view this publication, visit https://piie.com/publications/piie-briefings/chinas-belt-and-road-initiative-motives-scope-and-challenges.

China's Maritime Militia and Fishing Fleets

A Primer for Operational Staffs and Tactical Leaders

Shuxian Luo
Jonathan G. Panter

Articles about gray-zone operations—states' use of nontraditional forces and methods to pursue security objectives without triggering armed conflict—are unavoidable in military professional literature.[1] This is particularly true for commentary about Russia and the People's Republic of China (PRC).[2] These states' embrace of gray-zone operations is unsurprising since such operations are an attractive means for relatively disadvantaged powers to challenge a stronger rival like the United States. Among the most important of China's gray-zone forces and actors is its maritime militia. In addition, China's overtly civilian distant-water fishing (DWF) fleets, which are affiliated to varying degrees with Chinese government agencies, have been subject to growing international scrutiny.

Vessels in both groups help China rewrite the rules of freedom of navigation, buttress its maritime claims, secure vital resources, and extend its economic reach across the globe. In the coming years, U.S. Department of Defense civilians and military personnel throughout the joint force will encounter these nontraditional maritime forces engaged in a variety of operations across several geographic combatant commands. Failure to recognize the purpose, capabilities, or limitations of these vessels will impede U.S. forces' ability to accomplish assigned missions, defend themselves, and avoid unintentional escalation.

Chinese fishing boats head out to sea from Zhoushan in Zhejiang Province, China. (Photo courtesy of China Foto Press)

China's maritime actors have drawn growing attention from both scholars and defense professionals. However, the political context provided by academic research may not reach practitioners who rely on shorter, descriptive articles about Chinese capabilities.[3] Bridging this gap can support more informed assessments of Chinese vessels' possible intentions, assisting military staffs and leaders in developing rules of engagement, tactical procedures, and reporting criteria.

The article proceeds in three parts. It begins by analyzing the domestic sources of Chinese grand strategy that influence the PRC's maritime policies and activities. The next section describes China's maritime militia and fishing fleets, their strategic purposes, and their strengths and limitations. The final section addresses the challenges these actors pose to U.S. forces, with particular emphasis on the links between force protection and unintended escalation.

China's Grand Strategy: Misperceptions and Reality

"Grand strategy" is the highest rung of a state's foreign policy; it is a unifying theme linking a state's various

efforts to secure its own survival and welfare in the international system. As defined by political scientist Richard Betts, it is "a practical plan to use military, economic, and diplomatic means to achieve national interests (or political ends) over time, with the least feasible cost in blood and treasure."[4] The key phrase is "over time," because what distinguishes "grand strategy" from "strategy" is some consistent thread between a state's individual policies.

However, as Betts observes, the concept of grand strategy is too often applied retroactively to decisions that were merely ad hoc responses to a problem. Moreover, "[t]he term 'grand' conjures up unrealistic images of sweeping and far-seeing purpose, ingenuity, direction, and adroitness."[5] These critiques neatly capture many recurring tropes about China's grand strategy, including "hide and bide," "a game of Go," and invocations of Sun Tzu's *The Art of War* (especially "defeating the enemy without fighting").[6] The first refers to China's late paramount leader (from 1978 until 1989) Deng Xiaoping's philosophy that China should "hide its strength and bide its time"; the second holds that Western strategists see the world as a chess game (seeking decisive battle), but Chinese strategists see it like the board game "Wei Qi" (encircling the enemy over the long term); and the third suggests that Chinese strategists rely on deception and delay more than their Western counterparts (who, ostensibly, are avid readers of Carl von Clausewitz's *On War*).[7]

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These maxims sensationalize Chinese strategic thought as permanent, infinitely patient, devious, and opaque to the Western mind. To be sure, they contain some truth, but the pop version of Chinese grand strategy perpetuates two false assumptions (see the table, page 121). The first is that China is a unitary actor rather than a state with many domestic audiences (interest groups with varying degrees of power). The second is that Chinese policy priorities are fixed over time, despite the Chinese Communist Party's (CCP) shifting legitimating narratives for its internal audiences. The implication is serious: If China is incapable of change, what is the point of any U.S. policy but containment or confrontation?[8]

The PRC's long-term plans are more nuanced. China has a grand strategy, but one that is rooted in its governance structure and the CCP's narratives of legitimacy. U.S. defense professionals dealing with gray-zone forces should understand how China's maritime disputes affect the CCP's internal calculus about the stability of its governance. Knowing what domestic audiences and CCP narratives are impacted by, say, an at-sea encounter between U.S. warships and Chinese fishing boats, can inform analyses of the risks and benefits of such interactions.

While it remains subject to debate whether Beijing pursues a full-fledged revisionist goal of displacing the United States in the Indo-Pacific region and challenging U.S. dominance internationally, a broader and consistent theme has emerged in China's official documents and leadership speeches: that of Chinese national "rejuvenation," or a restoration of its past position of prestige in world affairs.[9] In a recent article, political scientist Avery Goldstein argues that rejuvenation has been a consistent grand strategy of the PRC alongside a second strategy: survival of the state with the CCP as its sole ruler. During the Cold War, as the PRC faced existential threats from outside, survival dominated rejuvenation. It remains the regime's "topmost vital, or 'core' interest" today, but China's greater safety leaves room for it to pursue rejuvenation.[10] Since 1992, Goldstein argues, rejuvenation has undergone three phases: "hide and bide" under Deng; "peaceful rise" (reassuring other countries of China's benign intentions) in the 1990s; and the "China dream" (increased assertiveness) under Xi Xinping. Upon taking power in 2012, Xi considered "hide and bide" and "peaceful rise" anachronistic, preferring an "activist approach" in which the PRC would utilize its power to "more resolutely resist challenges to core interests."[11]

Both grand strategies—rejuvenation and regime survival—depend on safeguarding China's sovereignty and territorial integrity, and maintaining economic development.[12] First, the CCP's domestic legitimacy since its founding has rested heavily on the party's demonstrative capabilities in defending the country from foreign interference. Its main competitor in the 1930s and 1940s, the Kuomintang, received both U.S. and Union of Soviet Socialist Republics support in World War II. During the ensuing Chinese Civil War, therefore, the CCP sought domestic support by claiming that it was the only side unsullied by foreign influence.[13]

After the CCP triumphed over the Kuomintang in 1949, its claim to be the sole party that could defend China from the machinations of foreign powers remained an enduring part of its foreign policy and domestic legitimacy. This precipitated an intervention in the Korean War in 1950 and a war with India in 1962. Concerns about territorial integrity and sovereignty at times even outweighed ideological alignment. In the 1960s, the PRC supported North Vietnam to counteract both U.S. *and* Soviet presence in Southeast Asia and used force to contest Soviet encroachments along the PRC's disputed border.[14] In 1974 and 1988, China fought Vietnam to seize land features in the contested Paracels and Spratlys, and to secure a stronger position in the South China Sea.[15]

A second major component of the CCP's legitimacy was its economic program of collectivization and central planning. But after the humanitarian disasters and internal turmoil resulting from the Cultural Revolution and the Great Leap Forward, the CCP in the late 1970s began to downplay communism and Maoism. Under the reform-minded Deng Xiaoping and his allies, the CCP emphasized economic growth as the source of the party's legitimacy and initiated radical economic, but not political, liberalization. But this economic opening, though conceived as a source of legitimacy, also threatened the regime's support by introducing socioeconomic inequality, changing values, and corruption.[16] The 1989 Tian'anmen prodemocracy protests and the demise of the socialist bloc in the early 1990s compounded the problem.

Against this backdrop, the CCP launched a propaganda campaign to shore up the party's legitimacy and discredit Western-style liberalization, reinforcing the memory of the "century of humiliation" (1839–1949) when foreign powers invaded China, imposed extraterritoriality in treaty ports, restricted indigenous economic regulation, and extracted war indemnities.[17] The years of backwardness and suffering at the hands of foreign powers engendered a persistent Chinese yearning for the country's restoration as a strong, prosperous, and respected power.[18] At the same time, new parochial interests and actors emerged outside the traditional Chinese foreign policy establishment during the reform era, forcing the CCP to cope with competition among bureaucrats, business elites, and local governments alongside an explosion in news outlets and internet users.[19] Many of these new actors constrain state action on foreign policy issues, including those on territorial integrity and sovereignty that resonate deeply with the Chinese nationalist sentiments.[20]

In this way, economic growth has reinforced the CCP's original claims to its right to rule: the "protection" of Chinese territorial independence and sovereignty. The pursuit of marine resources in the three million square kilometers of "maritime national territory" that incorporates the Chinese exclusive economic zone and continental shelf is thus framed in both economic and sovereign

Table. Misperceptions about China's Grand Strategy

Misperception	Reality	Implications for the U.S.
China as an "unitary actor"	Multiple domestic social, political, and economic audiences	Missed opportunities to influence Chinese domestic audiences
Chinese policy priorities as fixed	Policy priorities change over time in response to domestic politics and the external environment	Perception that diplomacy is futile, or that U.S. actions cannot affect China's priorities

(Table by Jonathan G. Panter)

terms.[21] First, the marine resources in these areas contribute both to China's domestic food needs and its export economy. China is by far the world's largest producer of "captured" (nonfarmed) fish, comprising 15 percent of world total, and the largest exporter of captured product. Of the 3.1 million fishing vessels in Asia, China operates 864,000 of them.[22] Second, China's growing reliance on sea lines of communication for trade in energy and other goods has increased Beijing's resolve to protect strategic waterways within and beyond China's maritime boundary.[23]

The growing need to safeguard maritime territories and jurisdictional waters in China's near seas has incentivized the People's Liberation Army (PLA)—which has, since the 1990s, focused on preparing for a Taiwan scenario—to share the burden of new missions with nonmilitary state actors. In its defense white paper from the year 2000, China for the first time described its frontier defense as a "joint military-civilian land and sea border management system, headed by the military and with a sharing of responsibilities between the military and the civilian authorities."[24] Since then, China has incrementally moved away from a relatively navy-centric approach toward a multiagent, division-of-labor method for safeguarding its maritime sovereignty and interests. Since 2005, China has preferred to employ the PLA Navy (PLAN) in background roles, relying instead on maritime law enforcement agencies and the maritime militia as its frontline responses to maritime disputes and contingencies.[25]

(Graphic courtesy of Wikimedia Commons)

South China Sea Claims

Although the United States takes no position on the ownership of the contested maritime territories, PRC maritime sovereignty and jurisdiction claims challenge U.S. interests in the region in several ways. First, China seeks the right to regulate and restrict the activities of foreign military vessels and aircraft operating within its exclusive economic zone, which is at odds with norms

Soldiers attend a flag conferral ceremony 21 July 2013 during the official launch of Sansha City's maritime militia. (Photo by Zhou Xiaogang, Xinhua News Agency)

on freedom of navigation and has been the central source of friction between U.S. and Chinese ships and aircraft in the South China Sea.[26] Second, it attempts to erode U.S. alliance relationships, especially those with Japan and the Philippines, with whom China has unsettled maritime territorial and boundary disputes.[27] Finally, the PRC continues to expand power projection and anti-access/area denial capabilities to cover a growing portion of the western Pacific.[28]

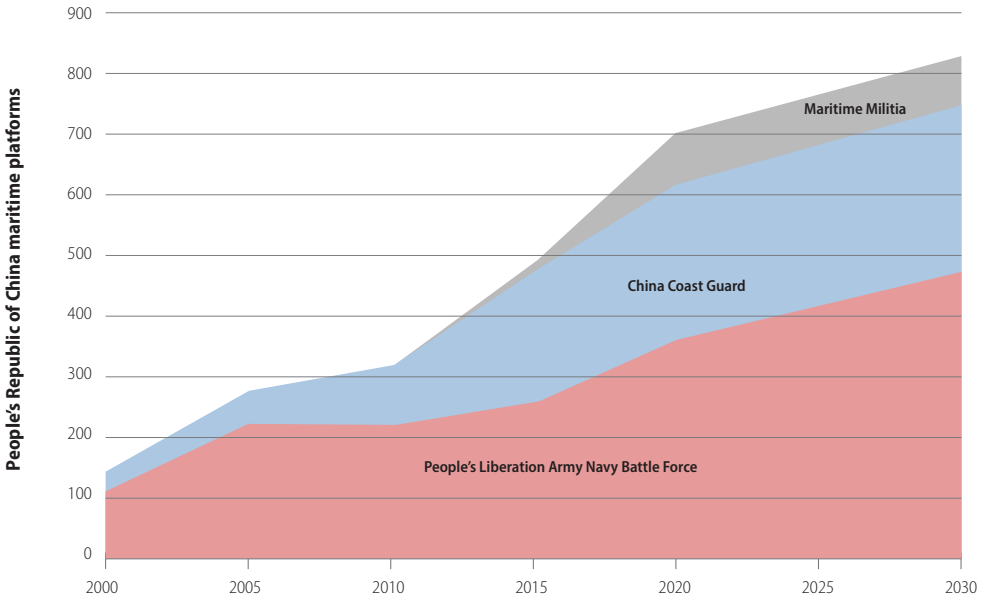
While employing maritime law enforcement and fishing ships in lieu of naval assets may enable China to avoid crossing the threshold of military conflict outright when asserting its maritime claims, it can still complicate crisis management for both the United States and China in the event of a maritime incident. Past major crises between two countries in the contemporary era illustrate the potential dangers. One of the most serious incidents occurred in 1999 when the U.S. Air Force accidentally bombed the Chinese embassy in Belgrade, killing three Chinese journalists. Despite a lack of evidence that the bombing was intentional, the incident triggered violent anti-American mass protests in China.[29] The affair highlights the sensitivity of any incident, mistaken or otherwise, resulting in Chinese civilian casualties.

The Hainan Island incident in 2001, in which a Chinese fighter jet collided with a U.S. reconnaissance plane during an attempted interception, highlights a different potential source of crisis escalation: distortion of information within the Chinese political system between local and central authorities. According to former senior U.S. civilian and military officials, the local naval aviation authorities in Hainan may have falsely reported to high-level Chinese leadership that the U.S. plane intentionally crashed into the Chinese fighter (which was technically impossible).[30] Crisis management in an incident involving Chinese fishing boats, whether or not registered as maritime militia, entails both types of danger.

China's Maritime Militia and Fishing Fleets

The PRC defines its militia as "an armed mass organization composed of civilians retaining their regular jobs," a component of China's armed forces, and an "auxiliary

and reserve force" of the PLA.[31] Once conceived as a major component in the concept of "People's War," the militia in contemporary Chinese military planning is now tasked with assisting the PLA "by performing security and logistics functions in war."[32] The maritime militia, a separate organization from both the PLAN and China Coast Guard (CCG), consists of citizens working in the marine economy who receive training from the PLA and CCG to perform tasks including but not limited to border patrol, surveillance and reconnaissance, maritime transportation, search and rescue, and auxiliary tasks in support of naval operations in wartime (see figure 1).[33]



(Figure from *Advantage at Sea: Prevailing with Integrated All-Domain Naval Power*, December 2020, by the U.S. Coast Guard, U.S. Marines, and the U.S. Navy)

Figure 1. Growth of China's Maritime Forces since 2000

The National Defense Mobilization Commission (NDMC) system, comprised of a national-level NDMC overseen jointly by the Chinese State Council and the PLA's Central Military Commission and local NDMCs at provincial, municipal, and county levels with a similar dual civilian-military command structure at each level, has traditionally been tasked to manage administration and mobilization of the militia. Following the PLA's 2016 reorganization, a National Defense Mobilization Department (NDMD) has been established under the Central Military Commission to oversee the provincial-level military districts and take charge of the PLA's territorial administrative responsibilities including mobilization work. The head of the NDMD is appointed as the secretary general of the national NDMC, in which China's premier and defense minister serve as the director and deputy director, respectively.[34] In addition to the NDMC line, the State Commission of Border and Coastal Defense system—also subject to a dual civilian-military leadership—has its own command structures running from the national to local levels, and it shares responsibility for militia administration, mobilization, and border defense. There is a significant crossover between the lines of authority.[35]

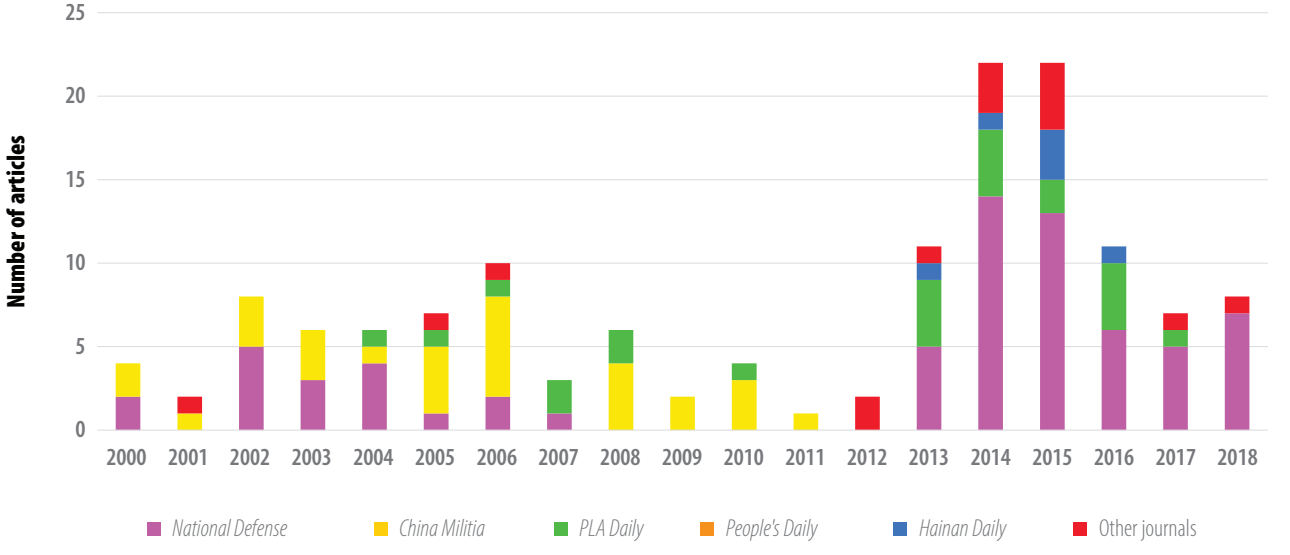
The militia has played a major role in asserting Chinese maritime claims in the South China Sea. This includes high-profile coercive incidents such as the 2009 harassment of USNS *Impeccable*, the 2012 Scarborough Shoal standoff, and the 2014 HD-981 clash.[36] Xi's 2013 trip to Hainan—the island province with administrative authority over the South China Sea that has organized local fishing fleets into active maritime militia units—unleashed a nationwide push (see figure 2, page 125) to build the militia into a genuine third arm of China's "PLA-law enforcement-militia joint defense" maritime sovereignty defense strategy.[37] Since it is comprised of both civilians and soldiers, according to the Chinese rationale, the militia can be deployed to strengthen control of China's "maritime territory" while avoiding the political and diplomatic ramifications that might otherwise be associated with military involvement.[38]

The surge of propaganda notwithstanding, several issues confront Beijing before the maritime militia can effectively function as the third arm in collaboration with the PLAN and CCG. First, the wide dispersion of the maritime militia at sea makes it harder to control than land-based forces.[39] Second, it is unclear through what

institutionalized cross-system integrator(s) maritime militia forces coordinate with the CCG or with the PLA's theater command system that operates active-duty forces.[40] PLA commanders and officers have openly discussed the problems of who commands the militia forces, under what circumstances, and with what authorization; who is authorized to review and approve the maritime militia's participation in what types of maritime rights protection operations; and who is responsible for militia expenditures. Due to these uncertainties, some PLA commanders have urged further standardizing the maritime militia's command, control, and collaboration structure.[41]

Budgetary shortfalls complicate the training, administration, deployment, and control of the maritime militia. As of 2010, only about 2 to 3 percent of China's national defense budget was used to fund militia training and equipment, with additional funding coming from local governments.[42] Local funding has proven inadequate to compensate for gaps in central government outlays. A guideline issued by Hainan in 2014 stated that the provincial and county/city/prefecture governments each would be responsible for 50 percent of the province's maritime militia expenditure. For that year, the provincial government earmarked 28 million renminbi (RMB, or Chinese yuan) for the maritime militia, a minuscule quantity given the huge costs of recruitment, administration, training, and deployment (1 RMB is equal to about 0.15 USD).[43] According to a 2014 estimate, one week of training for a fifty-ton fishing boat costs over 100,000 RMB for crew lodging and compensation for lost income.[44] To spread out the financial burden, common practice now holds that "whoever uses the militia pays the bill."[45]

Even so, funding remains a key hurdle. In 2017, the commander of the Ningbo Military Subdistrict (MSD) under the Zhejiang Province Military Subdistrict complained in the PLA's professional magazine *National Defense* about a lack of formal channels to guarantee funds. When the maritime militia was assigned to a task, he pointed out, funding took the form of "the county paying a bit, the city compensating a bit, and the province subsidizing a bit." This meant that "the more tasks you perform, the more you pay."[46] Given the fiscal strains, local authorities have forcefully lobbied Beijing for more money. The localities also see the outpouring of central government resources as an opportunity to benefit their local fishing economies. Hainan, for example, used Beijing's subsidies to upgrade local fishing boats



(Figure by Shuxian Luo)

Figure 2. Maritime Militia in the Core Newspapers and People's Liberation Army Journals since 2000 (CNKI Search by Theme)

U.S. Navy sailors and U.S. Coast Guard Pacific Law Enforcement Detachment Team personnel approach a Chinese fishing vessel on a rigid-hull inflatable boat 29 November 2016 during an Oceania Maritime Security Initiative mission with Arleigh Burke-class guided-missile destroyer USS *Sampson* (DDG 102) in the Pacific Ocean. (Photo by Petty Officer 2nd Class Bryan Jackson, U.S. Navy)

and increase modernized steel-hulled trawlers under the banner of "sovereignty rights via fishing."[47] In fiscal year 2017, the province received 18.01 billion RMB in transfer payments from Beijing to account for "the province's expenditure on maritime administration."[48]

The marketization of China's fishery sector in the reform era has compounded the organizational problems arising from this unstandardized funding model. Since Chinese fishermen are now profit driven rather than de facto employees of the state, the government has both less formal authority and less economic leverage over them.[49] In the 2000s, coastal provincial military districts widely reported problems in tracking and controlling registered militia fishing ships.[50] According to a 2015 article by the director of the political department of the Sansha MSD under the Hainan Provincial Military District, surveys conducted in Hainan localities showed that 42 percent of fishermen prioritized material benefits over their participation in the maritime militia. Some fishermen admitted that they would quit militia activity without adequate compensation or justified their absence from maritime rights protection operations because fishing was more important.[51]

In a 2018 interview with one of this article's authors, sources with firsthand knowledge of Hainan's fishing community noted that each fishing ship participating in maritime rights protection activity received a daily compensation of 500 RMB, a sum "too petty compared to the profits that could be made from a day just fishing at sea, and even more so when compared to the huge profits from giant clam poaching."[52] These financial pressures reportedly created substantial difficulty for China in mobilizing the militia during the 2014 HD-981 clash.[53] Some fishermen even manipulated maritime militia policies to evade regulations and conceal illegal attempts to fish for endangered or protected marine species in contested waters.[54] Notably, such activities were completely at odds with Chinese government strategy; Beijing had explicitly prohibited illegal

fishing to avoid "causing trouble for China's diplomacy and damaging China's international image."[55]

Given the unclear command and coordination arrangements, funding problems, and weak control exerted on Chinese fishermen, it is difficult to assess the extent to which Chinese authorities control fishermen operating in the South China Sea. Some fishermen have collaborated with the CCG and/or the PLA in gray-zone operations, indicating that the maritime militia does exploit the plausible deniability afforded by their dual identity as military personnel and civilian mariners. However, given the evidence in authoritative Chinese-language sources, it is unrealistic to portray the maritime militia as a coherent body with adequate professional training or as one that has systemically conducted deceptive missions in close collaboration with the PLAN and CCG. Rather, the coordination seems to be, as various sources in China, the United States, Japan, and Singapore similarly characterize it, "loose and diffuse" at best. Achieving high levels of coordination and interoperability will likely "take a long time."[56]

PLA officers and strategists worry that the maritime militia's status as "both civilians and soldiers" could carry more risks than advantages during encounters with foreign vessels. A scholar at the PLA's National Defense University asks, "If the militia uses force in maritime rights protection operation, should this be considered as law enforcement behavior or military behavior, or behavior other than war?"[57] The director of the political department of the Sansha MSD cautions that the militia's inadequate "political awareness" and professionalism make its members "unfit for the complex situation surrounding the South China Sea rights and interests struggle."[58] This makes it imperative, he argues, to "make the militia consciously comply with political and organizational disciplines, regulate their rights protection behavior, and avoid causing conflict, escalation, or diplomatic spats."[59]

Beyond the South China Sea, the U.S. Department of Defense believes that the maritime militia played a role in a large intrusion in 2016 in waters near the Diaoyu/Senkaku Islands, a group of uninhabited islets in the East China Sea whose sovereignty is contested among China, Japan, and Taiwan.[60] However, some members of the Japanese defense and foreign policy community, while voicing the concern that China might use fishing vessels in a future Senkaku contingency, noted that the maritime militia has been far less visible in the East China Sea than in the South China Sea.[61] For instance, in one prominent international crisis between Beijing and Tokyo—a 2010 collision between a Chinese fishing trawler and two Japan Coast Guard vessels—the evidence later showed that a drunk Chinese fishing captain bore responsibility for the accident, rather than China's maritime militia.[62]

China's deep suspicion of U.S. involvement in its home waters and China's use of a wide set of coercive instruments to assert its claims there stand in contrast to its activities in distant waters. China's policy agenda in Latin America and Africa, which fall within what Andrew Nathan and Andrew Scobell call "the Fourth Ring" of Chinese security, entails six strategic goals: energy; commodities, markets, and investments; arms sales; China's economic access abroad; diplomatic support for China's position on Taiwan and Tibet; and support for China on multilateral diplomatic issues such as human rights. Regions subsumed under this ring are "too large, too far away, too politically complex, and still too much dominated by the traditional colonial and neocolonial powers to come easily under the sway of a remote Asian power."[63]

In these far-flung regions, China has emerged as a major distant-water fishing nation. Its fishing fleet is the world's largest, operating a total of over 4,600 DWF vessels, according to a recent CSIS account.[64] China's tenth Five-Year Plan (2001–2005) introduced DWF as a component of the "going out" strategy, which encourages Chinese enterprises to search for new markets, resource accesses, and investments around the world.[65] After China articulated in 2012 its aspiration to become a "maritime great power" and introduced the Belt and Road Initiative in 2013, the DWF industry became a vital component of this strategy. The Chinese government sees DWF as a means to enhance China's food security at home and connections abroad with key economies along the Belt and Road Initiative corridors.[66]

Most recently, the Chinese fleet's engagement in illegal, unreported, and unregulated fishing activities in regions such as West Africa and Latin America has posed a challenge to global and regional fisheries governance.[67] The fleet's unsustainable fishing practices have caused tensions with Argentina, Chile, Ecuador, and Peru.[68] Nevertheless, interpreting Chinese DWF activities and associated conflicts through a military lens risks securitizing what is largely a conflict of economic interests.[69] As China increasingly pays attention to international reactions to the illegal fishing activities of its DWF fleet and has recently acknowledged this problem, tackling

illegal, unreported, and unregulated fishing activities in these distant waters represents a potential area that China sees as cooperation rather than confrontation, with coastal states and the United States better serving its global interests and repairing its international image as a "responsible fishing country."[70]

Challenges and Opportunities for U.S. Operations and Tactics

The strength of the maritime militia is its deniability, which allows its vessels to harass and intimidate foreign civilian craft and warships while leaving the PRC room to deescalate by denying its affiliation with these activities.[71] Meanwhile, when Chinese fishing vessels—even operating solely as civilian economic actors—operate unchallenged, their presence in contested areas helps solidify PRC maritime claims. Challenging these vessels is dangerous. Weaker states, aware of Chinese fishing vessels' possible government affiliation, might hesitate to engage with them in a way that could provoke a PRC response. Even stronger states, like the United States or Japan, might hesitate before confronting fishing boats because of the challenge of positively identifying these vessels as government affiliated.

By "defending" China's maritime claims from foreign interference, the PRC leverages its maritime militia in support of policies that form the core of a grand strategy of "rejuvenation" and also comprise the basis for the CCP's domestic legitimacy. At the same time, as previously suggested, the maritime militia is among the least-funded, least-organized, and often least-professional of the forces that could be employed for these purposes. The same factors that make the maritime militia a deniable force (its civilian crews and dual-use technology) also raise the risk of accidents and escalations. This is a toxic mix: due to the maritime militia's deniability and the core interests at stake, the PRC has a high incentive to employ it, but the more frequent its operations, the greater the likelihood of interactions with U.S. vessels that could spin out of control.

The remainder of this section draws on the aforementioned findings of this article to offer the authors' own assessments of the maritime militia's current strengths and limitations as a military instrument, as well as future projections.

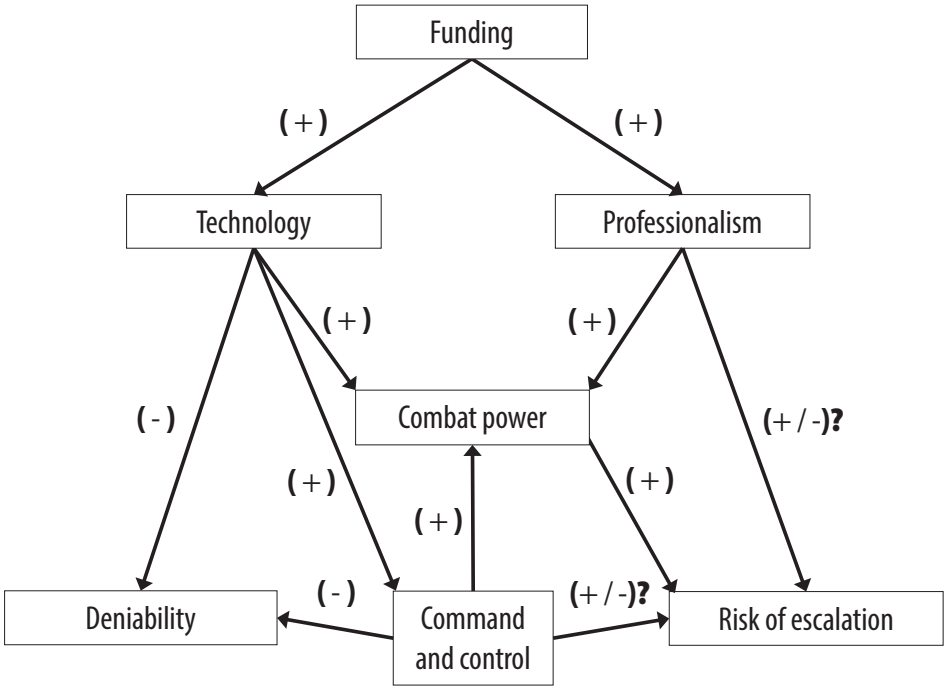
Funding. Funding is inconsistent across units and vessels, and across provinces, which rely on different budgetary channels and have different incentives to secure subsidies. Even where funding has been secured in some localities, budget constraints in others suggest that equipment standardization is a long way off. Strained budgets also restrict training opportunities, leading to inconsistency in professionalism across the force. This raises the risk of accidents and escalations.

Command and control. Strategic, operational, and tactical command and control is inconsistent across provinces and individual vessels. The command problem is structural, arising from bureaucratic competition and multiple lines of authority. The control problem is financial, as marketization has eroded individual units' incentives to participate in militia activities that draw away from their fishing opportunities. Command and control shortcomings inhibit combat power but contribute to the militia's core strength: its deniability.

Combat power. Fishing boats are inherently weak forces for traditional military operations. Due to their size, they are limited by sea state and lack the propulsion plants required for high-speed maneuver. Topside gear and nets, when deployed, also limit their maneuverability. Finally, fishing vessels are soft targets for naval firepower. Fishing vessels' "weaknesses," however, do provide some asymmetric advantages.

First, because they are cheap, fishing vessels will always outnumber warships. Deployed in high numbers using swarm tactics, small craft can pose an asymmetric threat to warships, as U.S. Navy experience with Iranian Revolutionary Guard Corps Navy (IRGCN) forces has shown.[72] But the Chinese maritime militia consists of fishing boats, not high-speed assault and pleasure craft like the IRGCN employs. Slow speeds reduce the ability to maneuver and increase the duration of exposure to layered defense (although the vessels' deniability could reduce the risk that they will be fired upon). Instead of a kinetic threat, Chinese fishing vessels present more of a disruptive one. Deployed in even limited numbers, fishing boats can inhibit, if not prohibit altogether, a warship's ability to conduct towed array and flight operations (both essential for antisubmarine warfare, a critical capability given China's growing anti-access/area denial forces in the South China Sea).

Second, fishing vessels pose a huge identification problem. As small craft, they generate minimal radar return even in clear weather and mild sea states. In addition, Chinese fishing vessels frequently do not broadcast their position in Automatic Identification



(Figure by Jonathan G. Panter)

Figure 3. Force Capabilities, Deniability, and Risk of Escalation

System and use only commercial radar and communications technology, making them hard to identify by their electronic emissions. The identification problem is compounded in congested environments like the South China Sea, which is cluttered with commercial traffic.

For these reasons, in combat operations, the maritime militia's primary role would likely be reconnaissance support, although some vessels have also received training in minelaying.[73] One of the PLA's major force modernization objectives has been development of an "informatized reconnaissance-strike capability" modeled on the U.S. military, although command and control problems continue to impede joint force operations.[74] When providing support to the PLAN in this way, it is important to note that maritime militia vessels would qualify as combatants under international law, despite their lack of military technology.[75]

The basic capabilities required for militia vessels to provide reconnaissance support have been widely fielded. Before joining the militia, fishing vessels are required to install equipment permitting communication with the People's Armed Forces Department, whose purpose is to assist with the reconnaissance function.[76] This includes satellite communication terminals and shortwave radio, which enable beyond line-of-sight communications.[77] But without advanced sensors and the training required to use them, militia vessels will be restricted to visually identifying opposing forces. The addition of electronic-intelligence equipment would be a game changer. In that case, the appropriate gray-zone analog for China's maritime militia vessels might be IRGCN intelligence dhows, not swarming assault craft.

Projections. Given the PRC's continued economic growth (and increasing government revenue) and the priority placed on military modernization, a successful resolution of militia funding problems would contribute most to recurring costs like training rather than one-time costs such as equipment, much of which has already been subsidized and acquired (see figure 3). However, new technology purchases beyond civilian dual-use equipment would also be possible. Additional training would foster professionalism in ship handling, equipment use, and coordination. Technology and professionalism would enhance the combat power of individual units and those operating jointly, but at the cost of deniability, the militia's core capability as a gray-zone force. Sophisticated maneuvers, visible advanced gear, or electromagnetic emissions can help U.S. and partner forces identify a "fishing vessel" as Chinese government sponsored.

Enhancing combat power would also raise the risk of escalatory incidents. For U.S. commanders making force protection decisions, the chances of misperception could increase when weapons or sophisticated technology are present on units of unknown intentions. On the other hand, these units' increased professionalism could dampen the risk of escalation, as they might be less prone to

ship-handling errors or suspicious maneuvering. Finally, while improved command and control would reduce vessels' deniability, its effect on escalation risks is indeterminate. Individual Chinese captains might be more restricted in their decision-making, leaving less room for error. However, they might also have less latitude to deescalate depending on the priorities of higher command.

Conclusion

In the past decade, American perspectives on China have shifted. Optimism has given way to suspicion, the desire for cooperation to rivalry. This shift appears in political science articles, partisan politics, and public opinion polls.[78] Hardly an issue of a military professional journal can avoid the phrase "the return of great power competition." In a related shift, these publications now dedicate substantial attention to China's instruments of national power that fall on the periphery of traditional military capabilities.

This is a welcome turn. As E. H. Carr pointed out, the security realm has never been neatly separable from other state activities.[79] But this new, broadened focus can also fuel alarmism and facilitate escalation. Defense and military professionals must walk a fine line between prudent skepticism of China and uninformed suspicions. This article has sought to assist those efforts with a primer on one PRC policy instrument that bridges the divide between the economic, informational, and military realms. Based on our findings, we close with two broad implications for U.S. policy.

First, in the South China Sea, pending resolution of the maritime militia's funding and organizational problems, the greatest threat to U.S. forces remains that of accidents and escalations.[80] Accurately identifying maritime militia vessels, ideally beyond line-of-sight, is an important way to reduce this risk by providing commanders and staffs with increased decision-space. The sheer number of militia-affiliated vessels, their minimal electronic emissions and radar cross-sections, and the congestion of the South China Sea means that identification efforts to undermine the maritime militia's deniability at scale require a bold approach. Solving the problem will be nearly impossible without the assistance of regional allies and partners.

Second, in regions outside of East Asia, U.S. policy makers must resist interpreting China's DWF fleet as a traditional security instrument. These vessels are legally noncombatants, and in practical terms, their military utility is nonexistent. The more important question is whether DWF vessels, even those engaged in civilian activities, represent an effort to acclimate U.S. and partner forces to the presence of Chinese vessels (government-affiliated or not) in the Americas. The goal might be to make Chinese overfishing an accepted (if bothersome) part of the pattern of life, an activity that resource-constrained coastal nations in Latin America ignore. Ultimately, the damage wrought to local economies by illegal, unreported, and unregulated fishing activities can undermine regional prosperity. Without a wholescale effort to build local nations' maritime law enforcement capacity, this trend will pose a far greater threat to nontraditional security realms—primarily ecological and economic—in the region, and to U.S. interests there, than any military role the Chinese DWF vessels could fill. ■

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Notes

1. Lyle J. Morris et al., *Gaining Competitive Advantage in the Gray Zone: Response Options for Coercive Aggression Below the Threshold of Major War* (Santa Monica, CA: RAND Corporation, 2019), 7–12, accessed 16 November 2020, https://www.rand.org/pubs/research_reports/RR2942.html; Alessio Patalano, "When Strategy Is 'Hybrid' and Not 'Grey': Reviewing Chinese Military and Constabulary Coercion at Sea," *Pacific Review* 31, no. 6 (2018): 811–39. Patalano argues that use of the term "gray-zone" operations to describe China's activities is misleading because it suggests they are unlikely to escalate to war. He argues that these constabulary activities form part of a larger hybrid strategy that does, in fact, raise the risk of armed conflict. Donald Stoker and Craig Whiteside, "Blurred Lines: Gray-Zone Conflict and Hybrid War—Two Failures of American Strategic Thinking," *Naval War College Review* 73, no. 1 (Winter 2020): 13–48. Stoker and Whiteside provide a critical perspective on the term "gray zone" that argues it is poorly defined, distorts history, and raises the risk of conflict escalation.

2. In 2020, the term "gray zone" appeared in nearly every issue of the U.S. Naval Institute's *Proceedings* and in every issue of *Military Review*. See, for example, Charles M. Kelly, "Information on the Twenty-First Century Battlefield: Proposing the Army's Seventh Warfighting Function," *Military Review* 100, no. 1 (January-February 2020): 62–68.

3. For a concise description of the maritime militia, see Conor M. Kennedy and Andrew S. Erickson, *China Maritime Report No. 1: China's Third Sea Force, The People's Armed Forces Maritime Militia: Tethered to the PLA* (Newport, RI: U.S. Naval War College, China Maritime Studies Institute, 2017), accessed 16 November 2020, https://digital-commons.

usnwc.edu/cmsi-maritime-reports/1. For a visual recognition guide, see Office of Naval Intelligence, "China People's Liberation Army Navy (PLAN), Coast Guard, and Government Maritime Forces: 2019-2020 Recognition and Identification Guide," October 2019, accessed 23 November 2020, https://www.oni.navy.mil/Portals/12/Intel%20agencies/China_Media/2020_China_Recce_Poster_UNCLAS.jpg.

4. Richard K. Betts, "The Grandiosity of Grand Strategy," *Washington Quarterly* 42, no. 4 (Winter 2020): 8.

5. Ibid., 7.

6. On "Go," see Henry Kissinger, *On China* (New York: The Penguin Press, 2011), 2–3, 22–32; Keith Johnson, "What Kind of Game is China Playing," *Wall Street Journal* (website), 11 June 2011, accessed 16 November 2020, https://www.wsj.com/articles/SB10001424052702304259304576374013537436924. On "hide and bide" and Sun Tzu's counsel about winning without fighting, see articles in the September-October 2020 issue of *Military Review*.

7. These two authors are not as opposed to one another on this point as a simplistic reading would suggest. Sun Tzu maintains that strategic defense can win wars. Carl von Clausewitz argues that a purely defensive war is impossible, but tactical defense has advantages over attack. But both agree on the source of defensive advantage: the waiting defender can strengthen their position, and the maneuvering attacker expends energy and resources.

8. For an example of how this sort of theorizing can influence policy decisions at the highest levels, see Alan Rappeport, "A China Hawk Gains Prominence as Trump Confronts Xi on Trade," *New York Times* (website), 3 November 2018, accessed 16 November 2020, https://www.nytimes.com/2018/11/30/us/politics/trump-china-trade-xi-michael-pillsbury.html.

9. Oriana Skylar Mastro, "The Stealth Superpower: How China Hid Its Global Ambitions," *Foreign Affairs* 98, no. 1 (January-February 2019): 31–39; Michael D. Swaine, "Creating an Unstable Asia: the U.S. Free and Open Indo-Pacific Strategy," Carnegie Endowment for International Peace, 2 March 2018, accessed 16 November 2020, https://carnegieendowment.org/2018/03/02/creating-unstable-asia-u.s.-free-and-open-indo-pacific-strategy-pub-75720. Mastro argues that China seeks to take the United States' place as the regional political, economic, and military hegemon in East Asia and to challenge the United States internationally without replacing it as the "leader of a global order." By contrast, Swaine questions the depiction of China as an "implacable adversary" that seeks to challenge the United States regionally and internationally and argues that treating China this way is a self-fulfilling prophecy.

10. Avery Goldstein, "China's Grand Strategy under Xi Jinping," *International Security* 45, no. 1 (Summer 2020): 164–201.

11. Ibid., 172–79.

12. Michael D. Swaine, "China's Assertive Behavior—Part One: On 'Core Interests,'" *China Leadership Monitor*, no. 34 (Winter 2011); Andrew Scobell et al., *China's Grand Strategy: Trends, Trajectories, and Long-Term Competition* (Santa Monica, CA: RAND Corporation, 2020), 11–14, accessed 16 November 2020, https://www.rand.org/pubs/research_reports/RR2798.html.

13. John Garver, *Foreign Relations of the People's Republic of China* (Englewood Cliffs, NJ: Prentice Hall, 1993), 25–26.

14. Thomas J. Christensen, *Worse than a Monolith: Alliance Politics and Problems of Coercive Diplomacy in Asia* (Princeton, NJ: Princeton University Press, 2011), 184–88; M. Taylor Fravel, *Strong Borders, Secure Nation: Cooperation and Conflict in China's Territorial Disputes* (Princeton, NJ: Princeton University Press, 2008), 201–9.

15. Fravel, *Strong Borders, Secure Nation*, 267–99.

16. Jinghan Zeng, *The Chinese Communist Party's Capacity to Rule: Ideology, Legitimacy and Party Cohesion* (New York: Palgrave Macmillan, 2016), 47; see also Jonathan D. Spence, *The Search for Modern China* (New York: W. W. Norton, 1999), 624–46, 692–96.

17. Jessica Chen Weiss, *Powerful Patriots: Nationalist Protest in China's Foreign Relations* (New York: Oxford University Press, 2014), 9; for a deeper description of the "Century of Humiliation," see Spence, *The Search for Modern China*, chaps. 7–11.

18. Garver, *Foreign Relations of the People's Republic of China*, 4–9, 16–18; Orville Schell and John Delury, *Wealth and Power: China's Long March to the Twenty-First Century* (New York: Random House, 2013).

19. Linda Jakobson and Dean Knox, "New Foreign Policy Actors in China" (policy paper, Stockholm: SIPRI, 2010), 24–33, 43–46.

20. Suisheng Zhao, "Nationalism's Double Edge," *Wilson Quarterly* 29, no. 4 (Autumn 2005): 76–82.

21. M. Taylor Fravel and Alexander Liebman, "Beyond the Moat: The PLAN's [People's Liberation Army Navy] Evolving Interests and Potential Influence," in *The Chinese Navy: Expanding Capabilities, Evolving Roles*, ed. Phillip C. Saunders et al. (Washington, DC: National Defense University Press, 2011), 57–59; Daniel M. Hartnett and Frederic Vellucci, "Toward a Maritime Security Strategy: An Analysis of Chinese Views Since the Early 1990s," in Saunders et al., *The Chinese Navy: Expanding Capabilities, Evolving Roles*, 98–99.

22. *The State of World Fisheries and Aquaculture 2020: Sustainability in Action* (Rome: Food and Agriculture Organization of the United Nations, 2020), 10–11, 41–42, https://doi.org/10.4060/ca9229en. In addition, as of the last available estimate in 2017, the western Pacific accounted for the second largest number of landings (catches), and the fastest annual growth of landings.

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The Strategic Significance of the Chinese Fishing Fleet

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The sheer tonnage of China's sixteen thousand hull fishing fleet and the fleet's illegal, unreported, and unregulated (IUU) practices exert their own gravitational pull for diplomatic, intelligence, military, and economic analysts globally. Contextualizing China's massive fishing fleet within China's grand strategy, identifying the most likely use case for the fleet, and assessing the most dangerous use case suggest the need for updates in the U.S. Department of Defense's role in monitoring and addressing the assessed threats.

Most Likely Course of Action

While security professionals and naval strategists grow suspicious over the staggering number of Chinese fishing vessels, the primary objective of the fishing fleet is to deliver meat to an increasingly affluent Chinese population with a growing appetite for protein.[1] The dietary evolution of China's 1.4 billion citizens and the corresponding increase in imports have shifted global protein markets dramatically over the past decade.[2] Further, the increase in Chinese meat consumption occurred in conjunction with repeated domestic failures in China's land-based agriculture associated with livestock disease, contaminated groundwater, and poor land management practices.[3] China's domestic production has been so overwhelmed by demand that China has uncharacteristically exposed itself to annually increasing trade dependencies such as the 2020 Phase One trade deal with the United States.[4] While protein imports may seem low risk from the U.S. perspective, they represent a major deviation from Maoist philosophies on China as a self-sustaining food producer.

Given the significant and growing protein demand, China's fishing fleet has aggressively overfished all regional seas, earning China the top marks as the world's worst offender of IUU fishing.[5] While China's fishing fleet of over sixteen thousand blue water hulls seems an asset to military analysts, economists may view the need for such a far traveling fleet as an embodied liability. The need for this large open ocean fleet suggests that China may be experiencing a fishery stock collapse in nearby seas.[6] This is of particular concern for China, the world's largest fishing nation.[7] Unlike failed harvests on land, a fishery stock collapse represents a strategic loss as it can take decades or longer to rehabilitate. The United States' own localized fishery collapse in the 1980s in the Aleutian Basin offers a glimpse of what China may be suffering on a broad scale.[8]

After ravaging its local seas, China spread its IUU fishing practices to Africa and Oceania. Open-source reporting from nongovernmental organizations (NGOs) and government agencies thoroughly document China's IUU practices in Western Africa in particular.[9] Many of the countries impacted by these fishing practices partner with China's Belt and Road Initiative (BRI) but quietly face an existential threat from overfishing due to critical nutritional and economic dependencies.[10] Challenges of overfishing present huge, but not immediately obvious, problems. The effects often metastasize within the legitimate economy and destabilize a number of factors like unemployment, tax revenues, and many others. Somalia's past decades of instability offer a glimpse of what can happen when fishing-dependent fragile states suffer from a fisheries collapse.[11]

Regardless of whether neighboring countries welcome China's aggressive and often illegal fishing practices, China will leverage its recently accrued diplomatic heft in international governmental organizations (IGOs) to push past international norms of behavior and weaker regional powers and devastate the fishing economies of its neighbors.[12] China's conflicts with Vietnam on these matters offer a clear example, which will be discussed in greater detail.

Impacts from the Most Likely Course of Action

Diplomatic. China has successfully campaigned against the international legal frameworks governing the sea and undersea for over a decade—particularly in international waters or transition zones between different exclusive economic zones.[13] China's excessive territorial claims in the South China Sea provide an excellent predicate for how China may further challenge legal frameworks governing fisheries. In addition to legal negotiations, China's overt pressure on the neighboring nation's fishing fleet reached new heights in 2020 when a Chinese Coast Guard (CCG) cutter collided with and sank a Vietnamese fishing vessel.[14] The response of international maritime bodies that establish norms for fishing fleets will set a precedent for China's next moves in its assertive displays in the region.

Military. The Chinese naval forces include the People's Liberation Army Navy (PLAN), the CCG, and the People's Armed Forces Maritime Militia (PAFMM). The PLAN and the CCG conduct regular patrols, but the PAFMM engages in gray-zone activities near contested features such as Scarborough Shoal, the Paracel Islands, and other areas of the South China Sea.[15] Among other tactics, the PAFMM has demonstrated a willingness, ability, and proficiency to band together to form phalanx formations, which disrupt freedom of navigation exercises of U.S. and allied militaries.

As argued previously, the most likely course of action (COA) for the fishing fleet is to continue fishing. However, the large number of fishing vessels offers a ready and distributed platform for signals, acoustic, and imagery collection. If outfitted with basic commercial sensors, the fishing fleet could sustainably scan over 1.2 million nautical miles per day.[16] This collection could occur passively without losing any of the protections of a fishing vessel upon the high seas afforded by the United Nations' Convention on the Law of the Sea. Table 1 (on page 137) provides the outputs of a parametric analysis performed using assumptions about standard fishing vessel maintenance, sensor reliability, and operational patterns.

Previous page: An aerial view of thousands of fishing boats as they berth near Shenjiamen Harbor 1 September 2020 due to Typhoon Maysak, the ninth typhoon of the year in Zhoushan City, east China's Zhejiang Province. (Photo by Imaginechina via Associated Press)

Economic. As with many other manufacturing industries, the Chinese government's subsidization of shipbuilding and sustainment will reorient global markets toward Chinese dependency.[17] The focus of China's investments has been directly aimed at commercial shipping such as oil tankers and container ships, but the capital, liquidity, and favorable regulatory environment provided to the shipbuilding market as a whole generate a positive environment for all classes of ship construction in China. The explosive growth of the Chinese fishing fleet highlights the maritime industry as the latest vector for economic dumping, which will systematically weaken other shipbuilding nations. The accompanying job creation increases the probability the Chinese government will continue its direct support for the shipbuilding industry.

Though U.S. shipyards maintain a qualitative edge at producing and maintaining capital ships such as nuclear-powered submarines and aircraft carriers, they offer no quantitative competition with China in terms of hulls or tonnage. China's status as the world's most prolific low-cost manufacturer secured its position as the world's largest shipbuilding nation (22.3 million gross tons in 2019).[18] As a result of the shipbuilding boom, China's shipbuilding sector has generated staggering progress toward the modernization of the PLAN. The production potential in both the number of hulls and tonnage per hull will remain an important indicator of China's economic and naval competitiveness.[19]

Lastly, China's geographical containment within the first island chain led to its historic orientation as a continental power. However, large maritime industries and a mariner corps to man the blue water fishing fleet will generate maritime depth in seafaring industries that may be needed for a large or protracted maritime conflict.[20]

Table 1. Parametric Analysis of Fishing Fleet in Most Likely Course of Action

Assumptions about each individual ship operating within a fleet	
Average speed of vessel engaged in fishing	8 knots
Average sensor operational availability (at least one of two sensors operating)	90%
Average downtime for sensor maintenance (enables 90% availability of sensors)	20%
Operational tempo per crew (time a rotating crew is deployed at sea/multiple crews assigned each ship to maximize time at sea)	40%
Fuel supply (fishing fleet regarded as a People's Liberation Army strategic priority)	Unconstrained
Model outputs	
Number of available hulls	10,986
Number of available hulls with sensors	6,400
Approximate nautical miles scanned per twenty-four hours	1,228,000

(Table by author. Model output information taken from "Parametric Analysis in Cameo Systems Modeler with ParaMagic Using the Systems Modeling Language," January 2021)

Most Dangerous Course of Action

Based on the above analysis, the majority of China's fishing fleet must remain actively fishing or the population will suffer significant nutrition deprivation. The Chinese Communist Party possesses the means and the will to impose deprivation upon its highly nationalistic population, but the prioritized utilization of the fishing fleet for protein production will increase during any sustained maritime conflict, especially if deteriorating relations with the United States and its allies result in degradation or termination of protein exports to China.

Fishermen sort fish 31 March 2017 on the deck of Chinese fishing boat *Bo Yuan 1* near Conakry, Guinea, West Africa. The Greenpeace ship *Esperanza* was on tour in West African waters to address the problem of overfishing in the region. (Photo by Pierre Gleizes ©/Greenpeace, https://media.greenpeace.org/C.aspx?VP3=DirectSearch&AID=KW-F6MY9JVU1. Used with permission)

In 2019, Brazil, the European Union, United States, Australia, and New Zealand provided over half of China's agricultural imports.[21]

In the most dangerous COA, China diverts a portion of its large fishing fleet to augment the PAFMM, which systematically floods the contact picture in the Western Pacific during a maritime conflict. Even if unarmed, a flooded contact picture increases the difficulty of U.S.-led intelligence, surveillance, reconnaissance, and targeting (ISR&T) activities. Such an abundance of sentries would increase the difficulty of U.S. counter-ISR&T and offensive maneuvers. Additionally, China's aggressive development of economic basing under the BRI includes fisheries depots.[22] These fishery depots could be used to sustain the fishing fleet and PAFMM. China already deploys its burgeoning private military contractors along the BRI, and these private military contractors could efficiently harden the fishery depots.[23]

From a collateral damage perspective, the presence of large numbers of fishing vessels offers potential liabilities for civilian deaths, which the Chinese would leverage to erode legitimacy of a U.S.-led campaign on the high seas or in China's claimed exclusive economic zones.[24] China would most likely leverage its platform at the United Nations and similar IGOs to amplify its narrative, regardless of whether the fishing vessels engaged in activities that qualified them as legitimate military targets. Even in an extreme scenario where the United States designated all Chinese fishing vessels within an operating area as lawful targets, operational commanders would have to balance the economics of expending exquisite U.S. weapons against small craft in order to preserve ordnance for priority targets.

Should China divert any portion of the fishing fleet for paramilitary activities, the most likely capability upgrades will support expanded ISR&T, overt harassment of U.S.-led naval platforms, or terrorist acts upon the sea.[25] Under the cloak of the fleet's protected status as

fishing vessels, these platforms would inflict maximum harassment in order to maximize intelligence gain.

Lastly, the United States enjoys an undersea advantage that extends deep into the Western Pacific, courtesy of the U.S. submarine fleet.[26] If the fishing fleet was used effectively, China could use it to systematically degrade the acoustic environment that submarines rely on for effective employment. For example, large trawler convoys could saturate the acoustic environment to mask the movement of capital warships over key maritime terrain. Additionally, China has invested heavily in undersea infrastructure to counter the U.S. submarine fleet, and up-fitted fishing vessels could serve as distributed mobile listening stations and augment fixed infrastructure.[27]

What Is the Role of the Joint Force in This Fight?

The Chinese fishing fleet does not currently represent a military threat to the United States, but the PLAN could apply these resources in overt or gray-zone military activities. The following analysis provides a framework for the joint force's resource planning efforts with respect to Chinese fishing fleets and provides context for many of the critical security issues that define the region.

The Chinese fishing fleet problem set has a combination of naval, diplomatic, and commercial elements, but key resource providers like the U.S. Army will be significant stakeholders in developing U.S. military strategy for the region. First, the Army maintains the largest number of uniformed personnel in the Department of Defense (DOD), and effective employment of the Army's human resources over the vast Pacific will be critical. Additionally, the Army's robust liaison channels with partner nations via the Defense Security Cooperation Agency (DSCA) will provide numerous opportunities to effectively channel partner resources.

Recommendations to Counter China's Most Likely Course of Action

Diplomatic. The joint force has the potential to support diplomatic gains in vulnerable areas in Africa, South Asia, and Oceania via effective cooperation with non-DOD agencies. Many U.S. agencies like the U.S. Coast Guard (USCG), National Oceanic and Atmospheric Agency (NOAA), U.S. Fish and Wildlife Service, and others augment the State Department's efforts to combat China's abusive fishing practices. While the DOD's largest footprint traditionally occupies the land domain, programs like the Army's linguistic corps offer a key resource in a region with so many spoken languages. In the context of managing the threats posed by China's fishing fleet, the USCG actively engages with partner nations to combat IUU fishing.[28] However, the USCG, NOAA, and other agencies lack the capacity to train linguists to accompany their large and growing list of bilateral fisheries partners. The Army could meaningfully augment fisheries enforcement teams and facilitate deepening diplomatic relationships with concerned nations. Indonesian, Thai, Malayan, Mandarin, Hindi, Arabic, and West African language expertise will all be critical in this endeavor and could easily convert to more traditional DOD activities on land.

Development of nontraditional partnerships with agencies like the U.S. Fish and Wildlife Service, U.S. Department of Agriculture, USCG, and NOAA will require sustained effort, since these organizations may not be accustomed to the DOD's sometimes overwhelming business and operational practices.[29] However, these agencies' specific knowledge will provide increased insights into the calculations of China's fishing fleet and which of the joint force resources will provide the greatest relevance to any contingency.[30]

Information. China's overfishing and manipulation of fishing markets offer opportunities for U.S.-led information campaigns against the Chinese and opportunities to attract new partners, allies, and "silent partners" in the Western Pacific. U.S. efforts could include both overt and covert exploitation of these tensions.[31] Where legal authorities permit, the military services' public affairs, civil affairs, and information operation units may exercise their capabilities to influence the global view of Chinese fishing practices. For example, amplifying the open reports of the Food and Agriculture Organization of the United Nations offers effective methods of raising awareness of China's abuses at

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sea.[32] Additionally, and perhaps more importantly, the joint force could collaborate with private analysis firms like FishSpektrum to provide objective information to the international community about Chinese fishing practices and abuse of international maritime protocol.[33] Partnerships with third-party outlets would provide objective perspectives distanced from a U.S. speaker, which serves a strategic purpose in a time of strained Sino-U.S. relations.

Military. The U.S. military is actively involved in security cooperation relationships with countries concerned over fisheries, but the United States often lacks effective marketing for its efforts in the region. For example, Operation North Pacific Guard and the Maritime Oceania Security Initiative expend U.S. military resources on protection of fisheries for small nations in the Pacific, but the United States spends comparatively little to ensure the local populations of partner nations understand the security and value the United States delivers to their economy.[34] In comparison, China accompanies any contributions to partner nations with public ceremony, physical monuments, and contractually required statements of support for flagship programs like the BRI.

The DSCA offers a key vector for the Army to contribute resources toward mitigating the threat posed by the Chinese fishing fleet. The DSCA's consistent presence and effective branding offer an excellent pairing for the military services to apply resources toward interoperability training for disaster response and humanitarian assistance. Perhaps most importantly, DSCA provides an integrated channel for all the contributing services and agencies engaged against China's abusive fishing practices. In the past, the United States sometimes lacked a coordinated approach to building partner capacity, so many U.S. agencies offering resources intermittently contacted single representatives of underresourced partner nations. Not only does this appear disorganized to would-be partners, but it also increases the cost of receiving aid from the United States. The DSCA's approach toward tailoring assistance packages for the needs of each nation offers the DOD an effective partner in placing resources at the point of need.

Table 2. Priority Intelligence Requirements for the Chinese Fishing Fleet

Priority intelligence requirements	
1	Identify logistical hubs that sustain the Chinese fishing fleet (e.g., at-sea refueling ships and fishery bases)
2	Assess the overall fuel demand of the Chinese fishing fleet relative to capacity of distributed logistical hubs
3	Identify primary points of fishery off-load to Chinese food processors
4	Analyze disputes between Chinese vessels (the People's Liberation Army Navy, Chinese Coast Guard, People's Armed Forces Maritime Militia, or fishing vessel) and any non-Chinese fishing vessel (e.g., Vietnam)

(Table by author)

Economic. In the realm of economics, the joint force should seek to illuminate the negative consequences of Chinese economic practices in all diplomatic, information, and military activities. Efforts should seek to inform partner nations about the risks of Chinese debt-book diplomacy that frequently recur within the BRI. The joint force should leverage the support of NGOs for this critical objective. NGOs like the Pew Charitable Trusts specialize in counter-IUU fishing.[35] These NGOs often retain local representatives that maintain longstanding relationships with local government leaders, which avoids the perception that the United States pushes a colonialist or political agenda. IGOs like the World Bank also offer another meaningful path for influence on counter-IUU fishing.[36]

Recommendations to Counter China's Most Dangerous Course of Action

In addition to the above actions, the joint force may need to apply military capabilities and resources to address the most dangerous COA for the Chinese fishing fleet.

Excerpt from "China's Monster Fishing Fleet"

By Christopher Pala

Foreign Policy · 30 November 2020

https://foreignpolicy.com/2020/11/30/china-beijing-fishing-africa-north-korea-south-china-sea/

"On August 5, 2017, China complied with a United Nations decision and formally imposed sanctions on North Korea, including a ban on seafood exports. Seafood, particularly squid, is one of North Korea's few significant foreign-exchange earners, and the sanctions were expected to increase the pressure on the regime.

"But just a few weeks after the ban came into effect, hundreds of squid-fishing vessels left Chinese waters and rounded the southern tip of South Korea. They entered North Korea's 200 nautical-mile exclusive economic zone (EEZ), nearly doubling the number of Chinese fishing vessels operating there from 557 to 907, according to a recent Global Fishing Watch report that tracked data from four different satellite systems. Even as China publicly claimed that it was complying with sanctions, many of the Chinese vessels continued to make trips to North Korea and back, including several round trips each year during both 2018 and 2019, said Jaeyoon Park, one of the report's lead authors.

"The Chinese fleet, made up of squid jiggers and pair trawlers, scooped up a staggering amount of squid—equal to almost as much as the entire squid catch in Japanese and South Korean waters combined over the same period, the report estimated. The Chinese decimated the squid population off North Korea to such a degree that Japanese and South Korean fishers saw their own take of the usually plentiful, migratory species plummet."

A Chinese fishing vessel equipped with an array of lights that are meant to attract squid at night is anchored in South Korean waters. (Photo courtesy of South Korean Fisheries Agency/ Ulleung Island)

In any large-scale conflict with China, the U.S.-led campaign plan will seek to counter Chinese antiaccess/area denial investments with the types of technologies and operational concepts associated with Joint All-Domain Command and Control and service-related initiatives such as the U.S. Air Force's All-Domain Battle Management System, the U.S. Army's Project Convergence, the U.S. Marine Corps' Expeditionary Advanced Base Operations, and the U.S. Navy's Project Overmatch.[37] As detailed above, the Chinese fishing fleets could meaningfully complicate the United States' high-end capabilities through overt means (e.g., ISR&T) or through masking movement of military formations. The large number of fishing hulls and unclear lawful target status challenge resources and the standard rules of engagement, so planners should prioritize disabling logistical hubs for fishing fleet sustainment. For example, degrading at-sea refueling operations of the fishing fleet would limit the effective range of fishing vessels. Table 2 (on page 140) provides a recommended list of priority intelligence requirements associated with the Chinese fishing fleet.

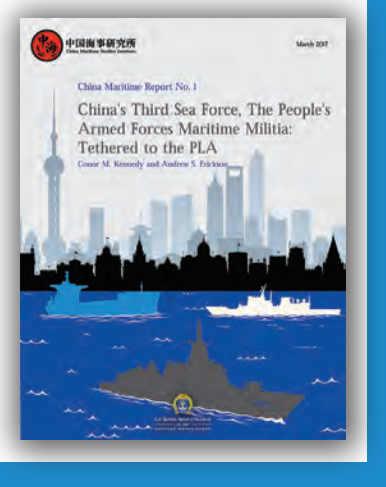
Should the U.S.-led effort require denying, degrading, or destroying any portion of the Chinese fishing fleet or logistical enterprise, the United States must prepare the supporting narrative and rules of engagement. Regardless of facts on the ground, China's legal strategy will likely accuse the United States of engaging in unrestricted warfare.[38] The joint force's vast experience in low-intensity conflict over the past two decades offer the opportunity to augment the Navy's experience in this area. Similar to navigating a convoy through a dense urban environment, a war in the Western Pacific will transit the densest maritime traffic scheme on the planet.[39]

The United States will need cooperative assets such as advanced capability naval platforms, sensors, and weapons in any envisioned conflict in order to disable high-end vessels like Chinese destroyers. However, fishing vessels engaged in paramilitary activities and supporting land-based logistical hubs provide manageable contacts for ground-based forces and partner nations to address with lower-cost munitions. This division of labor would increase efficiency and provide more effective weapon-target pairing.

The DOD should place a key emphasis on developing military interoperability with Indian Armed Forces.[40] Geopolitical analysis routinely emphasizes the importance of India's role in defining the probability of success for any sustained maritime conflict with China. India offers key terrain in the diplomatic, intelligence, military, and economic domains. Diplomatically, India has the best chance of championing the plight of developing nations suffering from Chinese abusive fishing practices. From an intelligence perspective, India's long coastline across the world's busiest maritime trading routes ensures that all commercial and military maritime traffic is within the range of shore-based, intelligence gathering capabilities. With respect to the military, India's partnership in preserving freedom of the seas and observance of international fisheries will be critical in upholding legitimate commerce should the United States become embroiled in maritime conflict.

Economically, the United States and China compete for the status of India's largest trade partner.[41] However,

In response to growing concern regarding the emerging role of China's maritime militia as a sea force that had been involved in a series of international incidents aimed at intimidating China's regional neighbors and obstructing free transit through the South China Sea, the U.S. Naval War College prepared a short study titled *China's Third Sea Force, The People's Armed Forces Maritime Militia: Tethered to the PLA*. Published in 2017, this report outlines the structure, command and control, and strategic role of this force within Chinese overall geopolitical and military strategy. It seeks to clarify the maritime militia's exact identity, organization, and connection as a reserve force that supports the objectives of the People's Liberation Army. U.S. military decision-makers should be aware of the role of the Chinese maritime militia and that of the expanding Chinese civilian fishing fleet that is also increasingly used as an instrument of coercion, intimidation, and attempted normalization of territorial claims. To view this study, visit https://digital-commons.usnwc.edu/cmsi-maritime-reports/1/.



Twelve Chinese fishing boats are banded together with ropes 21 December 2010 to try to thwart an attempt by a South Korean coast guard ship to stop their alleged illegal fishing in the Yellow Sea off the coast of South Korea. (Photo by Park Young-Chul, Agence France-Press)

India's consistently positive trade balance with the United States earns it a more favorable perception than India's consistently negative trade balance with China. In a future conflict, reinforcing cooperation with India offers a key pathway to fortify the region, and early effort by the joint force in this line of effort will provide strategic advantage.

Conclusion

The number of hulls and overall tonnage of China's fishing fleet should qualify it as a modern marvel, and military planners should monitor its use closely. Across the spectrum of conflict, the fishing fleet will most likely support its primary mission of protein harvest. However, Chinese planners could divert a relatively small percentage of these fishing vessels for paramilitary activity in the most dangerous COA to great effect. Below the threshold of conflict, the military services can play critical roles in suppressing the harmful activities of China's abusive fishing fleet. In doing so, the DOD will establish and mature key relationships with nontraditional federal agencies, partner nations, NGOs, and IGOs that will deliver decisive effects should Sino-U.S. tensions rise above the threshold for armed conflict. ■

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Competing with China for a Free and Open Indo-Pacific

Gen. Robert B. Brown, U.S. Army
Lt. Col. R. Blake Lackey, U.S. Army
Maj. Brian G. Forester, U.S. Army

As China continues its economic and military ascendance, asserting power through an all-of-nation long-term strategy, it will continue to pursue a military modernization program that seeks Indo-Pacific regional hegemony in the near-term and displacement of the United States to achieve global preeminence in the future.

—Summary of the 2018 National Defense Strategy

We are at a strategic inflection point. A hypercompetitive global environment coupled with accelerating technological, economic, and social change has resulted in an incredibly challenging and complex twenty-first-century operating environment. Nowhere is this more apparent than in the Indo-Pacific as the People's Republic of China (PRC), under the leadership of the Chinese Communist Party (CCP), seeks to undermine the rules-based international order that has benefitted all nations for over seventy years. The PRC's intentions are clear: to shape a strategic environment favorable to its own national interests at the expense of other nations. Recognizing the growing global challenges emanating from the region, our national leaders have offered a contrasting vision: a "Free and Open Indo-Pacific."[1] Since the end of World War II, the substance of that vision has benefitted all nations and none more than China. As an integral part of the U.S. Indo-Pacific Command's joint and combined approach to realize that vision and maintain the advantage against the PRC, Army forces are actively competing for influence in the region. Maintaining an Indo-Pacific that is free and open will require us to continue competing with Beijing by forward posturing combat-credible forces, strengthening our regional alliances and partnerships, and tightly integrating with the combined joint force to succeed in multi-domain operations.

A Revanchist China

The CCP's unabashed vision for the future is the "great rejuvenation of the Chinese nation."[2] Beyond just words,

Chinese troops on parade 13 September 2018 during the Vostok 2018 military exercise on Tsugol training ground in Eastern Siberia, Russia. The exercise involved Russian, Chinese, and Mongolian service members. Chinese participation included three thousand troops, nine hundred tanks and military vehicles, and thirty aircraft. (Photo by Sergei Grits, Associated Press)

this blueprint has manifested itself in actions such as China's One Belt, One Road initiative, wherein the CCP promises loans for infrastructure development across the Asia-Pacific region and, increasingly, the globe. In 2018, China expanded One Belt, One Road to include arctic regions as the "Polar Silk Road" and emphasized its growing status as a "Near-Arctic State."[3] Exploiting the resources of other nations for China's benefit, One Belt, One Road development agreements often come with harmful, mercantilist terms that result in host-nation corruption, crippling debt, and Chinese takeover of critical infrastructure. For example, Chinese loans to Sri Lanka for a port project in Hambantota ultimately resulted in political turmoil and debt default. In 2015, Sri Lanka was forced to hand the port over to China along with fifteen thousand acres of coastline.[4] This and other examples represent the type of "debt-trap diplomacy" that typifies the predatory economic practices under China's One Belt, One Road.[5]

Beyond simple regional influence, the CCP has a long-term vision for global preeminence.[6] President Xi Jinping has offered a plan to guide China through domestic transformation and realize the "Chinese dream."[7] This plan includes "two 100s," a symbolic representation of the CCP's and the PRC's one hundred-year anniversaries (2021 and 2049, respectively). By 2021, the CCP aims to achieve status as a "moderately prosperous society," doubling its 2010 per capita gross domestic product and raising the standard of living for all Chinese citizens.[8] By the PRC's one hundredth anniversary in 2049, the CCP envisions the nation as "fully developed, rich and powerful," with an economy three times the size of the United States backed up by the world's premier military power.[9] Collectively, the "two 100s"—with 2035 as an interim benchmark year—outline China's self-described path to revitalization as a superpower. This future vision is evident in the rhetoric and views of People's Liberation Army (PLA) leaders. Command level engagements with PLA officers indicate that they no longer fear the United States. Twenty, or even ten, years ago, it was evident that the PLA viewed the United States with a healthy dose of both respect and fear. That view has noticeably changed in recent years. While the PLA still respects our military capability, it no longer fears us, which is reflective of its confidence in its growing relative military power.

China has been utilizing the current peaceful interlude in international relations to aggressively modernize its military force. From 2000 to 2016, the CCP increased the PLA's budget by 10 percent annually.[10] And while the CCP has voiced its intentions to achieve a fully modernized force by 2035, its actions indicate a far earlier target.[11] Capitalizing on the research-and-development efforts of other nations, frequently through underhanded means, the PLA is rapidly expanding its arsenal, focusing less on conventional forces and more on nuclear, space, cyberspace, and long-range fires capabilities that enable layered standoff and global reach. The PLA's updated doctrinal approach to warfighting envisages war as a confrontation between opposing systems waged under high-technology conditions—what the PLA refers to as *informatized warfare*.[12] In short, this is using information to PLA advantage in joint military operations across the domains of land, sea, air, space, cyberspace, and the electromagnetic spectrum. Additionally, recognizing the need to carry out joint operations

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in a high-tech operating environment, the PLA is in the process of reforming its command-and-control structure to resemble our own theater and joint construct.[13] In sum, the CCP characterizes the PLA's military modernization and recent reforms as essential to achieving great power status and, ultimately, realizing the "great rejuvenation of the Chinese nation."[14]

China where we have an alignment of interests."[19] We have strands of commonality—especially in the military realm—notably related to humanitarian assistance and disaster relief. U.S. Army Pacific annually participates in the largest exercise with the PLA that focuses on disaster response. We can and should find common ground to build trust and stability between our two nations. But,

> By 'open,' we mean that 'all nations should enjoy unfettered access to the seas and airways upon which our nations and economies depend.'

Our Competing Vision

It is against this backdrop that U.S. Indo-Pacific Command is implementing a strategy toward our national vision of a "Free and Open Indo-Pacific."[15] As stated by Adm. Phil Davidson, commander of U.S. Indo-Pacific Command,

> We mean 'free' both in terms of security—being free from coercion by other nations—and in terms of values and political systems … Free societies adhere to the shared values of the United Nations Charter and the Universal Declaration of Human Rights, respecting individual liberties.[16]

By "open," we mean that "all nations should enjoy unfettered access to the seas and airways upon which our nations and economies depend." This includes "open investment environments, transparent agreements between nations, protection of intellectual property rights, fair and reciprocal trade—all of which are essential for people, goods, and capital to move across borders for the shared benefit of all."[17] The substance of this vision is not new; "free and open" have buttressed our regional approach for over seventy years. As an enduring Pacific power, we aim to preserve and protect the rules-based international order that benefits all nations, and it is this objective that underpins our long-term strategy for Indo-Pacific competition.[18]

Despite our conflicting visions, we must not overlook areas of common interest with China. As noted by then Acting Secretary of Defense Patrick Shanahan at the recent IISS (International Institute for Strategic Studies) Shangri-La Dialogue in Singapore, "We cooperate with

as Shanahan went on to say, "We compete with China where we must," and though "competition does not mean conflict," our overarching goal is to deter revisionist behavior that erodes a free and open Indo-Pacific and, ultimately, win before fighting.[20] Land forces play a key role in competing to deter the PRC. Deterrence is the product of capability, resolve, and signaling, and there is no greater signal of resolve than boots on the ground. Forward-postured Army forces, alongside a constellation of like-minded allies and partners, provide a competitive advantage and a strong signal of strength to potential adversaries. Should deterrence fail, forward-postured land forces support a rapid transition to conflict, providing the Indo-Pacific commander additional options in support of the combined joint fight. In an environment where anti-access aerial denial systems provide layered standoff, forward-postured land forces can enable operations in the maritime and air domains if competition escalates to crisis or conflict, which we have demonstrated in tabletop exercises, simulations, and operational deployments.

Army Forces in Combined and Joint Indo-Pacific Competition

Competition with the PRC is happening now, and the twenty-five thousand islands in the Indo-Pacific will be a key factor in any crisis scenario we may encounter. U.S. Army Pacific delivers several advantages to the combined joint force as America's Theater Army in the Indo-Pacific. This summer, U.S. Indo-Pacific Command completed the first ever certification of U.S. Army Pacific as a four-star combined joint task force (CJTF). This historic certification not only signifies the integral

role of land forces in the Indo-Pacific, but it also provides the combatant commander the option of a land-based CJTF. Additionally, Army forces contribute to an agile and responsive force posture that ultimately strengthens the joint force's capacity for deterrence.

Now in its seventh year, the Pacific Pathways Program is evolving to meet the demands of increased competition. Under Pathways 2.0, U.S. Army Pacific forces are now west of the international dateline ten months of the year, and the Pathways Task Force, which is growing from under 1,000 to approximately 2,500 troops, will remain static in key partner nations—especially in the first island chain—for longer periods.[21] Doing so benefits the partner forces by increasing the depth of training and relationships, enhances the combat readiness of the deployed task force, and allows the dynamic force employment of smaller units to outlying countries. For example, in May of this year, we operationally deployed a rifle company from the Pathways Task Force based in the Philippines to Palau for combined training with the local security forces—the first time in thirty-seven years Army forces have been in Palau. Pathways 2.0 and other Army force-posture initiatives are expanding the competitive space, providing opportunities to compete with the PRC for influence in previously uncontested regions of the Indo-Pacific.

Operating among the people, our land forces are especially suited to strengthening the alliances and partnerships in a complex region containing over half of the world's population. Everything we do in the region militarily is combined; we will never be without our allies, partners, and friends. Relationships must be built before—not during—a crisis. We strive every day to form our team in the Indo-Pacific so that when a crisis occurs, we are ready. During U.S. Army Pacific's recent certification as a CJTF, key allies and partners provided critical capabilities that made the entire team better. The exercise exemplified the importance of forming the team prior to crisis, strengthening our capacity for deterrence to ensure a free and open Indo-Pacific. Because fear and coercion are central to the PRC's regional approach, mutually beneficial and purposeful engagements build trust among our partners and enable us to cooperatively counter China's intimidation. During this fiscal year alone, U.S. Army Pacific conducted over two hundred senior leader engagements, seventy subject-matter expert exchanges, and over thirty bilateral and multilateral training exercises involving thousands of soldiers. These partner engagements reinforce the message that nothing we do in the theater will be by ourselves; it is only by working together that we can achieve a free and open Indo-Pacific.

Army forces also strengthen regional partnerships by enhancing interoperability among militaries. We often focus interoperability discussions on technical systems (communications, fires, logistics, etc.). The hard reality is that our systems will always have challenges with communication, and though we should not stop pursuing perfection, we must not forget the other dimensions of interoperability: procedures and relationships. Procedural interoperability involves agreed upon terminology, tactics, techniques, and procedures that

minimize doctrinal differences. While we will always remain frustrated by—and often focused on—systems interoperability, procedural interoperability should not be overlooked as a way to enhance our cooperative effectiveness. The most important dimension of interoperability is personal relationships. Strong relationships among partners can overcome the friction inherent in today's complex operating environment, especially at the outset of crisis, and they are a critical component of long-term strategic competition with China.

Finally, our strategic approach to the Indo-Pacific embraces the reality that current and future operations will be multi-domain. In competition and conflict, all domains—land, air, maritime, space, and cyberspace—will be contested. The combined joint force will have to seize temporary windows of opportunity to gain positions of relative advantage. Considering the geographic complexity of the Indo-Pacific across twenty-five thousand islands, land forces will play a pivotal role in supporting operations in other domains whether during competition, crisis, or conflict. Exercises and simulations have demonstrated the value of land-based systems—integrated with cyber and space capabilities—in enabling air and maritime maneuver. For over two years, U.S. Army Pacific has been leading the Army's Multi-Domain Task Force (MDTF) Pilot Program; through exercises and experimentation in the Indo-Pacific, we are driving the development of multi-domain operations (MDO) doctrine and force structure. Earlier this year, we activated the first Intelligence, Information, Cyber, Electronic Warfare, and Space (I2CEWS) Detachment, which serves as the core of the MDTF's forward-deployed capability to strengthen our capacity for deterrence.

The MDTF is proving its worth in key exercises, to include last year's Navy-led Rim of the Pacific (RIMPAC) exercise and in our recent CJTF certification. Key capabilities such as land-based antiship

A Naval Strike Missile fires from an Army Palletized Load System truck 12 July 2018 before hitting a decommissioned ship at sea during the world's largest international maritime exercise, Rim of the Pacific, at the Pacific Missile Range near Kekaha, Hawaii. This was the first land-based launch of the missile. (Photo by David Hogan, U. S. Army Aviation and Missile Research Development and Engineering Center Weapons Development and Integration Directorate)

Soldiers from Chinese People's Liberation Army (PLA) Southern Theater Command and the U.S. Army Pacific carry an injured man 18 November 2016 as they conduct a search-and-rescue operation at a simulated earthquake-collapsed building during the U.S.-China Disaster Management Exchange drill at a PLA training base in Kunming in southwestern China's Yunnan Province. (Photo by Andy Wong, Associated Press)

missiles enable operations in other domains and pose multiple dilemmas to the enemy. Final preparations are also underway for the MDTF's dynamic force employment during this year's Exercise Orient Shield, a combined exercise with the Japanese Ground Self Defense Force that, for the first time ever, will include the integration of multi-domain capabilities in concert with our Japanese partners. While the MDTF is not a panacea, the multi-domain capabilities that it is integrating into doctrine are invaluable as the joint force grapples with the changing character of warfare in the face of competition with China.

Succeeding in multi-domain competition with China will require an unprecedented level of U.S. joint force integration. In the past, we have waited for conflict to begin for jointness to take hold, but we cannot afford to do so now. And while we are well practiced at joint *interdependence* in conflict—notable examples include Operations Desert Storm and Iraqi Freedom—MDO will require the "rapid and continuous *integration* of all domains of warfare to deter and prevail as we compete short of armed conflict."[22] Accomplishing this level of joint integration will require us to break down existing service stovepipes, overcome our tendency to seek service-centric solutions, and integrate doctrine, training, and modernization efforts to mature MDO into a joint warfighting approach. The Indo-Pacific is truly a combined and joint theater, and we must seek combined and joint solutions to the problem of competition with China.

Our Advantage

We should be clear-eyed about the PRC's demonstrated intentions to undermine the rules-based international order and shape a strategic environment favorable to its interests at the expense of other nations. No one seeks conflict, but as George Washington once said, "To be prepared for war is one of the most effectual means of preserving peace."[23] U.S. Army Pacific, as part of a lethal

combined joint team, contributes to deterrence through the forward posture of combat-credible forces, the strengthening of our regional alliances and partnerships, and a joint approach to MDO. We will cooperate with China where we can but will also compete where we must to maintain a free and open Indo-Pacific and preserve the rules-based order that has been at the heart of the region's stability and prosperity for over seventy years.

Strategic competition with China is a long-term challenge, exacerbated by the accelerating complexity of the global security environment. Within this challenge, though, is the opportunity to leverage our greatest long-term advantages: our partnerships and our people. Everything we do in the Indo-Pacific is in partnership with other nations. We must maintain strong alliances and partnerships, leveraging our combined forces to ensure a free and open Indo-Pacific. And as Gen. George Patton said, "The soldier is the Army. No army is better than its soldiers."[24] Though our combined joint force is the envy of the world, we have "no preordained right to victory on the battlefield."[25] We must actively invest in the development of our people now in order to retain the advantage in MDO. Leaders who can thrive—as opposed to just survive—in ambiguity and chaos are essential if we are to maintain a combat-credible force that can succeed in a complex, multi-domain operating environment. We are confident in our greatest assets—our people, in cooperation with our great allies and partners. Investing in our advantage today will ensure we can compete, deter, and, if necessary, win as part of a lethal combined joint team. ■

Notes

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Chinese armored vehicles pass in review September 2018 at the end of the Vostok 2018 military exercise at the Tsugol training ground in Eastern Siberia, Russia. The exercise involved Russian, Chinese, and Mongolian forces. Chinese participation included three thousand troops, nine hundred tanks and military vehicles, and thirty aircraft. (Photo courtesy of the Office of the President of Russia)

Contemporary China

In Conflict, Not Competition

Timothy L. Faulkner

Any assessment that the United States and China are in competition and not conflict is flawed and reflects a fundamental misunderstanding of core Chinese operational and strategic end states. Within the U.S. Department of Defense, this misunderstanding stems in part from two misguided approaches to China. First, our current joint doctrine lacks joint operating concepts that integrate all services and domains, and it does not posture the United States to be in a positional advantage for conflict. Second, and more importantly, we misunderstand the Chinese approach to warfare. As stated in Qiao Liang and Wang

Xiangsui's *Unrestricted Warfare*, the new principles of war are no longer "using armed force to compel the enemy to submit to one's will, but instead using all means, including armed forces or non-armed forces … lethal and non-lethal means to compel the enemy to accept one's interest."[1] We would do well to understand this mindset.

Most Department of Defense officials tend to classify the current stance with China as a competition. However, instead of a competition, which implies a steady state, I would argue that we are in a mature state of *conflict*. Although this controversial stance may cause a stir inside various departments of the U.S. government, it is plausible when we apply China's thought process to the current U.S. situation and accept that China's view of the world causes us to miscalculate Chinese intent.

To rectify the "competition versus conflict" misunderstanding, one needs to consider China's extensive expansion of its military capabilities through the lens of the nation's historical references and contemporary political objectives. China's published political objectives clearly define its strategic goals of becoming the premier world power. These goals are in line with the upcoming one hundredth anniversary of the founding of the Chinese Communist Party (CCP) and the communist state in 2021 and 2049, respectively.

Military objectives include plans for advanced weapons that will enable China to have the positional advantage in the first island chain, an area that extends from Japan along the South China Sea, by 2021 (see figure 1). Moreover, by 2035, China plans to have a fully modernized military possessing a positional advantage in the Pacific; and, by 2049, the regime intends to be a rich and powerful country that will challenge, and potentially impose its will on, all democracies in the Indo-Pacific.[2]

(Figure from Office of the Secretary of Defense, *Annual Report to Congress: Military Power of the People's Republic of China, 2006* [Washington, DC: Department of Defense, 2006]; boundary representations are not necessarily authoritative)

Figure 1. Geographic Boundaries of the First and Second Island Chains

Additionally, the Chinese political system has created a purpose-built military to defeat the United States. The ruling regime in China, led by President Xi Jinping, desires to supplant the United States in the Pacific and change the existing world order. Coupled with China's economic growth, the regime's modern and capable military will ensure the U.S.-China conflict will endure for the next two decades. China's focus is on displacement, not replacement, in this current conflict. Displacement is one component of removing the United States from its post-World War II guardianship of the Indo-Pacific and the global commons.

China's ambitions are not confined to the Indo-Pacific. The nation also seeks to displace the United States globally in order to exert total social, cultural, ideological, and economic influence as a global power. China's strategic end state is to be both a regional hegemon and a global superpower, giving the country the socioeconomic leverage, power, and influence its desires. Until recently, China has been able to move this plan forward by creating man-made features in the South China Sea that contribute to success in the current and future conflicts with the United States. China pursues conflict with the United States through extensive military expansion, improvements in joint integration, political coercion of regional neighbors, and a twisted "whole-of-government" approach in its long worldview of Pacific supremacy and eventual totalitarian world order.

This world order uses military intimidation in economic coercion, transactional political payoffs, and lethal and nonlethal levers to support its current campaign. To create further challenges for U.S. forces, the Chinese use economic espionage, intellectual theft, cyber operations, and academic espionage to mitigate

U.S. technological advantages and ensure the United States has no traditional rear area.

Failure to understand or take this conflict seriously will have grave consequences for the United States, just as it did when China entered the Korean War. History can illuminate other cases where the United States approached a growing threat with a competition mentality instead of a conflict mindset. Imagine if the United States had taken a conflict approach to handle Adolf Hitler's free land grab or the Imperial Japanese invasions of Korea, China, and other Pacific nations before World War II. If Japanese Adm. Isoroku Yamamoto had not attacked Pearl Harbor, would the United States have come to "competition" terms with Imperial Japan? Moreover, if so, what would that have meant to the future world order and, more importantly, America's national security?

World War II and the Korean War were conflicts as horrible as one can imagine, but they do not compare to the warfare potential of the all-domain military and civilian capabilities the Chinese are building. These include weapons, such as the DF21 and DF26 missiles, that can kill a carrier strike group, an air wing, or an Army brigade within seconds. Alternatively, these capabilities can set the conditions for controlling sea lines and air lines of communication (SLOCs and ALOCs) with man-made islands in the South China Sea, where more than one-third of the global shipping passes.[3] These capabilities and improvements will allow China to slowly take possession of the Indo-Pacific without firing a shot via a methodical information campaign and emplacement of a sophisticated network of state-owned enterprises that control other countries' energy, telecommunications, medical, informational systems, and intellectual property.

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The current conflict with China takes place across all domains and is unlike anything the United States has ever faced, and, unfortunately, few people seem to be considering the consequences. As former Chief of Naval Operations Adm. Gary Roughead stated, "We have not thought about the significant capital losses that will occur—and the American people not being prepared for that."[4]

The way we address the China threat now will determine the United States' standing in the twenty-first century and beyond. Accordingly, the United States must recognize that it is, as Simon Sinek stated in his leadership discussion at the U.S. Special Operations Command headquarters, playing an "infinite game."[5] Infinite games are played by those who want to keep playing versus a finite game, which is played by those who seek a short-term win. In competitions, a finite player believes there can be a distinct near-term win. This mindset will not be the case with China. Infinite games are zero-sum: the country is either ahead or behind in military terms, and there can be no win-win scenario. Applying this to the current conflict and in the context of multi-domain operations, the United States either has a positional advantage or disadvantage; currently, it is at a disadvantage.

In this infinite conflict, we must embrace the fact that there will be positional advantages, and the United States' ability to limit China's maneuverability or obtain a permanent positional advantage is critical. It is crucial to challenge China in all traditional domains: land, air, and sea; however, it is equally important to challenge China in the nontraditional domains of intelligence, information, influence, cyber, and space (I3CS). The conflict China is waging has put it in a positional advantage in traditional and nontraditional areas that, if left unchecked, will allow it to dominate in terms of diplomatic, intelligence, military, and economic power by 2050. However, that is not to say that these results are inevitable. Understanding Chinese history, all-domain objectives, the People's Liberation Army's (PLA) transformation, a whole-of-government approach, and military force employment will provide critical insights into U.S. forces gaining the positional advantage in this conflict.

History is Religion

"For Chinese people, history is our religion," wrote Chinese writer Hu Ping.[6] This statement is key to studying China's history, understanding the future China envisions for itself, and enhancing the United States' ability to know the enemy. Two important historical reference points tie China's history to the Song (960–1279) and Qing dynasties (1636–1912). During both these periods, China was reunified, and during the Song Dynasty, it originated many significant technological innovations such as mass printing, the magnetic compass, gunpowder, and paper money.[7] Today's China is once again seeking to lead the world innovatively, including in the areas of artificial intelligence and quantum communication. As in the past, many of these technologies have dual civilian and military uses. More importantly, all these capabilities are essential for the PLA to become a world-class military.

> "World War II and the Korean War were conflicts as horrible as one can imagine, but they do not compare to the warfare potential of the all-domain military and civilian capabilities the Chinese are building."

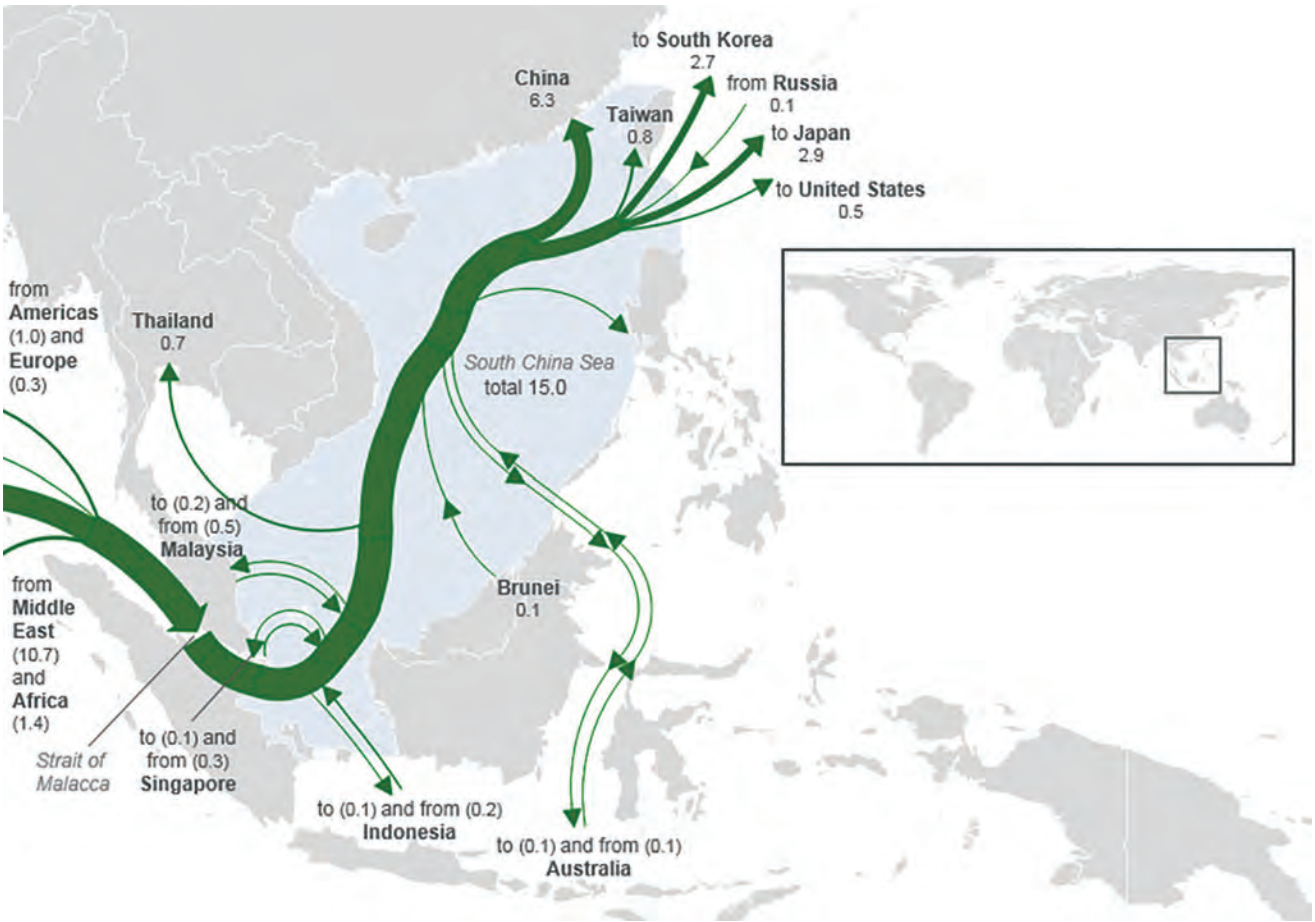
With the intent to intimidate, awe, and charm other countries and regions including Mongolia, Tibet, Central Asia, and Taiwan into submission (or at least acquiescence), Xi uses references to the Qing dynasty to remind his people and his neighbors of China's past economic and cultural glory.[8] His ability to leverage historical underpinnings provides his road map for rejuvenated Chinese dominance. Recent historical references paint the picture of Chinese determination to dominate the Asia-Pacific and beyond. Policies of insulation, all-domain objectives, the PLA transformation, and the all-of-government approach best explain China's efforts.

Insulation. Insulation plays a key role in Chinese strategic thinking. In 1989, Chinese Adm. Liu Huaqing, father of the People's Liberation Army Navy (PLA Navy), shifted the PLA Navy's focus to an offshore defense strategy by outlining a series of phases.[9] In phase 1, the PLA Navy would dominate the first island chain to include the South China Sea, the East China Sea, and the Yellow Sea by the year 2000.[10] In phase 2, the PLA Navy will extend its control to the second island chain beyond Guam by 2020 (see figure 1, page 155).[11] In phase 3, the objective is for the PLA Navy to evolve into a global navy by 2050.[12] Liu's vision is an excellent example of the standard Chinese belief that their rightful place is to control and dominate their region and the world. Chinese policy statements state that the path to success is waging a long war, much of which will be indirect and nonkinetic, to supplant U.S. leadership in the Pacific and dictate the Chinese totalitarian new world order.

China's race to build islands in the pathway of key SLOCS and ALOCs is by no means a coincidence. The Chinese have purposely built them to provide the PLA the ability to control the first island chain, providing a buffer from U.S. air and maritime dominance. The combination of geography and its recent militarization of these man-made features allows China to enjoy a positional advantage, enabling the country to challenge the United States on the sea and in the air. Furthermore, China has taken an aggressive stance against U.S. allies and partners by challenging any nation that comes within twelve nautical miles of its man-made features in the first island chain.[13] Through these moves, China has extended its ability to control an area where $3.37 trillion, or 21 percent, of global trade and 30 percent of the world's maritime crude oil and numerous fishing, transportation, naval vessels, and communication cables must pass through (see figure 2, page 158).[14]

Further complicating the situation, China's obsessive nature and concern of events on the Korean peninsula and Taiwan and border disputes with other neighbors such as India prompted Xi to declare at the 19th CCP Congress in 2017 that the PLA must "prepare for military struggle in all strategic directions and the military was integral in achieving China's national rejuvenation."[15]

All-domain objectives. China continues its influence with fabricated facts while it is simultaneously building a similar capability in the I3CS domains. As with traditional domains, the goal is to surpass and defeat the United States in I3CS.



(Figure from the U.S. Energy Information Administration, based on Clipper Crude Data Service and IHS EDIN; total includes small flows, less than 0.1 million barrels per day, not shown on map)

Figure 2. Major Crude Oil Trade Flows in the South China Sea during 2016 (numbers in millions of barrels per day)

China has built an intelligence layer that starts with its own population, thus controlling the domestic information domain. Implementing the intelligence layer is especially evident in China's social casting, which provides insights into the intricate intelligence apparatus China has built for its citizens. In China, the Ministry of State Security controls every aspect of the internet, and citizens who do not conform to the state's restrictions are placed on a no-fly list or, worse yet, are reeducated in various communist concentration camps.[16]

In the next intelligence layer, China conducts outward surveillance that focuses on key countries in the Asia Pacific and then branches out toward areas with strategic value such as the Panama Canal and the Middle East. The intelligence apparatus then starts intelligence preparation of the environment in order to facilitate the information collection and needed influence to achieve China's desired strategic end state. Part of this intelligence preparation is leveraging the cyber and space domains.

A web of state-owned enterprises, private companies, and Confucian centers are platforms to collect and influence local governments and populations. The Chinese also control media platforms that promote the Chinese narrative. Additionally, the Chinese have sought to spread influence by selling military technology with no questions of efficacy or moral obligation. (So, if we do not fight the Chinese tomorrow, we will surely fight their weapon systems.)

China is also trying to replace the United States in international military education and training. The Chinese are willing and able to train officers from all the countries where China seeks to challenge the United States. Add in language training, and the Chinese are slowly building a pathway for foreign

During a Chinese military parade marking the seventieth anniversary of the end of World War II, a military vehicle carrying a Pterodactyl I unmanned aerial vehicle drives past the Tiananmen Gate 3 September 2015 in Beijing. China is the world's leading exporter of unmanned aircraft systems (UAS). Low pricing and lack of export restrictions make Chinese-made UAS especially appealing to markets in Asia, Central Asia, and Africa. (Photo by Jason Lee, Reuters)

countries' leaders to align with China. If all officers received their training from China instead of the United States, where will we be when one of these officers is the minister of defense or the chairman of the Joint Chiefs of Staff in the United States or another country?

Finally, the U.S. global advantage depends in large part on sovereign countries allowing the United States to base or overfly their countries. Chinese influence may preclude this in the future. China's all-domain approach is a key foundation of its holistic joint transformation.

PLA transformation. Underpinning the PLA transformation was China's inability to confront U.S. forces during the 1996 Taiwan Strait crisis and observing U.S. military operations in Middle East conflicts. Chinese military strategist Sun Tzu opined, "Know your enemy and know yourself; in one hundred battles you will never be in peril."[17] Modern China has taken this to heart. Not only did the Chinese study, steal, and observe any writings of U.S. performance in conflicts, but it also made critical decisions not to have PLA forces strictly army based.

The Chinese have reformed traditional PLA units to work jointly and integrate all joint capabilities and nontraditional capabilities, including intelligence; information operations; and electronic, space, and cyber warfare. Not only has the PLA aligned joint theater-level headquarters to fight in complex joint environments, but it has also vastly improved its weapons capabilities.[18] The ability to employ sophisticated weapons is reinforced with an intelligence, surveillance, and reconnaissance network that provides commanders real-time intelligence to facilitate decision-making.[19] China also furthered its battlefield capabilities by creating a robust network that moves data across all domains.

China knows that equipment alone will not make the PLA a robust force; it takes training and integration. Since 2012, China has conducted combined-arms unit rotations with an opposing "blue force" at its training centers. These training events are not scripted and emphasize empowering junior leaders, much like U.S. combat training centers. In 2015, PLA leaders directed changes to ground forces training based in part on lessons learned from these rotations.[20]

These training adjustments have given China a competent joint warfighting capability that resembles

(Figure and information by Mercator Institute for China Studies [MERICS], May 2018)

merics
Mercator Institute for China Studies

Figure 3. The One Belt, One Road Initiative


Krasnoyarsk
Novosibirsk
Irkutsk
Ulan Bator
Daqing
Jiamusi
Harbin
Alashankou
Ürümqi
Hunchun
Vladivostok
Rason
Chongjin
Beijing
Dandong
Lanzhou
Qingdao
Busan
Lianyungang
Xi'an
Chengdu
Wuhan
Shanghai
Ningbo
Chongqing
Kunming
Fuzhou
Quanzhou
Dhaka
Guangzhou
Calcutta
Payra
Beihai
Zhanjian
Sittwe
Haikou
Kyaukphyu
Vientiane
Laem Chabang
Sihanoukville
Hambantota
Kuala Lumpur
Kuantan
Malacca
Singapore
Jakarta
Darwin
Newcastle
Melbourne
Existing
Planned / under construction
Railroads
Oil pipeline
Gas pipeline
Port
Silk Road Economic Belt
Maritime Silk Road
Economic Corridor
AIIB member states

A naval soldier of the Chinese People's Liberation Army Navy looks through a pair of binoculars from onboard China's first aircraft carrier, *Liaoning*, as it visits a military harbor circa 2013 on the South China Sea in Sanya, Hainan Province, China. (Photo by Hu Kaibing, Xinhua)

that of the United States. Overcoming the integration of forces, breaking cultural barriers, and including highly critical after action reviews are telling signs of military maturity. Strategic opportunity has given the PLA the ability to reinvent its fighting capability while not being in a hyperwar. With a trained and capable joint force, the PLA is prepared for employment.

Whole-of-government approach. China's "One Belt, One Road" initiative enables debt-trap diplomacy, leveraging countries' inattentive acceptance of loans that can never be paid off (see figure 3, pages 160–61). And, China's use of state-owned enterprises is a key and essential way to use Chinese businesses as a façade for permanent military and intelligence capability. Again, this global expansion has been put to practice in Djibouti and recently in Sri Lanka.[21] China conducts meticulous studies of where it requires military positioning, securing of invaluable SLOCs, global military responsiveness, and upper-hand dictation of terms in land agreements.

China now has reached into the Middle East and Africa and has coercive control of Sri Lanka's strategic position in the Indian Ocean. This initiative is only the beginning, as China can now focus on militarizing the first island chain and influencing countries in the second island chain, which will radically cut off the U.S. Pacific forces' attempts to engage in any future Pacific conflict. China's use of government agencies to advance military power is unequaled. U.S. military leaders must acknowledge the Chinese model that has shifted assets from tactical to strategic with one purpose in mind: to advance the nation's global-power end state. China's military has a direct chain of command to China's center of gravity, the CCP. Not only does the PLA have obedience to serve the CCP, but the PLA

Seaman Alex Case uses high-powered binoculars to observe a Chinese navy vessel from the bridge of the Arleigh Burke-class guided-missile destroyer USS *Sterett* (DDG 104) 21 September 2014 on deployment in the U.S. 7th Fleet area of operations in the Pacific Ocean. (Photo by Mass Communication Specialist 3rd Class Eric Coffer, U.S. Navy)

also handles domestic security as well, as evidenced during the 1989 Tiananmen Square unrest.

With the current whole-of-government approach, the Chinese have not only used all instruments of power to slowly diminish the U.S. influence in the Indo-Pacific, but they also have been able to accelerate weapons development, training, land reclamation on key ALOCS and SLOCS to create strategic leverage with U.S. partner countries to counter the free and open Indo-Pacific.[22]

China's unchallenged "buying friends" debt-trap strategy seeks to strategically influence countries where they have no choice in future diplomatic and military partnerships. Controlling the Pacific is the key terrain in this conflict, where not only 70 percent of the world's population lives but where many of the world's largest economies also operate.

"Feeding the beast" is an excellent analogy in terms of how a nation builds a fighting force. China's economic ascendance has allowed the rapid rise of its military force. The PLA's military modernization is focused on gaining capability that would challenge any U.S. force. The Chinese government increased annual spending by 10 percent from 2000 to 2016.[23] The Chinese economy drives the military makeover by intellectual thievery, much of which is enabled by its intelligence apparatus. China's intelligence activities on the U.S. mainland should be alarming. The use of Chinese students at major research labs for intellectual property theft and for infiltration of companies that provide a fighting edge to U.S. forces means that the days of distinct U.S. technological advantage are gone. The United States will have to contend with a force

that is trying to penetrate all walks of U.S. life to the benefit of the Chinese government. The U.S. global responsiveness must reassess its forward posture to be in a position to challenge the PLA in any conflict.

China has learned never to allow the United States the opportunity to deploy to strategic countries and forces countries to acquiesce to China's demand. This fact was very evident with South Korea, one of the most ardent U.S. allies, when China organized a massive protest against South Korean companies in response to the Terminal High Altitude Area Defense deployment. If South Korea can be pressured, what would a partner nation that cannot withstand the Chinese economic blackmail do? The answer to that question is probably whatever China wants. China committed long ago to creating a military that would challenge the United States through global conflict and in the Pacific. When it comes to conflict in the Pacific, we are there now.

Deploying the Force

China's military influence is not limited to the Pacific region. China has deployed forces in support of noncombatant evacuations in Yemen and Libya and provided counterpiracy naval patrols off the coast of Somalia.[24] These were the first tests along its path toward global power. China intends to build military capability across the globe, and deploying the force serves many vital lines of effort. First, it demonstrates to other nations it has the capability. Second, it provides placement and access to sell made-in-China military hardware. And lastly, it displaces the U.S. military as the partner of choice. Americans must understand the depth of the new battlefield that is not tied to lockstep military phases or traditional lethal means of attack, and realize China's strategic deployments guide its global actions.

Sun Tzu provides a framework for understanding the Chinese view of warfare. China's comprehensive study of U.S. tactics, capabilities, and weakness are three of Sun Tzu's themes: (1) "know your enemy and know yourself, and in one hundred battles you will never be in peril"; (2) "to win one hundred wars is not the height of skill, to subdue the enemy without fighting is"; and (3) "avoid what is strong, attack what is weak."[25] These themes drive strategic thinking into a broad campaign to win in conflict, and China has been in conflict. Those who have opposed have been met with confrontation, such as the Philippines, as seen from 2012 South China Sea Navy incident and recently in 2019 with multiple incidents of fishing in disputed territory and the use of maritime militia and the coast guard.[26]

We should not misinterpret China's past military campaigns in Korea or Vietnam as failures. These tactical defeats were strategic wins. Yes, China suffered losses; however, both conflicts restored an insular border in North Korea and ensured Vietnam withdrew from southeast countries and restored borders between Laos, Cambodia, China, and Vietnam. We should avoid the pitfall of thinking tactically about past conflicts, as it inhibits our ability to think strategically about future conflicts.

The PLA is a purpose-built force intended to defeat the U.S. military that answers directly to the CCP. Its rapid pace of military development and testing of capabilities is distressing. China's development in intelligence, surveillance, and reconnaissance capabilities, rocket technology, force projection of land and maritime forces, and fifth-generation fighters are all meant to defeat the United States. Winning quickly and decisively drives the Chinese military strategy. Regardless of the foe, it wants armed conflicts to end quickly and as bloodlessly as possible. Moreover, now it thinks it can do so. In this current state of conflict, the Chinese have set conditions early with hypervertical escalation to achieve strategic objectives and bring a quick victory.

The United States now finds itself in a conflict where the enemy has matched or will overmatch its capabilities by 2025. The Chinese are setting the conditions in diplomatic, economic, and informational areas where most countries will be reluctant to support U.S. force deployments to counter the PLA. China understands that defeating the conditions of U.S. support is vital in defeating the United States. Breaking apart alliances by using all elements of power sets the conditions for total U.S. defeat. In the conflict with China, understanding Chinese military intentions and force employment is critical in order to integrate a comprehensive campaign against China. We know what Chinese leadership is going to do because they have told us repeatedly. Therefore, the question before us now is a simple one: what are we going to do about it?

Gaining U.S. Positional Advantage in this Conflict

The United States and its military leaders must realize we are in an infinite conflict and, if actions are not taken

immediately, China will set conditions to obtain a permanent positional advantage in the Indo-Pacific. The Chinese are not without weaknesses. They have proven that their intentions in all domains are for the betterment of the CCP's rejuvenation. The CCP possesses several blind spots in the PLA transformation, all-domain objectives, and global partnerships, which the United States could exploit in order to counter China's dangerous ambitions.

First, in a country where the public lives in fear of the Chinese government, social casting and constant surveillance are true testaments of CCP control. However, they are also strategic weaknesses. The military is reflective of the values of the society and public it serves, and the PLA's most recent military victory is defeating its people in a public protest in Tiananmen Square. Moreover, current operations against the Muslim Uighurs only highlight the CCP's willingness to force its will to control the national narrative. Despite the Chinese government trying to erase this abhorrent abuse of human rights, the public finds the truth. The Chinese public recorded 131 million travelers in 2017. Most of this travel is to democratically elected countries with freedom of speech such as South Korea, Japan, the United States, Australia, and European countries.[27] As a result, though the CCP has total control, a population exposed to the truth will silently know the CCP narrative is false. This population fills the military ranks and, over time, with U.S. influence, this could be used to our advantage.

Second, the CCP has continually criticized the Chinese military for lacking strict adherence to communist doctrine. The CCP will never attain full adherence by the military, and that makes it vulnerable. The CCP does not fully comprehend the military agility required to accomplish operational and strategic tasks and often calls upon the PLA to do unreasonable or unattainable things.

Third, despite PLA transformation and military reforms, the PLA still requires a great amount of training and joint integration to become proficient as a fighting force. The PLA has recognized it is incapable of judging the battlefield situation, understanding senior leader intent, making operational decisions, deploying troops, and reacting to unexpected situations. Xi noted "two insufficient abilities" as being the inability to fight and command at all levels of modern warfare.[28] In contrast, the United States mastered joint synchronization in Operation Desert Storm and now conducts joint integration. True joint integration is the indicator of a professional military force.

The Way Forward

In order to prevail in the current and future conflict with China, the United States needs to move beyond our current joint integration and truly embrace joint multi-domain operations concepts that include all domains of warfare synchronized within the DIME. Conducting joint multi-domain operations war games against a peer competitor needs to be the standard for all exercises. To further capitalize on this disparity, the Army's training must include a more shared and technical understanding of peer capabilities. In multi-domain operations, the Army will have to conduct non-lethal and lethal effects against peer land, air, and sea targets as well as information, cyber, and space effects.

Furthermore, the military needs to include all non-lethal effects and the diplomatic, economic, and information winning in conflict and ensuring the United States maintains the positional advantage in this infinite conflict. The Army needs to have its forces deployed west of the International Dateline in East and South China Sea Areas to conduct preparation of the environment, indications and warning, and conduct intelligence support to non-lethal cyber, space and information effects before lethal considerations.

Additionally, our coalitions and alliances have never been more critical. Five of the seven mutual defense treaties are in the Indo-Pacific. The United States' ability to conduct multi-coalition exercises provides it with a distinct advantage. All Indo-Pacific nations need our support. The PLA's regional dominance land, air, sea, space, information and cyber space make the United States the only balancing force against China. The United States and our allies' ability to train, equip, and synchronize efforts is critical for all of our alliances and partners in Indo-Pacific and all other geographic and functional commands.

This conflict can and must be won. Having a positional advantage is required to set the conditions for defeat in this infinite conflict. Economic, information, and diplomatic coercion undergird Chinese transactional relationships with other nations, versus the U.S. message of a free and open Indo-Pacific. We must reassure our allies and partners that the United States is committed to countering the Chinese domestic and international narrative for the next one hundred years.

Despite the CCP's rewriting of history (in support of taking territory and building man-made features), it ignores important aspects of its own past. Chinese dynastic

periods were corrupt and morally deficient and conquered kingdoms with no regard for countries' borders or human rights. China has no international support for these claims and few allies willing to provide support. The United States must counter Chinese positional advantage by implementing a comprehensive counter-Chinese strategy that synchronizes a whole-of-government approach, deploys forces to conduct preparation of the environment in the Indo-Pacific and other geographic commands, doubles our joint exercises that involved all domains, supports our allies and partners' militaries, and conducts informational targeting to counter Chinese narrative. Time is of the essence, and the United States can be the true leader in this conflict. ■

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BRICS leaders (*from left to right*) Vladimir Putin, Narendra Modi, Dilma Rousseff, Xi Jinping, and Jacob Zuma holding hands in unity 15 November 2014 at the G20 summit in Brisbane, Australia. The BRICS acronym stands for the five major emerging national economies of Brazil, Russia, India, China, and South Africa. (Photo by Roberto Stuckert Filho, Agência Brasil)

Chinese Soft Power

Creating Anti-Access Challenges in the Indo-Pacific

Maj. Robert F. Gold, U.S. Army

In 1949, scores of Chinese Nationalist troops and civilian refugees under the leadership of Chiang Kai-shek fled to Taiwan to escape the onslaught of Chinese communist forces in mainland China. Major combat in the bloody Chinese Civil War ended; however, the lack of an armistice or a peace treaty meant that the conflict remains politically undecided. Since 1949, the Chinese Communist Party (CCP) has sought to annex Taiwan and bring the Chinese Nationalists under control of the CCP. The passing of time has not waned Chinese

A Chinese propaganda poster from 1958 that translates to "We Must Liberate Taiwan." (Graphic courtesy of Wikimedia Commons)

interest in this endeavor. This threat to Taiwan has proved to be an enduring geopolitical issue for the region.

Taiwan sits approximately 180 kilometers off the east coast of China, separated by what is called the Taiwan Strait. The island nation is also bordered by the East China Sea, the South China Sea, and the Philippine Sea. These waters play an important role in the global economy. About 80 percent of global trade by volume moves by sea, with about one-third of that traffic moving through the South China Sea alone.[1] This amount of trade in the South China Sea was estimated to be US$3.37 trillion in 2016.[2] In addition to interstate trade, the region is also rich with natural resources such as hydrocarbons that fuel the region's economies. Taiwan sits strategically along both trade routes and energy resources. This puts it in competition with China, which looks to secure the trade and resources necessary to secure hegemonic status in the region, if not globally.

The amount of trade that transits Asian waters and the region's resources are not only of interest to China, but the region is also of great interest to the United States for economic and security reasons. The United States depends heavily on trade across Asia. For instance, goods and services trade with the other twenty member states of the Asia-Pacific Economic Cooperation forum in 2018 totaled US$3.2 trillion.[3] To keep the flow of goods and services, the United States is interested in the overall security of the region. However, the U.S. presence in the region is viewed as disruptive by the Chinese government and conflicts with its interests.

There has been much discussion in the past few years about Chinese anti-access/area denial capabilities in the Indo-Pacific region. These discussions tend to center around the growing Chinese military capabilities. Buoyed by economic growth, China has spent years reforming its military and investing in various military technologies. Maps of the Indo-Pacific region typically show red fans indicating the weapon engagement zones for Chinese antiship and antiaircraft missiles. However, despite the threat these weapons may pose, military power is only one component of China's national power used to deny the United States access to the region, especially if it sought to defend strategically important Taiwan.

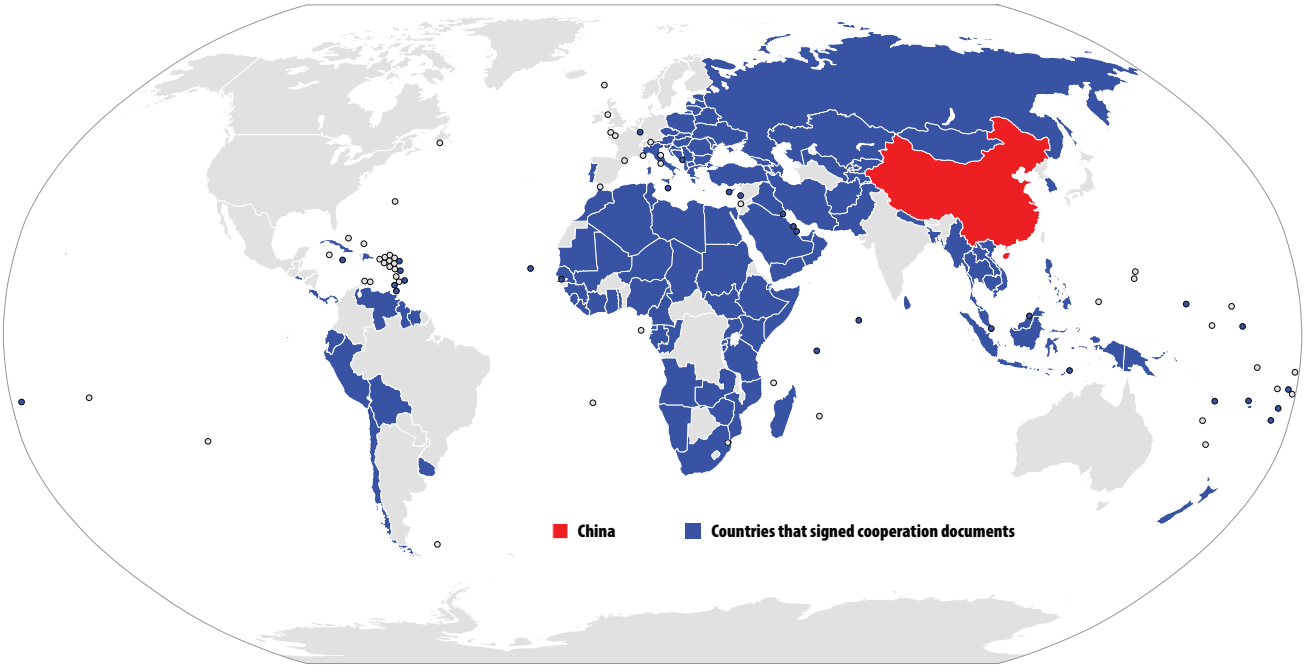
China has spent years using diplomacy, information operations, and economic investment to shape the global environment and influence its neighbors. However, despite its global outlook, China still looks across the Taiwan Strait and wishes to complete its long-term aim of annexing Taiwan. Chinese diplomatic, informational, and economic efforts are setting the stage to allow China to seize Taiwan in the future by isolating it. Additionally, these nonmilitary means of national power are working to separate the United States from its regional allies and to deny prompt access to potential crisis spots. For the U.S. military, overcoming Chinese antiship and antiaircraft missiles is only one problem in gaining access to the region. Potentially, the U.S. military may someday face a reality where access to Indo-Pacific seaports and airports is not only hampered by long-range missiles but also through Chinese political maneuvering and foreign investment. This reality will require the U.S. military, especially the Army, to be prepared to conduct an array of amphibious operations across the region's littoral areas. This will be vital to protecting U.S. interests and allies within the region.

Chinese Diplomacy in the Strategic Environment

Politically, China is very engaged globally because of its Belt and Road Initiative (BRI). The BRI was announced by Chinese President Xi Jinping during a trip to Kazakhstan in 2013 and is a global development strategy that spans dozens of countries.[4] The purpose of this strategy for China is to create new trade corridors and opportunities across the globe through land and maritime routes. Additionally, increased economic interaction with other countries allows China to increase its cultural interactions with them as well. China hopes to complete this initiative by 2049 to coincide with the one hundredth anniversary of the CCP coming into power in China. To achieve this goal, China remains politically engaged through several forms. Part of the Chinese strategy is to remain a participant in international organizations to showcase its ability to be a regional and global leader. Through these international forums, China engages in diplomatic campaigns to further its interests and delegitimize the claims of others through "lawfare," or legal engagement.

Chinese land-based trade corridors across Asia and Europe greatly benefit from the country's membership in the Shanghai Cooperation Organization (SCO), of which it is a founding member. The SCO is an intergovernmental organization that was originally founded to play a role in the regional security of Central Asia. However, its role has expanded to increase political and economic ties between member states. Original members of the alliance included China, Russia, Kyrgyzstan, Kazakhstan, and Tajikistan, but it has now grown to include India, Pakistan, and Uzbekistan. Several states hold observer status in the SCO and the organization is in dialogue with Turkey, Cambodia, Sri Lanka, Armenia, Azerbaijan, and Nepal. Political engagement by China through its participation in the SCO has allowed China to secure its land routes for the BRI.

The SCO is only one example of Chinese participation in intergovernmental institutions. China also actively plays a part in the United Nations (UN) by holding a permanent seat on the UN Security Council and participating in UN-affiliated organizations such as the International Monetary Fund, the World Bank, and the International Criminal Court. Additionally, China also regularly deploys troops as part of UN's peacekeeping operations. Active membership in international institutions



(Figure by Owennson via Wikimedia Commons)

Belt and Road Initiative Participants as of 27 April 2019

and the global community writ large allows China to further its diplomatic engagements and show itself as a leader on important international issues. Additionally, this allows China to shape the strategic and operational environments in the Indo-Pacific by attempting to sway U.S. allies into the Chinese sphere of influence and limit American opportunities for engagement in the region.

The CCP also uses its diplomatic platform to delegitimize competitors in the Indo-Pacific as it furthers its own interests. China does this through lawfare. China claims several small islands and reefs in the Pacific, using the language of the UN Convention on the Law of the Sea (UNCLOS), placing it at odds with countries such as Japan and the Philippines. The UNCLOS establishes international law to govern the use of the world's oceans and its resources.[5] The UNCLOS grants states ability to claim sovereign rights of an exclusive economic zone that extends two hundred nautical miles from the shore, to include use of the seabed.[6] Additionally, states can claim territorial seas that may not exceed twelve nautical miles from the shore line.[7] However, according to the UNCLOS, areas that have no ability to sustain human habitation have no economic zone.[8]

China makes the claim that, historically, the Diaoyu Islands (Senkaku Islands in Japanese), a small uninhabited area near important shipping lanes in the South China Sea, belong to the country. This area offers potential oil and natural gas fields as well as abundant fishing areas.[9] Additionally, China is at odds with the Philippines over the Spratly Islands and Scarborough Shoal. These areas, like the Diaoyu Islands, are potential sources of natural resources to fuel the Chinese economy. China has used its claims to these areas as justification to occupy and build up the areas with several man-made islands. Attempting to use the language of the UNCLOS, China claims its territorial waters extend twelve miles from the shores of these artificial islands.

This claim by the Chinese government has been disputed in international court. A ruling by an international tribunal at The Hague in 2016 sided with the Philippines and determined that the Chinese government cannot claim territorial waters of areas that are primarily submerged and are within the exclusive economic zones of other states.[10] However, despite this ruling, the Chinese continue to challenge freedom of navigation operations by the U.S. Navy in the South China Sea.

China also uses lawfare to improve its strategic positioning by enforcing contract law. As part of the BRI, China, through state-owned enterprises, has invested

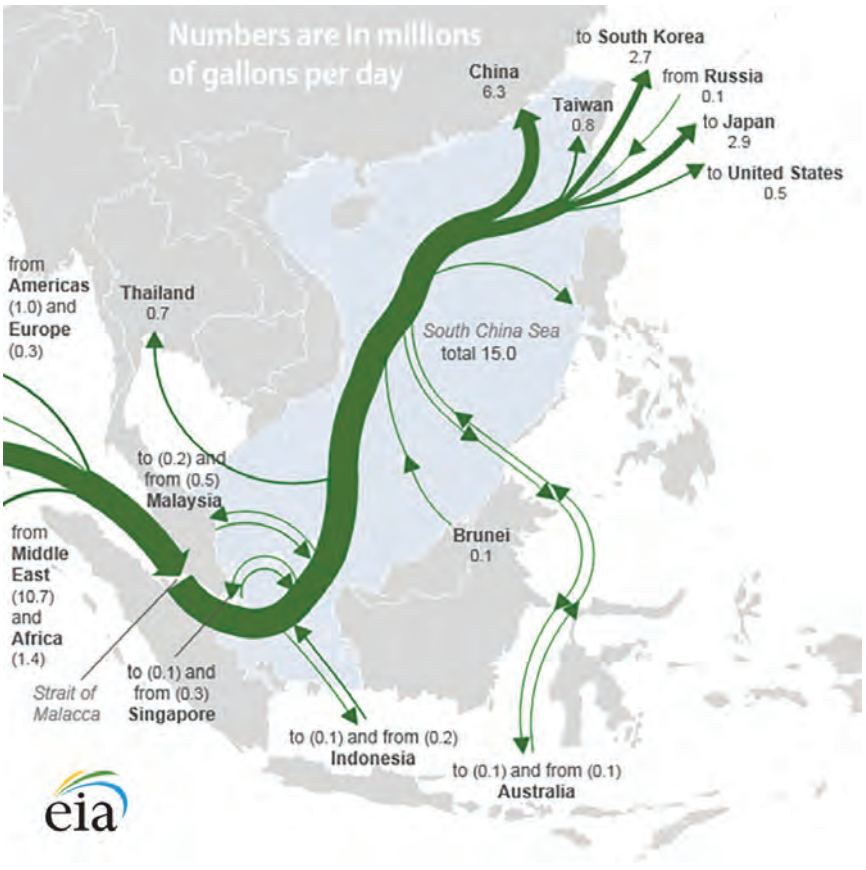
(Figure courtesy of Jackopoid, Wikimedia Commons)

Disputed Senkaku Island Chain in the East China Sea

in infrastructure or partnered with other nations on infrastructure projects. These projects include seaports, airports, and energy infrastructure. Chinese loans to poorer states in the Indo-Pacific have the potential for setting up a debt-trap if the state defaults on its loan. Sri Lanka had such an experience with the construction of the port at Hambantota, which was contracted to the China Harbor Engineering Company.[11] However, the port did not generate enough revenue to allow Sri Lanka to pay off the Chinese loans that paid for the port's construction. This was because the Sri Lankan Port

Authority had struck a deal with the Chinese to withhold container traffic at Hambantota for a time to not undermine container traffic at Sri Lanka's Port of Colombo.[12] Sri Lanka ended up owing the Chinese the equivalent of US$1.3 billion with no ability to pay back Chinese-backed loans.[13] China exercised the terms of its contract with Sri Lanka and ordered that a China Merchants Group take over a majority equity holding in the port. Additionally, Sri Lanka was forced to lease fifteen thousand acres of land to the Chinese around the port for a period of ninety-nine years.[14] These actions enabled the Chinese to gain control of a seaport on the Indian Ocean.

The example of Hambantota is only one example of Chinese enforcement of its contracts with other governments. While Chinese loan behavior is not necessarily predatory by nature, China, through its state-owned enterprises, has engaged throughout the Indo-Pacific on many projects with states that are economically underdeveloped. This sets the conditions for China to have at least a minority stake (if not a majority) in infrastructure the United States might need to project forces and build combat power should China threaten Taiwan. These conditions provide the Chinese with political leverage over host nations that it can apply to deny critical locations such as seaports, airfields, and other key facilities for use by U.S. forces. Additionally, the presence of Chinese enterprises and their workers in these locations creates an operational security concern for U.S. forces staging in an area. Finally, control of infrastructure by Chinese companies would potentially limit the amount of contract support the U.S. military might be able to rely upon.



(Figure courtesy of the U.S. Energy Information Administration)

Major Crude Oil Trade Flows in the South China Sea (2016)

Chinese Influencing Activities

In addition to its diplomatic efforts, China also uses information operations to manipulate the strategic environment to degrade security partnerships with the United States in the Indo-Pacific region. China also focuses much of its activities internally as part of a carefully planned information strategy. As an authoritarian regime, the CCP tightly controls the internet and other media forms within China to carefully craft its image to the rest of the world. This has resulted in social engineering of the Chinese people and pushes a nationalist message to make its citizens more patriotic and supportive of Chinese strategic interests. For example, China makes itself appear as a victim regarding the international court ruling on its claims to islands in the South China Sea. Playing the role of victim, China claims that the U.S. Navy's freedom of navigation operations are a direct challenge to Chinese sovereignty. This has caused Chinese citizens to express outrage over social media with some calling for war.[15]

As mentioned, China's influencing activities are not limited to its own people. China also uses propaganda and social media to interfere in politics within other countries and promote Chinese cultural values.[16] China has targeted its influencing activities toward Chinese citizens in countries like Australia and New Zealand as well as others in the Indo-Pacific. Through political donorship linked to Beijing and the silencing of foreign critics, China is able to influence domestic debate in foreign countries to reexamine those countries' views on China's policies. Through these proxies, China advocates against the recognition of Taiwan, for the recognition of the Chinese economic development model, and for furthering friendly relations with China. Additionally, China also funds Confucius Institutes across the globe on university and secondary school campuses. These institutes have the goal of sharing Chinese language and culture with students and educators. However, Confucius Institutes teach a nuanced view of Chinese culture that discourages critical discourse on Chinese policies.

These influencing activities serve to isolate Taiwan from the international community and ensure it is more vulnerable to Chinese aims for reunification. In 2018, according to the U.S. Department of Defense, Taiwan lost three diplomatic partners, leaving only seventeen countries around the world to grant diplomatic recognition to Taiwan.[17] Additionally, Taiwan is still refused formal recognition by many international institutions such as the UN. Chinese efforts to influence opinion has also had the consequence of swaying some Taiwanese citizens to call for reunification with China.[18] The consequence would create a dynamic and complex operating environment if the United States were to come to the aid of Taiwan in case of a hostile annexation attempt by China.

Most importantly for the United States, Chinese influencing activities act as a wedge between the United States and its allies in the Indo-Pacific. While it undermines U.S. security partnerships, China itself does not necessarily want to become the security partner of choice in the Indo-Pacific.[19] Instead, China wants to degrade U.S. influence while China seeks its own objectives such as the annexation of Taiwan. The vast distances of the Pacific and geography make the United States reliant on security cooperation with countries throughout the region to secure American interests. The degradation of diplomatic and security relationships with long-term U.S. allies would make it harder for the United States to project power and achieve a basing strategy to balance Chinese power.

Using Economics to Shape the Environment

The growth of the Chinese economy has been remarkable since economic reform became a priority for the Chinese government in the late 1970s. As a communist country, the Chinese economy was centrally planned for decades with Chinese leadership placing emphasis on autarky, or economic self-sufficiency. The Chinese economy was agriculturally based and did not interact much with the global economy. However, through the implementation of policies aimed at economic reform, the Chinese have been able to move to a more market-based economy. But it is important to recognize that the Chinese economy, while a market economy, is still socialist.

A major difference between the Chinese economy and capitalist markets is the level of government participation in the market. The presence of state-owned enterprises within China allow the CCP to maintain a degree of control of the marketplace. State-owned enterprises only make up 3 percent of the businesses that operate in China, but these companies account for 40 percent of the business capital within China.[20] This limitation on private control of capital assets by China is different than a capitalist market economy where private control is encouraged over government intervention. However, Chinese control of the market through governmental action allows it to more directly influence the course of its own economy.

The benefit for China in loosening economic restrictions is that it has encouraged individuals and other business enterprises to partake more fully in the global marketplace.[21] China seeks to capitalize on this through the BRI, as previously mentioned. To support the BRI, China has also stood up the Asian Infrastructure Investment

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Bank. This bank is a lending institution that China uses to support its infrastructure investment projects in not just the Indo-Pacific region but also in the rest of Asia, Africa, South America, and Europe. It is believed that the Chinese government is involved in the construction or operation of at least forty-two ports in thirty-four countries globally.[22] Additionally, in 2015, it was reported that the Civil Aviation Administration of China had fifty-one ongoing projects at airports tied to the BRI.[23]

China has also increased its investment in amphibious ships and force structure. The People's Liberation Army Navy maintains five Type-071 Amphibious Transport Docks with three more under construction as of 2018.[25] Also, in 2019, it was reported that the People's Liberation Army Navy had plans to construct three Type-075 Landing Helicopter Dock vessels. The CCP has also grown the oddly named People's Liberation Army Navy Marine Corps from just two brigades to seven brigades.[26]

> "Increased Chinese wealth has allowed it to invest in infrastructure projects that have increased China's sphere of influence and enabled it to posture itself around the globe."

Chinese economic reform has led to an increase in gross domestic product and net wealth that has allowed nearly one billion Chinese to be lifted out of poverty. However, despite a rise in relative wealth, China is still a large source of inexpensive labor. This has attracted foreign direct investment to China as manufacturers look to take advantage of a cheaper labor force to lower their manufacturing costs and increase their bottom line.

China has benefited greatly from its increasing wealth, which it uses to fund reform of its military and expand its sphere of influence through targeted investment. Chinese military reforms have been ongoing for many years. The purpose of these reforms is to allow the Chinese military to compete more effectively with the United States and Japan. Also, a stronger military allows China to secure its interests abroad through its own force projection.

As part of its reforms, the People's Liberation Army reduced three hundred thousand personnel from its ranks and it condensed its seven military districts to five in recent years.[24] This not only allows for more efficient command and control of Chinese forces, but it also frees up a significant portion of the Chinese military budget for procurement. Increased Chinese wealth has allowed the acquisition of newer missiles (e.g., the DF-21 "carrier killer"), fifth-generation aircraft, and ships. China now maintains two aircraft carriers, one of which it purchased from Russia (the *Liaoning*) and another it has built domestically (the *Shandong*). These aircraft carriers signal Chinese intent to extend its influence outside of Chinese territorial waters. Additionally, two divisions from the People's Liberation Army Ground Forces are reported to have been restructured as combined arms mechanized amphibious brigades.[27] Like China's aircraft carriers, an increase in amphibious capability allows China to project power abroad and indicates that it wishes to fight in an expeditionary manner like the United States.

Chinese economic reform has allowed it to do several things. Increased Chinese wealth has allowed it to invest in infrastructure projects that have increased China's sphere of influence and enabled it to posture itself around the globe. Chinese infrastructure projects at civilian seaports and airports offer potential locations for the Chinese government to project and build its own combat power in response to Chinese interests around the globe. Additionally, China has used its wealth to leverage other states in pursuit of its political objectives. One result of this is the ever-increasing isolation of the Taiwanese government as fewer states recognize it diplomatically. Rising Chinese affluence has also supported massive military reform spending by the Chinese government. This increased military spending enables the People's Liberation Army to be more competitive with the United States and serves to create a hard power instrument that can coerce Taiwan into reunification.

What This Means for the United States

Despite Chinese efforts to shape the Indo-Pacific region, it is important to note that the Chinese have not

blocked American access to the region; they have only made it more complicated. For years, the United States has postured itself to defend its interests away from the U.S. mainland. This has included forward deployed troops, as well as pre-positioned stocks of equipment. The United States is still very capable of engaging its adversaries across the globe. However, a vulnerability of the U.S. military is its reliance on existing infrastructure to support the logistical requirement of building combat power and fighting abroad.

Over the last two decades, the United States has especially been reliant upon airports and seaports to receive large quantities of personnel and equipment for reception, staging, onward movement, and integration into a theater of operations. Additionally, the U.S. military has grown more reliant on contractor support to meet its operational logistics needs. However, operations in the Indo-Pacific may require a different approach in the future that is less reliant on existent facilities and contract support. The U.S. military should be prepared for a nonpermissive environment where it does not have access to the infrastructure it needs for large combat operations. In this type of environment, the joint force may need to conduct distributed amphibious assault operations, open or construct seaports, construct aircraft landing strips, and conduct joint-logistics-over-the-shore operations to sustain operations. In the future, the United States may have to gain access to a part of the Indo-Pacific by fighting its way ashore to seize or construct the facilities it needs to fight and win.

However, while China builds its amphibious capability, the capability to conduct amphibious operations has been steadily declining in the U.S. military since the end of World War II.[28] The U.S. Navy maintains thirty-two amphibious warships, which is short of the fifty amphibious support ships needed by some estimates. Still, of these amphibious warships, only sixteen are capable of supporting operations at any one time.[29] Additionally, the U.S. Marine Corps is undergoing review of its force design to move away from large-scale amphibious assaults and sustained land combat. Instead, the Marine Corps is moving toward a force design that would allow it to operate in smaller formations and seize expeditionary advanced bases from where precision fires could be employed against an adversary.

The U.S. Army has an important role to contribute as part of a joint force in the Indo-Pacific region. It has the combat formations, precision fires, and logistics capabilities to seize terrain and conduct sustained operations. Even though amphibious capability in the Army is deficient, it is a capability that will be necessary to overcome Chinese access challenges in the Indo-Pacific region. The Army does maintain a small watercraft fleet that is manned by the Transportation Corps. This allows the operational movement and maneuver of soldiers and equipment in littoral environments. However, this fleet of vessels is too small and is more suited for use in permissive environments. Additionally, the small number of personnel who operate these craft are the only subject-matter experts on amphibious operations in the Army today. There is a significant gap in institutional knowledge to fully integrate Army forces into joint planning to conduct amphibious operations.

The Army has not always been averse to conducting amphibious operations, however. During World War II, the Army took part in fifty-eight of sixty-one amphibious operations.[30] The Army also took part in six major assault operations and supported seven other amphibious operations along with the Navy and Marine Corps. Amphibious Army engineer units also proved their worth during the Korean War by enabling UN forces to conduct shore-to-shore maneuvers in the littoral regions of the Korean peninsula. However, after the Korean War, the management of amphibious craft was transferred to the Army Transportation Corps.[31] By the mid-1960s, the last Army amphibious units were deactivated as the Army focused on fighting large Soviet tank formations in Europe. With these last units went the institutional knowledge to plan and conduct Army-led amphibious operations.

One way to restore amphibious capability in the U.S. Army would be to create a multifunctional brigade of engineers and logisticians called the Engineer Amphibious Support Brigade (EASB).[32] This brigade would combine some of the Army's watercraft fleet with engineer troops who could help establish the base camps necessary to support the joint force in the Indo-Pacific. Additionally, this type of formation would be helpful in the opening or clearing of seaports, or even in the construction of temporary port facilities, if necessary. The EASB would be capable of conducting construction and combat engineering operations to sustain and support large-scale combat.[33] In a nonpermissive environment like the one China is shaping in the Indo-Pacific, the EASB would contribute

to gaining U.S. forces access to the region in the event of a crisis, such as a war between Taiwan and China.

For the Army, forming a new type of organization to improve its ability to conduct amphibious operations is just one step. Training and education would be necessary to better prepare Army personnel to conduct amphibious operations in the world's littoral regions. To accomplish this the Army should coordinate with the U.S. Navy and U.S. Marine Corps to conduct amphibious joint training and exercises. This would allow the sharing of lessons learned, build the institutional knowledge for soldiers regarding the planning and conduct of amphibious operations, and streamline integration of the Army into future joint amphibious operations.[34] Additionally, the Army could work with the Navy and Marine Corps to invest in new ship-to-shore connectors to allow forces to be better protected in nonpermissive environments.

Conclusion

China has been adept at using its instruments of national power to manipulate the strategic environment in the Indo-Pacific, especially regarding Taiwan. Chinese diplomatic, informational, and economic efforts have allowed it to increasingly isolate Taiwan from the rest of the international community. Chinese efforts have been aimed at swaying allies away from the United States and preventing U.S. access to key infrastructure in the region. This would hamper a U.S. response to a crisis in the region such as a Chinese invasion of Taiwan. China has also used its increasing wealth to fund military reform and modernization efforts. A more modern and efficient People's Liberation Army allows the Chinese to back up their soft power gains with coercive hard power. It has also better enabled the Chinese to invade and annex Taiwan.

To overcome these challenges, the United States will need to be prepared to conduct amphibious operations and open critical infrastructure needed to sustain operations in the Indo-Pacific region. Being comfortable operating in littoral regions will allow the U.S. military to move and maneuver large numbers of troops and equipment, whether from ship-to-shore, or shore-to-shore. While the United States already has robust amphibious capability compared to most nations, it is also a capability that

"China has a huge array of multimedia tools to carry out 'Information Operations.' It leverages online operations, audio visual productions, and of course the traditional media of newspapers and television news channels. It reportedly controls more than three thousand public television channels in the world, over one hundred and fifty pay TV channels, around twenty-five hundred radio stations, about two thousand newspapers and ten thousand magazines, and more than three million internet sites. The biggest and by far the most important asset in this propaganda machinery is the *Global Times*. It is a tabloid that has been appropriated by the Chinese Communist Party (CCP) and now attempts to pass off as a daily newspaper. Earlier it came out only in the Chinese language for internal consumption; in 2009 it started publication in English to cater for 'international readership.'"

Snippet of article courtesy of "The Global Times: Obnoxious Headquarter of Chinese Information Warfare," by Col. (Retired) Jaibans Singh, *NewsBharati*, 23 September 2020, https://www.newsbharati.com/Encyc/2020/9/23/Information-Global-Times-.html.

Photo: Chinese President Xi Jinping delivers a speech 18 May 2020 during the 73rd World Health Assembly in Beijing. (Photo by Li Xueren, Xinhua News Agency)

has been declining for several years. For the Army, the capability is almost nonexistent.

It will be necessary for the Army to invest resources into growing its ability to conduct amphibious operations. While they are very capable organizations, the Navy and Marine Corps cannot shoulder the burden of operations in the Indo-Pacific alone. The Army brings significant capability to the joint force in the Indo-Pacific, but it must get its forces there first. One step the Army can take is to look at creating specific organizations, such as the EASB. This would enable the Army to create the basing and infrastructure the joint force needs to sustain combat operations in the region. Additionally, the Army should work with the Navy and Marine Corps to build the institutional knowledge to conduct complex amphibious operations. These actions would allow the Army to better integrate with the joint force to overcome Chinese efforts to deny the United States access to the Indo-Pacific. ■

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Graphic by Dale E. Cordes, Army University Press

Economic Warfare

China's Financial Alternative to Military Reunification with Taiwan

CHINA-TAIWAN REUNIFICATION CONUNDRUM SUBMISSION

1st Lt. Bethany G. Russell, U.S. Army

The People's Republic of China has made no secret of its intention to annex the island of Taiwan by 2049. Numerous military war games and academic papers have repeatedly explored the military aspects of this annexation to use as templates for possible courses of action for China's campaign. However, while China's military might presents an obvious threat, Taiwan's economic vulnerability

to China poses a greater risk to its security than its military disadvantages. Although China possesses the military capabilities to defeat Taiwan, China's own cultural norms, its desire for international stability, and the possibility of its failure may hinder its primary course for reunification through military conflict. Instead, China will rely on economic disruption tactics to pressure Taiwan into acquiescing to its policy stances and reunifying with the mainland.

Using Economic Pressure

Rather than attempt a military campaign in Taiwan, China will attempt to first compel Taiwan capitulation by using economic strategies. China already possesses significant economic leverage over Taiwan; it could easily employ sanctions or market disruption, and the international community and Taiwan do not have the capabilities to defend the island against these actions.

Historically, Taiwan attempted to limit economic relations between the two countries in an effort to avoid economic overdependence on China. However, the opposite outcome occurred. In the span of a single generation, Taiwan's economy transformed from having almost no ties to mainland China to becoming incredibly dependent on Chinese trade and investment.[1] The desire to capitalize on China's economic rise and create similar economic improvements in Taiwan caused the economic relationship between China and Taiwan to become a matter of "asymmetric interdependence," which means that Taiwan depends more on China for a higher percentage and broader range of its economic activities than China depends on Taiwan.[2] As economic ties between the two countries continue to deepen, Beijing's sheer economic size might result in "overwhelming and irresistible leverage" over the island.[3]

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Taiwan currently finds itself incredibly economically vulnerable to China. China is the leading recipient of Taiwanese exports and foreign direct investment (FDI). Exports to China account for one-tenth of Taiwan's gross national product, and FDI flows to China comprise more than half of all of Taiwan's FDI.[4] Hundreds of thousands of Taiwanese businesspeople also work on the mainland and commute between the two countries. Not only are the numbers of individuals working in China high, but the sectors to which the businesspeople belong are also strategically significant. Many of the Chinese-based workers belong to Taiwan's profitable information technology sector, as many of these companies have established factories within mainland China while keeping their main offices in Taiwan. These companies are both economically viable and politically influential, and many Taiwanese have expressed potential security concerns about their placement within China's borders.[5] Regardless of the location of these facilities, the difficult truth remains that without China's role in Taiwan's economy, the overall economic health of the island would degrade.[6]

Mainland sanctions. A clear method for China to exert economic pressure against Taiwan exists in leveraging export and import sanctions. Sanctions offer a low-cost, low-risk way to signal dissatisfaction; they would increase the cost to Taiwan for ignoring China's wishes, and they would prove difficult to respond to in retaliation. Sanctions can also create a sizable degree of economic damage, encouraging political unrest within a country and possibly catalyzing a change in the country's leadership.[7] Taiwan would suffer substantial economic disruption from a shutdown of Chinese imports from the island. A 2002 Deutsche Bank study concluded that given China's status as the leading importer of Taiwanese goods, if such a ban on imports occurred, "the impact on final demand in Taiwan could be worse than any of the previous regional or global recessions."[8]

Since 2002, Taiwan's dependence on China has only deepened. The number of imports to China has increased, and therefore, the potential economic repercussions of these sanctions have only worsened.

China would have great incentive to employ sanctions as a tool of economic manipulation; past studies on the

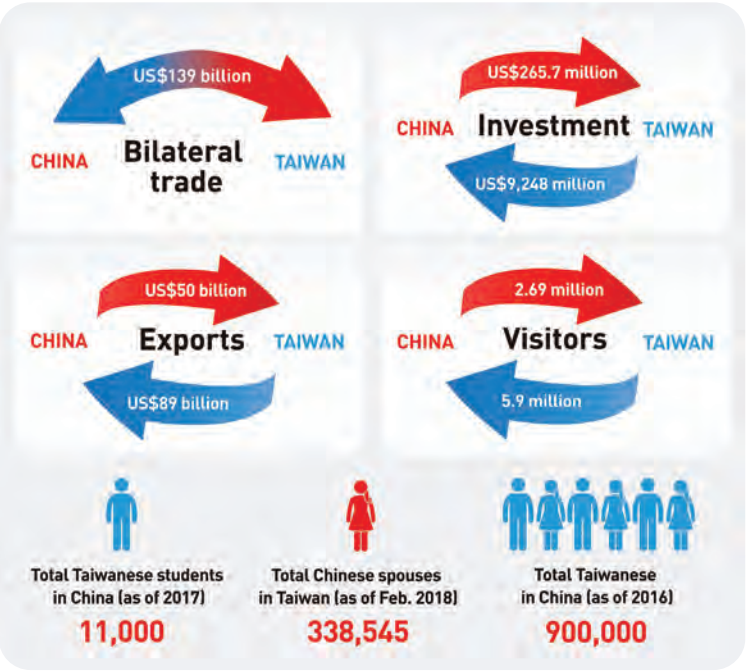
A woman walks past a screen 24 July 2020 that shows information and the index of the Taipei Stock Exchange. (Photo by Sam Yeh, Agence France-Presse)

effectiveness of sanctions indicate a likelihood of success given the economic relationship between the two countries. Historical case study analysis has demonstrated that sanctions are most successful when the economy of the "sender" country is at least ten times larger than that of the "target country."[9] In 2019, China's gross domestic product was at least twenty times that of Taiwan's.[10] Building on the gross domestic product comparison, sanctions are also effective when the sender country accounts for a third of the trade of the target country.[11] In 2018, China accounted for nearly a third of Taiwan's total trade.[12] These economic measures do not guarantee that Chinese sanctions would prove effective at changing Taiwanese policy, but they do provide significant comparisons to the conditions necessary in historical cases for sanctions to prove successful at causing political change.

Market disruption. The greatest threat to Taiwan's economy is not as blatant as issuing sanctions against the island. Chinese officials recognize they can target and disrupt Taiwanese economic markets, including its stock market and its foreign exchanges; doing so would not be a new strategy for China.[13] In 1996, China's missile tests caused Taiwan's stock market to plummet.[14] While that instance was accidental, Beijing learned the impact its actions could cause in the Taiwan's market. China has since intentionally repeated the effect. In 1995, when China used military exercises in the Taiwan Strait to respond to Taiwanese President Lee Teng-hui's trip to Cornell University, Taiwan's stock market fell almost 30 percent.[15] Four years later, when Lee issued political statements that China viewed unfavorably, the market fell 13 percent, with the loss equaling one-sixth of Taiwan's gross national product.[16] On several occasions since these incidents, Beijing has indulged its ability to spur large drops in Taiwan's stock and bond markets, and on occasion target specific industries or sectors that it felt challenged its national interests.[17] As Taiwan continues to globalize its economy more, opening its markets to foreign capital translates to a flood of Chinese capital and greater Chinese interference in the Taiwanese economy. This has resulted in an increase in China's capacity to suppress the Taiwanese market and erode investor confidence, which poses a significant threat to the country's stability.[18] While Taiwan could draw on its reserves to address disruption in the short term and in the midterm, it would

be unable to survive a prolonged effort to undermine investor confidence in its economy.[19]

Alternative methods. Other methods of Chinese economic disruption exist, such as harassing Taiwanese businesspeople as they travel between the two countries. China could also freeze or seize the assets of Taiwanese companies and investors in mainland China in an attempt to pressure those individuals to call for policy change in Taiwan.[20] However, the success of these methods largely relies on an assumption that the Taiwanese government would alter its stance on reunification for the sake of a number of individuals. Even if China targets influential businesspeople from Taiwan, it is unlikely that this will be substantial enough to prompt such a drastic policy shift.[21]



(Graphic from Focus Taiwan, Central News Agency English News, https://focustaiwan.tw/news/aipl/201804180022.aspx)

Statistical Overview of Taiwan-China Relations

Outside of targeting the movement of individuals, China could also disrupt aspects of Taiwan's economic infrastructure, including its IT systems, communications platforms, and transportation. While China continues to invest heavily in its offensive cyber capabilities and could conduct these endeavors, its primary course of economic coercion would not include such attacks. Taiwan's own cyber capabilities mean that China's attacks would not go unchallenged, and the dependence of the Communist Party of China on continued economic stability means that Beijing is unlikely to jeopardize its own economic performance from cyber counterattacks.[22]

International Response

Economic actions would likely serve to isolate Taiwan internationally. Should China issue sanctions, manipulate Taiwanese markets, or undertake other forms of economic coercion, Taiwan would call upon the international community to come to its defense. However, determining a response to such a situation would prove to be difficult for other countries. Mustering a military response to economic aggression is a possibility, but it would seem a mismatch to an economic offense and would likely launch a prolonged military conflict with China. Similarly, other countries could implement their own sanctions against China, but they would do so at the risk of their own economies. If Taiwan should call for aid and no countries come to its assistance, or if other countries are unable to alleviate the economic situation, the island would find itself in a desperate position and would thus be more willing to negotiate with China to alleviate the economic strain.[23]

Chinese Strategy

China's economic campaign against Taiwan is not a recent predicament. Rather, China has repeatedly demonstrated its desire to draw Taiwan closer to the mainland through economic ties and its ability to influence the Taiwanese economy. In 2010, China and Taiwan ratified their bilateral trade agreement, the Economic Cooperation Framework Agreement (ECFA).[24] Many individuals met the ECFA with skepticism and apprehension, with one analyst remarking, "The ECFA is not unification, far from it, but it steps in that direction economically."[25] The deal was economically and strategically significant for China. Not only did it further the ties between the two countries, but it also brought Taiwan to economic parity with other

Asian countries. At the same time, the deal did not elevate Taiwan's status so much so that Asian countries would seek their own trade agreements with Taiwan. In more blatant manipulation, in 2016, China's General Administration of Quality Supervision, Inspection, and Quarantine destroyed or returned 722 shipments of Taiwanese imports due to "political factors."[26]

for a prolonged period of time without capitulating. Should further measures prove necessary, China could accept the risk and engage in cyberattacks against the Taiwanese economic infrastructure. It could also seize the Taiwanese economic assets located in the Chinese mainland, looking to cause major losses of capital for Taiwan's most significant corporations.

> If market manipulation proved insufficient, China could escalate to issuing sanctions against Taiwan, restricting the imports China receives from the island.

Taiwanese companies operating in China have found themselves subject to random inspections and audits, with companies treated more favorably should they support China's political position.[27] From trade deals to business interference, these actions suggest that China has an ongoing continuous strategy already in place to slowly co-opt more of Taiwan through its economics.

Should China wish to pursue economic actions against Taiwan, it would occur as an escalation of force, similar to a military campaign. The larger country will continue its low-effort measures while its own economic growth increases, ensuring increasing economic leverage over Taiwan. As this occurs, Taiwan will naturally drift closer to China due to its asymmetrical economic relationship. If deepening economic ties prove insufficient on their own, China will likely escalate its tactics to manipulate Taiwanese markets by issuing statements that cause Taiwan's stock market to fall. It would seek to cause a long-term downturn so that Taiwan's reserves would prove ineffective to address any ongoing crisis. While this effort would prove to be China's main tactic, the country could also engage in smaller harassment operations, affecting the travel of Taiwanese businesspeople and increasing bureaucratic pressures on Taiwanese businesses located in mainland China.

If market manipulation proved insufficient, China could escalate to issuing sanctions against Taiwan, restricting the imports China receives from the island. Between the ongoing effects to the market and the sanctions against the country, Taiwan's economy would not have the resources available to survive

At each of these stages, economic action is not exclusive. Historical analyses of economic disruption cases have found that the measures are effective when accompanied by "powerful military companion measures."[28] China could easily conduct patrols through or flyovers above the Taiwan Strait to provide additional pressure. It could also employ diplomatic means, reinforcing Taiwan's exclusion from the World Health Organization, UN conferences, and Interpol. China also courts countries that continue to diplomatically recognize Taiwan, offering financial aid to tempt countries into ending diplomatic relations with Taiwan.[29] While economic pressures would remain China's main course of action to influence Taiwan's political choices, they would not be the only strategy the country has employed to further isolate Taiwan internationally and render it susceptible to Chinese manipulations.

Taiwanese Resistance

China does not go unchallenged in this ongoing economic battle. Taiwan is not blindly walking into China's arms; the island is fully aware of China's ability for economic leverage and has sought to counter China's efforts. Taiwan possesses significant quantities of foreign exchange reserves and places strict controls on daily movements of its stock market to provide short-term financial stability. However, to resist Chinese efforts over the long term, Taiwan needs to obtain other sources of foreign investment, which has proven difficult.[30] In January 2017, Taiwan launched a "New Southbound Policy" to divert the island's exports to south and

Pro-Taiwan independence activists call for a referendum on a formal declaration of autonomy in front of the headquarters of the ruling Democratic Progressive Party 20 October 2018 during a demonstration in Taipei. Thousands of Taiwan independence campaigners took to the streets for a major rally that was a rebuke to Beijing and a challenge to the island's already embattled government. (Photo by Sam Yeh, Agence France-Presse)

Southeast Asia rather than China, but Chinese pressure on southeast Asian countries to limit interactions with Taiwan challenges the future success of the initiative.[31] To diversify its economy, Taiwan could also consider joining one of the large regional trade agreements arising in the Pacific, namely the China-led Regional Economic Partnership or the Japanese-led Comprehensive and Progressive Agreement for Trans-Pacific Partnership. However, signing on to Regional Economic Partnership would require Taiwan to join as a province of China, which would not assist its effort to distance itself from the mainland. The other option available is the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, which is the successor to the U.S.-led Trans-Pacific Partnership. However, this trade agreement has yielded mixed results to its signatories, with some countries experiencing a significant increase in their trade flows and others seeing no change. With such a mixed record, signing on to this latter trade agreement would not guarantee Taiwan the diversity it needs in its economy to neutralize Chinese interference. The last option for Taiwan would be to enter into bilateral free trade agreements with other countries. Unfortunately, given Taiwan's controversial political status, most countries would avoid a bilateral deal to avoid antagonizing China and jeopardizing their relationship. Even if Taiwan successfully negotiated bilateral free trade agreements, the relationships would simply provide it parity with other countries in the region.[32] For Taiwan to become a competitor in the regional economy, it must develop its economic competitiveness. Unfortunately, Taiwan's strategy for improving its national competitiveness largely involves investments in its industrial sector in which it has agreed to "joint industrial cooperation" with China. Therefore, despite its efforts and desires otherwise, for Taiwan to maintain and improve its economic standing, it currently must rely on a close economic relationship with China.[33]

Military Overmatch

If China avoids a military conflict with Taiwan, it will not be because China is unprepared for battle. China has armed itself both with legal arguments for aggression and military capabilities for a campaign into Taiwan. To build its legal framework, China outlined in its 2005 Anti-Secession Law that should any secessionist forces seek independence, the People's Republic of China would "employ non-peaceful means" to protect its national sovereignty.[34] Reiterating this provision in 2019, President Xi Jinping extended this guarantee to allow the use of force to prevent "intervention by external forces" into Taiwan.[35] China views any attempt to attain independence as illegal, whether Taiwan attempts independence alone or with the assistance of a third party, and China's leaders periodically issue hawkish statements reminding the island of that fact.

More worrisome than the political language surrounding the Taiwan issue is the Chinese military development and investment that has occurred with the intention of arming the country in a future campaign against the island. Since the 1996 Taiwan Strait Crisis, China has placed significant weight behind reforming and modernizing its military. These efforts escalated further in 2012 when Xi championed creating a modern force in China that could lead its regional neighbors.[36] China is now second only to the United States in annual defense spending.[37] While not all of its military improvements are specifically for a future crisis with Taiwan, developments in the navy and air force suggest that China is looking to secure the transportation routes between it and Taiwan should it need to seize the country. China's navy has ballooned to become the world's largest naval force in total ship numbers. As of 2017, more than 70 percent of the fleet was new, compared to less than 50 percent in 2010.[38] The country has commissioned more nuclear submarines and looks to expand its operations from the near seas to greater distances from the mainland. China's air force has grown as well. In addition to increasing its size, the People's Liberation Army Air Force has copied many American designs to build advanced versions of stealth aircraft, unmanned aerial vehicles, airborne warning and control systems, and bombers.[39] China has also worked to develop its rocket force. Relative to the Taiwan issue, China has developed antiship ballistic missiles to target vessels in the Western Pacific, supporting its anti-access/area denial strategy.[40] Regardless of the ultimate strategy it pursues, China is preparing for the military contingency of seizing Taiwan.

Rejecting Military Means

Even with its hawkish statements and military reforms, China will seek to avoid military reunification with Taiwan. A forced reunification conflicts with Chinese cultural norms, would disrupt the international order, and provides no guarantee of a Chinese victory.

Cultural norms. Despite its military growth, China's history has led to the rise of norms and traditions that incline to avoid outright military conflict. Since the Han dynasty (206 BCE–220 CE), Confucian ideas and values have informed Chinese interpersonal relationships, societal structures, individual behaviors, and work ethics.[41] Confucianism emphasized virtuous behaviors, and its Five Constant Virtues include humanity, righteousness, propriety, wisdom, and faithfulness.[42] With such deep roots in Chinese society, Confucianism also invariably influences the country's military strategic thought and international relations. Key within Confucianism is the preference for harmony over conflict and defense tactics over offensive ones.[43] These teachings became evident in Confucian idioms throughout Chinese history: "display virtue and do not flaunt the military instrument" and "emphasize civility, deemphasize martiality; stress virtue and downplay physical strength."[44]

Chinese military scholars have also traced this influence to the writings of Sun Tzu, who advocated subduing the enemy without resorting to violent means.[45] Avid Chinese historians note the prevalence of walls and earthworks throughout the country's history, rather than vast expansions of its borders. These barriers are the manifestation of the need for self-protection and the use of defensive, rather than offensive, force.[46] While it began centuries ago, this Confucian influence is also prevalent in more recent observations on Chinese leaders. In his lauded work *On China*, Henry Kissinger noted the following:

> Rarely did the Chinese statesmen risk the outcome of a conflict on a single all-or-nothing clash: elaborate multi-year maneuvers were closer to their style. Where Western tradition prized the decisive clash of forces emphasizing feats of heroism, the Chinese ideal stressed

subtlety, indirection, and the patient accumulation of relative disadvantage.[47]

Confucian culture and traditions guided the Chinese statesmen with whom Kissinger interacted, and their avoidance of decisive acts of aggression stem from centuries of Chinese history that have created such a strategic culture.

Confucian influence does not completely remove the potential for war. However, to commit to military action, the use of force must be "unavoidable."[48] According to Confucianism, "war should be taken only as a last resort, and only in a just cause. This generally means defensive war, but can also mean punitive war to stop the strong from bullying the weak."[49]

Chinese military history scholars have classified its recent military actions as righteous endeavors, particularly in the Korean War, the Sino-Indian war, and the Sino-Vietnamese War. In each of these cases, Chinese leaders defined their military involvement as just and strategically defensive to their core interests and national security.[50] Each war is a limited affair, with clearly defined political goals and often spatial or temporal restrictions.[51] In this way, Chinese leadership have defined their military actions as righteous and defensive acts consistent with Confucian ideals.[52]

Aware of how its development could appear threatening and contradictory to many of its Confucian values, Beijing has repeatedly committed itself to reiterating its peaceful intentions.[53] Col. Kenneth Johnson noted in a previous study on Chinese strategic culture that the country's leaders have established the following principles governing their behavior in the world order:

(1) the "five principles of peaceful coexistence," which include mutual respect for each other's territorial integrity and sovereignty, mutual nonaggression, mutual noninterference in each other's internal affairs, equality and mutual benefit, and peaceful co-existence;
(2) establishing a fair and reasonable political and economic world order;
(3) no use of force or threat of the use of force in international relations;
(4) all nations, big or small, strong or weak, rich or poor, are equal in international affairs; and
(5) China should always side with developing countries, and it should never seek hegemony or superpower status.[54]

In many of the defense white papers the country has published, it hedges its security developments by reemphasizing its commitment to avoid hegemony and military expansion.[55] These principles have also manifested in more recent discussions on China's desire for a peaceful solution with Taiwan. In the country's 2019 defense white paper, its leaders emphasized peace:

> China adheres to the principles of "peaceful reunification," and "one country, two systems," promotes peaceful development of cross-Strait relations, and advances peaceful reunification of the country.[56]

While the white paper discusses the catalyst for any military involvement, it takes care to stress the desire for peace first and to abundantly use peaceful language in the writing.[57] For China, military reunification remains the ultimate last resort, rather than its preferred strategy.

Challenge international stability. Military action against Taiwan would unquestionably disrupt the international order. Even though other countries typically cast China as a disruptive force, it has largely upheld international rules, laws, and norms. China has increased its funding to the United Nations and regularly contributes to peacekeeping operations. While it has pushed for reforms in these organizations, China largely abides by the frameworks of the International Monetary Fund, World Trade Organization, and G-20.[58] Taking military action against Taiwan would prove internationally politically unpopular and would jeopardize China's standing in all of these institutions.

China's leaders have also blatantly stressed their devotion to a stable world order. In his 2015 speech to the United Nations General Assembly, Xi noted that "[w]e cannot realize the Chinese dream without a peaceful international environment, a stable international order, and the understanding, support, and help from the rest of the world."[59] Adding to this statement, Xi remarked at the 2017 19th Party Congress in Beijing that China would "continue its efforts to safeguard world peace, contribute to global development, and uphold international order."[60] These two speeches stress the Chinese desire for continued stability and counterbalance the bellicose statements quoted earlier regarding military intervention.

While Taiwan is a "bottom line" for China, the latter country must ultimately maintain its international standing. In China's 2013 defense white paper, Xi noted how it is necessary to both "safeguard stability and safeguard rights."[61] This remark was the first time that the country's rights and interests received the same level of prioritization as the traditional directive to uphold stability.[62] However, this new emphasis merely places the matters on more equal standing, which indicates that the country it must confront the possibility of failure in a military campaign into Taiwan. Even with its recent and ongoing military improvements, there is no guarantee of a Chinese victory against Taiwan. China holds no illusions about the state of its military and notes its own need to continue modernization and restructuring. The country acknowledges in its own 2019 defense white paper that "the People's Liberation Army (PLA) still lags far behind the world's leading militaries."[64] It struggles

A one Yuan banknote was issued by the Federal Reserve Bank of China, a Japanese puppet government bank that printed paper money during the years 1938–1945. A portrait of Confucius is featured with an image of the Temple of Confucius, which is located in Shandong Province. Confucius, who lived from 551 BCE to 479 BCE, was one of China's most important and enduring philosophers. His teachings have shaped the moral foundation of Chinese society and government for more than two thousand years and continue to deeply influence Chinese society, despite occasional official efforts to stamp out his influence. (Image courtesy of PrimalTek, http://primaltrek.com/chinesepapermoney.html)

may tolerate more risk for the sake of pursuing what it asserts is its rights. The primacy given to safeguarding stability and the fact that Xi did not elevate safeguarding rights higher than maintaining stability both reinforce that Chinese leadership will not pursue the Taiwan issue to the extent that it would challenge the international stability China requires for continued economic growth.[63] Therefore, no matter the importance that Taiwan may hold for China, Beijing ultimately favors a stable international order over military action.

Possibility of failure. If China minimizes its cultural norms and desire for international stability, then to recruit and train a sufficient number of personnel to man its ranks, and China's limited involvement in ongoing conflicts means that the majority of its service members lack combat experience. The country itself has not mobilized for war since a brief altercation in the late 1980s, and many of the processes to mobilize remain undeveloped and untested.[65] While the Chinese military may possess an advantage in technology and equipment, it does not have the dominance over Taiwan as its size and capabilities would otherwise suggest.

The potential for the United States to involve itself in supporting Taiwan further complicates the

outcome of a future Taiwan campaign. China has no guarantee that the United States will not send its own manpower and equipment to aid Taiwan in its struggle. Even the possibility that the United States could participate remains a significant deterrent for China. While China has improved its own military relative to other Asian powers, it does not have the strength necessary to defeat the United States. Continued Chinese military improvements, particularly in anti-access capabilities, do improve its standing relative to the United States, but any gains against the Americans in Taiwan would prove costly. At best, China would experience a pyrrhic victory against the United States-seizing and occupying the island but suffering heavy casualties in the process. At worst, China would find its military power degraded in the fight against the United States and lose both the campaign and its international standing.[66]

A Different Outcome

This article is predicated upon the assumption that the overall status quo of the China-Taiwan relationship will remain. Should Taiwan undertake a drastic independence push or should another country push for independence on its behalf, Xi has already clearly stated China will make a military response. In the country's 2019 defense white paper, China remarked it "will never allow the secession of any part of its territory by anyone, any organization or any political party by any means at any time."[67] This chain of "any's" is stronger language than the country used in previous defense papers. Xi reaffirmed this commitment by stating that China would "resolutely defeat anyone attempting to separate Taiwan from China."[68] Therefore, should Taiwan continue as it has with political language supporting separation but no clear military efforts, China will seek a longer and subtler economic approach to reunification. However, if the island nation pursues military action or should an outside party conduct military effort on its behalf, China will forsake its economic strategy to and employ its military capabilities to annex Taiwan.

Similarly, Beijing would likely abandon an economic strategy should its economic leverage over Taiwan diminish or its 2049 goal approach with no headway. Currently, Beijing has the ability to conduct the "elaborate multi-year maneuvers" Kissinger noted as its specialty. However, if 2049 nears and Taiwan is no closer to unification through economic means, China can be expected to reevaluate its strategy and consider a final military solution.

Conclusion

While China certainly has the current capability to conduct a military expedition against Taiwan, cultural norms that avoid conflict where possible, desire for international stability, and lack of a guaranteed military success all render a forceful annexation unlikely. Instead, Beijing can be expected to use its economic leverage over Taiwan to disrupt markets and implement sanctions in an effort to compel the island to acquiesce for the sake of its economic survival. Therefore, as China watchers continue to monitor the country for signs of any threat to Taiwan's sovereignty, they must remain aware of the likelihood that the main initial attack will not come from the sea or air but rather through indirect financial means. ■

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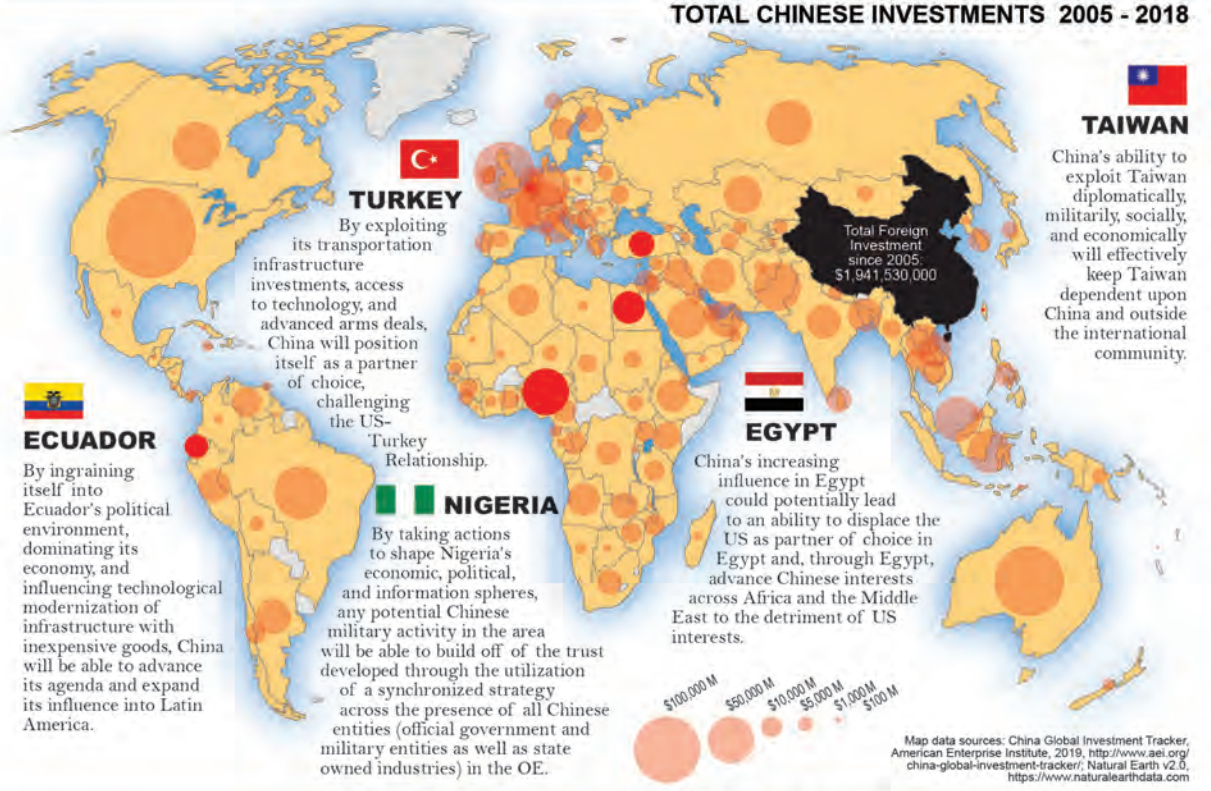
COMPETITION IN 2035: ANTICIPATING CHINESE EXPLOITATION OF OPERATIONAL ENVIRONMENTS

China's Approach to Exploitation

China's whole-of-nation approach, which involves synchronization of actions across government, military, and industry, will facilitate exploitation of OEs and enable it to gain global influence through economic exploitation.

China will leverage the international system to advance its own interests while attempting to constrain others, including the US.

PREFERRED CONDITIONS	PREFERRED METHODS
Infrastructure Capacity Challenges	China targets undeveloped and fragile environments where their capital investments, technology, and human capital can produce financial gains and generate political influence.
Interconnected Economies	China looks for partners and opportunities to become a significant stakeholder in a wide variety of economies in order to capitalize on its investments as well as generate political influence.
Specialized Economies	China looks for opportunities to partner with specialized markets and leverage their vulnerabilities for gain.
Technology Access Gaps	China targets areas where their capital investments in technology provide partners with key resources and competitive advantages by filling technology gaps.



IMPLICATIONS FOR THE US ARMY

Traditional US Army threat paradigms may not be sufficient for competition.

The US Army could be drawn into unanticipated escalation as a result of China's activities during the competition phase.

US Army military partnerships will likely be undermined by China in 2035.

US Army operations and engagements will be increasingly impacted by the pervasiveness of Chinese goods, technology, infrastructure, and systems.

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Graphic from *Competition in 2035: Anticipating Chinese Exploitation of Operational Environments* (15 August 2019) by Training and Doctrine Command G-2, Operational Environment & Threat Analysis Directorate. To view the document, visit https://community.apan.org/cfs-file/__key/docpreview-s/00-00-12-67-21/Competition-in-2035-_2D00_-Anticipating-Chinese-Exploitation-of-OEs-_2800_Paper_2900_.pdf.

A woman walks past a television in New Taipei City 2 January 2019 that shows China's President Xi Jinping making a speech commemorating the fortieth anniversary of a message sent to Taiwan in 1979 that asserted Taiwan's unification with the mainland is "inevitable." Xi warned against any efforts to promote the island's independence, saying China would not renounce the option of using military force to annex it. Xi continued, "After peaceful reunification, Taiwan will have lasting peace and the people will enjoy good and prosperous lives. With the great motherland's support, Taiwan compatriots' welfare will be even better, their development space will be even greater." (Photo by Sam Yeh, Agence France-Presse)

How to Counter China's Disinformation Campaign in Taiwan

Linda Zhang

China wants to shift Taiwan's public opinion to adopt a pro-unification stance. The People's Republic of China (PRC) has held the goal of unifying with Taiwan since the Chinese Civil War of 1945–1949, and Beijing's toolkit has expanded since the days of Mao Tse-tung's periodic

initiation of cross-strait artillery fire. Today, Taiwan experiences near-constant threats from China, including those to its media and social media landscape. Taiwan receives the most foreign government disseminated disinformation out of all the countries in the world.[1] The risk of conventional war is real, but Taiwan's more urgent threat comes from China's attacks on its media independence and distribution of disinformation targeting Taiwanese elections.

Definition and Objective

For the purposes of this article, we will use *Science Magazine*'s definition of disinformation as "false information that is purposefully spread to deceive people."[2] This definition, incidentally, is popular among PRC netizens and scholars and is helpful for understanding the PRC's disinformation campaign in Taiwan.[3] The objective of Chinese disinformation in Taiwan is to convince Taiwan's people that unification with China is their best (and only) option. This takes form in terms of economics, where the Chinese argue that Taiwan would be better off financially under unification; foreign relations, where China claims that the Taiwanese government cannot offer adequate diplomatic services and protection to its citizens; and culture, where China spreads disinformation about eligibility for the Olympics if athletes competed under "Taiwan" rather than "Chinese Taipei."[4] The PRC also uses disinformation to discredit individuals who, in the PRC's perception, threaten its agenda. The targets of these disinformation campaigns range from Taiwanese President Tsai Ing-wen to diplomatic allies, celebrities, journalists, and prominent supporters of Taiwan's independence.[5]

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China's Toolkit

Early PRC cross-strait propaganda methods included using megaphones to broadcast announcements and playing music to encourage defections in the 1950s.[6] Technology and tactics have advanced significantly since then, and the PRC started what it calls "information warfare" (信息化战争) against Taiwan in the early 2000s. The PRC encouraged sympathetic Taiwanese businessmen to purchase media outlets, bought advertising in Taiwan's media to influence public opinion, and pressured media proprietors who had investments in China to stop publishing criticism of the PRC.[7]

Due to its financial resources, the PRC has made significant progress in infiltrating Taiwanese television and print media, even though Chinese entities cannot directly own Taiwanese media companies without government approval.[8] In 2008, pro-Beijing businessman Tsai Eng-meng, the owner of snack food company Want Want, purchased China Times Group, a media company that owns one newspaper and two TV channels.[9] Since the purchase, reporting from *The China Times* took on a tone less critical of China and decreased its coverage of human rights issues in China.[10] Want Want's China subsidiaries received NT$2.9 billion (US$96 million) in subsidies from the PRC government between January 2017 and March 2018, indicating the PRC's leverage against businessmen like Tsai.[11] In the social media realm, the PRC has made even more direct "investments" by buying the social media accounts of Taiwanese politicians and social media influencers.[12] Fan pages with large amounts of followers suddenly switched over to using simplified Chinese and began helping PRC disinformation go viral (the Taiwanese use traditional Chinese characters). Influencer accounts on Professional Technology Temple (PTT), a local online bulletin board, sold for as much as US$6,500 prior to the 2018 elections.[13]

PRC influence operations also use social media platforms to spread pro-unification and anti-Democratic Progressive Party (DPP) content. In particular, YouTube is a popular platform among Taiwanese internet users, and disinformation on YouTube has become a greater threat vector since Facebook and Twitter have become more proactive in removing fake content.[14] Disinformation on YouTube is generally more deliberate, as it is more difficult to create and edit a video than it is to write a post or make a meme. However, Puma Shen, an assistant professor at National Taipei University, notes that China's operations on YouTube

In this 27 April 2012 image, pages of rival Taiwan newspapers *Apple Daily* (*top half*) and *The China Times* depict each other's owners in a fight for ownership of a major chunk of Taiwan's media outlets. Hong Kong's media mogul owner of *Apple Daily* and fierce China critic Jimmy Lai was calling foul as Want Want Group chairman Tsai Eng-meng was seeking to purchase a local cable TV network system in a $2.4 billion deal that would significantly bolster his influence in Taiwan and his stature in China. Tsai , who had big business interests in China, had been frank about his aim of trying to monopolize media in Taiwan to promote annexation of Taiwan to China. (Photo by Associated Press)

are not very sophisticated. For example, some videos aimed at a Taiwanese audience still had simplified characters in their closed captions.[15]

Some recent examples of Chinese disinformation on social media include the following:

- Posts on PTT claiming that the Chinese consulate rescued stranded Taiwanese tourists in Japan during Typhoon Jebi in September 2018 but only if they identified as "Chinese."[16] The disinformation was intended to spark public anger against the Taiwanese consulate and to portray the Taiwanese government of being incapable of rescuing its citizens. This story ended tragically when Su Chii-cherng, the director of Taiwan's representative office in Osaka, Japan, committed suicide after receiving criticism online for not providing sufficient assistance to Taiwanese citizens.[17] The IP address of the original PTT posts traced back to Beijing.[18]
- Posts "revealing" that the Taiwanese government lied about the number of COVID-19 cases and deaths in Taiwan.[19] This is an attempt to discredit the Taiwanese government's handling of the COVID-19 pandemic, especially after Beijing's own mistakes in its early COVID-19 response.

These posts showed linguistic characteristics of having originated in the PRC, and some were even written entirely in simplified Chinese.[20]

- A LINE (messaging application popular in Taiwan) post claiming that President Tsai Ing-wen's government would take away people's pensions if they traveled abroad without a declaration. This is another example of an attempt to discredit the DPP government. The original article traced back to a content farm in China.[21]

banning discussion of the Tiananmen Massacre, the Dalai Lama, Falun Gong, and broader criticism of China. Eventually, SET canceled *Dahua Xinwen* in May 2012, months after it began negotiations with Chinese authorities on broadcasting its television dramas in the PRC.[23] In online media, pro-independence outlets are almost always blocked in China, while pro-unification outlets are accessible. This impacts the ability of pro-independence media outlets to generate online advertising revenues.[24]

A 23 April 2019 Chung T'ien (CTi) Television report displays a map that shows Taiwan as a part of China. CTi is a major cable TV network owned by the Want Want China Times Media Group. It drew wide criticism from the Taiwanese public in response to the newscast. The channel has been fined numerous times by the Taiwanese National Communication's Commission for broadcasting inaccurate and defamatory information. Many called for CTi to be once again fined for inaccurate and biased reporting favorable to the People's Republic of China. (Screenshot from CTi)

Finally, the PRC uses economic leverage against Taiwanese media outlets. Newspapers that carry advertisements from PRC commercial entities tend to have a more pro-Beijing message.[22] SET, a major cable television station, previously broadcasted a DPP-friendly political talk show *Dahua Xinwen* (Big Talk News). The network began restricting the topics allowed on the program after Kuomintang (KMT) candidate Ma Ying-jeou's election in 2008 and also began

The PRC's disinformation tactics take advantage of weaknesses in Taiwan's media landscape. First, the Taiwanese media environment is highly polarized, and it is easy to exploit controversial issues such as pension reform and same-sex marriage.[25] Disinformation on these issues can be domestic, further complicating the attribution concerns.[26] Taiwan has a high level of press freedom and a competitive media landscape. These indicators create an environment where the PRC can

spread disinformation with little risk of censorship or penalty.[27] Finally, Taiwan has an overwhelming number of internet users; by December 2018, 93 percent of Taiwan's population surfed the World Wide Web.[28] More than three-quarters of Taiwan's population use their smartphones to access the news.[29]

Attribution

As with any effort to fight disinformation, attribution of malign social media activity can be difficult. Even if it is possible to identify a post as originating in China, it is still hard to tell if it was a lone actor or an organized government effort. For example, there is evidence that some of the misinformation and disinformation on COVID-19 was a grassroots effort that stemmed from anger at Taiwan over its decision to limit exports of face masks to China, rather than a government attack.[30]

Nonetheless, there are strong indicators of a Chinese government-led effort to affect Taiwanese elections and social discourse. Rumors that major airlines were no longer accepting the Republic of China's passport as proof of identity for international flights, although ultimately not attributable, are consistent with the PRC's disinformation themes and tactics.[31] The PRC's documented recent actions in Hong Kong use tactics of the same playbook and espouse similar themes—a goal of unification and anything opposing unification as foreign interference (from the United States) or terrorism.[32]

What Is Taiwan's Response?

Taiwan has not been sitting idle as the PRC expands its influence operation into the country's media ecosystem. Both the Taiwanese government and civil society have stepped up efforts to combat disinformation by banning Chinese internet media platforms, passing legislation on election interference, organizing efforts to fact-check news, and educating the public on media literacy.

The most direct action that the Taiwanese government has taken against China is banning select Chinese media platforms, such as iQIYI (Baidu's video platform) and Tencent video, from the Taiwanese market. The DPP government cites the prevalence of disinformation spread to influence the January 2020 presidential elections as the reason for these bans. However, the bans have sparked concerns with regard to freedom of speech, and the effectiveness of such bans is debatable as the PRC can simply upload disinformation content on YouTube or Twitch, platforms that remain accessible and are popular among the Taiwanese public.[33]

The Taiwanese government also confronted China's disinformation campaign through other executive and legislative action. The Ministry of Justice established the Big Data and Public Opinion Task Force. Security institutions, including the Ministry of National Defense and the National Security Council, have coordinated response groups to Chinese disinformation.[34] The Legislative Yuan, Taiwan's legislative body, passed laws in response to the PRC's 2018 election interference. The Public Media Act, passed in 2019, addressed board governance, accountability, and financial independence for public media groups.[35] The legislature also updated the Social Order Maintenance Act to criminalize the spread of misinformation online.[36] Most visibly, the Taiwanese legislature passed the Anti-Infiltration Act two weeks before the 2020 presidential election, preventing "foreign hostile forces" from making political donations, spreading disinformation, staging campaign events, or otherwise interfering in elections.[37] Although the act does not mention China by name, its target is Chinese actors and Taiwanese citizens with connections to China.[38] The new law has already succeeded in driving out Master Chain, a pro-China media outlet with funding connections to China.[39]

Taiwan has an active civil society engaged in fighting disinformation. Civil society organizations that work on disinformation include the following:

- The Taiwan FactCheck Center, a nonprofit initiative launched in 2018 by the Association for Quality Journalism and Taiwan Media Watch. According to the center's website, it does not accept donations from governments, political parties, and politicians in order to maintain its independence.[40]
- The Fakenews Cleaner, a nonprofit founded after the 2018 Taiwanese elections that teaches media literacy to the elderly. Volunteers from the organization conduct in-person workshops at community centers and senior centers to bridge the generational gap in social media usage.[41]

Finally, Taiwan is educating its citizens as a part of a long-term strategy of fighting disinformation.

Education is a key indicator of resilience to fake news, and in particular, media literacy education is effective in helping individuals identify misinformation and disinformation.[42] In Joseph Kahne and Benjamin Boyer's study of nationally representative youths in the United States (ages fifteen to twenty-seven), participants who reported the most media literacy education were also the ones who most consistently spotted the difference between the evidence-based posts and the misinformation they were shown.[43] Like Finland, Sweden, and the Netherlands, three countries that rank the highest in the Open Society Institute's Media Literacy Index (which only covers Europe), Taiwan has a media literacy curriculum in schools to teach students about digital literacy and misinformation and disinformation.[44] Audrey Tang, Taiwan's digital minister, supports media literacy as the most useful tool for educating people on identifying misinformation and disinformation.[45]

Case Study: Taiwan's 2018 and 2020 Elections

Taiwan's "nine-in-one local" elections in November 2018—somewhat akin to U.S. midterm elections—were a big loss for the DPP. The KMT reversed the results of the 2014 election results and won thirteen of twenty jurisdictions.[46] This was an ideal result for the PRC, which had been ramping up pressure against Taiwan since the election of the DPP's Tsai Ing-wen as president in 2016. Tsai resigned as the DPP chairperson after the defeat.[47]

It is impossible to attribute the DPP's electoral defeat directly to interference from Beijing, but disinformation may have been effective in exaggerating existing fractures in Taiwanese politics, including LGBTQ issues and the urban-rural divide.[48] Tsai's government was well aware of the PRC's attempts at election interference and warned the public on her own social media platforms.[49] In October 2018, the Ministry of Justice investigated cases of candidate campaigns allegedly receiving funding from the Chinese government or its affiliate organizations.[50] Despite these efforts, public awareness of the problem lagged. A survey conducted one week after the elections found that 52 percent of respondents did not believe that there was foreign interference in the elections or did not know enough to judge.[51]

The Taiwanese government learned the lessons of the 2018 election and was successful in countering the PRC's disinformation campaign the next time around. In the weeks before the 2020 legislative election, Tsai again sounded the alarm about PRC-sponsored disinformation in Taiwanese media and social networks.[52] In response, the Taiwanese government strengthened its institutions: every Taiwanese ministry established a team to detect disinformation campaigns and respond rapidly with a counternarrative. The government created a well-funded Department of Cyber Security to guard websites and databases against hackers.[53] Taiwan also worked with social media companies to educate the public about misleading social media content. For example, Facebook began tagging fake articles with a correction from the Taiwan Fact Check Center and alerting users who shared the article that it contained inaccurate information.[54] The Ministry of Justice fined both individuals and television media companies who shared misinformation.[55] These measures, along with outside events, propelled Tsai to reelection in a landslide victory against KMT candidate Han Kuo-yu, and the DPP maintained its majority in the Legislative Yuan.[56]

What Has the United States Done?

The United States and Taiwan are already strengthening cooperation in combating disinformation in Taiwan. In December 2016, U.S. Congress established the Global Engagement Center (GEC) to counter foreign propaganda and disinformation.[57] The GEC has been collaborating with Taiwan as a part of these efforts.[58] In April 2019, the GEC accepted funding applications to crowdsource counterpropaganda work in Taiwan.[59] The GEC also hosted a U.S.-Taiwan Tech Challenge, an open competition for companies to win a GEC grant used for countering propaganda and disinformation in the region. Trend Micro Taiwan, a company working on information security with the Criminal Investigation Bureau, won the top prize of US$175,000.[60]

More broadly, the United States has passed bipartisan legislation advancing its commitment to U.S.-Taiwan relations. The Taiwan Travel Act, passed and signed into law in early 2018, allows U.S. officials to meet with their Taiwanese counterparts and allows high-level Taiwanese officials to officially enter the United States and meet with officials.[61] The Taiwan Allies International Protection and Enhancement

Baybars Örsek (*top*), director of the International Fact-Checking Network at the Poynter Institute, meets with Taiwan fact-checkers in December 2019 for a workshop at the Taiwan FactCheck Center in Taipei. (Photo courtesy of Baybars Örsek's Twitter, @baybarsorsek, https://twitter.com/baybarsorsek/status/1202562487591112704)

Initiative (TAIPEI) Act, passed in 2019, requires the State Department to report to Congress on steps the State Department has taken to help strengthen Taiwan's diplomatic relationships and partnerships around the world annually.[62] These legislations reinforce the United States' support for Taiwan's democracy and protects Taiwan's international standing.

How Can the United States Help?

Taiwan has proven itself capable in combating the PRC's use of disinformation to interfere in the 2020 elections, but the PRC is not stepping back. Recently, the PRC has been spreading disinformation about COVID-19 in Taiwan to discredit the Taiwanese government, and we can be certain that these efforts will continue. The United States can support Taiwan through the following ways:

Support relationships between U.S.-based social media companies and the Taiwanese government and civil society groups. The most popular social media platforms in Taiwan are U.S.-based companies. Facebook and YouTube were the top two social media outlets for Taiwanese internet users (as of January 2019), and Facebook Messenger, Instagram, Twitter, and WhatsApp were also in the top eight. WeChat was the only Chinese app on the list, and only 32 percent of internet users reported using the platform.[63] Twitter, Google, and Facebook are already working with the Taiwanese government on identifying fake news on their platforms. The United States should encourage these efforts by establishing an official channel for cooperation and make public data or research resulting that can help American and Taiwanese researchers

attribute disinformation to the PRC and better educate Taiwanese citizens in identifying fake stories.

Increase funding for grants to Taiwanese civil society groups that fight disinformation. Although not all of Taiwan's fact-checking nonprofits accept foreign government donations, the United States should increase grant funding for those that wish to apply. These organizations can enhance their effectiveness with additional resources, such as by providing better training for their volunteers, employing more full-time staff to oversee and organize their efforts, and providing more resources for the public to help them navigate Taiwan's traditional and social media landscapes.

> "Disinformation, election interference, and information warfare are global problems not limited to Taiwan, and international organizations and nongovernmental organizations will be establishing rules and norms for internet governance and wireless communications."

Facilitate relationship building between Taiwan and European countries such as Finland and Latvia that are successful in combating disinformation. Taiwan is not the only U.S. ally that is facing a threat of hostile social manipulation. NATO allies and the European Union (EU) face a similarly elaborate and targeted disinformation threat from Russia. The NATO Strategic Communications Centre of Excellence runs a training program on advanced counterpropaganda techniques to help member states assess and counter Russian propaganda in Eastern Europe.[64] The EU established the East StratCom Task Force in 2015. The task force "develops communication products and campaigns focused on better explaining EU policies in the Eastern Partnership countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) ... supports wider EU efforts aimed at strengthening the media environment in the Eastern Partnership region ... [and] reports and analyses disinformation trends, explains and exposes disinformation narratives, and raises awareness of disinformation coming from Russian State, Russian sources and spread in the Eastern neighborhood media space."[65] By setting up a forum to facilitate dialogue between Taiwan and our European allies and partners, the United States can help Taiwan's efforts to combat Chinese influence and provide it with the opportunity for deeper international engagement.

Pursue cooperation in developing artificial intelligence (AI) to help combat disinformation. Fact-checking today is still a predominantly manual process, but Taiwan has already begun to use AI to identify fake news by automatically identifying and deleting content.[66] It is critical for Taiwan to be ahead in this technological race. China uses AI to generate and spread disinformation, and its ability to do so will only improve.[67] The PRC could develop AI with the capabilities to generate disinformation faster than Taiwan can identify it, and Taiwan must maintain a technological advantage in AI against the PRC to preserve its independent media environment. Tech companies can also use AI to identify the origins of the disinformation activity and collect data on the prevalence of disinformation from China.[68]

Train a strong cohort of Mandarin speakers who can study Chinese disinformation tactics and engage our Taiwanese partners. Studies have shown that language usage in satire, hoaxes, and propaganda is different than that of real news stories.[69] A strong grasp of language and culture is critical to understanding disinformation and developing effective tactics in response. The United States should train and hire more Chinese-speaking analysts who can work with Taiwanese teams to monitor Taiwanese social media activity and identify disinformation. These linguists can also bring back best practices for our own fight against Chinese disinformation and election interference. Taiwan, as the main target of Chinese disinformation, understands Chinese information warfare better than any other nation, and a strong cohort of

Mandarin linguists in our government can help us access this wealth of knowledge.

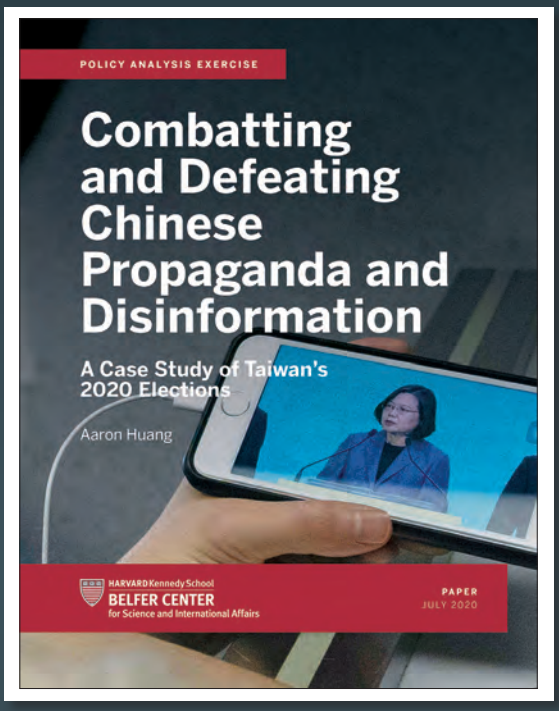
Advocate for Taiwan's participation in international organizations. Disinformation, election interference, and information warfare are global problems not limited to Taiwan, and international organizations and nongovernmental organizations will be establishing rules and norms for internet governance and wireless communications. China will no doubt push for rules in accordance with its own interests and authoritarian values.[70] Taiwan is a U.S. ally in this conversation, and the United States should support Taiwan's participation in the United Nations so it can engage in discussions on these resolutions.

In particular, the United States should encourage Taiwan's participation in future discussions on security issues in communications infrastructure. The Taiwanese government recognizes Chinese-built 5G networks as a threat to Taiwan's cybersecurity, and any backdoor access companies like Huawei may have could disable Taiwan in military conflict. In light of these concerns, Taiwan chose Nokia (Finland) and Chunghwa Telecom (Taiwan) to deliver its first 5G networks.[71] Taiwan also banned Huawei and ZTE equipment for government employees.[72] By joining international discussions such as the Prague 5G Security Conference, Taiwan would be able to share these security concerns directly with European countries.

More participation in international organizations will also allow Taiwan to have better information to make policy decisions domestically and to fight disinformation from Beijing. A recent and notable example of this is Taiwan's lack of membership in the World Health Assembly, the decision-making body for the World Health Organization. Participation in the World Health Assembly would have allowed Taiwan to access more information about COVID-19 rather than going through

Military Review

WE RECOMMEND



Chinese communist propaganda and disinformation synchronized with other aggressive initiatives such as China's Belt and Road Initiative have the potential to manipulate the world's perception of Beijing, distort America's image globally, and reshape international norms and values on human rights, rule of law, and concepts of national sovereignty. In the interest of exposing China's malign propaganda methodologies, *Combatting and Defeating Chinese Propaganda and Disinformation* provides a case study of China's attempted efforts to control Taiwan's 2020 presidential and legislative elections. It analyzes China's disinformation capabilities and vulnerabilities as it details how Taiwan was able to nullify the effectiveness of information campaigns against opponents of Chinese communist influence in Taiwan. The study aims to promote a fuller understanding of such disinformation operations to enable the U.S. government to better protect America against China's interference in its elections as well as other socioeconomic and sociopolitical institutions, and counter Chinese Communist Party narratives around the world. To view this study, visit https://www.belfercenter.org/publication/combatting-and-defeating-chinese-propaganda-and-disinformation-case-study-taiwans-2020.

Beijing or relying on the United States to get information and resources.[73]

Conclusion

Although there is always the threat of conventional war, the PRC poses a more urgent threat to Taiwan's media landscape in its quest for reunification. The PRC's malign influence in Taiwan's traditional media and ability to spread propaganda and disinformation on social media threatens Taiwan's press freedom and democratic process. Taiwan's government and civil society has responded to the PRC's threat in innovative ways. The United States has helped Taiwan fight PRC propaganda and disinformation through the GEC and should continue to do so by connecting Taiwan to companies and allies, increasing funding for Taiwan's efforts to fight disinformation, and advocating for its participation in international organizations. ■

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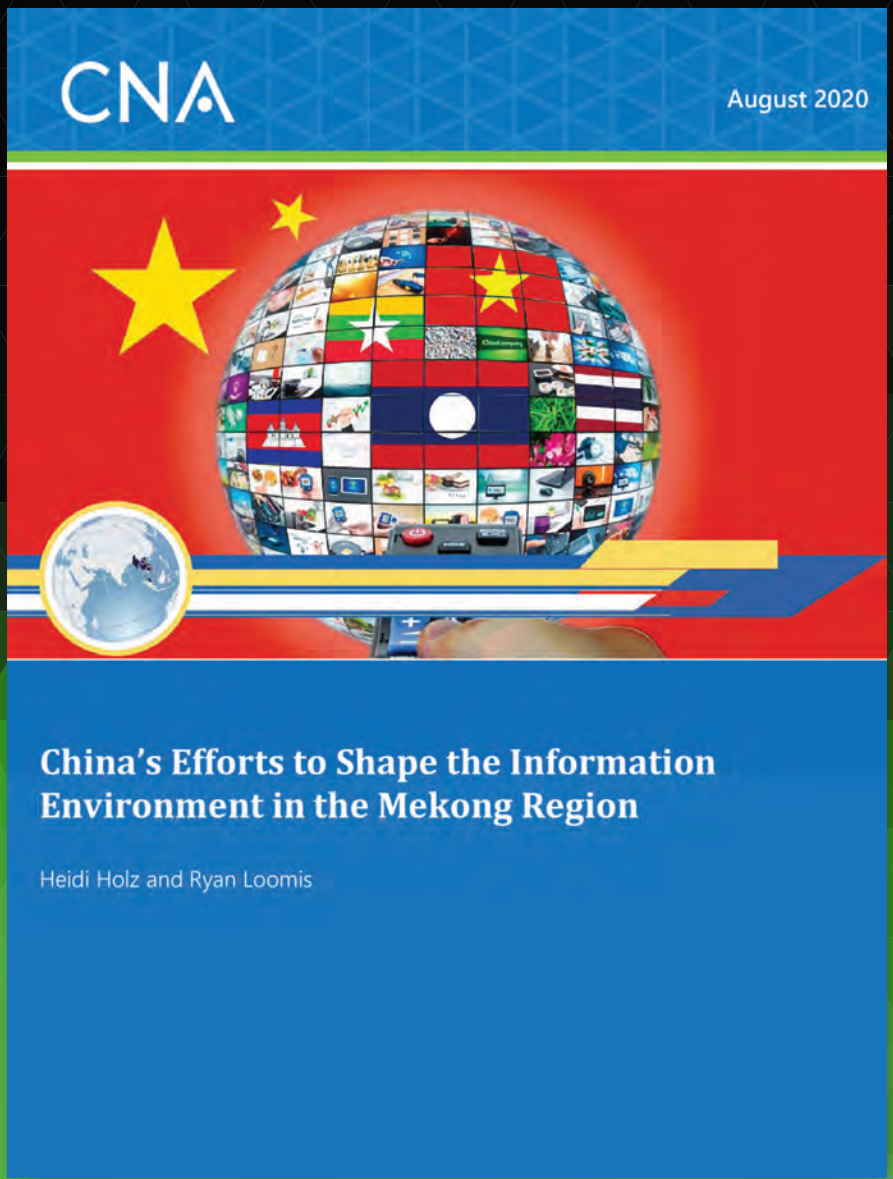
Military Review

RECOMMENDS



China's Efforts to Shape the Information Environment in the Mekong Region provides a detailed case study on just one of China's propaganda campaigns— its efforts to shape the information environments of Cambodia, Laos, Myanmar, Thailand, and Vietnam to make the people of those nations more vulnerable and receptive to Chinese influence and intimidation. A major value of this study is that it provides detail and insight into the template China employs to manipulate public perceptions in other targeted regions to achieve its political objectives. To that end, the study identifies key communist Chinese narratives and examines each of the tactics, tools, and techniques that China characteristically employs to promote those narratives to local audiences through media and other venues. To view this study, visit https://www.cna.org/CNA_files/PDF/IIM-2020-U-027917-Final.pdf.

Preparing for the Future

Marine Corps Support to Joint Operations in Contested Littorals

Gen. David H. Berger, U.S. Marine Corps

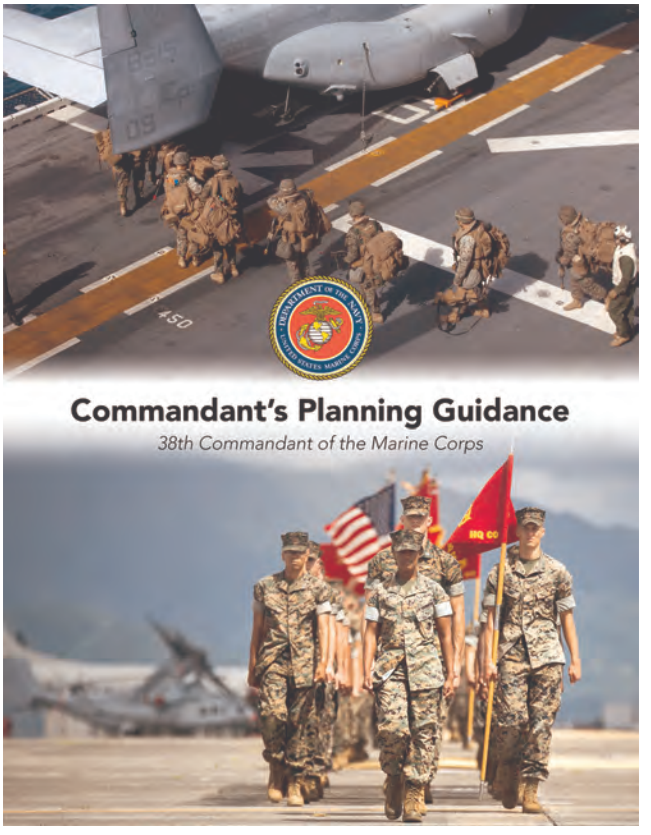
Over the last five years, the U.S. defense establishment has begun to grapple with the implications of the advent of a radically more complex and challenging strategic epoch. The return of great-power competition and the continuing threats of regional rogue states and violent nonstate actors challenge our Nation's interests amid an ongoing "revolution in technology that poses both peril and promise."[1]

Consideration of the challenging future these changes are likely to produce has sparked an energetic focus on developing new operating concepts, technologies, and force structures in all the military services. The U.S. Marine Corps is no exception. In close partnership with the U.S. Navy, our thought in recent years has converged around the concepts of *littoral operations in contested environments* and *expeditionary advanced base operations*, and their implications for the full range of Title 10 service functions in organizing, training, and equipping the forces necessary to execute them. During my predecessor's tenure as commandant, the U.S. Marine Corps embarked upon a campaign of learning to draw out these implications, a campaign that has continued and accelerated on my watch. Our learning to this point has led us to some interesting initial conclusions and hypotheses. One of the most interesting is *the possibility that a major role for Marine Corps forces in critical future scenarios may revolve around enabling naval and joint force commanders as a dedicated multi-domain reconnaissance and counterreconnaissance force.*

Reconnaissance and counterreconnaissance are precisely defined in joint and service doctrine. Reconnaissance operations, in any domain, use the full range of available "detection methods to obtain information about the activities and resources of an enemy or adversary."[2] Counterreconnaissance seeks to prevent adversaries from doing the same to us; it comprises "all measures taken to prevent hostile observation of a force, area, or place."[3] In the maritime context, it is wise to marry these current doctrinal definitions with the broader perspective conveyed in two "navy words of distinguished lineage": *scouting* and *screening*. The distinguished naval tactician Capt. Wayne P. Hughes Jr. defined scouting as "reconnaissance, surveillance, code-breaking, and all other ways to obtain and report combat information to commanders and their forces," and screening as "all measures used to frustrate the enemy's scouting effort … includ[ing] the possibility of attacking a threatening enemy."[4] This broader naval understanding of the mission informs my understanding of reconnaissance and counterreconnaissance in the pages that follow.

The most recent phase of the U.S. Marine Corps' learning process began with my *Commandant's Planning Guidance* of July 2019, amplified by a June 2020 article

articulating "The Case for Change," in which I laid out my assessment of the major features of the operating environment for which we now have to plan.[5] Nesting within the 2018 *National Defense Strategy*'s threat analysis, I observed that U.S. military responses to the challenges posed by revisionist powers, rogue states, and technologically advanced nonstate actors must contend with the realities of an increasingly mature precision strike regime. Several of these actors also make use of a sophisticated toolkit of coercive behaviors below the threshold of violence that some describe as gray-zone strategies. I also noted the obvious facts of geography—the intersection of threat and U.S. interests means that our interaction with several of our most formidable challengers will largely occur within the maritime domain. Sharing my predecessor's conclusion that "the Marine Corps is not organized, trained, equipped, or postured to meet the demands" of this rapidly changing operating environment, I have been deeply engaged over the last eighteen months with the challenge of formulating appropriate responses to those demands.[6]



To view the *Commandant's Planning Guidance: 38th Commandant of the Marine Corps*, visit https://www.hqmc.marines.mil/Portals/142/Docs/%2038th%20Commandant%27s%20Planning%20Guidance_2019.pdf.

A major part of the Marine Corps' response to this challenge is the program of development and learning that we call Force Design 2030 (FD 2030). We have already executed some of the less controversial elements of this program—for example, my decision to divest the entire Marine Corps' inventory of M1A1 Abrams tanks. The more consequential elements of the program are still underway, and among these are significant changes to a major portion of our ground combat element: fielding the Marine Littoral Regiment, restructuring our infantry battalions, and eliminating much of our existing towed cannon artillery in favor of longer-range rocket and missile systems. The latter will be able to launch a wide range of containerized munitions, including antiship missiles. Accompanying these changes are shifts in supporting aviation and logistical capabilities. The overall thrust of our FD 2030 program is to produce a Marine Corps that is "prepared to operate inside actively contested maritime spaces in support of fleet operations" that are themselves nested within overarching joint campaigns.[7]

These initial changes are the early stages of a much longer campaign. They will allow us to free resources and field experimental capabilities for the sustained period of innovation that the operating environment demands. As FD 2030 is at its heart a campaign of learning, it is not surprising that after a bit more than a year of work, we have learned some things. The wargaming and experimentation we have done thus far, culminating in the annual Naval Services Wargame in October 2020, suggests that the basic proposition of FD 2030 remains valid. Given the realities of geography and the proliferating precision strike regime, the Navy and the joint force will need an "inside" or "stand-in" force that can operate persistently within the weapons engagement zone (WEZ) of a peer adversary. Such a capability is particularly critical in the "contact" and "blunt" layers of the Global Operating Model , when joint forces must "compete … below the level of armed conflict" and should that competition escalate to armed conflict, "delay, degrade, or deny adversary aggression."[8] Stand-in forces will be constantly present in key maritime terrain during periods of competition

below the threshold of violence, deterring and countering nonlethal coercive behavior and other malign activity directed at U.S. allies, partners, and other interests. These same forces will remain inside an adversary WEZ to provide necessary support to naval and joint campaigning should competition escalate to war. Critically, given the vulnerability of large, fixed bases and shore-based infrastructure to long-range precision strike and the challenges of adequately defending that infrastructure, the stand-in force must be able to perform these functions from a strictly expeditionary and highly mobile posture.

> Given the realities of geography and the proliferating precision strike regime, the Navy and the joint force will need an 'inside' or 'stand-in' force that can operate persistently within the weapons engagement zone (WEZ) of a peer adversary.

These broad conclusions are well supported by the wargaming and analysis we have done thus far. Our ongoing learning from these tools as well as from experimentation and large-scale exercises is steadily generating answers to the question of *how* the Marine Corps can most usefully contribute to solving naval and joint force commanders' problems as a stand-in force. Based upon our evolving understanding of expeditionary advanced base operations, we initially envisioned supporting fleet commanders by providing lethal antiship fires from mobile ground units operating from dispersed, austere expeditionary advanced bases (EABs) and from STOVL fifth generation strike fighters likewise operating from or enabled by specialized EABs.[9] What is now becoming clearer is a critical enabling role of the stand-in force—what the Navy and joint force might need most from the Marine Corps. The answer to the question of how we may best support the broader effort, it seems increasingly likely, is not lethal fires as an end in themselves but rather *reconnaissance and counterreconnaissance* applied in all domains and across the competition continuum.[10]

The logic of this requirement is clear. With the proliferation of the precision-strike regime, the ability of the naval and joint force to retain the initiative and ultimately to conduct effective offensive action to reverse adversary aggression will depend critically on the ability to win the "hider-finder" competition. Given the rapidly advancing capabilities of our pacing threat, the People's Republic of China (PRC), the joint force's historically dominant capability to sense and understand its operating environment will be vigorously contested or denied in every domain. At least initially, as wargame after wargame suggests, fixed land bases and high-signature land forces will be vulnerable to long-range precision weapons. Large naval vessels will likewise initially face considerable risk operating within the range of a peer adversary's long-range precision strike capabilities, including DF-21 and DF-26 antiship ballistic missiles.[11] Given our pacing threat's capabilities in the space and information domains, reliable tracking and cuing of naval targets through the use of national technical means will be challenged, and our links among command and logistical nodes may also be targeted.

Within this highly contested environment, as simulated in the wargames, analysis, and experimentation we have conducted to date, the utility of the stand-in force in a reconnaissance and counterreconnaissance role becomes clear. A light, self-reliant, highly mobile naval expeditionary force postured forward in littoral areas within the adversary's WEZ would provide naval and joint force commanders the ability to identify and track

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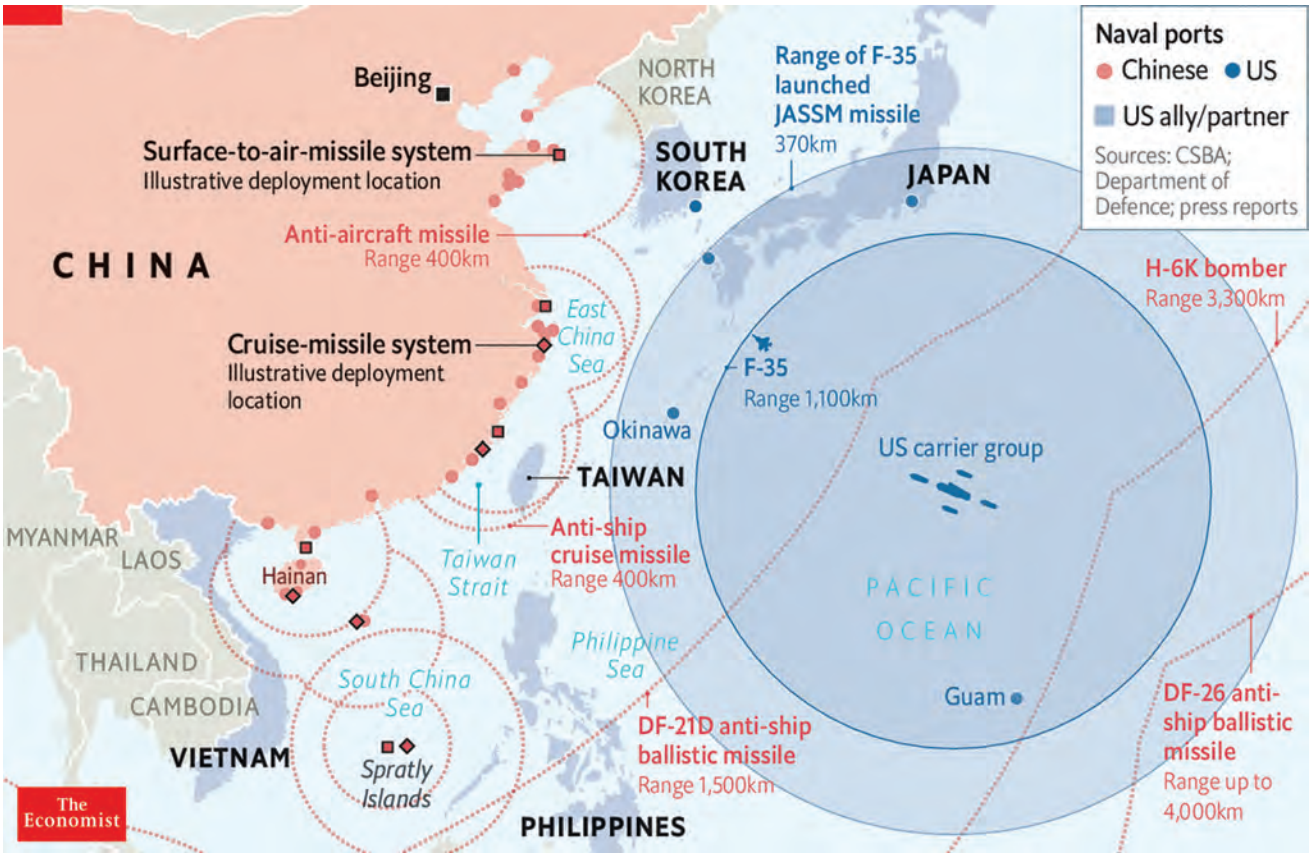

(Figure by *The Economist*)

Aircraft Carrier Combat Range

Increasing quantities of more capable area denial systems based on mainland China and on artificial islands built by China have made U.S. naval operations increasingly risky in and around the South China Sea and Taiwan. China has also vastly extended its weapons ranges eastward and now poses a direct threat to U.S. forces based in Guam and naval forces operating in the central Pacific.

high-value targets including key reconnaissance platforms, scouting units, and other elements of the adversary's command, control, communications, computers, cyber, intelligence, surveillance, reconnaissance, and targeting (C5ISR-T) complex. The force could hold these targets at risk with its own organic fires capabilities and, perhaps more importantly, provide critical links for highly lethal naval and joint fires kill chains. With the right investments and doctrine for our own joint and combined C5ISR-T, this capability broadens to encompass the possibility of highly resilient "kill webs" able to link available sensors and shooters even in the face of adversary disruption of the information domain.[12] Moreover, since the stand-in force would operate in continual motion from a variety of low-signature maritime platforms and austere, temporary EABs ashore, it would be fiendishly difficult for the adversary to locate, track, and effectively target. Its constant, distributed presence will introduce significant uncertainty into an adversary's decision-making calculus. Even in steady-state, day-to-day competition below the threshold of violence, this widely distributed mobile presence will greatly expand the depth and fidelity of the joint force commander's understanding of the full range of adversary and other activity within the area of operations. In close cooperation with local allies and partners, this expanded understanding will help discourage an adversary's nonlethal coercive behavior and contribute directly to "deterrence by detection."[13]

Marines assigned to the 13th Marine Expeditionary Unit conduct call-for-fire missions 12 September 2018 during Theater Amphibious Combat Rehearsal (TACR) 18 in Djibouti. Led by Naval Amphibious Force, Task Force 51/5th Marine Expeditionary Expedition Brigade, the TACR integrated U.S. Navy and Marine Corps assets practiced a range of collective critical combat-related capabilities that would support an expanded reconnaissance and counterreconnaissance role for the Marine Corps. (Photo by Staff Sgt. David Proffitt, U.S. Marine Corps)

All of this, it must be emphasized, will be accomplished by naval expeditionary forces operating in international waters and periodic light footprints ashore on the territory of local allies and partners. It does not require the sustained presence of heavy ground forces or the regular deployment of large, land-based aviation elements. The use of the stand-in force in this maritime reconnaissance and security role will be a good fit for

scenarios in which regional allies or partners are unwilling or unable to host substantial numbers of U.S. personnel ashore. While it may be infeasible for heavy land-based joint forces to establish a permanent presence forward in such scenarios, the sustained operations of lighter Marine Corps stand-in forces in the contact and blunt layers can set the conditions for their later introduction in the surge layer. The stand-in force's persistent presence will help build partner and ally confidence in U.S. reliability and commitment. At the same time, its contribution to establishing and maintaining reliable combined and joint C5ISR-T within the WEZ will provide critical enablers for the introduction of follow-on forces.

The notion that maritime reconnaissance and counterreconnaissance might become a major role or mission for the Marine Corps has predictably generated some counterarguments. One of these, heard frequently both within and outside the Marine Corps, is the idea that our service's identity is tied to the forcible entry mission or the amphibious assault. Closely related to that criticism is the notion that our service must maintain a strictly offensive character—that our tradition as "amphibious shock troops" is one to which we are somehow immutably bound. Finally, there is the idea that recasting that part of the Marine Corps that will source the stand-in force to focus on maritime reconnaissance and counterreconnaissance will focus us exclusively on the demands of a single threat in a single theater and compromise our ability to perform our broader enduring role as a globally employable naval expeditionary force in readiness.

These critiques are serious. Taking on the maritime reconnaissance and counterreconnaissance mission would entail an adjustment for the Marine Corps, with implications for certain aspects of our doctrine, force structure, and associated budget. The critics deserve equally serious answers to their concerns, which I will try to provide here in brief.

The issue of "service identity" is particularly troubling, as it can become an obstacle to the kind of innovative thinking we need to keep pace with a changing world. Marine Corps roles and even basic force structure are codified in law; 10 U.S.C. § 5063 prescribes a Marine Corps focused primarily on the "seizure or defense of advanced naval bases and for the conduct of such land operations as may be essential to the prosecution of a naval campaign" and structured as "forces of combined arms" organized in three combat divisions and three aircraft wings.[14] Statutes, however, codify what *has been*, and they evolve as new situations and requirements present themselves. The Marine Corps has traditionally been quite agile in navigating such change, and we are consequently fond of referencing our historical role in major military innovations such as the development of amphibious doctrine in the interwar period and of heliborne vertical envelopment in the early Cold War.[15] We are justifiably proud of our historical accomplishments, and

a certain amount of conservatism in military thinking helps counter the risk of infatuation with overly deterministic or otherwise misguided visions of future war. But at a certain point, conservatism can crystallize into a static mentality that becomes an obstacle to necessary change. Our service identity is inextricably linked to our historical record of innovation and adaptation. At

> The issue of 'service identity' is particularly troubling, as it can become an obstacle to the kind of innovative thinking we need to keep pace with a changing world.

several points in our history, the Marines have managed to develop a vision of future war accurate enough to allow the timely development of capabilities that proved to be essential enablers to the prosecution of naval and joint campaigns. We did not, for example, conduct the iconic amphibious operations of the Second World War purely for the sake of conducting amphibious operations—those operations enabled naval forces to secure land bases or eliminate those of the adversary in support of an overarching naval campaign. Ultimately, as we neared the home islands of Japan, the rationale for the seizure of bases in the Marianas, Iwo Jima, and Okinawa became directly linked to a larger joint campaign; airfields on these islands were essential to the Army Air Corps in their campaign against Japanese war industry. We should keep this history in mind as we think about amphibious operations or any other form of maneuver. These concepts are tools in a kit that we must be willing to adjust over time.

Closely related to critiques based on service identity is a concern that focusing on maritime reconnaissance and counterreconnaissance might somehow compromise our essentially offensive service ethos. As our basic doctrine for warfighting reminds us, a general bias toward action is essential, and at the appropriate level of war, a bias for the positive aim, the offensive action, is warranted. The maritime reconnaissance and counterreconnaissance mission, as the naval concept of "screening" suggests, is in no sense a matter of merely passive sensing or observation. The purpose of a reconnaissance and security force is to fight for information. Successful accomplishment of that mission has always required an operationally sophisticated balance of prudent observation and savagely aggressive action to force enemy commitment and reveal disposition. Performing this function for the Navy and the joint force is entirely consistent with a warfighting philosophy that counsels us to "orient on the enemy," uncover their "surfaces and gaps," to disrupt their decision-making cycle, gain dominance in operational tempo, and ultimately "penetrate the system, tear it apart, and … destroy the isolated components."[16] The ability to do this, which a well-designed stand-in force will be well postured to provide, is an essential enabler for naval and joint force commanders in multi-domain competition in the contact and blunt layers.

Finally, the idea that a maritime reconnaissance and counterreconnaissance role for the Marine Corps reflects a myopic focus on a single threat or theater; in this case, the PRC in the western Pacific is rooted in a concern that commitment to this role could render us unready for the range of demands we may face as a forward-deployed naval expeditionary force. This is a legitimate concern, and we need to guard against it. There is no question that as a naval expeditionary force in readiness, the Marine Corps is a key element of the Nation's ability to manage the risk of crises and contingencies involving the full global range of expected and unexpected threats. It would indeed be foolish to overspecialize to a degree that would compromise that capability. I am confident that we are managing that risk effectively. A portion of the risk has been assumed by higher authority given the basic conclusions of current strategy regarding great-power competition. This guidance identifies the PRC as the pacing threat and directs the Marine Corps to take certain actions in response. Service action in response to such prioritization is in no sense optional, and I have guided our actions accordingly. Additionally, given the long-standing trends and realities of the twenty-first-century operating environment, it is likely that military operations in general will be increasingly subject to the constraints imposed by the rapidly proliferating precision strike regime. A stand-in force able to persist inside an adversary WEZ and

perform reconnaissance and counterreconnaissance tasks in the contact and blunt layers will be useful to naval and joint commanders in a wide variety of theaters. Winning the hider-finder contest will be critical, no matter where we are on the globe.

Some assert that the security environment we now confront is the most complex, the most dangerous our Nation has ever faced. These claims can sometimes gloss over the significant lethal challenges our predecessors confronted throughout history. Still, the challenges we face now are real, they are many, and they are growing. We cannot afford to double down on traditional or preferred ways of doing business simply *because* they are traditional or preferred; we must retain the flexibility to innovate in response to the demands of *today's* operating environment to produce the enabling capabilities that *today's* naval and joint force commanders require. Even more critical is our ability to anticipate the challenges of tomorrow's environment and invest now in capabilities we will need going forward. This mental and institutional flexibility—the ability to adjust and adapt the specific capabilities and forms of maneuver by which we perform our enduring role as the Nation's naval expeditionary force in readiness—is the essence of the Marine Corps' service identity. While the maritime reconnaissance and counterreconnaissance role is in early stages of concept development, it already shows great potential for helping the joint force gain and maintain relative advantage. Wargaming, experimentation, and practical exercising by Fleet Marine forces will help determine just how great that advantage might be. ■

Learning and innovation go hand in hand. The arrogance of success is to think that what you did yesterday will be sufficient for tomorrow.

—C. William Pollard[17]

Notes

1. The White House, *Interim National Security Strategic Guidance* (Washington, DC: The White House, March 2021), 8.

2. Marine Corps Doctrinal Publication (MCDP) 1-0, *Marine Corps Operations* (Quantico, VA: Marine Corps Combat Development Command, 26 July 2017), 6-4.

3. Ibid., Glossary-10.

4. Wayne P. Hughes Jr. and Robert P. Girrier, *Fleet Tactics and Naval Operations*, 3rd ed. (Annapolis, MD: Naval Institute Press, 2018), 3–4.

5. United States Marine Corps (USMC), *Commandant's Planning Guidance: 38th Commandant of the Marine Corps* (Quantico, VA: Headquarters, USMC, 2019); David H. Berger, "The Case for Change," *Marine Corps Gazette* 104, no. 6 (June 2020): 8–12.

6. USMC, *Commandant's Planning Guidance*, 1.

7. Ibid.

8. Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge* (Washington, DC: U.S. Government Publishing Office, 2018), 7.

9. In February 2021, we codified our present understanding of this core concept in the "Tentative Manual for Advanced Base Operations," available at https://www.marines.mil/News/Messages/Messages-Display/Article/2495507/publication-and-availability-of-the-tentative-manual-for-expeditionary-advanced/ (CAC enabled).

10. MCDP 1-4, *Competing* (Quantico, VA: Marine Corps Combat Development Command, 2020), 1-6. Marines think of interaction with adversaries below the level of armed conflict, as well as all forms of violence including open warfare, as residing at various points along a continuum of competition.

11. Steven Stashwick, "Chinese Ballistic Missiles Fired into South China Sea Claimed to Hit Target Ship," *The Diplomat* (website), 17 November 2020, accessed 8 April 2021, https://thediplomat.com/2020/11/chinese-ballistic-missiles-fired-into-south-china-sea-claimed-to-hit-target-ship/.

12. Compelling thoughts on this have been advanced by Bryan Clark, Daniel Patt, and Harrison Schramm, *Mosaic Warfare: Exploiting Artificial Intelligence and Autonomous Systems to Implement Decision-Centric Operations* (Washington, DC: Center for Strategic and Budgetary Assessments, 11 February 2020), accessed 8 April 2021, https://csbaonline.org/research/publications/mosaic-warfare-exploiting-artificial-intelligence-and-autonomous-systems-to-implement-decision-centric-operations.

13. Thomas G. Mahnken, Travis Sharp, and Grace B. Kim, *Deterrence by Detection: A Key Role for Unmanned Aircraft Systems in Great Power Competition* (Washington, DC: Center for Strategic and Budgetary Assessments, 14 April 2020), accessed 8 April 2021, https://csbaonline.org/research/publications/deterrence-by-detection-a-key-role-for-unmanned-aircraft-systems-in-great-power-competition.

14. 10 U.S.C. § 5063, accessed 8 April 2021, https://www.govinfo.gov/content/pkg/USCODE-2010-title10/pdf/USCODE-2010-title10-subtitleC-partI-chap509.pdf.

15. Victor H. Krulak, *First to Fight: An Inside View of the Marine Corps* (Annapolis, MD: Naval Institute Press, 1984), loc. 1600-1619, Kindle.

16. MCDP 1, *Warfighting* (Quantico, VA: Headquarters, USMC, 1997), 73–76, 92.

17. C. William Pollard, *The Soul of the Firm* (New York: Harper Business; Grand Rapids, MI: Zondervan, 1996), 114.

Taiwan and the U.S. Army

New Opportunities amid Increasing Threats

Eric Setzekorn, PhD

For the first time in decades, the evolving security situation in the Taiwan Strait offers the U.S. Army a chance to play an important role in deterring Chinese military action and strengthening American strategic connections in East Asia. In the western Pacific, the U.S. Army has been traditionally focused on the Korean Peninsula, but a shifting political context, technological developments, and new policies are expanding the U.S. Army's opportunity to play a larger part in maintaining stability in the region.

A Starker Strategic Context

Over the past five years, the strategic consensus that engagement between the United States and the People's Republic of China (PRC) would provide long-term benefits and possibly political changes in the PRC has been abandoned by both the Republican and Democratic parties. Opposition to Chinese predatory economic practices, aggressive territorial actions in East Asia, and Communist Party of China General Secretary Xi Jinping's domestic political crackdown has led to a backlash throughout the U.S. foreign policy community. Then Secretary of Defense James Mattis released the *2018 National Defense Strategy*, identifying China as a "strategic competitor using predatory economics to intimidate its neighbors while militarizing features in the South China Sea."[1] Alongside increasing concerns about the PRC, connections between the United States and Taiwan have been steadily expanding. Since the passage of the Taiwan Relations Act in 1979, the United States has been committed to preserving close economic and cultural ties with Taiwan, as well as providing defensive military equipment.[2] Although in accordance with the "One China Policy," the U.S. formally recognizes only the People's Republic of China, rather than the Republic of China (Taiwan), U.S.-Taiwan government relations have been increasing in the past several years. The Obama administration supported Taiwan's inclusion in several international organizations, such as the International Civil Aviation Organization.[3] On 31 December 2018, President Donald Trump signed the Asia Reassurance Initiative Act, passed by Congress with unanimous consent, which increases support to Asian allies and specifically called for expanded contact with Taiwan through expanded defense sales and high-level visits.[4] In November 2019, Heino Klinck, U.S. deputy assistant secretary of defense for East Asia, visited Taiwan; the visit was the highest level American military engagement in a decade.[5] The year 2019 also marked the fortieth anniversary of the Taiwan Relations Act, which was commemorated by numerous ceremonies, exhibitions, and speeches in Taipei and Washington.[6]

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At a New Year's Day flag-raising ceremony held 2 January 2016 in Washington, D.C., Taiwan representative Shen Luxun speaks to a crowd supportive of Taiwan's independence, emphasizing the importance of Taiwan's flag as a national emblem of the Republic of China. (Photo by Zhong Chenfang, Voice of America)

In 2020, the United States (together with Japan), also began an effort to increase Taiwan's role in the World Health Organization, after Taiwan's deft handling of the COVID-19 pandemic drew international praise.[7]

The past twenty years has seen an increasingly stark disconnect between Taiwan and China, as a distinctive Taiwanese identity has flourished, while the PRC's intensely nationalistic posturing has further separated the two distinct societies and cultures. The relationship between Taiwan and China has posed a political challenge since 1949, when Mao Tse-tung's communist People's Liberation Army (PLA) forces defeated the Republic of China's (ROC) military and forced Chiang Kai-shek's government to flee to Taiwan. Over 80 percent of the modern-day Taiwanese population has no direct familial connection to China, their ancestors having emigrated to Taiwan hundreds or even thousands of years earlier. During the Cold War, the ROC government that had fled to Taiwan in 1949 promoted an official historical narrative of a shared "Chinese" culture on both sides of the Taiwan Strait. Historians and political scientists have increasingly highlighted the shallow roots of this cultural project, with recent scholarship illustrating that Cold War propaganda to "retake the mainland" was a political slogan that was not indicative of larger cultural or social affinities between China and Taiwan.[8] Since Taiwan's democratization in the 1980s and 1990s, the majority of the population has been skeptical of political and social connections to the PRC, and since the year 2000, Taiwan's Democratic

Progressive Party, which is wary of China, has won four out of six ROC presidential elections. Moreover, Taiwanese voters have shown increasingly negative opinions of China during Xi's rule, and the voters do not desire any political relationship. In 2020, over 83 percent of the voters identified as Taiwanese, compared to the 5 percent who self-identified as Chinese.[9] A strong identification with Taiwan, and a negative opinion of China, is especially apparent among younger demographic cohorts, who see China as belligerent and repressive, especially in light of the recent Hong Kong protests.[10] Taiwan's free press, its openness to immigration, and its changing social views (such as the legalization of same-sex marriage) also deepens the psychological divide. In effect, Taiwan's society and culture has evolved away from any real possibility of a sustained political relationship with China.

In addition to a deep cultural and political divide, Taiwan's economic relationship with China has also been wavering in the past five years. Since China began allowing Taiwanese investment in 1988, China has become Taiwan's largest trading partner, accounting for roughly 23 percent of Taiwanese exports in 2018, although this percentage is falling.[11] The signing of a tariff lowering Economic Cooperation Framework Agreement between China and Taiwan in 2010 set off massive protests in Taiwan, where many were worried that dependence on the Chinese market would allow for economic coercion and undermine Taiwan's sovereignty. While trade did increase after the Economic Cooperation Framework Agreement was signed, in the past four years Taiwan's economic investment in China had been declining, and Chinese investment growth in Taiwan has slowed sharply. Taiwan is also seeking to diversify its economic connections, and has negotiated free trade agreements with Singapore, New Zealand, and Panama.[12] The U.S.-China trade dispute has also created an opportunity for Taiwan, with Taiwan's economy growing at a rate of 3.4 percent in the fourth quarter of 2019, as U.S. companies sought to diversify their supply chains and move away from a reliance on China.[13] The U.S.-China trade dispute also appears to have boosted U.S.-Taiwan connections, especially in hi-tech industries, with a May 2020 announcement of a massive $12 billion investment by a Taiwanese company in a semi-conductor facility in Arizona, as well as the establishment of a Google research cluster in Taiwan.[14]

On the other side of the Taiwan Strait, the contrast to Taiwan's increasingly democratic, postmodern society is stark, as Xi continues to consolidate power and assert Chinese strength on the world stage. Since becoming General Secretary of the Communist Party of China in 2012, Xi has authorized the construction of artificial islands as a means of pursuing aggressive policies in the South China Sea; widespread cyberattacks and massive espionage activities directed toward the United States; and extensive military posturing toward neighboring countries such as Japan.[15] At home, Xi has greatly expanded the powers of security agencies, turned the vast western region of Xinjiang into a laboratory of Orwellian surveillance, and conducted widespread detentions of the Uyghur people. Xi has been similarly direct with Taiwan by personally establishing hard-line policies, underscoring that China will take the necessary actions to preserve its territorial claims. In a January 2019 speech regarding Taiwan, Xi stated, "We make no promise to renounce the use of force and reserve the option of taking all necessary means."[16] Xi's views have further limited the possibilities for a political and diplomatic solution to the cross-straits dispute, and the PRC's frequent saber rattling through military exercises and fielding advanced weapons has made the balance of military power in the Taiwan Strait increasingly fragile.

The Shifting Conventional Military Balance

While the political and cultural divide between Taiwan and China has widened, the balance of military power has shifted, not just between Taiwan and China but also between China and the United States. Since 1949, Taiwan has maintained a large military for a country with a population of twenty-three million people, using conscription and extensive purchases of U.S. equipment to create a very effective deterrent force. However, the growing capacity of the PLA to use air, naval, and missile forces to threaten Taiwan and which calls into question the forward basing of U.S. forces in East Asia

Next page: The 1st Battalion, 142nd Field Artillery Regiment team fires an Army Tactical Missile System 10 July 2015 at White Sands Missile Range, New Mexico. (Photo by Sgt. Katie Grandori, Arkansas National Guard Public Affairs Office)

has now forced a fundamental redesign of Taiwan's defense policy, and U.S. planners are also searching for new operational models to project power.

China's extensive military force modernization program is designed to provide the PLA with the ability to fight "informatized wars under local conditions," which means short, high-tech conflicts in China's periphery and a long-term goal of "world-class" military power in twenty to twenty-five years.[17] The PLA naval force is already larger than the U.S. Navy in total number of ships, and multiple aircraft carrier groups are under construction.[18] Chinese investment in large shipyard building capacity means that naval vessels can be built rapidly; for example, forty-one Jiangdao-class (type 056) corvettes were built between 2013 and early 2019, and the building boom shows no signs of ending.[19] PLA ground forces continue to reduce personnel strength, while increasing formations.[20] In 2015, the PLA command structure was also refined to create five theater-level commands, allowing for streamlined joint operations.[21] The PRC has become a world leader in hypersonic missiles and the DF-17 ballistic missile, which has a range of 1,500 miles and a speed of Mach 5, is expected to reach initial operating capability in 2020.[22] The impact of the Chinese massive spending and growing offensive capability has inspired doubt in the U.S. Navy's ability to provide security in the western Pacific region.

Taiwan's military has not been passive in the face of rising Chinese military threats and has continued to modernize its forces and adapt defense policies to the changing threats. Taiwan's ground forces have undergone major changes, with many of the older M41 and M48 tanks put into storage while newer, more mobile systems have been introduced. An

eight-wheeled armored vehicle, the CM-32 "Cloud Leopard," which functions much like the U.S. Army Stryker, has been domestically produced and has multiple configurations including mortar carrier, infantry squad, and command models. To upgrade the survivability and firepower of its armored forces, in 2019, Taiwan purchased over one hundred M1A2 Abrams tanks from the United States.[23] Since 2006, Taiwan has worked to create three combat aviation brigades modeled after U.S. formations and purchased sixty UH-60M Blackhawk medium-lift utility helicopters and thirty AH-64D Apache Longbow attack helicopters to join its existing fleet of CH-47 Chinook heavy-lift and UH-1 Huey medium-lift helicopters.[24] Taiwan has invested heavily in U.S. Army missile systems, spending billions on Patriot missiles and Army Tactical Missile System for its M270 rocket launch vehicles.[25] Taiwan's F-16 fighter aircraft force is set to receive a major upgrade of its existing F-16A/B fleet to the F-16V configuration; it will also add sixty-six more new F-16 aircraft, an effort costing over $5 billion.[26] The effect of these military acquisitions and improved capabilities maintains a tenuous balance in the region and preserves a credible deterrence presence in Taiwan.

In contrast to the intensive reform and procurement programs in Taiwan and China, the U.S. Army has not developed or deployed any new equipment or programs of significance in the past fifteen years that directly address the challenges in the western Pacific. This neglect was largely caused by the focus on counterinsurgency operations during the post-9/11 period as well as budget reductions due to sequestration. The Army Futures Command (AFC), created in 2018, was a positive development for the U.S. Army. AFC bears responsibility for a number of efforts that could have a tremendous impact in deterring PRC actions, such as boosting long-range firepower and developing next-generation Army weapons. AFC also examines supporting elements, such as "assured position, navigation and timing" to protect against enemy interference with electronics and a "synthetic training environment," to provide new training options.[27] One bright spot in the near future is the development of the precision strike missile, which can hit ground and naval targets at a range of up to four hundred kilometers and can be mounted in existing U.S. Army High Mobility Artillery Rocket System or Multiple Launch Rocket System launchers, both of which Taiwan also operates.[28] The U.S. Army's recent developments are promising, and Taiwan offers an intriguing location for mutually beneficial coordination because of shared Chinese threats to cyber systems, tactical networks, and the need for long-range precision fires.

New Strategies and Policy Options in East Asia

Although the military balance of power in the western Pacific is currently sufficient to promote stability and maintain peace, Taiwan and the United States will both increasingly need the robust, layered defense that ground forces provide in order to deter PRC military action. The U.S. Army could play a vital role in assisting with the development of new defense strategies in East Asia that could deter PRC aggression even if Taiwanese and U.S. naval and air forces were unable to defeat PRC attacks offshore. The defense situation in East Asia is fluid, and the PRC has continued reforms to its ground forces to emphasize the ability to seize and control disputed land territory and prevent a layered defensive force from challenging PLA operations. This evolving situation presents the U.S. Army with an opportunity to provide support and assistance, as well as refine old techniques for the twenty-first century multi-domain environment.

In the past five years, new ROC defense plans have sought to strengthen land-based defenses and present China with the challenge of overcoming robust and

Top: Taiwan pro-independence supporters display a banner before a Democratic Progressive Party gathering 16 January 2016 in Taipei. Taiwan elected its first female president in the historic vote, ending eight years of closer ties with China. (Photo by Philippe Lopez, Agence France-Presse)

Bottom: Taiwan's President Tsai Ing-wen (*center*) meets Maj. Gen. Arthur J. Logan, commander of the Hawaii National Guard, 28 March 2019 during a tour of the Hawaii Emergency Management Agency (Hi-EMA) and the Hawaii National Guard's disaster prevention center in Honolulu. (Photo courtesy of the Office of the President of the Republic of China [Taiwan])


Taiwan is NOT Part of China!
Support Taiwan Independence
台灣是台灣
不是中國

Like those Taiwan purchased from the United States, two M1 Abrams main battle tanks with 1st Armored Brigade Combat Team, 1st Infantry Division, search for optimal defensive positions 19 August 2019 during the culminating force-on-force exercise of Combined Resolve XII at the Joint Multinational Readiness Center in Hohenfels, Germany. (Photo by Sgt. Thomas Mort, U.S. Army)

decentralized ground defenses. This strategy, known as the "Overall Defense Concept," seeks to provide low-cost asymmetric capabilities. For example, in addition to conducting an immediate counterattack on PRC forces at a beach landing site using M1A2 tanks and AH-64 attack helicopters, ground units will prepare a layered defense that will not only inflict high casualties but will also provide time for reinforcements to mobilize from reserves or arrive from overseas.[29] Taiwan has begun developing an indigenous High Mobility Artillery Rocket System, which can deploy rapidly and is small enough to maneuver through Taiwan's dense urban environments or mountainous terrain. Taiwan is also purchasing hundreds of Stinger antiaircraft missiles, as well as over 1,400 Javelin and tube-launched, optically tracked, wire-guided (TOW) antitank missiles to add to the thousands of short-range, portable missiles it already has on hand.[30] In addition, Taiwan has developed an indigenous shoulder-fired disposable antitank missile and has begun distributing hundreds of the systems to locations throughout the country.[31]

The Overall Defense Concept is also pushing Taiwan to reshape its large number of reserve forces into a more operational and capable element of a layered defense. During the Cold War and into the 2010s, Taiwan required eight years of military service in the reserves after the period of mandatory conscription, and the overall pool of reserve manpower was over 3.5 million, with 2.5 million having army experience.[32] Taiwanese men are now conscripted for only four months of military training rather than a prolonged period of military service.[33] Taiwan's reserve system has never been fully activated in a crisis, and most reservists complete four "refresher" weekend exercises that include rifle marksmanship

training, limited combat training, and learning basic disaster relief skills.[34] Although changes to Taiwan's reserve forces are needed to make it more capable and responsive, this force represents an enormous military resource with significant deterrence potential. Due to the PLA downsizing and streamlining into a force of roughly 1.3 million ground force personnel, not all of whom can be deployed, Taiwan has a significant advantage in sheer numbers if it can create a more active, capable reserve element. The U.S. Army can serve as a useful partner in the effort to strengthen Taiwan's reserve capacity because the United States has developed a complex Army Reserve and National Guard system that supports operational rotational assignments as well as domestic disaster relief functions. Even creating a small operational reserve of roughly one hundred thousand personnel could provide additional brigades and support units during a crisis by reinforcing defenses and augmenting the active duty force.[35] Taiwan's policy makers have already been seeking U.S. Army assistance in creating a more robust and flexible ground component. During President Tsai Ing-wen's 2019 stopover in Hawaii, she visited the Hawaii Army National Guard Emergency Management Agency to understand how the U.S. National Guard units coordinate with other local and federal agencies.[36]

> "The U.S. Army could play a vital role in assisting with the development of new defense strategies in East Asia that could deter People's Republic of China (PRC) aggression even if Taiwanese and U.S. naval and air forces were unable to defeat PRC attacks offshore."

The shift toward a layered defense and asymmetric responses has not gone unnoticed in China, which has also been reforming its military forces to provide a larger manpower pool for expeditionary operations and new specialization in combat support roles. During the past five years, the People's Armed Police (*wuzhuang jingcha budui*, or PAP), a paramilitary force that serves as an adjunct to the PLA, has undergone a radical transformation. The PAP augments PLA ground forces, providing combat support roles similar to military police in the U.S. Army. The PAP has been systematically reformed from a dumping ground for passed-over officers and retired soldiers into a highly trained and well-equipped reaction force that can deploy to disputed areas. Changes in the PRC command structure have also more closely linked the PAP to military affairs. On 1 January 2018, the PAP was moved under the control of the Central Military Commission and the Central Committee of the Chinese Communist Party, both of which are headed by Xi.[37] In order to focus on combat roles, this organizational shift saw the PAP shed many civilian roles such as border protection and safeguarding natural resources. PAP forces have been structured into two "mobile contingents," each commanded by a two-star general officer.[38] These new formations have been equipped with heavier and more advanced weaponry, armored vehicles, helicopters, and unmanned aerial vehicle capabilities. PAP detachments have also been shifting from a stationary duty location to an expeditionary model; PAP units spend a year or two in Tibet or Xinjiang, which are regions with significant animosity to the PRC government, before rotating into a training and recovery phase. In total, these reforms of the PAP have made it a valuable resource of tactics and manpower that can support PLA efforts to defeat a layered defense approach to ground conflict in Taiwan.

Outlook for the Future and the U.S. Army's Role

In this dynamic environment between the PRC and ROC, the U.S. Army has an opportunity to become more involved and play a vital role in several ways. Unfortunately, the U.S. Army has not been proactive and is not a leading voice in the Washington policy discussion on Taiwan or the PRC. For example,

in the 2018 National Defense Authorization Act, Congress identified several tasks related to engagement, including Taiwan's participation in "Red Flag" U.S. Air Force exercises and for the U.S. Navy to "conduct bilateral naval exercises, to include pre-sail conferences, in the western Pacific Ocean with the Taiwan navy."[39] No mention was made of a U.S. Army role, which is not surprising due to the lack of U.S. Army messaging in Washington detailing what the service can provide. U.S. Air Force and Navy officers and senior leaders, both active duty and retired, are frequent speakers at Washington think tanks and research centers. In contrast, positions within the Department of Defense that coordinate East Asia policy in general, and PRC or Taiwan policy in particular, are rarely staffed by Army officers.

If the U.S. Army can become more active within Washington, D.C., where U.S. budgets are created and policy debates occur, there are two vital areas with excellent possibilities for future security development in the Taiwan area. First, the Army appears to be making great progress in developing long-range precision fires, and the Taiwan environment would be an excellent area to work through operationalizing the technology and developing new procedures. Second, the U.S. Army has made tremendous improvements in how it has trained and used reserve forces in the past two decades, and there are lessons that can help Taiwan as it attempts to "operationalize" its reserve component. By playing a more proactive role in policy debates, continuing to focus on relevant technologies, and sharing organizational lessons, the U.S. Army can impact an important and potentially dangerous flashpoint in the world today. ■

The views presented in this article represent the author's personal opinions and are not those of his employer.

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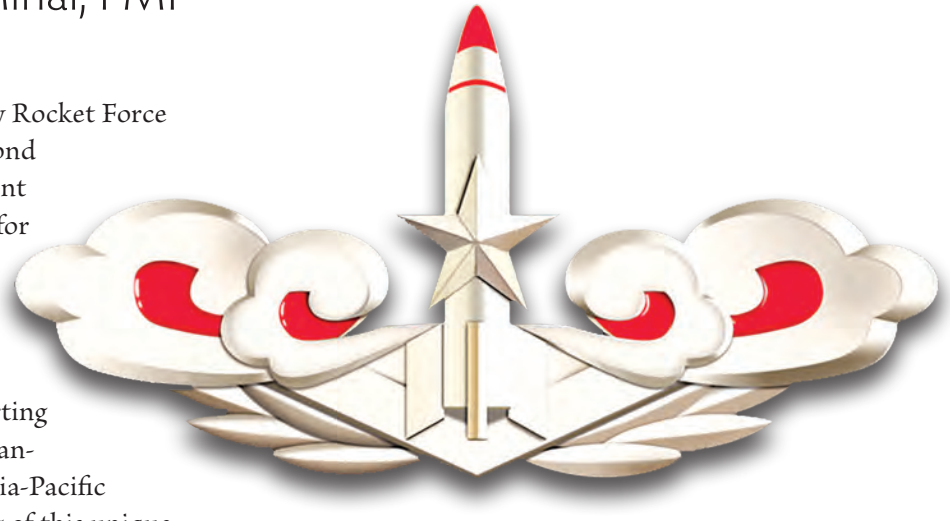
Understanding the People's Liberation Army Rocket Force

Strategy, Armament, and Disposition

Maj. Christopher J. Mihal, PMP



The People's Liberation Army Rocket Force (PLARF), formerly the Second Artillery Force, is the element of the Chinese military responsible for organizing, manning, training, and equipping the People's Republic of China's (PRC) strategic land-based nuclear and conventional missile forces as well as their supporting elements and bases. Any military planner involved in operations in the Asia-Pacific theater must have an understanding of this unique force as it presents a threat to its neighbors, specifically Taiwan, and maintains the ability to influence local, regional, and global military operations. The PLARF has been rapidly expanding and modernizing in recent years, concurrent with the PRC's evolving strategy regarding deterrence.

China's nuclear buildup is directly in line with the PRC's expanded view of the utility of nuclear weapons, and China's nuclear strategy is gradually evolving from a policy of minimal deterrence to a more active posture of limited deterrence.[1] While its nuclear arsenal is small compared to that of the United States, China fielded roughly 320 nuclear warheads as of 2020; China's nuclear arsenal is constantly upgrading, modernizing, and expanding.[2] Unconfirmed reports place China's nuclear arsenal as somewhat larger than it publicly claims; several conventionally armed ballistic missiles allegedly have nuclear variants that have never been officially confirmed.[3] However, these proposed nuclear variants may be disinformation or speculative.

Meanwhile, the conventional arm of the PLARF is the largest ground-based missile force in the world, with over 2,200 conventionally armed ballistic and cruise missiles and with enough antiship missiles to attack every U.S. surface combatant vessel in the South China Sea with enough firepower to overcome each ship's missile defense.[4] The elevation from Second Artillery Force to PLARF—that is, elevation to a full-service equivalent to the army, navy, and air force—is indicative of China's increased reliance on missile forces at the operational and strategic levels.

Identifying the strategy governing the employment of the PLARF and demonstrating China's history of proliferation will explain how the PLARF fits into China's overall strategic vision. Identifying each of PLARF's missile systems will chart the location of each of China's approximately forty missile brigades and their probable composition to the greatest extent possible. Some recommendations are necessary for planning against the PLARF; there are weaknesses inherent in its structure and technology as the formation currently exists.

Strategy

China's 2019 defense white paper identified that, while China has downsized the People's Liberation Army (PLA), it has expanded the PLARF because it "plays a critical role in maintaining China's national sovereignty and security."[5] Chinese leadership views the PLARF as a significant contribution to "strategic balance" between China and its main strategic competitors.[6] The PLARF fulfills several missions for China, including strategic deterrence, suppression of enemy air defenses, and "not allowing any inimical force access to Chinese space: land, air, or sea, and deny the enemy any space to fight a battle near the Chinese territory, including Taiwan and the first chain of islands [China's disputed island claims in the South China Sea]."[7] The PLARF's near-term objectives include "enhancing its credible and reliable capabilities of nuclear deterrence and counterattack, strengthening intermediate and long-range precision strike forces, and enhancing strategic counter-balance capability, so as to build a strong and modernized rocket force."[8] China is achieving these capabilities by simultaneously introducing new, more accurate nuclear missiles while drastically building up its conventional missile forces. Every year between 2002 and 2009, the PRC deployed approximately fifty to one hundred new ballistic missiles opposite Taiwan, with the number of missiles currently arrayed against Taiwan equaling at least one thousand.[9] Additionally, China is making great strides in enhancing the accuracy of its missiles, with the circular error probable (CEP) continuing to shrink. (The CEP is a measure of a weapon's precision; it is the radius of a circle in which 50 percent of rounds are expected to hit.) The CEP for China's first nuclear missile, the DF-3A, was four thousand meters, while its newest intercontinental ballistic missile (ICBM), the DF-41, has a CEP of one hundred to five hundred meters—conservatively, an 800 percent improvement.[10]

The PLARF's main focus is on Taiwan and the South China Sea, but it also maintains capabilities against the Korean Peninsula, India, Russia, and the United States. Although growing at a much more moderate pace compared to its conventional missile arm, the PLARF's nuclear forces have been expanding in recent decades and are on track to double in size by 2030.[11] Crucially, China's nuclear arsenal could now survive a first strike from either the United States or Russia with enough capability remaining to retaliate.[12]

The PLARF's capabilities are expanding to counter both Taiwanese and U.S. systems; China has focused on antiship ballistic missiles like the DF-17, DF-21, and DF-26 to counter U.S. carrier groups and deny U.S. access to the region via land, air, and sea in order to inhibit the U.S. ability to assist regional allies.[13] China's numerous short- and medium-range ballistic missiles are designed to overwhelm Taiwan's air defense, and China currently spends nearly twenty-four times what Taiwan does on defense.[14] With more accurate CEP of its missiles, the PLARF is better able to target "key strategic and operational targets of the enemy," including reconnaissance, intelligence, command and control, electronic warfare, antiair and logistics systems to disrupt enemy supply, logistics, and defenses in preparation for a land invasion.[15]

The direct impact of China's missiles is disturbing enough, but also troubling is China's willingness to share its missile technology with other nations. Pakistan in

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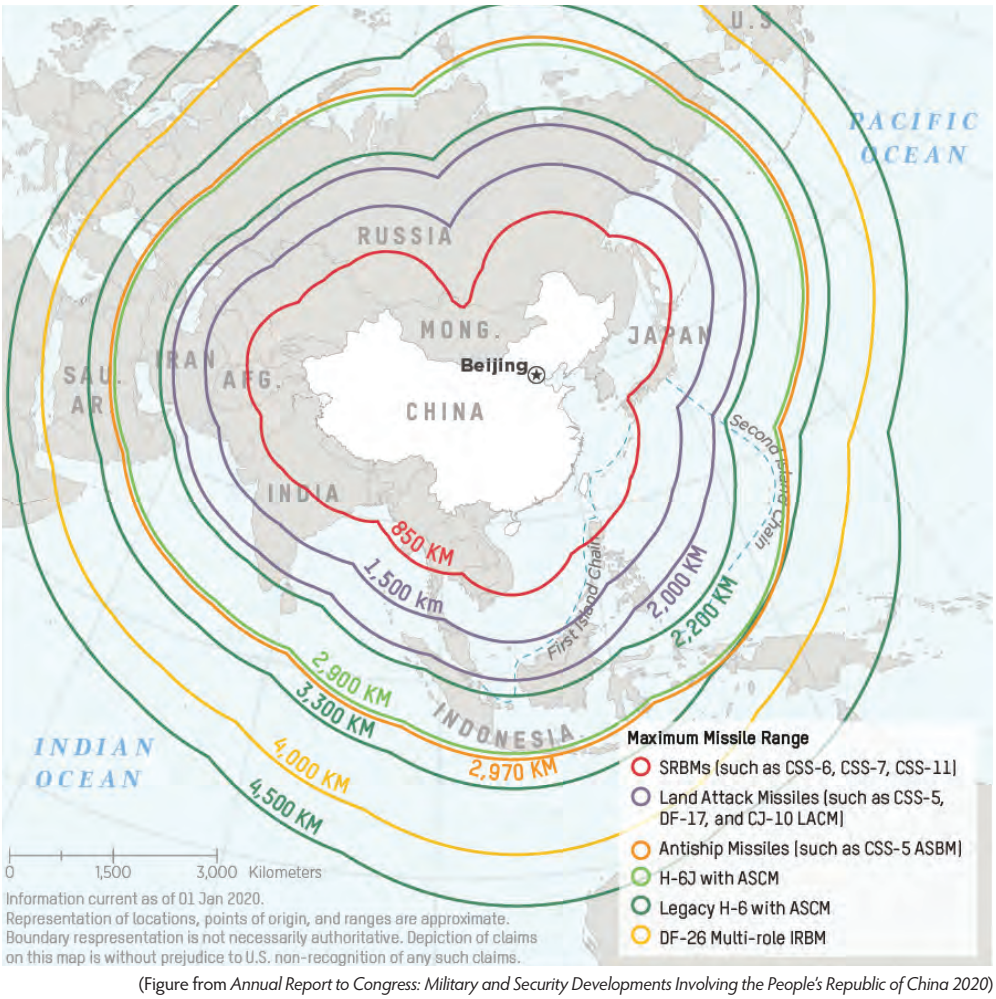


(Figure from *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2020*)

Figure 1. Short, Medium, and Intermediate Ballistic Missile Ranges

particular has benefited from this stance, with every Pakistani solid-fueled ballistic missile constructed with Chinese assistance since the early 1990s.[16] In 1981, China supplied Pakistan with CHIC-4 bombs—a potential delivery system for Pakistan's then nascent nuclear weapons program—and as much as fifty kilograms of highly enriched uranium, ten tons of natural uranium hexafluoride (a chemical compound that can be placed in centrifuges to produce highly enriched uranium for nuclear reactors or weapons), and five tons of UF_6 enriched to 3 percent, capable of producing uranium suitable for nuclear reactors.[17] Possessing a nuclear capability requires two distinct but vital programs—a program to construct a nuclear warhead, and a program to design a delivery system for a nuclear warhead. China has demonstrated willingness to assist other nations with both.

Armament

It is important to understand the varying missile systems fielded by the PLARF in order to devise adequate countermeasures. Each missile described below will include whether the missile is confirmed to be armed with a nuclear warhead, a conventional warhead, or if it is dual-capable; in other words, if there are conventional and nuclear variants of the same missile. China has an estimated 2,300–2,400 ballistic missiles in total, including about ninety ICBMs and approximately 320 nuclear warheads. More than half of China's nuclear capability resides in the PLARF; the rest are either stockpiled or launched from submarines, along with a handful of nuclear gravity bombs for the PLA air force, specifically for use by the H-6K bomber.[18]

Chinese missile nomenclature is relatively simple to follow. All ballistic missiles of the PLARF belong to the Dong Feng (East Wind) family of systems and possess the prefix "DF" in their designation, while cruise missiles belong to the Hong Niao/HN (Red Bird) or Chang Jian/CJ (Long Sword) family of missiles. In keeping with PLA deception tactics, the cruise missile CJ-10 has also been designated the Hong Niao-2/HN-2 to confuse intelligence analysis.

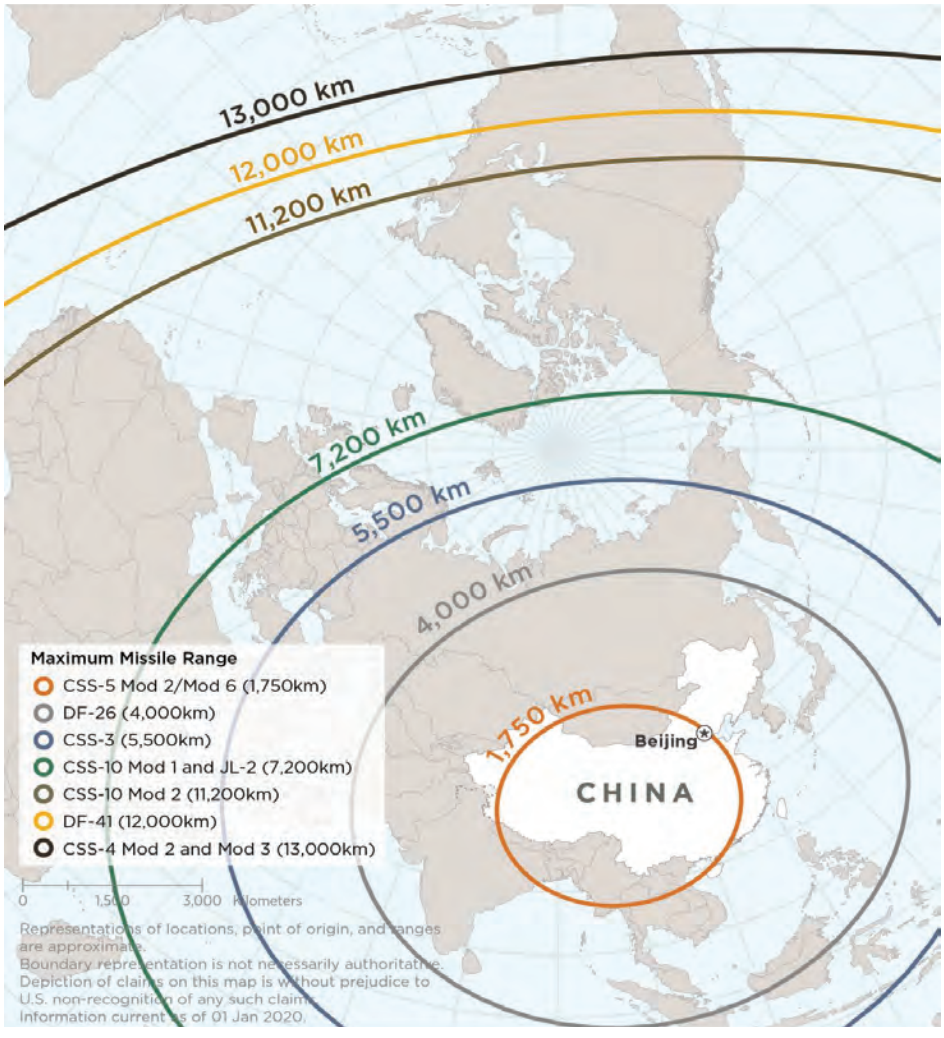
As the largest ground-based missile force in the world, the PLARF fields a wide variety of missile systems. Approximately half of these are short-range weapons

intended for use against Taiwan. Ground-based missiles fall into several categories based on type and range. PLARF missiles are organized into six classifications:

- Ground-launched cruise missile (GLCM)
- Hypersonic glide vehicle (HGV)
- Short-range ballistic missile (SRBM, range less than one thousand kilometers)
- Medium-range ballistic missile (MRBM, range between one thousand and three thousand kilometers)
- Intermediate-range ballistic missile (IRBM, range between three thousand and 5,500 kilometers)
- Intercontinental ballistic missile (ICBM, range greater than 5,500 kilometers)

For reference, figure 1 (on page 222) and figure 2 demonstrate range bands of many of China's missiles.[19] China's longest-range ICBMs—the DF-5A, DF-31A, and DF-41—could strike targets anywhere in the continental United States. Note that not all Chinese missiles belong to the PLARF; for instance, the DF-12 SRBM (also known as the M20 for the export version) may be used by the PLA and not the PLARF, as that weapon debuted in 2013 but has not been seen with any known PLARF units since.[20] The DF-12 may be based off of the B-611, a weapon system designed for the PLA to have integral long-range precision fires without the need to request theater PLARF forces.[21] The following missiles will be identified first by their Chinese designation and then by their Western designation, if applicable.

CJ-10 or HN-2. Previously referred to as the DH-10 until 2011, the CJ-10 is the only cruise missile in the PLARF arsenal; other Chinese cruise missiles are under the control of the PLA Navy or PLA Air Force.[22] As opposed to ballistic missiles, cruise missiles have a significantly lower trajectory and remain in the atmosphere for the duration of their flight time; this makes cruise missiles difficult to detect and intercept.[23] The CJ-10 is based off the Russian Kh-55, and purportedly, reverse-engineered U.S. Tomahawk technology.[24] The CJ-10 has a range of somewhat over 1,500 kilometers, an extremely accurate CEP of five meters, and while conventionally armed, it could potentially carry a



(Figure from *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2020*)

Figure 2. Intermediate and Intercontinental Ballistic Missile Ranges


DF-17
DF-17
DF-17
ZL105
ZL104


DF-26

nuclear warhead. These facts are mostly conjectural, and the total number of deployed CJ-10s is a mystery; the Department of Defense reported at least three hundred CJ-10 missiles as of 2020, but previous estimates vary from mid-two hundred to over five hundred missiles.[25] China has been extremely secretive regarding this weapons system, using numerous designations as well as intentional conflation with the DF-11 ballistic missile in numerous publications to further obfuscate the true nature of this system.[26] While China is no stranger to military deception, the deliberate attempts to hide the CJ-10's capabilities is unusual.

DF-4/CSS-3. A liquid-fueled ICBM carrying a 3.3-megaton nuclear warhead, the DF-4 is an older design that may be phased out in favor of the DF-31 or the DF-41. As is typical with older Chinese ICBMs, it is very inaccurate.[27] It is one of only two Chinese weapons systems with a megaton payload. The DF-4 is silo-based or cave-based, limiting its utility compared to the road-mobile ICBMs China has been recently fielding like the DF-31. As of 2020, there were only six DF-4s in the Chinese arsenal, further evidence the weapon is retiring.[28] As liquid-fueled missiles cannot store their fuel and thus must be fueled prior to use (a process that can take hours), liquid-fueled missiles are being retired in favor of solid-fueled missiles that can deploy instantly, increasing force readiness.

DF-5/CSS-4. Another liquid-fueled, silo-based ICBM, the DF-5 has much greater range than both the older DF-4 and new DF-31. The original DF-5, which is no longer deployed, could only carry a single one- to four-megaton warhead, while all three subvariants, the DF-5A, -5B, and -5C, are multiple independently targetable reentry vehicle (MIRV) capable. The DF-5A can carry three three-megaton warheads, the DF-5B can carry up to eight warheads, and the still-experimental DF-5C can carry up to ten warheads. The CEP of the newest variant is purportedly three hundred meters. Approximately ten of the DF-5 missiles currently operational are the DF-5A variant and ten are DF-5B variants.[29] The DF-5C is not currently deployed but may be in the near future.

DF-11/CSS-7. The DF-11 road-mobile, solid-fueled SRBM is the most numerous weapon system in the PLARF, with conservatively two hundred launchers and six hundred deployed missiles, and an upper estimate at over 750 missiles, with a range of six hundred kilometers.[30] China also has sold this weapon extensively to external markets as the M-11, with Pakistan, Myanmar, and Bangladesh confirmed to have purchased the missile.[31] Over one hundred of China's DF-11s have been upgraded to the DF-11A variant, while a bunker-buster variant designated DF-11AZT has also been unveiled.[32] Unconfirmed reports state that the DF-11 can carry small nuclear warheads of between two and twenty kilotons, or even a large, 350-kiloton warhead, but these speculations have never been confirmed and are not included in estimates of China's total nuclear forces.[33]

DF-15/CSS-6. A solid-fueled, road-mobile SRBM, the DF-15 has three variants: the DF-15A, -15B, and -15C. The DF-15 is conventionally armed but purportedly the DF-15A can carry a fifty- to 350-kiloton warhead.[34] The DF-15 is also very numerous, with several hundred missiles and at least one hundred launchers in total, although somewhat fewer total missiles than the DF-11.[35] The DF-15 has a range of six hundred kilometers, while the DF-15A has a range of nine hundred kilometers and the DF-15B eight hundred kilometers.[36] The DF-15C is an earth penetrator and has similar range to the -15A and -15B.

DF-16/CSS-11. The DF-16 is China's newest solid-fueled, road-mobile SRBM and may replace the older DF-11s and DF-15s in the years to come. It can carry up to three MIRV warheads, though the nuclear variant is unconfirmed as it is with other Chinese SRBMs. China had twelve DF-16s as of 2017 and has added a second brigade since, leading to probably twenty-four DF-16s as of 2020.[37]

DF-17 and DF-ZF. The DF-17 is a new solid-fueled, road-mobile IRBM. It shares some design aspects with the DF-16 but is most notable for its unique warhead, the DF-ZF. The DF-ZF is an HGV, a new type of warhead that combines elements of ballistic and cruise missiles, achieving supersonic speeds and thus immense

Top left: The Dongfeng-17 (DF-17), a hypersonic weapon used for precision strikes against medium and close targets, is displayed to the public for the first time 1 October 2019 during the National Day Parade in Beijing. (Screenshot of a China Global Television Network YouTube video)
Bottom left: A DF-26 medium-range ballistic missile displayed after a military parade commemorating the seventieth anniversary of the end of World War II 3 September 2015 in Beijing. (Photo courtesy of IceUnshattered via Wikimedia Commons)

kinetic energy. Powered by a scramjet, the DF-ZF can perform extreme evasive maneuvers to avoid enemy missile defense, unlike ballistic missiles that generally follow a predictable trajectory. Chinese commentators have stressed that the DF-ZF only will have conventional armament, but its nearest relative, the Russian Avangard HGV, carries a two-megaton warhead.[38] The DF-ZF also has an antiship variant undergoing testing.[39] Sixteen DF-17s appeared at the seventieth anniversary of the PRC military parade in 2019.[40]

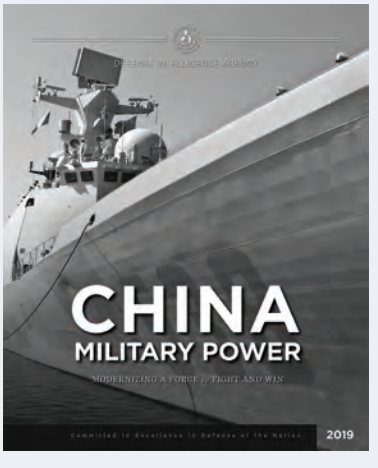
DF-21/CSS-5. China's first road-mobile, solid-fueled missile, the DF-21, is a medium-range ballistic missile with four subvariants: the DF-21A, the DF-21C, the DF-21D, and the DF-21E. The DF-21 has conventional and nuclear variants, with the nuclear variants, DF-21A and DF-21E, equipped with a 250-kiloton warhead, and there may also be an electromagnetic pulse warhead for the DF-21A.[41] The DF-21C is the conventional variant and is primarily deployed against India. The DF-21D is designed as a "carrier-killer" with greatly increased accuracy.[42] As of 2020, there are approximately forty nuclear-equipped DF-21A and DF-21E missiles and slightly more conventionally armed DF-21Cs and DF-21Ds.[43]

Both the DF-21 and DF-26 (and possibly the DF-17) are worrying, because as both have confirmed conventional and nuclear variants, there is significant ambiguity when one is launched as to what type of warhead it carries and how to counter it. As there is little visually to distinguish the variants, especially once they are launched, ascertaining the threat becomes incredibly difficult and could lead to unwarranted escalation and/or tragedy.[44]

DF-26. Another road-mobile, solid-fueled IRBM, the DF-26 is another dual-capable missile with both conventional and nuclear variants. With a range of about four thousand meters, the DF-26 is just shy of classification as an ICBM and will carry a similar 250-kiloton warhead to the DF-21. The DF-26 will likely supplant the older DF-3, with a similar range profile but greatly increased accuracy, deployment time, and the potential benefits of a dual-capable system.[45] There are roughly one hundred launchers and as many missiles for the DF-26, though the ratio of nuclear to conventional is not known.

DF-31/CSS-10. The DF-31 is a silo-based or road- and rail-mobile, solid-fueled ICBM. It is the most common ICBM in the PLARF arsenal. The ICBMs are solely nuclear-armed, with either a 250-kiloton or a one-megaton warhead. The CEP for the DF-31 is around three hundred meters, though the Chinese claim greater accuracy.[46] The subvariants are the DF-31A and the DF-31AG (sometimes called the DF-31B), both of which add MIRV capability with three-to-five twenty- to 150-kiloton warheads each. The PLARF currently possesses six DF-31 launchers, thirty-six DF-31A launchers, and thirty-six DF-31AG launchers for a total of seventy-eight missiles.[47]

DF-41/CSS-X-10. China's newest ICBM, the DF-41, is solid-fueled and has both silo and road-mobile variants, with a maximum theoretical range of fifteen thousand kilometers. The DF-41 will likely replace older ICBMs in the Chinese arsenal and will carry either a single megaton warhead or up to ten MIRV smaller warheads. The development of the DF-41 in addition to the DF-31 and older ICBMs is leading intelligence analysts to assume China's ICBM force could increase to "well over 200 [missiles]."[48] Sixteen DF-41s were present at the 2019 military parade, though there have only been unconfirmed reports of DF-41 brigades and their locations.[49]



(Figure from *Annual Report to Congress: U.S.-China Economic and Security Review Commission 2017)*

Figure 3. Chinese Theater Commands

Disposition

Overall PLA forces are divided into five theater commands, and each command has a distinct mission (see figure 3).[50] There is some confusion as to whether PLARF units in these theater commands report directly to the theater commander or are directly controlled by Chairman Xi Jinping and the Central Military Commission. Even if PLARF units are under direct control of the Chinese Communist Party, they undoubtedly have liaison and advisory relationships with the theater commands in which they share space, even if they are nominally independent of the theater command structure. For instance, PLARF units at Base 61 in the eastern Anhui Province almost certainly are fully integrated into Eastern Theater Command plans for Taiwan. There are five PLA theater commands:

- Eastern Theater Command—responsible for Taiwan, Japan, and the East China Sea
- Southern Theater Command—responsible for the South China Sea and Southeast Asia
- Western Theater Command—responsible for India, South Asia, Central Asia, and counterterrorism in Xinjiang and Tibet
- Northern Theater Command—responsible for the Korean Peninsula and Russia
- Central Theater Command—responsible for capital defense and for providing surge support to other theaters[51]

Table. People's Liberation Army Rocket Force Bases, Brigades, and Armament

Base number	Headquarters location	Brigade	Armament	Nuclear or conventional	Range	Yield	Notes
Base 61	Huangshan, Anhui Province						Eastern Theater Command area of resposibility (AOR)
	Chizhou	611	DF-21A	Nuclear	2,100+	200-300 kT	
	Jingdezhen	612	DF-21	Conventional	1,750+		Possible DF-21A, which would make it nuclear-armed
	Shangrao	613	DF-15B	Conventional	750+		
	Yong'an	614	DF-11A	Conventional	600		
	Meizhou	615	DF-11A	Conventional	600		Possibly replacing with DF-17
	Ganzhou	616	DF-15	Conventional	600		
	Jinhua	617	DF-16	Conventional	800+		
	UNK	618	UNK	UNK			Rumored new brigade base
Base 62	Kunming, Yunnan Province						Southern Theater Command AOR
	Yibin	621	DF-21	Conventional	1,750+		Possibly DF-21A, which would make it nuclear-armed
	Yuxi	622	DF-31A	Nuclear	11,200	200-300 kT	
	Liuzhou	623	CJ-10	Conventional	1,500		
	Danzhou	624	DF-21C/D	Conventional	1,750+		
	Jianshui	625	DF-26	Nuclear	4,000	200-300 kT	May still use DF-21
	Qingyuan	626	DF-26	Nuclear	4,000	200-300 kT	May still use DF-21
	Jieyang	627	DF-17	Conventional	1750+		

(Table by author; modified from Hans Kristensen and Matt Korda, "Chinese Nuclear Forces, 2020," *Bulletin of the Atomic Scientists* 76, no. 6 [2020]: 449–50)

Table. People's Liberation Army Rocket Force Bases, Brigades, and Armament (continued)

Base number	Headquarters location	Brigade	Armament	Nuclear or conventional	Range	Yield	Notes
Base 63	Huaihua, Hunan Province						Southern Theater Command AOR
	Jingzhou	631	DF-5B	Nuclear	13,000	5 x 200-300 kT (MIRV)	
	Shaoyang	632	DF-31AG	Nuclear	11,200	200-300 kT	
	Huitong	633	DF-5A	Nuclear	12,000	4-5 MT	
	Tongdao	634	UNK	UNK			Possible DF-41 Brigade
	Yichun	635	CJ-10	Conventional	1,500		
	Shaoguan	636	DF-16	Conventional	800+		
	UNK	637	UNK	UNK			Rumored new brigade base
Base 64	Lanzhou, Gansu Province						Western Command AOR
	Hancheng	641	DF-31A	Nuclear	11,200	200-300 kT	
	Datong	642	DF-31AG	Nuclear	11,200	200-300 kT	
	Tianshui	643	DF-31	Nuclear	7,200	200-300 kT	
	Hanzhong	644	UNK	UNK			Possible DF-41 Brigade
	Yinchuan	645	UNK	UNK			Rumored new brigade base
	Korla	646	DF-26	Nuclear	4,000	200-300 kT	
	Xining	647	UNK	UNK			Rumored new brigade base

(Table by author; modified from Hans Kristensen and Matt Korda, "Chinese Nuclear Forces, 2020," *Bulletin of the Atomic Scientists* 76, no. 6 [2020]: 449–50)

Table. People's Liberation Army Rocket Force Bases, Brigades, and Armament (continued)

Base number	Headquarters location	Brigade	Armament	Nuclear or conventional	Range	Yield	Notes
Base 65	Shenyang, Liaoning Province						Northern Command AOR
	Dalian	651	DF-21A	Nuclear	1,750+	200-300 kT	
	Tonghua	652	DF-21C	Conventional	1,750+		
	Laiwu	653	DF-21C/D	Conventional	1,750+		
	Dalian	654	DF-26	Nuclear	4,000	200-300 kT	
	Tonghua	655	UNK	UNK			Rumored new brigade base
	Laiwu/Taian	656	UNK	Nuclear			Rumored new brigade base, possible DF-31AG
Base 66	Luoyang, Henan Province						Central Command AOR
	Lingbao	661	DF-5B	Nuclear	13,000	5 x 200-300 kT (MIRV)	
	Luanchuan	662	DF-4	Nuclear	5,500	3.3 MT	Might upgrade to DF-41
	Nanyang	663	DF-31A	Nuclear	11,200	200-300 kT	
	Luoyang	664	DF-31	Nuclear	7,200	200-300 kT	Possibly upgrading to DF-31AG
	Wehui	665	UNK, probable ICBM	UNK, probably nuclear			
	Xinjang	666	DF-26	Nuclear	4,000	200-300 kT	
Base 67	Baoji, Shaanxi Province						Responsible for nuclear warhead stockpile, Western Command AOR
Total		**40 total brigades**		**20 nuclear brigades**			

(Table by author; modified from Hans Kristensen and Matt Korda, "Chinese Nuclear Forces, 2020," *Bulletin of the Atomic Scientists* 76, no. 6 [2020]: 449–50)

The PLARF is divided into six "bases," sometimes referred to as armies, each corresponding to a geographic area in China. An additional element, the Jinlun (Golden Wheel) Engineering Company, is stationed in Saudi Arabia and responsible for operating missiles including the obsolete DF-3 and newer DF-21 missiles and training of the Royal Strategic Rocket Force of Saudi Arabia.[52] PLARF units are stationed at bases numbered 61 through 66; an additional base, Base 67, is where all of China's nuclear warheads are stockpiled. Chinese nuclear warheads are maintained separately from their missiles during peacetime and do not leave Base 67. As the size of support units at Base 67 has not varied much in decades, this may be an indicator that China's nuclear stockpile has not greatly increased.[53] While the PLARF itself has expanded drastically, with current personnel strength hovering around one hundred thousand, this seems to be primarily focused on the conventional arm of the PLARF and not the nuclear so far.[54]

Each base with missile units has between four and seven missile brigades. Each brigade consists of a number of battalions or independent companies armed with a specific type of missile. Brigade subordinate units are either conventionally or nuclear armed, and the size of the subordinate unit varies greatly based on armament, with some conventional missile brigades containing thirty-six launchers with six missiles each, while mobile nuclear missile brigades possess between six and twelve launchers, and silo-based nuclear missile brigades may only have six or fewer silos/caves in total with one missile per silo. Furthermore, each brigade and battalion maintains multiple supporting units for both the missiles and the launchers.[55] These supporting units include a technical battalion, a site management battalion, a communications battalion, a technical service battalion, and an electronic countermeasures battalion.[56]

As China's exact missile totals and force structure are not public knowledge, the size and disposition of some units is conjectural. What is certain is that the majority of China's missiles are short-range missiles such as the DF-11, DF-15, and CJ-10; over one thousand missiles of just these three types are aimed at Taiwan.[57] China has a total of 2,200 missiles that fall within the parameters of the now-defunct Intermediate Nuclear Forces (INF) Treaty, and those missiles make up 95 percent of China's missile inventory; almost half of these missiles are aimed directly at Taiwan.[58] The bases and the corresponding primary armament of their subordinate brigades are presented in the table (on pages 228–230).[59] Unconfirmed reports also place a DF-41 brigade in the far northwest Heilongjiang Province near the city of Daqing; if true, this could be a new brigade under Base 65, though it could also be disinformation designed to hide true DF-41 deployment.[60]

Conclusion and Recommendations

The PLARF represents a formidable force to enhance China's military objectives, and one that is very foreign to U.S. military planners, as the last U.S. ground-based missile, the Pershing II, was retired in 1987 to comply with the INF Treaty with the Soviet Union.[61] Seeing a capability gap in the forces of its two closest rivals, China seized an opportunity and has developed the largest ground-based missile force in the world. The PLARF is perhaps China's most valuable current military asset as it provides China both offensive and defensive capabilities against a wide range of opponents as well as the inherent value of deterrence that nuclear weapons provide any nation. The intentional ambiguity of armament in weapons such as the DF-21 and DF-26 enhance China's deterrence options and force adversary planners to develop a wide range of contingencies that may never be implemented. Despite these factors, there are weaknesses that U.S. planners should exploit in order to mitigate the threat posed by the PLARF.

First and foremost, China is geographically surrounded by enemies and potential enemies. Strengthening ballistic missile defenses in these nations will degrade the danger of overwhelming long-range precision fires at the onset of a conflict that the PLARF is designed to provide. Furthermore, although the PLARF is large, China does not possess vast stockpiles of missiles; in a protracted conflict, the utility of the PLARF will diminish rapidly. This is doubly true for the nuclear arm of the PLARF. China simply does not have enough nuclear missiles to warrant a nuclear exchange, though Chinese defense white papers of the last decade have stressed an "escalate to de-escalate" concept regarding nuclear employment.[62] Such a strategy would involve using a very limited number of nuclear weapons, perhaps even only a single weapon, to force an opponent into negotiations rather than devolve into a general nuclear conflagration. Given the apparent lack of tactical nuclear weapons in the

PLARF, this seems illogical. Utilizing a nuclear weapon of several hundred kiloton or higher yield will only serve to escalate a conflict, and those are the preponderance of Chinese nuclear warheads.

Any U.S. military plan, whether on the Korean Peninsula, Taiwan, the South China Sea, or elsewhere, must factor the PLARF in its calculations. U.S. Army nuclear and counter-weapons of mass destruction officers would be invaluable at the operational level in the event of a conflict with a nuclear power such as China. Although typically assigned at the strategic level, these officers possess intimate knowledge of nuclear targeting and damage assessment that would greatly enhance the situational awareness of operational commanders. They would be able to assist operational Army commanders in preparing to operate in a nuclear environment and reacting to dual-use weapons.

Joint planners should refer to the Department of Defense's *Deterrence Operations Joint Operating Concept* and the 2018 *Nuclear Posture Review*, which both provide guidance on how to counter an adversary's nuclear and dual-capable forces.[63] Plans must integrate robust air and missile defense options at all levels to protect the force and degrade Chinese deterrence. U.S. home-based strategic missile defense is planned to increase from forty-four ground-based interceptors to sixty-four within the next ten years, while tactical and operational-level Patriot, Terminal High-Altitude Air Defense, and Aegis SM-3 air defense systems are receiving upgrades and will be procured in greater numbers per the *2019 Missile Defense Review*.[64] Protection will also be vitally important for mission command and logistics nodes, necessitating robust construction engineer units to harden these locations and electronic warfare units to conceal locations. Commanders should use intelligence, surveillance, and reconnaissance (ISR) capabilities to identify PLARF assets and use either special operations forces or long-range precision fires, either integral or air support, to neutralize the threat these missile systems pose. ISR can also identify if a PLARF unit is a conventional or nuclear unit to permit the commander to react accordingly; the United States and Russia demonstrated technology using neutron detectors on helicopters to find nuclear weapons as early as the 1980s, and these could be modified for use in current ISR assets.[65] Finally, deception operations to fool Chinese targeters into striking false targets will yield immense benefits, because as noted above, the PLARF has a very limited reserve of missiles to draw from, and thus every wasted missile offers significant ability to degrade PLARF capabilities.

By fully integrating enablers, Army and joint commanders can mitigate the risk posed by PLARF units in the event of a conflict. The PLARF is a formidable but not invincible element of the Chinese military. As China continues to flex its muscles regionally, the United States must, at the strategic level, counter malign influences and strengthen legitimate ties. Should strategic deterrence fail and the United States enter into open conflict with China, combatant commanders must be prepared to counter the force-multiplying nature of the PLARF to ensure success in the operating environment. ■

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Tanks, fighting vehicles, and troops of Japanese Ground, Sea, and Air Self-Defense Forces march in front of viewing stands 23 October 2016 during the Armed Forces Day military parade at the Ground Self-Defense Forces Asaka training ground north of Tokyo. (Photo by Natsuki Sakai, AFLO via Alamy Live News)

The Impact of Base Politics on Long-Range Precision Fires

A Closer Look at Japan

Maj. Richard M. Pazdzierski, U.S. Army

It was crystal clear to me that the future and, indeed, the very existence of America, were irrevocably entwined with Asia and its island outposts.

—Gen. Douglas MacArthur

After withdrawing from the Intermediate-Range Nuclear Forces Treaty (INF Treaty) in August 2019, the Trump administration believed it was better postured to close the "missile gap" with the People's Republic of China (PRC), which rapidly modernized its ground-launched missile program over the past two decades. The Department of Defense (DOD) estimates the PRC now has more than 1,250 ground-launched ballistic missiles and ground-launched cruise missiles with ranges between 500 and 5,500 kilometers.[1] The United States, on the other hand, does not currently field any conventional ground-launched ballistic missiles or ground-launched cruise missiles in order to abide by the Senate-approved INF Treaty since 1987—a treaty that applied to the United States and Russia but not the PRC. U.S. defense circles are looking for ways to reestablish escalation dominance in the Western Pacific through long-range precision fires (LRPF), including new missile technology with ranges previously banned by the INF Treaty.

Maj. Richard M. Pazdzierski, U.S. Army, is a military intelligence officer who recently graduated from the Command and General Staff College and from Osaka University, Japan, where he studied as an Olmsted scholar and received a master's degree in international public policy. He is fluent in Japanese and Polish. His previous assignments include serving as a company commander and battalion intelligence officer in the Republic of Korea, troop executive officer in Germany, and scout platoon leader in Afghanistan.

Among the U.S. Armed Forces, the Army took a leading role in researching and developing new capabilities for militarily competing with the PRC by way of the fires warfighting function. Army leadership announced LRPF as the Army's top modernization priority in October 2017. The LRPF cross-functional team (CFT) later confirmed that a new portfolio of strategic, midrange, and short-range fires capabilities would begin fielding by 2023.[2] In addition to ground-based launcher and missile technology, the CFT is also analyzing the corresponding doctrine, organization, training, materiel, leadership, personnel, facilities, and policy solutions of the LRPF program when conducting capability-based assessments. Mission command and targeting solutions, for example, will also be essential for integrating sensor data into an efficient decision-making system and enable the Army's future LRPF units to operate as part of a joint force.

While defense analysts continue to debate over the optimization of LRPF technology and doctrine, especially in the great-power competition with Russia, some of the unanswerable questions relate to the deployment of LRPF capabilities to the western Pacific. Compared to Europe, the maritime domain makes up a much larger proportion of the Indo-Pacific's area of operations and complicates the battlefield calculus for the Army. Even if the Army is on a glidepath to develop successful new LRPF technology, questions remain as to where in Asia the United States will deploy such capabilities and whether LRPF platforms should be permanently based or expeditionary. Japan emerged as a leading candidate site for new U.S. LRPF capabilities due to the nation's geostrategic position vis-à-vis China. However, the Japanese government has yet to indicate its willingness to accept a post-INF, U.S. missile posture on Japanese territory. While the Army's materiel and doctrinal modernization efforts for LRPF are in full swing, Japan's post-INF policy debate has just begun.

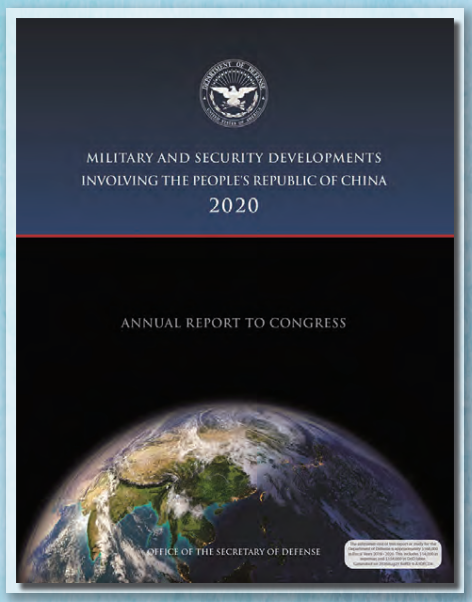
Both before and after the United States withdrew from the INF Treaty, numerous foreign policy and security commentators pointed out the potential diplomatic challenges associated with building up the United States' ground-based missile forces in the western Pacific.[3] Analyzing Japan's defense modernization efforts over the past decade will better forecast its political will for supporting the deployment of U.S. strike capabilities. Japan's domestic base politics impacted the security aspects of the U.S.-Japan alliance for many decades, particularly the operational efficiency of Japan-based U.S. forces and Japan's own Self-Defense Force (SDF). Japan's political culture surrounding military bases and exercises will likely have a significant impact on the Army's ability to train, fight, and win with long-range precision strike capabilities intended to deploy to Japan.

Strategic Context

Since the end of the Cold War, the PRC gradually modernized its military through a strategy aimed at improving antiaccess/area denial (A2/AD) capabilities. Chinese strategists refer to these capabilities as part of the PRC's "counter-intervention operations."[4] The superiority of the U.S. Navy dominated the seas since World War II and convinced Chinese defense planners to pursue an offset strategy that underscored high-technology warfare to counter existing U.S. strengths. The People's Liberation Army's (PLA) operational- and tactical-level objectives are now contingent on offensive capabilities designed to gain the military initiative and prevent opposing forces from entering the western Pacific battlespace. As a separate branch of the Chinese military, the PLA Rocket Force took control of China's strategic missiles in 2016 and assumed the PLA's primary responsibilities for nuclear deterrence and precision conventional strikes that are core components of China's A2/AD strategy.

The PLA's A2/AD capabilities did not evolve overnight. The U.S. military's operational myopia in the Middle East preoccupied much of the U.S. defense establishment with counterinsurgency operations instead of a conventional, near-peer threat. It was not until 2006 that the DOD's *Quadrennial Defense Review Report* pointed to China as having the "greatest potential to compete militarily with the United States."[5] By the time the United States withdrew from the INF Treaty over a decade later, the PRC already boasted an array of formidable A2/AD capabilities including shore-based antiship missiles, unmanned aircraft, surface-to-air missiles, and long-range sensors. In the land domain, the proliferation of the PRC's ground-launched cruise and ballistic missiles shifted the western Pacific's security environment and altered the deterrence calculus facing the U.S.-Japan alliance.

Among the most stressing scenarios analyzed by U.S. military planners involves the PLA launching a missile strike campaign to coerce Taiwan into submitting to the PRC's political demands. In this scenario, the PLA would neutralize Taiwan's command-and-control network through an arsenal of land, ship, and aircraft-launched missiles while simultaneously threatening U.S. and allied forces to deter their entry into the conflict. The PRC positioned its LRPF to hold U.S. and allied ports, airfields, facilities, and personnel in key terrain of the Indo-Pacific region at risk, and the DOD recognizes that the PRC's current supremacy in ground-launched missiles



United States Strategic Assessment of the People's Republic of China

For those readers interested in learning more about the 2020 U.S. Department of Defense's assessment of the threats posed by strategic competition with China, your attention is invited to the *Military and Security Developments Involving the People's Republic of China 2020*. This publication provides a summary of policy concerns and overview of key global initiatives guided by implementation of the *National Security Strategy* as it specifically applies to the People's Republic of China. To view this document, visit https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF.

Graphics courtesy of Amonrat rungreangfangsai and matrixdesigner, Vecteezy

significantly threatens allied forces stationed in Japan during such a scenario.[6] The PLA could engage targets in Japan to achieve air and maritime superiority during a localized conflict involving Taiwan.

Since potential enemies geographically surround the PRC, it seeks to avoid a long-duration conflict by accomplishing a quick, decisive transformation of its territorial claims. The greatest challenge for U.S. forces is building up combat power and rapidly counterattacking against PLA forces deploying from China's mainland. U.S. forces located outside of the western Pacific must traverse the vast expanse of the Pacific Ocean to defend its allies and partners, and such long distances come along the associated problem sets of logistics and timeliness. When considering China's technological asymmetry in ground-launched missiles and U.S. challenges in moving combat power rapidly into the region, the PRC now has more confidence in its own conventional and nuclear deterrence as it seeks to protect its national interests.

What the U.S. Army Is Doing

In response to China's missile force improvements, the DOD is pursuing counterforce capabilities that can find, destroy, or disable the PRC's integrated A2/AD network. The INF Treaty's termination opened new conventional deterrence options for consideration, and thus LRPF remains the Army's priority modernization effort. The PLA depends on strategic depth for its offensive assets' survivability, so allied long-range precision strike capabilities are necessary to offset the continental-based systems behind China's A2/AD network. Long-range strikes against actual transporter erector launchers are nearly impossible due to the launchers' mobility and concealability. Still, the Army's LRPF capabilities can instead aim to neutralize the PLA's command-and-control nodes, airfields, ports, air defense, and other stationary, war-supporting targets on mainland China. The Army's LRPF CFT is brainstorming solutions within an overall joint concept to attack the entire kill chain that enables the PLA's A2/AD network.

From a technological standpoint, the Army made notable progress in its LRPF program since emerging

as a modernization priority in 2017. In December 2020, the Extended Range Cannon Artillery system successfully hit a target seventy kilometers away during testing.[7] The LRPF CFT expects to field the precision strike missile (PrSM) as a replacement for the Army Tactical Missile System (ATACMS) in fiscal year 2023, with ATACMS currently the Army's longest-range surface-to-surface missile at three hundred kilometers.[8] The PrSM will extend the Army's midrange missile range to five hundred kilometers and fire from the same launchers as the ATACMS. Within the midrange portfolio, the Army is also pursuing ground-launched antiship missiles to restore the Army's ship-killing capabilities that it once had prior to World War II. The Army successfully fired a Naval Strike Missile at a decommissioned ship from a Palletized Load System truck during the Rim of Pacific 2018 exercise.[9] Unlike the PrSM or the Extended Range Cannon Artillery system, the antiship program has no exact fielding date as the LRPF CFT continues to improve the antiship missile's moving target capability.

In addition to new midrange surface-to-surface fires, the LRPF CFT is also advancing its long-range strike portfolio to hit targets at strategic ranges. The Long-Range Hypersonic Weapon will enter service as a prototype battery of four launchers in 2023, and this new system employs rocket-powered, boost-glide missiles that soldiers would fire from Army trucks.[10] Another LRPF project receiving significant attention is the Army's Strategic Long-Range Cannon, which seeks to fire rocket-boosted projectiles at ranges over 1,500 kilometers.[11] The LRPF CFT acknowledges that strategic range programs like the Strategic Long-Range Cannon are very ambitious and may never materialize as a program of record, but ground-based fires will endure as the Army's main modernization effort for improving power projection in both Europe and the Indo-Pacific.

> Instead of competing with the Navy or Air Force, the Army's long-range strike capabilities mean to complement the joint force, as ground-launched missiles offer several benefits over air- or sea-launched systems.

Instead of competing with the Navy or Air Force, the Army's long-range strike capabilities mean to complement the joint force, as ground-launched missiles offer several benefits over air- or sea-launched systems. Ground-launched platforms are much cheaper than missile-equipped destroyers, submarines, or aircraft. Ground-based launchers are also road-mobile and concealable and can serve as a more difficult target for opposing forces when compared to aircraft or ships. Army platforms could also be colocated near a stockpile of war-ready missiles and support longer-duration fire missions. The U.S. Navy lacks the capability to reload the vertical launch systems on its vessels, and this limits the number of land-attack missiles American ships can carry over water as these vessels must also carry antiship missiles and surface-to-air missiles (SAM) for self-defense.[12] U.S. aircraft face similar limitations in terms of payload, and reloading aircraft at airbases is more time-consuming than reloading a transporter erector launcher.

Perhaps the biggest advantage of the western Pacific's A2/AD fight is that ground launchers can be forward deployed as part of a pre-positioned LRPF network to avoid longer deployment times. Ground-based launchers forward deployed under a "fight tonight" readiness posture would do more to deter

Previous page: The U.S. Army conducts developmental testing of multiple facets of the Extended Range Cannon Artillery project 18 November 2018 at Yuma Proving Ground, Arizona. From artillery shells to the longer cannon tube and larger firing chamber for the improved howitzer, the ammunition plant at Yuma Proving Ground has been instrumental in building multiple experimental formulations, shapes, and configurations for new propelling charges to accommodate improved projectiles. (Photo by Lance Cpl. Katherine Cottingham, U.S. Marines)

China from executing a surprise salvo attack than a strike force needing to deploy from Guam or Hawaii. If ground launcher units must deploy into the western Pacific from outside the first island chain, they would face the same threats that currently confront U.S. ships and aircraft operating in the Pacific's maritime and air domains.

From a strategic standpoint, forward-positioning ground-launched fires on allied territory offer other indirect ways of deterring China's ambitions to conduct a surprise attack. Forward-deployed LRPF capabilities could increase a U.S. ally's confidence that America stands ready against Chinese coercion while raising the standard for an ally's contribution to collective defense. As pointed out by Takahashi Sugio and Eric Sayers, ground-launched systems that put the PRC's interior at risk would divert the PRC's attention away from offensive capabilities and force greater Chinese investment into missile defense.[13] Forward-deployed U.S. missiles could instigate an expensive arms race and pressure the PRC to deliberate an arms control regime, similar to how the Army's Pershing II deployments to Europe swayed the Soviet Union into INF Treaty negotiations during the 1980s.[14]

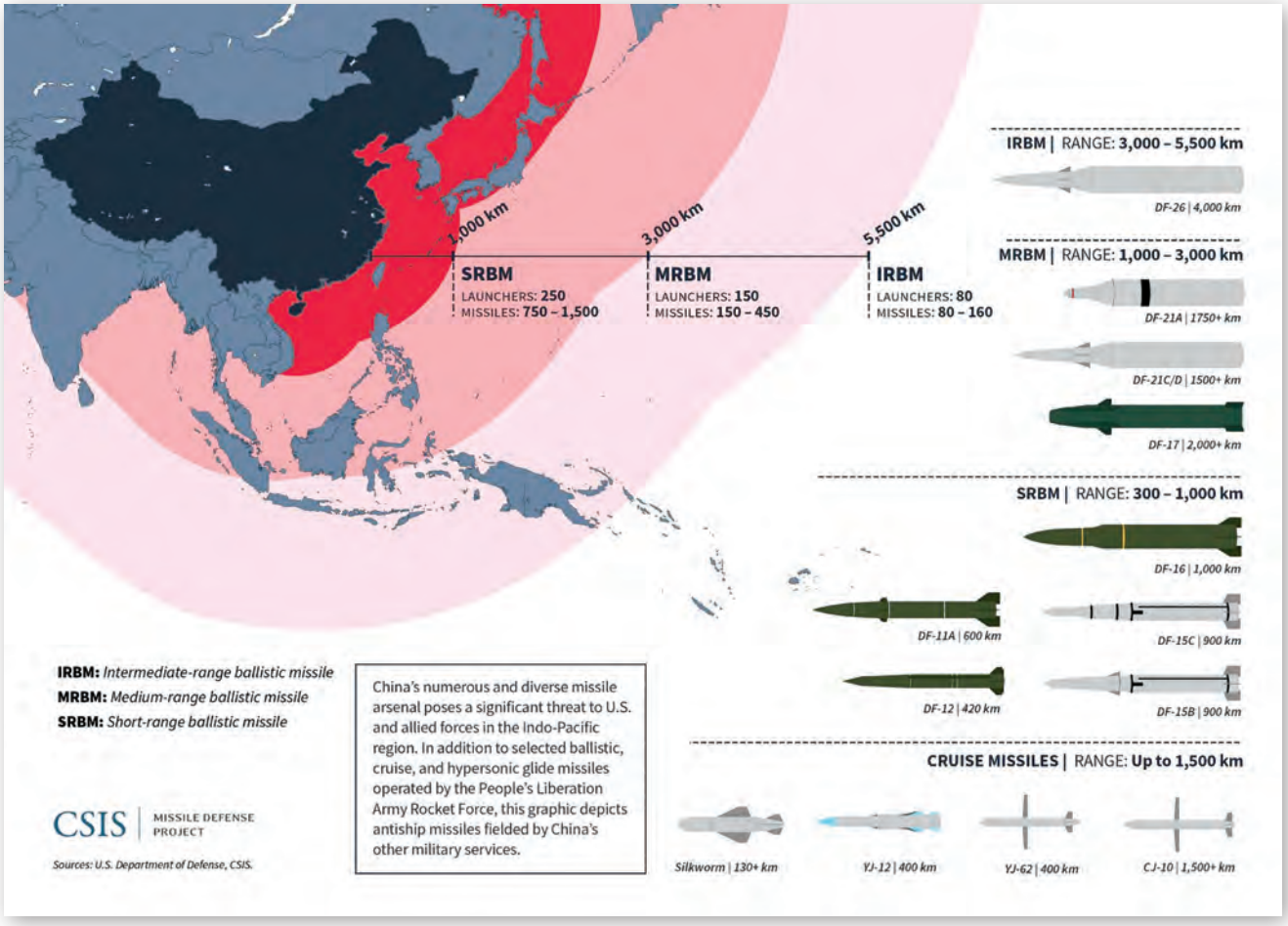
Ground-launched cruise missiles and ballistic missiles have the potential to restore the United States' escalation dominance in the western Pacific but only if such capabilities can be deployed to the locations that facilitate shorter deployment times, concealment, and the targeting of the PRC's rear-area forces with a high-level of accuracy. A former U.S. secretary of defense and other top DOD officials suggested Japan as an optimal deployment site for the Indo-Pacific's future LRPF units, but diplomatic efforts will be necessary to ensure such a strategy is politically feasible.[15] To forecast how Japan's government and public will react to the Army's emerging technology discussed above, it is important to understand the politics surrounding Japan's own defense efforts to counter China's A2/AD bubble over the past decade, especially the Japanese Ground Self-Defense Force's (GSDF) "Southwestern Wall."

What Japan's Ground Self-Defense Force Is Doing

By the early 2000s, Japanese defense specialists concurred that Japan's geography was a critical part of China's calculus for achieving the long-term objectives of its A2/AD strategy.[16] The PLA's capacity to dominate the region's sea lanes of communication, seize PRC-claimed territories, and prevent allied forces from mounting counteroffensive operations is contingent on controlling key terrain in the first island chain and neutralizing allied combat power positioned on Japanese territory. In 2010, Japan's cabinet approved the *2010 National Defense Program Guidelines*, which stipulated how the SDF would replace its "Basic Defense Force" with a new concept called a "Dynamic Defense Force." The new concept aimed to deter threats to Japan's southwest islands by improving the SDF's surveillance, rapid deployment, and power projection capabilities.[17] The 2010 guidelines reordered the SDF's overall mission priorities by moving "attacks on offshore islands" up to the SDF's second overall priority behind ensuring the security of Japan's sea and air space. Both priorities reflected the longer-term view of defending Japan's southwestern islands as part of an intense, A2/AD-like conflict situation that may occur among the United States, China, and Taiwan.

To improve the GSDF's power projection and surveillance capabilities to deal with new threats, the GSDF—one of the three SDF branches—reorganized its Cold War-era force posture by reducing troops stationed in Japan's northern region of Hokkaido and augmenting the GSDF's footprint on the southwestern islands of Okinawa. The GSDF established a new coastal observation unit on Yonaguni Island in 2016, which was the first new SDF facility constructed in Okinawa since the prefecture's 1972 reversion to Japanese sovereignty. Yonaguni is the westernmost edge of Japan and is located just 110 kilometers from Taiwan. In 2019, the SDF completed the deployment of other units to the islands of Miyako-jima and Amami Oshima. These two locations host newly formed SAM batteries of the Air Self-Defense Force and antiship cruise missile batteries of the GSDF. There is another set of SAM and antiship cruise missile batteries scheduled to deploy to Ishigaki Island sometime in 2021, which is the municipality with administrative jurisdiction over the Senkaku Islands. Japan's defense strategists hoped that these new SDF camps and ground-launched fires would create a "Southwestern Wall" and close the gaps among Japan's numerous undefended straits throughout Okinawa.[18]

In another line of effort, the GSDF has been investing resources into new transport platforms for



(Graphic courtesy of Missile Defense Project, "Missiles of China," Missile Threat, Center for Strategic and International Studies, last modified 16 July 2020, https://missilethreat.csis.org/country/china/)

China's Regional Missile Threat

rapidly deploying troops during a contingency. The GSDF formally established Japan's first amphibious rapid deployment brigade (ARDB) in 2018, which operates assault amphibious vehicles (AAV) based out of Camp Ainoura on Japan's southwest island of Kyushu. The GSDF also procured CH-47 JA and V-22 Osprey transport helicopters to support ground units' rapid deployment.[19] The ARDB's primary purpose is to dissuade China from seizing Japan's remote islands during a low-scale conflict or gray-zone scenario where PLA troops or heavily armed PRC "fishermen" embark on Japanese territory. By approving plans to acquire new equipment such as the AAV7 and Izumo-class helicopter carrier, the Government of Japan (GOJ) seemed willing to test the Japanese public's acceptance of defense policies previously considered off-limits and "too offensively" oriented.

Although the INF Treaty did not prohibit U.S. allies from developing their own ground-launched missile systems, Japan never seriously considered acquiring such capabilities during the 1990s due to its decades-long pacifist identity, constitutional renunciation of war, and conciliatory diplomacy toward the PRC. Japan's defense planners, nonetheless, gradually came to appreciate the importance of missile defense systems and standoff firepower like the Type-12 ASCM, Type-02 SAM, and Patriot Advanced Capability-3 systems that are currently fielded throughout Japan. Similar to the U.S. Army, the GSDF is now exploring medium-range antiship missiles, standoff hypersonic weapons, and other

improved LRPF capabilities to offset PLA advantages in the ground domain.[20] Japan's politicians recently began debating whether the SDF should have the capability to wage attacks against enemy bases with missile launchers.[21] U.S.-Japan security agreements traditionally left the SDF as the "shield" and the U.S. military as the "sword" responsible for offensive actions, but some leaders in Japan argue that new missile technology blurs the line between offense and defense. In the summer of 2020, then Japanese Defense Minister Kono Taro asserted that the SDF's capability to mount a "defensive first strike" against an enemy missile base would not violate Japan's pacifist constitution.[22]

> Japanese Defense Minister Kono Taro asserted that the Self-Defense Force's capability to mount a 'defensive first strike' against an enemy missile base would not violate Japan's pacifist constitution.

Japan's Political Will in the A2/AD Fight

At first glance, Japan's security focus on the PLA and the shifting of resources into capabilities previously considered taboo may suggest that the timing is right for deploying the Army's LRPF platforms to Japan. Like most symbolic representations, however, the vision of Japan's defense establishment "normalizing" in the post-Cold War era overstates the case of Japan's security identity evolution and fails to understand the interface between defense strategy formulation and force management implementation. Despite the movement of pacifist parties toward the ideological center of Japan's political system since the 1990s, base construction and military personnel operating near residential areas remain very contentious issues in Japan. SDF efforts to build up Japan's "Southwestern Wall" and deploy troops to new localities faced many political obstacles as Japan's central government engaged in consensus building for the local acceptance of SDF troops.

Although defense strategists within the SDF proposed deploying a new surveillance unit to Japan's southwestern island of Yonaguni as early as 2009, Camp Yonaguni did not begin operations until 2016. The seven-year deployment process was less a result of funding or construction timelines as it was due to a lengthy consensus-building process that featured Yonaguni's local government holding a referendum over whether to accept the SDF. Japan does not provide for any direct citizen participation in policy-making at the national level, but its local autonomy law outlines that citizen-initiated referendums can serve as an instrument for Japan's localities to influence policy. The pro-base faction won the vote during Yonaguni's 2015 referendum, but the fact remains that Camp Yonaguni may never have happened if the referendum vote did not go the GOJ's way. Japan's central government does not exercise eminent domain in pursuit of force management strategies, and it was mainly Japan's Ministry of Defense (MOD) that drove negotiations with Yonaguni's locals. There was little involvement by Japan's elected lawmakers over the promotion of Camp Yonaguni, and the MOD's public relations campaign focused more on the GSDF base's potential for economic stimulus instead of the importance of Japan's surveillance capacity in the East China Sea.

In Miyako-jima, the MOD faced similar challenges when embarking on consensus-building efforts to gain local acceptance of new SDF camps. Unlike Camp Yonaguni, the GSDF facilities planned for Miyako-jima embodied a more kinetic force posture of missile launchers and troops designed to engage the PLA in the island's surrounding waters. Antibase factions rendered such a force posture at the central government's willingness to allow Miyako-jima to become an adversary's target during a conflict scenario.[23] The MOD and pro-SDF civic groups, in turn, refocused their public relations campaign on a narrative disconnected from the China threat and more focused on the potential financial advantages of

The U.S. Army's Rapid Capabilities and Critical Technologies Office is developing a land-based, truck-launched system armed with hypersonic missiles that can travel well over 3,800 miles per hour. Extremely accurate, ultrafast, maneuverable, and survivable, hypersonic missiles can strike anywhere in the world within minutes. These weapons will provide a critical strategic weapon to counterbalance hypersonic capabilities that Chinese and Russian militaries already reportedly possess. (Graphic courtesy of the U.S. Army)

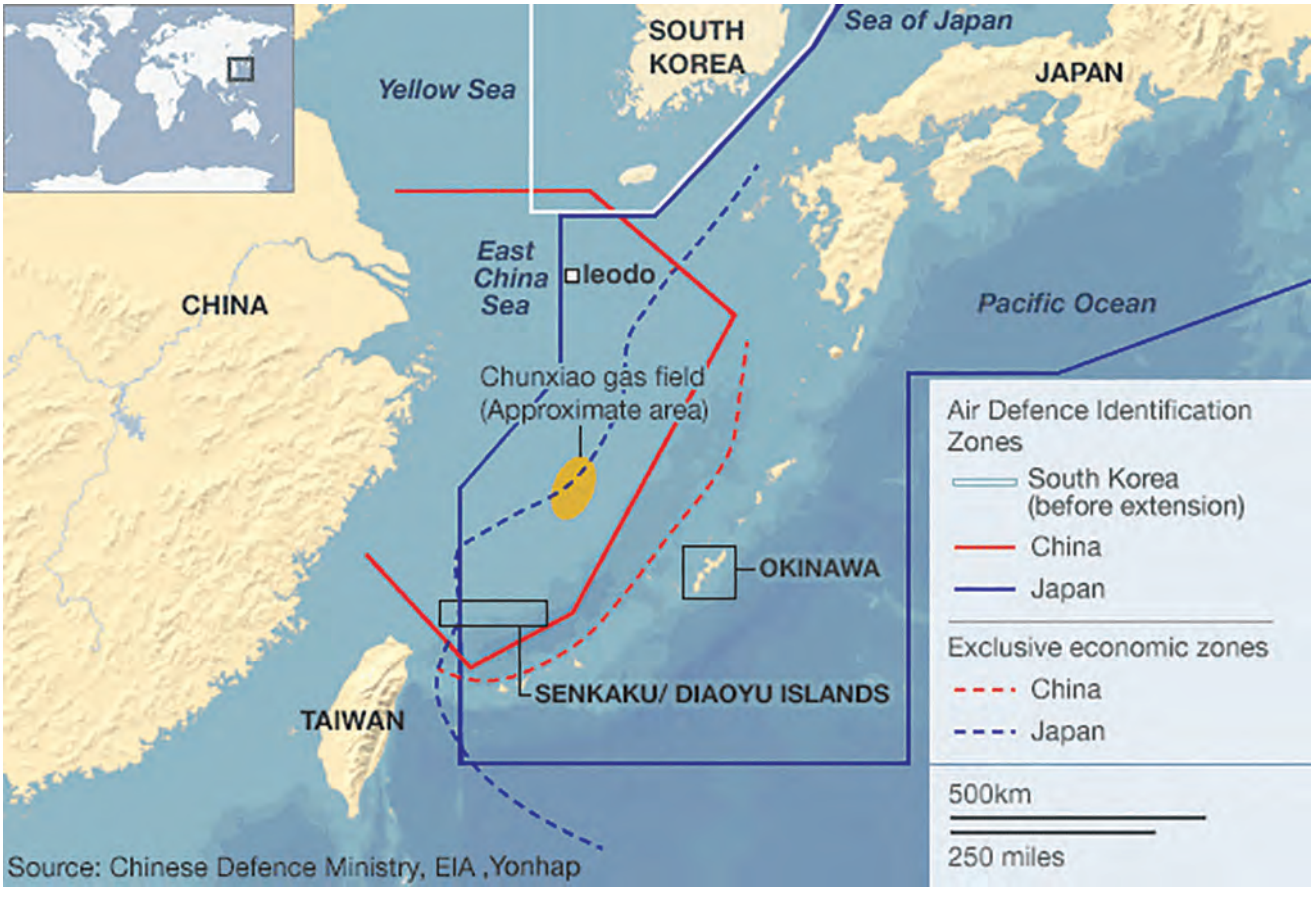
SDF presence for Miyako-jima's stagnant economy. The MOD found many local actors willing to cooperate and compromise over the SDF's deployment when negotiations involved subsidies and pledges to construct public infrastructure.[24]

Consensus-building efforts meant to implement force management plans often destabilize the U.S.-Japan alliance and capacity for the SDF to meet the operational objectives of centrally planned defense strategies. During Yonaguni's 2013 mayoral election, Yonaguni's antibase assembly members linked a U.S. military helicopter crash that occurred on Okinawa in August 2013 with the SDF's deployment plans to Yonaguni.[25] Controversies surrounding U.S. bases in Japan impact local sentiments toward a military presence in their municipality, so the MOD eventually promised Yonaguni's local government that there would be no joint U.S.-Japan military exercises on Yonaguni in exchange for local acceptance of the GSDF's coastal observation unit.

Japan's MOD faced similar challenges in ensuring the operational efficacy of a future SDF base in Miyako-jima, as opposition groups argued that the presence of missiles would violate local ordinances related to the storage of hazardous materials. Residents also voiced concerns over the future training exercises that Miyako-jima's SDF troops would conduct on the island. The MOD made several large concessions for Miyako-jima's mayor in return for a more supportive policy stance toward the SDF deployment, which included an agreement to select an alternate ammunition storage site despite the operational inefficacy of having GSDF troops separated from their missiles.[26] To address concerns about the base becoming "too kinetic," the MOD pledged that the ARDB would not conduct any training at Miyako-jima, and the SDF would refrain from using the island's ports as much as possible. There would also be no joint U.S.-Japan training exercises on the island, no helipad construction on the new base, and Camp Miyako's GSDF would conduct most of its training virtually.[27]

During the SDF's "Southwestern Wall" buildup over the past decade, the majority of Japan's Liberal Democratic Party (LDP) politicians were unwilling to devote significant political capital to promote the deployment of the SDF to new localities. Contrary to conventional wisdom, the executive leadership of conservative LDP politicians at the local levels of government did not automatically render a political environment that welcomed SDF presence. Open disputes over base politics can damage the LDP's party label, so the majority of politicians avoid taking a particular policy stance in the hopes that MOD bureaucrats negotiate internal differences out of public view. The LDP was willing to postpone SDF deployment plans during Okinawa's contested 2014 local gubernatorial election, and there was little pushback over the SDF's inability to deploy with mission-critical weapons—all suggesting that Japan's elected officials lack commitment over transforming defense strategy into actual defense force posture.

Japanese interest groups that are uneasy about worsening economic ties with the PRC exacerbate the GOJ's unwillingness to address base issues head-on. The Chinese Communist Party (CCP) harshly criticized Japan's new military facilities in Okinawa's southwest islands and the establishment of the ARDB.[28] The CCP similarly voiced opposition to the United States contemplating missile deployments to the western Pacific this past year.[29] After witnessing South Korea succumb to the PRC's substantial economic penalties for accepting the Terminal High Altitude Area Defense system in 2017, Japan's business groups (*keidanren*) would likely oppose



(Graphic courtesy of the BBC)

Disputed Territorial Claims between China and Japan

any defense posture that risks deteriorating Japan's relations with the PRC, especially in a post-COVID world of corporate leaders desperate for an economic recovery.

It is also important to point out that Japan's contemporary base politics issues are not confined to Okinawa, as demonstrated by the GOJ's recent cancellation of deployment plans for the ground-based Aegis Ashore missile defense systems to the Yamaguchi and Akita prefectures. Japan's Aegis Ashore deployment faced strong opposition from local governments and residents of both localities, and the MOD ultimately justified the cancellation because of "technical issues."[30] In another setback for the MOD, Saga's local government rejected plans to deploy the GSDF's new V-22 Ospreys to Saga Airport as part of a support package for ARDB operations. The MOD was instead forced to deploy the Ospreys to Camp Kisarazu of Chiba Prefecture, which is over one thousand kilometers away from the ARDB's home station.[31] In addition to being geographically separate from the Ospreys, the ARDB is also unable to find training areas for the brigade's AAV7 landing craft. Japan's locals are apprehensive toward ship-to-shore training exercises, which leaves the ARDB training irregularly at distant sites in California or the Philippines.

For U.S. forces stationed in Japan, there are too many examples of base politics impacting training and operations to expound upon in this article. Like the SDF, U.S. forces are also very constrained in training opportunities as Japan's central and local governments impose restrictions to decrease the perceived risks and "base burden." For artillery units specifically, local municipalities often make arrangements with the U.S. military over live-fire drills that prohibit night fire and limit the number of days U.S. forces can carry out training exercises each fiscal year.[32] There are also significant financial costs involved as the GOJ pays direct subsidy payments to those residents in close proximity to artillery or aircraft. Overall, the above episodes indicate that gaining Japan's public support for ground-based offensive systems, despite the threats posed by the PRC's missile forces, remains politically challenging regardless of whether new force posture involves U.S. or Japanese armed forces. Allowing future American LRPF units to make use of Japan's strategic terrain would almost certainly require the rectification and renormalization of certain Japanese norms in the sphere of base politics.

(Graphic created by author; adapted from Alexandra Sakaki, *Japan's Security Policy: A Shift in Direction Under Abe?*, German Institute for International and Security Affairs Research Paper, March 2015)

Japan's Southwest Islands in a Regional Context

Implications for the Army and U.S. Strategy

From the U.S. perspective, the biggest diplomatic challenge of forward deploying a missile posture to Japan is overcoming Japanese fears of entrapment. Such fears envision an uncontrollable U.S.-PRC standoff and Japan's localities ultimately becoming targets during the PRC's A2/AD operations. The

infrastructure associated with the PLA's conventional missile force is often colocated with assets from China's nuclear force, which also implies a risk of escalation beyond conventional warhead exchanges if the allied response to China is not measured appropriately during such a scenario.[33] Many Japanese understandably do not want their territory to host LRPF platforms that would induce the PRC to abandon its nuclear no-first-use policy. During the Cold War, the United States faced heavy public opposition against deploying Pershing II missiles to Europe, and similar demonstrations could repeat themselves on Japanese soil if plans to deploy LRPF platforms to Japan formalize.[34] The United States does not specify whether its overseas systems and facilities are explicitly nonnuclear, and this strategic U.S. policy would further complicate efforts to alleviate any potential societal opposition to LRPF assets.

Japan's rejection of permanently stationed LRPF units would impact competition with the PLA at the strategic level while also imposing major constraints on the Army's ground-based fires at the operational level. Because ground-based launchers depend on mobility and concealability for optimal effectiveness, Army platforms would need permission to train throughout the Japanese countryside and scatter as necessary during times of alert. This is a tall order considering that Japan has limited amounts of terrain without population centers, particularly in the southwest islands. Ensuring the survivability of missile launchers during the initial stages of conflict also requires allied forces to have a distributed footprint, multiple decoy LRPF sites, a robust missile defense system, and the hardening of existing storage bunkers, airfields, and other key infrastructure. Expanding the military footprint and hardening infrastructure in Japanese localities so dependent on tourism and agriculture could be politically untenable, as already revealed by the MOD's experiences in building up the SDF's "Southwestern Wall." Japan's own A2/AD network is a formal idea still fraught with legal and political implications.

The U.S. Army may need to assume that LRPF units will be expeditionary, even if the expeditionary model is not strategically or operationally optimal. Doctrinal and organizational solutions would need to identify how expeditionary ground-based fires could complement the other domains during an A2/AD fight to best deter PLA ambitions in the western Pacific. Policy solutions would need to address how U.S. capabilities, including the fires battle management systems, integrate with host-nation forces. Timeliness, again, will be invaluable for the Army to stay relevant in a fundamentally asymmetric geographic battlespace. Technological advances in long-range precision-strike capabilities can enhance conventional deterrence in a world of great-power competition, but alliance management issues and the inability for U.S. forces to operate effectively on allied territory could also have the reverse effect of emboldening the PRC. The CCP is certainly paying close attention to how the United States' post-INF missile capabilities will play out in Japan. We can all expect the CCP to be opportunistic toward any perceived weaknesses in the U.S.-Japan alliance, which is why the Army should design theater-specific and flexible solutions when pursuing its priority modernization effort. ■

The views expressed are those of the author and do not reflect the official policy or position of the U.S. Army, Department of Defense, or the U.S. government.

Notes

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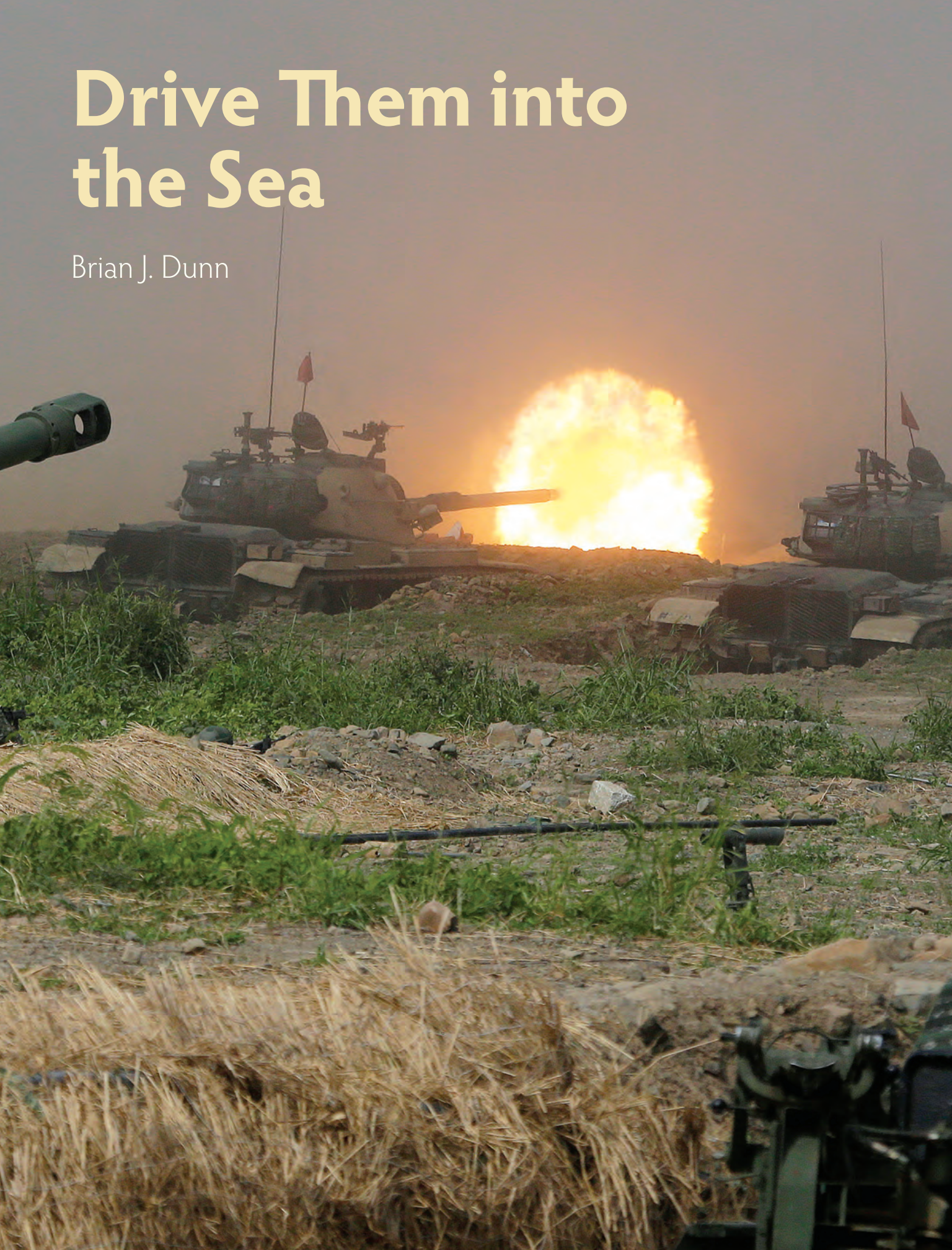
Drive Them into the Sea

Brian J. Dunn



China has a longstanding claim to Taiwan that "persistently remains the PLA's [People's Liberation Army] main 'strategic direction.'"[1] Now, however, China's rising military power has made this core interest an objective that is within its reach.[2] China would prefer to avoid outside intervention in this endeavor, but what would it have to achieve in order to capture and annex Taiwan without drawing in an American-led coalition?

Too much effort is spent looking at China's insufficient amphibious lift assets, whether Taiwan can resist until the American cavalry arrives, or whether Taiwanese asymmetric strategies could deter China by raising PLA casualties to unacceptable levels. What if China is willing to pay the price to invade? What if China can achieve key objectives within America's reaction time? And what if China doesn't share the assumptions about what it needs to take an army across the Taiwan Strait? A U.S. Army corps will be key to thwarting China's ambitions regarding Taiwan.

Taiwanese combined arms forces fire 30 May 2019 during the annual Han Kuang exercises in Pingtung County, Southern Taiwan, which primarily focus on repelling a Chinese invasion. (Photo by Chiang Ying-ying, Associated Press)

To defeat Taiwan and avoid war with America, all China needs to do is get ashore in force and impose a cease-fire prior to significant American intervention. Once that is achieved, a future phase two of overrunning or simply overawing Taiwan into submission can take place at a time of China's choosing after reinforcing and supplying its occupied Taiwan territory.

The only method of preventing China from successfully annexing Taiwan is to reject calls for a cease-fire, contain Chinese bridgeheads and airheads into as small a perimeter as possible, and then drive the invaders into the sea. Contrary to the limited Army supporting role envisioned in the Pacific, an Army corps will be indispensable and must be fully incorporated into U.S. Indo-Pacific Command (INDOPACOM) Taiwan contingency plans.[3]

Balance of Local Forces

In the past, the balance of forces for the Chinese and Taiwanese militaries was once irrelevant because the U.S. Navy dominated the Taiwan Strait. It is only in the last quarter century that China's increasingly sophisticated military with a full array of anti-access/area denial (A2/AD) weapons has made it considerably more difficult for America to stop a potential Chinese invasion with its forward deployed fleet in the western Pacific. The scale of China's naval power growth is illustrated by China's view of American naval power during the 1996 Taiwan Strait Crisis. The deployment of two American aircraft carriers to the Taiwan region was seen as not a mere signal but an "operationally effective force" that "reminded the PLA of American command of the seas in East Asia, and that the [PLA Navy's] ability to carry out missions opposed by the United States is nil, unless a way is found to nullify American sea power."[4]

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Chinese A2/AD capabilities are now strong enough to make the U.S. Navy wary of approaching China. China's military strength compels the Navy to call on ground forces to help gain control of the seas near China. The U.S. Marine Corps has declared mobile antiship missiles its highest modernization priority in order to be "an arm of naval power."[5] The Army views the Pacific's dominant sea domain as requiring very different artillery brigade attributes to operate on small islands in support of the Navy.[6]

Taiwan has significant forces to attack Chinese invasion forces at sea, in the air, and on the ground. But as the balance of forces tilts toward China, Taiwan is stressing an asymmetric response including "information and electronic warfare, high-speed stealth vessels, shore-based mobile missiles, rapid mining and minesweeping, unmanned aerial systems, and critical infrastructure protection" to resist a Chinese invasion.[7] Taiwan is also developing an all-volunteer military that includes a reduction in active-duty strength. However, a shortage of volunteers has hampered Taiwan's ability to reach its manning goal of 90 percent of end strength, which is authorized at just 188,000.[8]

Taiwan fields 140,000 ground-force personnel in three army groups containing a total of three mechanized brigades, six motorized infantry brigades, four armor brigades, four air assault/aviation brigades, three artillery brigades, and two marine brigades.[9] Taiwan's air and naval assets are outnumbered, lack their former technological superiority, and lack the capability to reinforce or replace losses as do the Chinese forces closest to Taiwan.[10] Given that Taiwan's ability to defeat the PLA in and over the Taiwan Strait has eroded, I assume that China will gain sufficient air and naval superiority in the Taiwan Strait.

The U.S. Department of Defense (DOD) assesses that the PLA "continues to prepare for contingencies in

the Taiwan Strait to deter, and if necessary, compel Taiwan to abandon moves toward independence. The PLA also is likely preparing for a contingency to unify Taiwan with the mainland by force, while simultaneously deterring, delaying, or denying any third-party intervention on Taiwan's behalf."[11]

The reorganization of the PLA Army (PLAA) into combined arms brigades, the expansion of army aviation, the creation of other combat support elements, improved air assault, and more close air support options have had the result of "improving and increasing its options for a Taiwan invasion."[12] The PLA Navy (PLAN), PLA Air Force, and PLA Rocket Force; the PLA's Strategic Support Force (space and cyberspace operations); and its Joint Logistics Support Force have all increased capabilities to support an invasion.[13] China's Eastern Theater Command would likely have operational control of forces in combat around Taiwan (see map).[14]

(Figure from the Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2020*, https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF)

China's Eastern Theater

The DOD includes PLA forces in China's eastern and southern theaters as available for Taiwan contingencies. China has in those theaters 408,000 ground force personnel in five army groups credited with thirty PLAA combined arms brigades (five with amphibious roles), five air assault/aviation brigades, and five artillery brigades, plus six airborne and four marine brigades).[15] China's naval and air power are


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overwhelming, and it has a significant ballistic and cruise missile inventory that can destroy and disrupt Taiwan's assets at the onset of war.[16] The rest of the PLA could reinforce or replace combat losses. The Chinese marines would be available for an invasion of Taiwan. However, they may not be more than a spearhead where needed given their traditional focus on the South China Sea and recent orientation to areas farther afield, including inland, as an expeditionary force as much as an amphibious force.[17]

Getting Ashore

Efforts to improve capabilities to invade Taiwan across all elements of the PLA are enabled by overwhelming defense spending, "much of it focused on developing the capability to unify Taiwan with the mainland by force," according to the DOD; yet the DOD seemingly minimizes the likelihood of a successful invasion.[18]

> Publicly available Chinese writings describe different operational concepts for an amphibious invasion of Taiwan. … The objective would be to break through or circumvent shore defenses, establish and build a beachhead, transport personnel and materiel to designated landing sites in the north or south of Taiwan's western coastline, and launch attacks to seize and occupy key targets or the entire island.
>
> Large-scale amphibious invasion is one of the most complicated and difficult military operations. Success depends upon air and maritime superiority, the rapid buildup and sustainment of supplies onshore, and uninterrupted support. An attempt to invade Taiwan would likely strain China's armed forces and invite international intervention. These stresses, combined with China's combat force attrition and the complexity of urban warfare and counterinsurgency, even assuming a successful landing and breakout, make an amphibious invasion of Taiwan a significant political and military risk.[19]

The broad increase in Chinese military capabilities and China's great interest in annexing Taiwan by force if necessary is seemingly belied by the lack of PLAN amphibious capabilities or a marine force anywhere nearly as large and sophisticated as the U.S. Navy-Marine Corps team. The DOD notes the lack of PLAN landing ships, "suggesting a direct beach-assault operation requiring extensive lift is less likely in planning."[20] Further, Chinese amphibious capabilities are not exercised at levels above battalion, notwithstanding the reorganization and reequipping of amphibious and airborne forces.

These apparent shortcomings should not be taken to mean that an invasion is beyond China's capabilities but instead that the Chinese believe a 1944 D-Day-style invasion is unnecessary. Americans forget that their large Marine Corps is a unique force historically and that amphibious assaults predate the Marines.[21] The Marines developed specific tactics and equipment prior to World War II to make large-scale forcible entry and sustained combat ashore their missions, an approach followed since World War II until the recent focus on integration with the Navy.[22]

China has a large source of sealift in the form of civilian vessels built with a reserve military role.[23] Rather than traditional beach landings, China could seize ports using its special forces and some of its marines supported by the Chinese airborne group army and with follow-up civilian ships bringing in heavier forces. The Taiwanese army could be surprised in its barracks or beach defenses, unable to redeploy quickly and in good order under PLA missile and air attack while the Chinese airheads and bridgeheads are forming and most vulnerable to counterattack.[24]

China has experience with an amphibious campaign that diverges from American practice. Despite a lack of amphibious ships and trained personnel for its navy, the PLA successfully conquered Nationalist-held Hainan Island, which is only slightly smaller than Taiwan, in April 1950. The Chinese suffered heavy losses, but once ashore, captured over ninety thousand Nationalist troops. The landing was made possible despite superior Nationalist air and naval power by PLA

Previous page: People's Liberation Army Navy Marine Corps amphibious armored vehicles arrive at a beachhead 17 August 2019 during amphibious assault training in south China's Guangdong Province. (Photo by Yan Jialuo and Yao Guanchen, Ministry of National Defense of the People's Republic of China)

artillery used to "gain effectual control of the sea and airspace between Hainan and the mainland."[25]

Amphibious warfare is surely as difficult as the DOD states. But Hainan demonstrates that China can overcome the difficulties without using American methods.[26] China can invade Taiwan if it can nullify air and naval power that could stop the crossing by the PLA. New Taiwanese emphasis on asymmetric approaches to fighting the PLA, as well as U.S. Navy concerns about PLA A2/AD capabilities, indicate that China has already, at least in part, nullified air and naval power obstacles to invasion.

If the issue is simply one of a China-Taiwan war, China has the air and naval superiority to gain control of the Taiwan Strait in order to invade Taiwan. In 2012, the Taiwanese carried out a military exercise anticipating a direct Chinese attack on Taipei via a "landing on the shores of the Tamshui River, which flows through the capital."[27] If China can then build up forces faster than Taiwan can mobilize and counterattack, even if America can get naval and air power over and around Taiwan before China can defeat Taiwan's ground forces, what can be done to prevent PLA ground forces from remaining on Taiwan in a "frozen conflict" that it can heat up at a time of its choosing to complete the conquest?

The Tyrannies of Time and Distance

Discussions of the U.S.-Chinese military balance obscure the reality that China needs to defeat Taiwan

One of many pieces of nationalist propagandistic artwork created by students of the Sichuan Fine Arts Institute in Chongqing, China, that depicts various actions of a notional People's Liberation Army invasion of Taiwan. (Image courtesy of the Sichuan Fine Arts Institute)

to win. China only needs to *delay* American entry to be able to focus on defeating Taiwan. Can China achieve key objectives on Taiwan before America decides to intervene and before American (and allied) military forces are gathered and sent into battle?

China can impose a delay on American intervention by military deterrence and by using the time it takes American civilian leadership to decide to intervene. Samuel Huntington said of these two aspects of national security decision-making,

> One [world] is international politics, the world of balance of power, wars and alliances, the subtle and brutal uses of force and diplomacy to influence the behavior of other states. The other world is domestic politics, the world of interest groups, political parties, social classes with their conflicting interests and goals.[28]

One aspect of slowing American reaction time is the balance of power altered by a quarter century of rapid Chinese military modernization. The 1996 Taiwan Strait Crisis helped spur China to "focus on building capabilities to counter U.S. forces" and to deter Taiwan from moving toward independence.[29] Two American aircraft carriers are no longer an operationally effective force standing in China's way. A larger and

more sophisticated Chinese military requires America to reinforce forces in the western Pacific with forces based in America or even in other parts of the world to mass enough power to fight through the PLA A2/AD shield just to reach Taiwan.

and American forces in nearby Japan, the initial ground force was not on the ground until a week and a half after the North Korean invasion, with three more divisions reaching South Korea over three weeks after the invasion.[33] In the 1990 Persian Gulf War,

> American forces could be readied, sent to sea, and ordered to shift to the Pacific after identifying Chinese preparations consistent with invasion plans in advance of the political decision to fight.

It is unlikely that China could carry out a "bolt from the blue" invasion; its preparation for an invasion could not remain hidden for long. But while a Soviet attack on West Germany would have immediately hit American forces, it would not be the case if China invaded Taiwan. If China refrains from striking American forces at sea, in Japan, or in Guam, American political leadership would be faced with the decision to fight a powerful China over a small and distant Taiwan. How quickly would America make that decision?

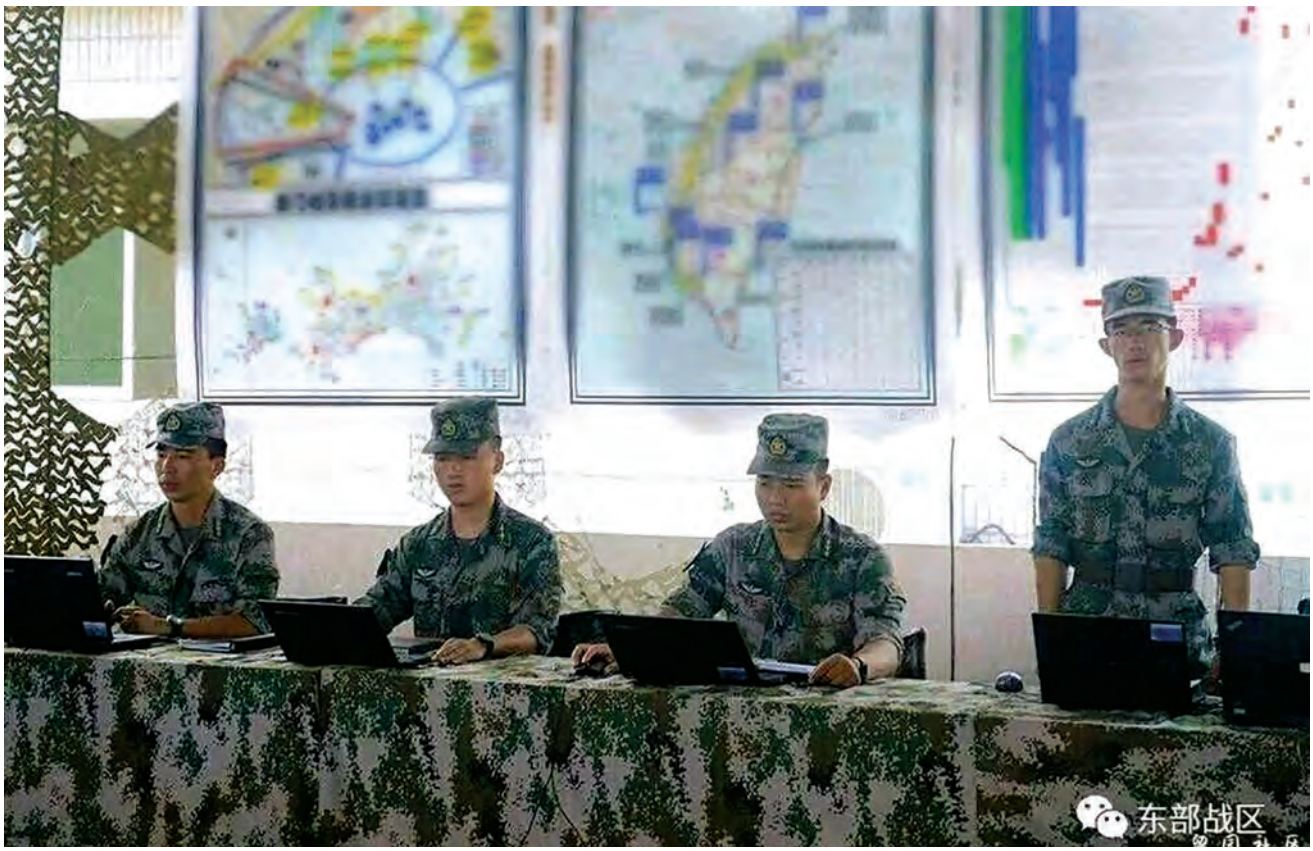
On three occasions when an enemy struck suddenly—in South Korea in 1950, in Kuwait in 1990, and after the 11 September 2001 al-Qaida terror attacks on the U.S. homeland—America's decisions to react were rapid. In 1950, President Harry Truman ordered American air and naval action just two days after North Korea invaded.[30] In 1990, President George H. W. Bush ordered American forces to Saudi Arabia less than a week after Iraq invaded Kuwait.[31] And the U.S. Congress authorized military force a week after the terror attacks.[32] China is a potential threat far larger than any of the enemies in those three examples, so the American debate could be longer, but China cannot count on a lengthy delay from America's domestic politics.

The international relations power aspect is not simply the military balance of power that has shifted in China's direction. The great physical distance that dominates American operations in the western Pacific requires time to overcome. Without American troops on the ground in Taiwan, there will be no automatic involvement on the first day as there would have been in West Germany during the Cold War. In the Korean War, despite a quick political decision to intervene it took about six weeks to deploy the 24th Infantry Division (Mechanized) from the continental United States to Saudi Arabia—without Iraqi interference.[34] In a direct attack on America in 2001, it took over five weeks before the first Special Forces were on the ground in out-of-the-way Afghanistan.[35]

Certainly, American forces could be readied, sent to sea, and ordered to shift to the Pacific after identifying Chinese preparations consistent with invasion plans in advance of the political decision to fight. Some Army units could be moved to Taiwan in weeks—assuming the Navy and Air Force can keep air and sea lines of communication secure. But American armored forces located in the continental United States are unlikely to outpace a PLA buildup across a one hundred-mile strait. Those armored forces are the key to defeating a Chinese invasion of Taiwan.

Staying Ashore

Landing an invasion force on Taiwan is not beyond the PLA's capabilities and experience. American strategists must not conflate the prevention of China's total conquest of Taiwan with defeating China. What if the key objectives China must attain in an invasion are simply those that allow China to sustain a military presence there rather than breaking out and occupying the island? Failure to drive the PLA ground forces into sea could be tantamount to losing Taiwan. At best, America might find itself manning a second, Korea-like demilitarized zone in INDOPACOM in defense of Taiwan. At worst, America could be confronted later with a choice to liberate Taiwan using a U.S. Marine Corps less focused on large-scale amphibious warfare against Chinese A2/AD assets emplaced on Taiwan.



An image from Chinese social media depicts a People's Liberation Army command post exercise with a topographic map of the southern coastline of Taiwan prominently featured. (Photo courtesy of ETtoday)

China does not need to destroy the Taiwanese military, occupy all of Taiwan, or even capture Taipei to win the war. If China can move sufficient army groups onto Taiwan and maintain a reasonable line of supply, it can suspend the war at any time. Taiwan's Overall Defense Concept's (ODC) core premise is that Taiwanese asymmetric warfare capabilities will target Chinese weaknesses most efficiently "while surviving long enough for third-party intervention."[36] Much of the world—perhaps America especially—would be relieved to have a cease-fire before American and Chinese forces are openly shooting at each other. China would use that cease-fire to strengthen its position on Taiwan and prepare for a second phase of the invasion: the breakout and final conquest of Taiwan.

By the end of June 1944, despite damage to one artificial port and the destruction of the other, nearly a million Allied troops were ashore on the Normandy beachhead following the D-Day invasion of German-occupied France.[37] The Germans missed their opportunity to throw the invaders into the sea and could not prevent an Allied buildup and subsequent drive into the heartland of Germany. Taiwan faces that dilemma if the PLA ground forces get ashore. The question is whether Taiwan can throw the invaders into the sea. While Taiwan's new ODC focuses on asymmetric warfare capabilities, an approach "widely lauded by international experts," once the Chinese are ashore, the Taiwanese will desperately want force-on-force symmetrical ground combat capabilities with a conventional arsenal, such as Abrams tanks that Taiwan has decided to purchase, but that does not conform to the ODC.[38] Taiwan will need to deny China a pause to build up and resume the war months or years later.

The Taiwanese will need to drive the PLA ground forces into the sea and not just contain the Chinese in their enclaves. Taiwan has 140,000 ground troops in three group armies totaling twenty-two combat brigades facing a potential invasion force of over 400,000 ground troops in seven army groups (including marines and airborne forces), totaling fifty combat brigades in the eastern and southern theaters (those closest to Taiwan).[39] While the Taiwanese

might be thinking of how many PLA troops the Taiwanese ground forces could prevent from driving on Taipei until America intervenes, the correct question is how many PLA troops China would need on Taiwan to stop a Taiwanese counterattack. Consider that even a successful mobilization of Taiwanese reserve troops simply provides hometown local defense forces while the active forces carry out the main combat missions.[40] Is Taiwan's active army a "hollow shell" with shortages of personnel especially acute in combat units?[41] Would even one hundred thousand PLA troops with ample air and naval support be enough to dig in and hold on against Taiwan alone?

Even a fully manned active Taiwanese army equipped for large-scale combat operations may be inadequate. If so, simply pushing Taiwan to spend more on defense and correcting manning deficiencies is not enough. Taiwan will need help from abroad. America is the only source of ground forces capable of conducting offensive large-scale combat operations. The Marine Corps has significant forces deployed in the western Pacific, but the Marines are getting lighter and focusing more of their attention on supporting the Navy in a sea control battle in the new era of great-power competition.

That leaves the U.S. Army to provide a corps of two-to-four divisions plus supporting units to spearhead offensives against the PLA bridgeheads.[42] Naturally, this requires the Navy and Air Force to fight through China's A2/AD-supported naval and air forces to gain secure access to Taiwan's ports and airfields that would allow the deployment of the Army and provide joint U.S. forces opportunities to interdict China's line of supply across the Taiwan Strait.

This scale of U.S. Army involvement in INDOPACOM outside of the Korean Peninsula is truly a new idea in the twenty-first century.[43] The infrastructure and logistics support to carry it out are insufficient. A proposal patterned on spending to improve logistics capabilities in NATO could broaden INDOPACOM's reach.

> Under the multiyear INDOPACOM proposal, $5.8 billion would be for offensive missiles and multiple radars, including a space-based radar; another $5.8 billion would be used to distribute forces around the region; and $5.1 billion would be for "logistics and security enablers"—a broad array that includes counterpropaganda operations, fuel storage, battle-damage repair facilities, as well as military aid for forces in Indonesia, Malaysia, the Philippines, Thailand, and Vietnam.[44]

This is just a first step in enabling the Army to decisively intervene to prevent China from beginning the conquest of Taiwan. If afloat Army prepositioned stocks for heavy divisions are needed in the western Pacific to speed their deployment, they should be added to the proposal.

Victory

Taiwan is a location around China's periphery where the Army's core competency of large-scale combat operations could potentially be carried out for a decisive outcome. Counting on a Taiwanese ODC asymmetric strategy of inflicting casualties to deter China from invading is risky. Years ago, it seemed as if there was a limit to what China would endure to take Taiwan:

> Some months ago it was reported that the Chinese high command regularly provides the leadership with its predictions for an attack against Taiwan. Apparently in 2004 it emerged under questioning that about 21,000 deaths were expected in such an attack. Contrary to Western views that China has unlimited manpower and that human life is cheap, the leadership found this figure unacceptable.[45]

The problem is that a casualty-inflicting deterrence strategy relies on the enemy tolerance for deaths. We cannot know when the Chinese will see an improving—or fleeting—military situation that brings the anticipated death toll within an acceptable range. And we cannot know when the domestic situation will make Chinese Communist Party (CCP) rulers far more tolerant of military casualties. The Chinese military exists to keep the CCP in power.[46] If the CCP needs to conquer Taiwan to remain in power, PLA casualties may not be a limiting factor.

Once the PLA is ashore, the missions to defeat the invasion will be to contain and isolate the bridgeheads; prevent them from consolidating; slow the PLA buildup; and enable a Taiwanese counterattack

as soon as possible before the PLA ground forces bring in heavy weapons and supplies to fight a major battle. These missions can be promoted by

- selling Taiwan the heavy armor, attack helicopters, and fires and support assets needed to defeat the PLA in large-scale combat operations;
- sending U.S. Army fires, aviation, air and missile defense, and other supporting units to Taiwan (in addition to Navy, Marine Corps, and Air Force assets) to support a Taiwanese counteroffensive; and
- dispatching an Army heavy corps to Taiwan.

The latter step will bolster Taiwanese morale with the knowledge that maneuver unit reinforcements are coming and will provide the core for a decisive counterattack if Taiwan's maneuver brigades alone are unable to drive the PLA ground forces into the sea.

The idea that Taiwan must be able to resist the PLA until America intervenes is not without merit. The question is, what does America do when its forces arrive? Arriving in time to enforce a cease-fire is simply a means to delay losing. Just the credible threat of a U.S. Army corps capable of deployment to Taiwan might deter China from starting an invasion; China might no longer be confident that the main effort will remain one between the PLA and the Taiwanese ground forces. And if deterrence fails, the corps will drive the enemy into the sea. ■

Notes

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5. David B. Larter, "To Combat the China Threat, US Marine Corps Declares Ship-Killing Missile Systems Its Top Priority," Defense News, 5 March 2020, accessed 5 June 2020, https://www.defensenews.com/naval/2020/03/05/to-combat-the-china-threat-us-marine-corps-declares-ship-killing-missile-systems-its-top-priority/.

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7. Office of the Secretary of Defense, *Annual Report to Congress 2019*, 91.

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15. Office of the Secretary of Defense, *Annual Report to Congress 2019*, 115–17.

16. Ibid.

17. Michael A. Hanson, "China's Marine Corps Is on the Rise," *Proceedings* 146, no. 4 (April 2020): 30.

18. Office of the Secretary of Defense, *Annual Report to Congress 2019*, 90–91.

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20. Ibid., 88–89.

21. Jeremy Black, *Combined Operations: A Global History of Amphibious and Airborne Warfare* (Lanham, MD: Rowman & Littlefield, 2018), x.

22. U.S. Marine Corps, *Force Design 2030* (Washington, DC: Department of the Navy, March 2020), 2, accessed 5 June 2020, https://www.hqmc.marines.mil/Portals/142/Docs/CMC38%20Force%20Design%202030%20Report%20Phase%20I%20and%20II.pdf?ver=2020-03-26-121328-460.

23. Agence France-Presse, "Report: China Orders Civilian Ships Adapted for Military Use," Defense News, 18 June 2015, accessed 5 June 2020, https://www.defensenews.com/global/asia-pacific/2015/06/18/report-china-orders-civilian-ships-adapted-for-military-use/.

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25. Cole, *The Great Wall at Sea,* 19.

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38. Corey Lee Bell, "Is Taiwan Really Buying the 'Wrong' Weapons?" The Diplomat, 31 March 2020, accessed 5 June 2020, https://thediplomat.com/2020/03/is-taiwan-really-buying-the-wrong-weapons/.

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40. Ian Easton et al., *Transformation of Taiwan's Reserve Force* (Santa Monica, CA: RAND Corporation, 2017), 28, accessed 5 June 2020, https://www.rand.org/pubs/research_reports/RR1757.html.

41. Paul Huang, "Taiwan's Military Is a Hollow Shell," *Foreign Policy* (website), 15 February 2020, accessed 5 June 2020, https://foreignpolicy.com/2020/02/15/china-threat-invasion-conscription-taiwans-military-is-a-hollow-shell/.

42. Since the Persian Gulf War, the Army has routinely planned for major regional contingencies (or conflicts) or major theater wars organized around four to five divisions. I assume that the distance, lack of time, People's Liberation Army anti-access/area denial assets, and the required existence of a viable Taiwanese army to support push the number of American divisions to a lower level.

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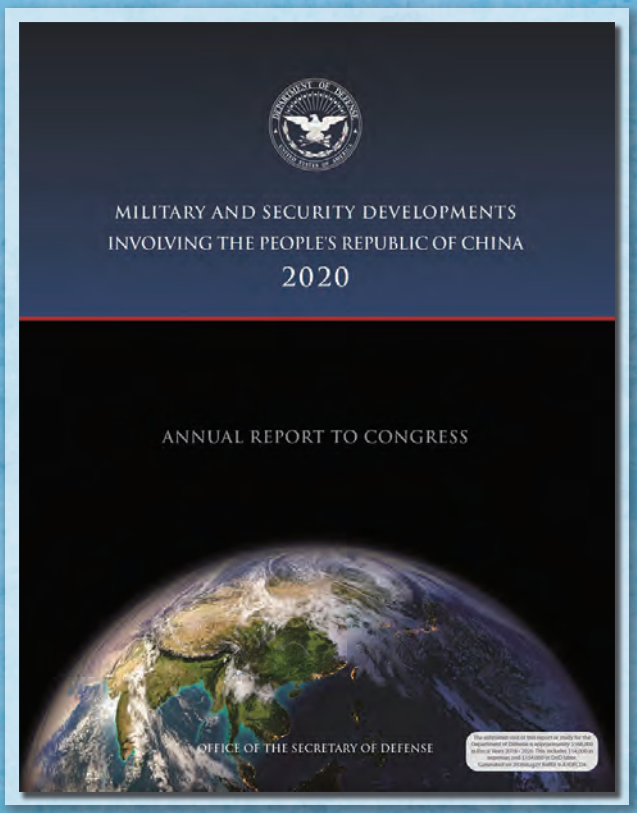
United States Strategic Assessment of the People's Republic of China



For those readers interested in learning more about the 2020 U.S. Department of Defense's assessment of the threats posed by strategic competition with China, your attention is invited to the *Military and Security Developments Involving the People's Republic of China 2020*. This publication provides a summary of policy concerns and overview of key global initiatives guided by implementation of the *National Security Strategy* as it specifically applies to the People's Republic of China. To view this document, visit https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF.

Graphics courtesy of Amonrat rungreangfangsai and matrixdesigner, Vecteezy

Deterring the Dragon

Returning U.S. Forces to Taiwan

Capt. Walker D. Mills, U.S. Marine Corps

During the Cold War, the primary objective of the U.S. military's conventional deterrence was to prevent a Soviet invasion of Western Europe and most of the literature on conventional deterrence focused on Europe. Since then, the collapse of the Soviet Union and the expansion of the NATO alliance to include many post-Soviet states have dramatically lowered the threat of a conventional invasion of Western Europe. While there remains a risk of fait accompli actions and other malign behavior, the overall risk does not compare with the risk of invasion during the height of the Cold War. Meanwhile, the United States has "pivoted" to Asia and is primarily concerned with an aggressive and "revisionist" People's Republic of China, also called mainland China.[1] China has made it clear that it views the Republic of China (hereinafter referred as Taiwan) as its most important "core interest" and that it would use force to prevent full Taiwanese independence. Chinese leadership has also made clear that they intend to reunify Taiwan with mainland China by 2049.[2] Parallel to increasingly assertive rhetoric from Chinese leadership, the People's Liberation Army (PLA) has undergone a dramatic modernization and is rapidly approaching parity with U.S. forces in some areas and has surpassed U.S. forces in others like intermediate range missiles.[3] Current trends including the increasingly assertive Chinese claims over Taiwan, an increasingly potent and aggressive Chinese military, and the U.S. pivot to Asia have set the stage for escalation and potential confrontation over Taiwanese sovereignty. The United States needs to recognize that its conventional deterrence against PLA action to reunify Taiwan may not continue to hold without a change in force posture. Deterrence should always be prioritized over open conflict between peer or near-peer states because of the exorbitant cost of a war between them. If the United States wants to maintain credible conventional deterrence against a PLA attack on Taiwan, it needs to consider basing troops in Taiwan.

Previous page: One of many pieces of nationalist propagandistic artwork created by students of the Sichuan Fine Arts Institute in Chongqing, China, that depict a People's Liberation Army invasion of Taiwan. (Image courtesy of the Sichuan Fine Arts Institute)

Assessing Intentions

Assessing the intentions or redlines of foreign governments is particularly difficult, and the United States has an imperfect track record with China after major miscalculations regarding Chinese intervention in the Korean War. However, Chinese leadership has made their intention to reunify Taiwan and China by force, if necessary, unequivocally clear. They have never wavered from their "One China" policy and have been calling for PLA invasion of Taiwan since 1949.[4] Since at least 1993, the PLA has held up a potential cross-strait operation as their number one strategic priority.[5] Some analysts like Toshi Yoshihara and James R. Holmes argue in the book *Red Star over the Pacific* that Taiwan is even more valuable to China than many Western analysts recognize in the minds of mainland leadership.

> [The Taiwan Issue] involves far more than sovereignty and national dignity, the motives Westerners commonly impute to

> China. Taiwan's return to mainland rule would buttress China's strategic position, broaden access to resources and trade, and brighten the prospects for restoring China's rightful standing in Asia.[6]

Ian Easton, a senior researcher at a China-focused think tank, has emphasized this as well, writing:

> Invading Taiwan is at the heart of the armed wing of the CCP… The war plan for fighting a Taiwan "liberation" campaign is tattooed on the PLA's corporate memory.[7]

The United States' increasingly complicated relationship with China casts doubt on U.S. intentions regarding the defense of Taiwan. In 1979, it established diplomatic relations with the People's Republic of China and denormalized its relationship with Taiwan, including ending a mutual defense treaty. At the same time, the United States withdrew its forces from Taiwan, standing down the U.S. Taiwan Defense Command and the dedicated Navy Taiwan Patrol Force.[8] Since 1979, the United States has supported Taiwanese defense with intermittent arms sales and strait transits by U.S. warships and Coast Guard vessels but has not returned troops to the island in accordance with the 1979 Taiwan Relations Act. The act, which has been the legal guarantor for U.S. support of a free and independent Taiwan, is somewhat ambiguous. It codifies U.S. policy as:

> To provide Taiwan with arms of a defensive character; and to maintain the capacity of the United States to resist any resort to force or other forms of coercion that would jeopardize the security, or the social or economic system, of the people on Taiwan.[9]

Critically, it is *not* a mutual defense treaty that obligates the United States to defend Taiwan or to respond to PLA aggression; it is ambiguous in this way and defers the actual decision to use force to U.S. leadership at the time of a crisis. Even before the 1979 withdrawal

the United States maintained an intentional level of ambiguity in its commitment to the defense of Taiwan.[10] Because the United States does not base forces on Taiwan, conduct joint military training with Taiwanese forces, or have an alliance with Taiwan, the arms sales are the only real demonstration of the U.S. commitment to Taiwanese defense.[11] Thomas C. Schelling, one of the fathers of compellence theory, reminds us that "one cannot incur a genuine commitment [to defend another state] by purely verbal means," because other demonstrations of commitment are essential.[12] Ambiguous or uncertain commitments can lead to disastrous miscalculations. It is possible that the Korean War could have been prevented had the United States made clear its willingness to defend South Korea, and that direct Chinese involvement could have been avoided with more effective communication of their redlines as well.[13] Both were miscalculations because of a lack of mutual understanding about redlines and intentions. It is more than just a coincidence that again, the United States is dangerously ambiguous about deterrence with China, a country as opaque to Americans as any.

Assessing the Balance of Forces

The local balance of forces in East Asia continues to tip ever more in favor of the PLA. Taiwanese forces have been unable to keep up with the rapid growth and modernization of the PLA and have prioritized "prestige" military capability over the anti-access/area denial (A2/AD) capabilities that would be more effective defending the island against the PLA.[14] Because of this, Taiwanese forces, while certainly still capable, are increasingly at risk of having to face PLA overmatch in

China's *Liaoning* aircraft carrier, accompanied by navy frigates and submarines, conducts military exercises 12 April 2018 in the South China Sea. (File photo released by the Xinhua News Agency)

A U.S. Air Force Lockheed F-104A Starfighter from the 83rd Fighter Interceptor Squadron stationed at Taoyuan Air Base, Taiwan, participates in Operation Jonah Able 15 September 1958 in response to the Quemoy Crisis. (Photo courtesy of the National Museum of the U.S. Air Force)

quantity but also in quality.[15] These changes in Taiwan's threat environment particularly the ambiguous nature of U.S. support and relative changes in the balance of forces are pushing Taiwanese leaders to alter their defensive strategy.[16] Perhaps more importantly in the overall balance, U.S. forces no longer boast the overmatch that they enjoyed during the 1995–1996 Taiwan Strait Crisis.[17]

Unconstrained by the Intermediate-Range Nuclear Forces Treaty, the PLA amassed hundreds of thousands of conventional ballistic missiles that now threaten U.S. ships and bases in Japan, Korea, and even Guam. During the same period the United States lost its bases in the Philippines—critical locations near China and on the South China Sea. The risk to the remaining bases and ships, especially to runways and aircraft carriers, is that China could swiftly neutralize American air and naval power in East Asia during a conflict. This would effectively prevent the United States from interfering with a PLA invasion of Taiwan because the United States does not have any forces in Taiwan.

A 2017 report by the Center for New American Security found that Chinese missiles were "the greatest military threat to U.S. vital interests in Asia."[18]

> By marrying great accuracy with numerous ballistic missiles, China may have developed a capability that the Soviet armed forces never had: the ability to strike effectively, in a matter of minutes, U.S. and allied bases, logistical facilities, and command centers without resorting to the use of nuclear weapons, and without having established air superiority.[19]

Later in the year, a RAND research brief came to the same conclusion—that U.S. presence in the region was vulnerable because of the Chinese capability to target U.S. bases, specifically aviation infrastructure, which could be neutralized for at least the first forty days of a conflict—more than enough time for the PLA to gain a foothold in Taiwan.[20] Michael Chase's 2018 testimony before the U.S.-China Economic and Security Review Commission reported on the modernization of PLA capabilities and found that

> [the PLA] Rocket Force's growing conventional ballistic and cruise missile capabilities

> could pose a serious threat to U.S. forces and those of its allies and partners, including not only fixed facilities such as air bases but also surface ships, such as U.S. aircraft carriers.[21]

Another analyst called the Kadena Air Base in Okinawa, Japan, a "sitting duck susceptible to missile attacks from the Chinese."[22]

Recent commentary has begun to reflect a sense of doom and gloom in the ability of U.S. forces in East Asia to credibly deter Chinese aggression. A steady parade of commentary has identified the vulnerabilities of aircraft carriers and large amphibious ships, the foundation of American deterrence in East Asia.[23] A 2018 *New York Times* article announced that the head of U.S. Indo-Pacific Command, Adm. Phillip Davidson, admitted, "China is now capable of controlling the South China Sea in all scenarios short of war with the United States."[24] The article was focused on the Chinese military buildups on several reefs and artificial islands in the South China Sea, but it came out at the same time as the U.S. military was acknowledging the threat of Chinese missiles to its ships and bases. Gen. Robert B. Neller, the previous commandant of the Marine Corps, expressed a similar pessimism responding to a question about increasing PLA dominance of the South China Sea.

> Sadly, I don't see us doing a whole lot to contest that. [The Chinese] are out there putting their marbles down, and we've got no marbles. We've got old marbles, but pretty soon there isn't going to be a place to put down marbles if they don't start doing something.[25]

Until recently, American naval forces were enough to credibly deter the PLA from attempting a cross-strait operation. Even though the U.S. Navy's Taiwan Patrol Force stood down in 1979, the Navy was still very engaged in enforcing the neutrality of the strait. During the 1995–1996 Taiwan Strait Crisis, the Navy sailed two carrier strike groups formed around the USS *Nimitz* and the USS *Independence*, through the strait to signal the United States resolve to defend Taiwan against aggression from Beijing. It is highly likely that PLA impotence in the face of the 1995–1996 strait transits provided the impetus for the PLA's robust A2/AD capability.[26] Even as late as 2008, a RAND study found that "successful invasion [of Taiwan] would be nearly impossible for the near term"; however, the study also foreshadowed the current balance of forces, noting that "Chinese force modernization (particularly the acquisition of systems to deny U.S. naval and air assets access to the area around Taiwan) may alter this balance in the next decade."[27]

United States Taiwan Defense Command badge

Today, U.S. Navy and Coast Guard vessels make occasional strait transits as part of routine freedom of navigation operations.[28] However, these vessels would be extremely vulnerable if caught in the middle of a cross-strait operation and would be unable to prevent a cross-strait operation by the PLA on their own. It is also unlikely that the Navy would send an asset as valuable as a carrier strike group through the Strait of Taiwan today, even though in June 2020, the Navy surged three aircraft carriers to the Pacific.[29] It would also be difficult and risky, if not impossible for the United States to surge forces to Taiwan to support the Taiwanese military in the event of a conflict. PLA A2/AD capabilities could easily seal off Taiwan to even the expeditionary forces on the United States bases in Japan and Guam. Surge forces from the U.S. mainland would be weeks if not months away.[30]

In addition to the expansion of PLA missile capabilities, the People's Liberation Army Navy (PLAN) has also modernized and expanded its surface and subsurface fleet. A 2015 Office of Naval Intelligence report noted that in 2013 alone, the PLAN launched, commissioned, or laid down more than sixty ships. The report also noted that this level of shipbuilding was "more naval ships than any other country and is expected to continue this trend

Capt. Walker D. Mills, U.S. Marine Corps, is an infantry officer serving as an exchange officer with the Colombian Marine Corps.

through 2015–16" and beyond.[31] Other analysts noted that the Office of Naval Intelligence, "a body not known for hyperbole," called the PLAN shipbuilding program "remarkable."[32] This shipbuilding program is all the more threatening to the U.S. ability to reinforce Taiwan because most of the PLAN vessels are armed with anti-ship missiles, and every anti-ship missile in the PLAN outranges the U.S. Navy's standard anti-ship missile, the Harpoon.[33] Yoshihara and Holmes ultimately concluded in their book on the subject,

> If our diagnosis is correct, the United States and its allies are in a danger zone. … The martial balance may continue shifting toward the PLA in the coming years as Chinese forces expand, improve their arsenal and refine their tactics to make the best use of the contested zone.[34]

A 2015 Center for Strategic and Budgetary Assessments report, *Deploying Beyond Their Means: America's Navy and Marine Corps at a Tipping Point*, found that the Navy and Marine Corps are overextended and in many cases, unable to do much more than exist at forward locations in the Pacific.[35] This point was underscored by the 2017 USS *Fitzgerald* and USS *John S. McCain* collisions, which were attributed to a lack of personnel readiness and training in the Seventh Fleet. The Marine Corps commitments to the region have also been lagged over recent years as it prioritized ongoing combat operations in U.S. Central Command over rotational deployments to Okinawa and Australia. However, this year, the commandant of the Marine Corps, Gen. David Berger, announced that the corps would reprioritize operations in the Pacific.[36] The U.S. Army, despite having a Pacific presence similar in size to the Marine Corps, continues to prioritize deterrence in Europe, and even within U.S. Indo-Pacific Command, it is focused on deterring North Korea rather than China.

Deterrence

The concept of deterrence has benefited from considerable academic study, though not as much of it has been devoted to East Asia, or specifically to the issue of Taiwan; most studies have focused on nuclear deterrence issues or deterrence in Western Europe. According to Alexander L. George and Richard Smoke in *Deterrence in American Foreign Policy*, deterrence is defined as "the persuasion of one's opponent that the costs and/or risks of a given course of action he might take outweigh its benefit."[37] Karl P. Mueller described conventional deterrence "distilled to 140 characters" as "deterrence is causing someone not to do something because they expect or fear that they will be worse off if they do it than if they do not."[38] Robert Ross explained deterrence with regard to Taiwan in *International Security*:

> Effective deterrence demands that the status quo state possess the retaliatory capability to inflict costs that outweigh the benefits on a state that seeks to change the status quo. U.S. deterrence in the Taiwan Strait requires that Chinese leaders believe that the United States can use its military capabilities effectively in a war in the Taiwan theater and that it can inflict sufficient costs on China that outweigh the benefits of unification through war.[39]

In Taiwan's case, it is helpful to break deterrence down into two components: the perceived ability to prevent a PLA invasion (often called denial) and the perceived ability to effectively respond to one with force and fight a larger conflict.[40] The distinction is important because it is now likely that the United States has little or no ability to prevent such an action. Chinese missiles and missile-armed bombers could, with little or no warning, cripple the U.S. aviation support infrastructure in East Asia and neutralize flat-deck Navy vessels in the opening hours of a conflict. By targeting runways, China could prevent the United States from bringing other aircraft into theater, and China could use its considerable number of surface ships and submarines to prevent or delay the arrival of out-of-theater U.S. naval assets. The United States would still retain a long-range bomber force capable of striking PLA targets and probably submarine assets capable of striking targets on land and at sea. However, unsupported, these assets would be vulnerable to Chinese fighter aircraft and antisubmarine warfare efforts, respectively. A surprise PLA attack on U.S. forces and Taiwan could effectively isolate Taiwan from U.S. support and prevent U.S. interference in a cross-strait invasion for days, if not weeks. A RAND study found that with only 274 missiles (a small fraction of the PLA inventory), the PLA could keep Kadena Air Force Base in Okinawa close

Lance Cpl. Tyler Pearson watches his sector of fire 22 July 2019 during an amphibious assault on Kings Beach while participating in Exercise Talisman Saber 2019 in Queensland, Australia. To neutralize potential enemy capabilities resulting from the construction and militarization of artificial islands in the South China Sea, the Marine Corps is building a Marine littoral regiment specifically designed for island hopping offensive operations against defending enemy forces in a contested environment. The design of this force reduces the kinds of conventional equipment that can potentially slow quick-strike capabilities and will emphasize the employment of lethal air and ground unmanned platforms, long-range surface and subsurface vehicles, electronic warfare, and a greatly increased number of precision guided munitions, among other organizational and equipment innovations. Such a regiment could be maintained afloat or be stationed permanently at a forward deployed location. (Photo by Sgt. 1st Class Whitney C. Houston, U.S. Army)

to fighter operations for thirty days and three times as long for tanker operations.[41] This would be adequate time for the PLA to gain a foothold in Taiwan and expand its air defense umbrella across the strait. Similarly, a more limited PLA strategy of blockade or an extended air and missile campaign would effectively preclude U.S. forces from defending Taiwan later.

The second component of deterrence, the ability to react, now becomes important. The United States would be faced with the choice of acquiescing to the PLA invasion of Taiwan, a near fait accompli at this point, or marshaling forces to attempt a much larger and longer campaign to roll back the PLA A2/AD umbrella and ultimately land forces on Taiwan to reinforce the Taiwanese military or retake the island. Because the United States is reacting and could have been isolated from providing immediate support to Taiwan, the decision to intervene and support Taiwan becomes a deliberate rather than reflexive choice.

American leadership and the public may, at that juncture, decide that the sovereignty of Taiwan is not worth the cost of that larger campaign and a potentially much larger war with Beijing. In his 2013 essay on deterrence, Richard K. Betts argued that the political will to support Taiwan militarily in a crisis was an open question.

> There is no serious discussion about this, let alone consensus, among either U.S. voters or the foreign policy elite in Washington.[42]

In his book *Conventional Deterrence*, John Mearsheimer outlines his own theory of deterrence. His study focuses closely on conventional deterrence in Europe at the end of the Cold War, though his conclusions apply to the Taiwan case. Mearsheimer argues that deterrence fails when one side believes it has a relatively cheap way to achieve its objectives, which is often what he calls "the quick land grab."[43] He calls this the "limited aims strategy," writing,

> When strategic surprise is possible, the limited aims strategy has a high probability of success; it is simply not as ambitious a strategy as one that aims at decisive defeat of the enemy.[44]

If the PLA believes it can quickly achieve its "limited aim" of repatriating Taiwan through surprise and a lightning maritime campaign, U.S. deterrence based offshore is likely to fail. "In a crisis, if one side has the capability to launch a blitzkrieg, deterrence is likely to fail."[45] Robert Ross echoed the same argument in "Navigating the Taiwan Strait":

> Deterrence can also fail when the deterrer's military strategy cannot eliminate the challenger's option of a fait accompli strike that achieves the challenger's limited objectives and leaves war initiation or escalation to the deterrer. In the Taiwan Strait, failed conventional deterrence could entail China starting a war to seek the rapid political capitulation of Taiwan.

> Thus, effective deterrence requires the United States to possess the specific capabilities necessary to frustrate a fait accompli strategy.[46]

The larger risk to the PLA is a protracted war with the United States—a short, yet bloody conflict with Taiwan may be an acceptable price for reunification. Ross argues that what makes deterrence work is when an attacker (in this case China) does not believe they can rapidly achieve their limited aims and would face a larger and riskier war of attrition.

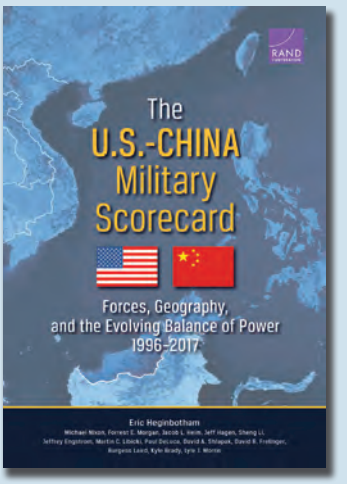
> Deterrence is likely to hold when a potential attacker is faced with the prospect of employing an attrition strategy … the possibility of becoming engaged in a long, costly war, even if success could be guaranteed, is a powerful deterrent to military action.[47]

To effectively deter China and the PLA, America needs to posture its forces in a way that would inevitably trigger a larger conflict and make plain its commitment to Taiwanese defense. American forces cannot be postured in a way where they could simply be isolated from the conflict by PLA A2/AD capabilities and a debilitating strike on their bases.

Altering the Balance: Returning U.S. Forces to Taiwan

It is time to consider returning U.S. forces to Taiwan. The presence of U.S. ground forces in Taiwan would significantly alter the deterrence paradigm and prevent Mearsheimer's blitzkrieg and fait accompli attacks or any misunderstanding of the United States' intentions. Forces in Taiwan would also communicate the message the United States will defend Taiwan in the clearest terms, in Schelling's words this communication is the "hardest part of deterrence.[48] The United States needs to "make [deterrence] persuasive, to keep it from sounding like a bluff."[49] A 2020 RAND study on the value of heavy ground forces for conventional deterrence concluded "our results provide consistent evidence for

The Chinese People's Liberation Army has transformed over the last two decades from a bloated and technologically inferior force to a modern and highly capable power that poses significant challenges to protecting U.S. interests in Asia. *The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power 1996-2017* compares and contrasts U.S. and Chinese military capabilities in ten operational areas, covering air and missile, maritime, space and counterspace, cyber, and nuclear domains. Additionally, it assesses the capabilities in the context of two scenarios at different distances from China, one centered on Taiwan and the other on the Spratly Islands. To view this document, visit https://www.rand.org/content/dam/rand/pubs/research_reports/RR300/RR392/RAND_RR392.pdf.



Soldiers of the People's Liberation Army oversee military exercises while a map of Taiwan prominently hangs in the background. (Photo by the *South China Morning Post*)

the deterrent effects of heavy ground forces and air defense capabilities."[50] This finding was in comparison to the deterrent effect of light forces, mobile and sea forces, and also crisis deployments. The study found that crisis deployments, which are short-term deployments to deescalate a particular crisis at a particular time, had valuable deterrent effects but were limited in their ability to "prevent no-notice or short-notice *faits accomplis* launched by highly capable adversaries [emphasis in original]."[51] It also found "little, if any, evidence for the deterrent impact of air and naval forces."[52]

Ground forces based in Taiwan would not only be important for repelling a PLA invasion, but more importantly, they would act like what RAND calls a "tripwire"; that is, "smaller numbers of ground forces stationed to ensure that U.S. forces quickly become directly involved in a potential adversary invasion."[53] A small force would be economical and minimally antagonistic toward mainland China especially if it was only a rotational force. It would have the deterrent effect of assuring the PLA that in the event of a cross-strait invasion, U.S. forces would be committed to the defense of Taiwan, avoiding what Betts called "the most dangerous long-term risk posed by Washington's confusion over deterrence"—lack of a clear message to Beijing.[54] Another RAND article on deterrence argued, "A defender can succeed by deploying sufficient local forces to raise the cost of a potential attack, to make escalation inevitable, and to deny the possibility of a low-risk fait accompli."[55]

U.S. ground combat forces are the most capable in the world, and it would be extremely unlikely that the U.S. government would not commit to a larger conflict after U.S. ground forces were engaged in Taiwan. Such a force would also allow U.S. and Taiwanese forces to train and exercise together like U.S. forces routinely do with South Korean, Japanese, and Filipino forces.

This year, the U.S. Marine Corps announced significant future changes in the way it mans, organizes, and equips the force so that it can operate as an "inside

The Evolution of Military Strategy in Taiwan

force" in the first island chain. This reorganization will allow the corps to operate in accordance with its new operating concept, Expeditionary Advanced Base Operations.[56] The Marine Corps envisions itself operating as a highly mobile and distributed force using precision fires and unmanned aviation to strike PLA targets on land and at sea. This vision has been widely lauded; however, even the Marine Corps is unlikely to be able to prevent a PLA assault without basing these forces in Taiwan. Even the projected Marine Corps capabilities will not be able to reach the Strait of Taiwan from potential operating sites in Japan or the Philippines. Also, the authors of a 2018 RAND study found that

> light ground forces, particularly when deployed directly inside the borders of the partner or ally being threatened, may be associated with a higher risk of low-intensity militarized disputes, but we do not find similar evidence of this risk for heavy ground forces in our statistical models.[57]

This finding stands in contrast to the Marine Corps' own conclusions that a lighter, more mobile force can provide superior deterrence than the medium-weight force that exists today. The Marine Corps recently announced that it was divesting of all of its tanks, reducing its number of attack helicopters, and reducing its purchase of F-35B fighter jets.[58] The Marine Corps' vision offers another path to effective conventional deterrence; however, that vision is still predicated on being at the point of crisis in time to prevent a fait accompli or blitzkrieg attack, which would potentially require forces based in Taiwan.

Similarly, the U.S. Air Force has been experimenting with a new concept Agile Combat Employment,

(Figure from the *Taiwan National Defense Report–2019*, https://www.ustaiwandefense.com/tdnswp/wp-content/uploads/2020/02/Taiwan-National-Defense-Report-2019.pdf)

where small, self-sufficient groups of tactical forces can be surged forward and operate from improvised or dual-use facilities in a crisis.[59] However, like Expeditionary Advanced Base Operations, Agile Combat Employment still requires access to the operational area and basing infrastructure in order to be effective. Also, while certainly a force multiplier, airpower alone has been historically ineffective in both deterrence and coercion.[60]

It is critical to recognize that basing U.S. forces in Taiwan would likely be considered an escalatory move by the People's Republic of China and that such a move would likely have other impacts in U.S. foreign policy beyond Taiwan. The full range of potential consequences of this decision are beyond the scope of this paper but would need to be thoroughly considered. Any U.S. forces in Taiwan would also have require an invitation by the Taiwanese government, something likely to provoke significant internal debate in Taiwan. On the other hand, the loss of Taiwan as a friendly nation would throw the larger U.S. military strategies for defending Japan or the Philippines into disarray; control of Taiwan would give the PLA unfettered access to the Pacific Ocean and break any defensive strategy centered on the First Island Chain.

Conclusion

The United States needs to consider basing ground forces in Taiwan if it is committed to defending Taiwanese sovereignty. The regional balance of power in East Asia continues to tilt away from the United States and Taiwan toward mainland China. More specifically, the contours of the power balance make the possibility of a surprise, or fait accompli, attack on Taiwan more likely. If PLA forces can prevent U.S. forces from responding reflexively or immediately to PLA aggression, the United

States will either accede to a quick PLA victory in a Taiwanese-mainland China conflict, or be forced to wage a long, costly campaign to reestablish access to Taiwan with a far from certain outcome. U.S. leadership may have to face down domestic pressure at home and international pressure abroad against a deliberate and more global conflict with China.

U.S. ground forces in Taiwan, particularly combat credible, heavy forces could not only go far in repelling a PLA cross-strait operation but also serve as a tripwire that would inevitably trigger a wider conflict not acceptable to China. Most importantly, the presence of ground forces sends a clear message that the United States will support Taiwan militarily in a conflict with mainland China. These forces would also be able to train with Taiwanese forces and make it easier for follow-on U.S. forces to flow into Taiwan in the event of a conflict. If the United States is serious about Taiwanese defense, then it needs forces in Taiwan. Without U.S. forces in Taiwan, it is increasingly likely that China will attempt to integrate Taiwan into its republic by force. If current trends continue as projected and the United States does not increase its presence U.S. deterrence will continue to erode, paradoxically increasing the risk of conflict. ■

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Above: Artwork depicting a U.S. Naval carrier being attacked. (Artwork used with permission by The Tom Freeman Trust)

Right: Rear Adm. Luo Yuan of the People's Liberation Army Navy speaks at the National Committee of the Chinese People's Political Consultative Conference 3 March 2010 in Beijing. (Photo courtesy of Xinhua, www.news.cn)

Extract from Rear Admiral Luo Yuan's Speech at the 2018 Military Industry Ranking Awards Ceremony and Innovation Summit

25 December 2018

I personally think that we cannot just overtake [the United States] in a straight line, but also overtaking in a curve. We will develop whatever our opponent is afraid of. The United States has eleven aircraft carriers. Do we have to develop twelve aircraft carriers to compete with the United States? I think this line of thinking is wrong, and we cannot engage in an arms race. Historical experience tells us that the United States is most afraid of death. We now have Dongfeng 21D and Dongfeng 26 missiles. This is an aircraft carrier killer. We can sink an aircraft carrier and let it suffer casualties, 5,000 people; two ships sunk, and 10,000 casualties. Do you think the United States is afraid? Therefore, our chief military engineer should also consider developing from the weak underbelly of the United States.

To view the complete transcript of the speech, visit **https://www.kunlunce.com/ssjj/guojipinglun/2018-12-25/130147.html**.

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