

PROJECTIONS AMONGST GREAT POWERS: TRAJECTORIES WITHIN BOUNDED
DETERRENCE AND OBSERVATIONS ON MISCALCULATION – U.S., CHINA, AND
CUBAN CRISIS AS CASE STUDIES

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ABSTRACT

This research seeks to examine the likely misperceptions, miscalculations, and misjudgments in the present environment surrounding Taiwan's contested future which are likely to cross the nuclear threshold of either the United States or People's Republic of China. This is illustrated primarily through the lens of the bounded deterrence model in order to investigate all possible nuclear deterrence outcomes of a given conflict, while offering an extension of theory based upon a four-part continua of bounded deterrence variables. This research investigates the present local deterrence environment and trends; deterrence dispositions of the United States, People's Republic of China, the Republic of China, and numerous regional countries at present and foreseeable future; all possible nuclear deterrence outcomes between the United States and People's Republic of China and implications; and the investigation of the seminal case study of the Cuban missile crisis as it pertains to today. Lastly, the research offers recommendations to ameliorate the possibilities of these misperceptions, miscalculations, and misjudgments from escalating to nuclear war. Namely, there are many "near misses" to nuclear war, notwithstanding the increasingly likely possibility of conventional conflict over Taiwan's political future. The probability of conventional conflict over Taiwan turning into a nuclear war is greater than traditional American foreign policy wisdom recognizes. Therefore, the United States must be precisely clear in its intentions and to communicate in ways that not only the United States believes to be clear in maintaining deterrence, but that effectively transmits the necessary knowledge to the intended audience. Unless these trends of misjudgment and miscalculation are sorted and resolved, the concern McNamara had about the Cuban missile crisis is now thoroughly likely to be revisited in some future Taiwan crisis.

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DEDICATION

To Father and Mother, for those questions you gave me about the world.

The question is not what you look at, but what you see.

— Henry David Thoreau

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CHAPTER I

INTRODUCTION

Throughout the research, each chapter will highlight the risks of miscalculation from multiple dimensions, arguing that the possibility of nuclear war between two great powers may be closer than commonly realized. The beginning developments which invite the opportunity for miscalculation are occurring now and will deepen in the next decade.

Chapter I offers a clear baseline assessment of current conditions in the region governing relations between the U.S., China, and Taiwan, which affect the political future of the island. Further along, the research question and hypothesis are posed, coupled with evaluation of the extended deterrence literature and the bounded deterrence model, which will help guide future chapters. Chapter I ends with how this work will define deterrence in region.

Chapter II details erosion of U.S. conventional general deterrence, prompting uncomfortable questions of its continued desired effect years out, as questions of balancing the U.S. Navy's capability, capacity, and readiness in region become starker. This *longue durée* is the beginning invitation which may set the stage for miscalculation in the years to come. Other strategic elements contribute to the lack of U.S. deterrence, to include concerns of strategic focus of potential allies and partners on a plausible Taiwan invasion, technical interoperability concerns, logistics and geographic proximity, and worries of potential retaliation from the CCP if supporting the U.S. in deterring a CCP invasion that does not weigh directly on these partners' and allies' security interests, among other reasons. The chapter progresses with an account of sizeable would-be allied or partner regional navies – willingness to contribute to conventional general deterrence and the three above metrics to do so – and follows an analysis that the potential of the U.S. to rely significantly upon these regional navies would be ill-advised considering the lack of prospects when evaluated against these criteria. The chapter further

evaluates conventional missile reports of both U.S. and CCP in region to augment analysis that U.S. conventional general deterrence is eroding. Lastly, Chapter II analyzes U.S. proposals in countering the deteriorating regional balance of force, such as “integrated deterrence,” which imply an inclination to rely upon greater ally and partner assistance to prevent a Taiwan crisis; a differing approach on deterrence, which will be further explored later.

Chapter III examines a Taiwan that has a distinct cultural and political identity yet appears unwilling to marshal the political capital and Taiwanese buy-in to truly defend their society and way of life. Buried in this behavior is an implicit yet perilous understanding that, come what may, chances are the U.S. will defend Taiwan. Taiwan is playing a treacherous game in refusing to defend itself while relying on a great power for deterrence and likely defense. This trend could further metastasize into a declaration of Taiwanese independence leading to war – greatly increasing opportunity for misjudgment and miscalculation. Reneging on its own defense commitments, Taiwan risks allowing the PRC to deal irreparable damage via rapid overwhelming force at initial stages, at some point in future, that makes the costs of reversal outweigh gains. Therefore, Taiwan has a balancing act to play. It so far chooses a form of politically expedient disregard with erroneous perceptions of a great power patron. While the U.S. has lately been preoccupied with the internal defenses of Taiwan, the U.S., too, must realize that these are merely tactical. The most urgent considerations for the U.S. government are to think deeply of how to maintain its own conventional general deterrence in region, and how to respond originally and imaginatively to tests of its resolve and capabilities. This must be a structured exercise to clarify concepts and chart a widely understood intra-government path forward. This begins with a rededication of upholding the strength of strategic ambiguity¹ –

¹ Jakub Grygiel, “How to Deter Russia and China,” *Strategika*, No. 77, February 15, 2022, <https://www.hoover.org/research/how-deter-russia-and-china>.

perhaps a *realist arbitration*. Any other policy – of clarity or resignation – risks inciting Taiwanese independence or PRC adventurism, respectively. Ironically, both miscalculate and lead to greatly increased chances of war between two nuclear-armed great powers.

Chapter IV and Chapter V are structured around an ends, ways, and means framework. The “ends” section examines the aims of both parties regarding Taiwan, of which these same aims are the political underwriting of the U.S. – PRC relationship. As it pertains to Taiwan, both parties agreed to “peaceful reunification” to the mainland, yet as recent developments show, this understanding is being called into question as this fundamental political agreement is becoming increasingly unworkable. In the “ways” section, we analyze the “way of battle” for both great powers: U.S. expectations for quick, bloodless, technologically dependent conflicts resulting in unconditional surrender, and the escalatory nature of CCP operational concepts in war. Both beliefs and behaviors stand to aggravate missteps for miscalculation. Lastly, the “means” section includes discussion on the lack of a sound U.S. theory of victory and the hazardous assumptions of a generic CCP theory of victory, both of which fuel opportunities for miscalculation within conventional general deterrence without accurate understandings of the other party.

Chapter VI will investigate the bounded deterrence model in detail. This will vivify how conflicts may spiral out of hand into what some may consider “unthinkable,” when analyzing the Nuclear Threshold (NT) – Level of Unacceptable Damage (LUD) continuum of both defender and aggressor, and how the perceptions of these will likely influence the future deterrent potential in the region. This is the mechanism in how the research will view deterrence. The chapter ends with exploring a new concept on the great shifts of strategic thinking which may occur when transitioning from a general to immediate deterrence environment.

Chapter VII explores the seminal immediate deterrence encounter of two nuclear-armed great powers: the Cuban missile crisis. This will refresh the memory of how quickly events can spiral out of hand, even from a conventional conflict to nuclear brinkmanship. It is a warning for all three parties to tread with extraordinary prudence in attempting a change of the status quo. As the U.S. tolerated an unsavory regime 90 miles off the Florida coast, so too must the CCP reconcile its domestic desires to the geopolitical moment. That as the U.S. accepted such an outcome, so must the CCP begrudgingly acknowledge the existence of present-day Taiwan 100 miles off its coast. As Diodotus debated Cleon in Thucydides's *History of the Peloponnesian War*: "All, states and individuals, are alike prone to error, and there is no law that will prevent them."² To act otherwise would be to court unpredictable disaster – disaster which would have unforeseen ramifications for the CCP.

Chapter VIII offers practical recommendations to policymakers concerned. Primarily, that Taiwan should never declare political independence, while the U.S. is committed to seeing the question of its political future settled by peaceful means. This translates directly to a much-needed reinvigoration of the U.S. policy of strategic ambiguity. This does not mean aloofness.

The U.S. must rebuff CCP tests of resolve and tactical probing on the proverbial chessboard. To showcase a strong sense of resolve against an unprovoked CCP attack on Taiwan, the U.S. must signal to the Taiwanese with gusto to prepare for its own defenses, accordingly, in the most expeditious manner, yet not to the failure of accurately appraising U.S. beliefs and actions in the event. It was noted in Chapter II that the USN is struggling both conceptually and materially to reinforce conventional general deterrence. At risk of triteness,

² Jakub Grygiel, "When Deterrence Fails," *The American Interest* (blog), November 24, 2015, <https://www.the-american-interest.com/2015/11/24/when-deterrence-fails/>; and Thucydides, *The Landmark Thucydides: A Comprehensive Guide to the Peloponnesian Wars*, ed. Robert B. Strassler, trans. Richard Crawley, trade paperback edition (New York London Toronto Sydney: Free Press, 2008), 3.45.3.

U.S. policymakers must right that ship forthwith, as the full effect of such a transformation has a long lead time. The ideas are out there, all that is required is the determination to implement.

CHANGING REGIONAL DYNAMICS

There has been a flurry of renewed attention in the Taiwan Strait.³ Since January 28th, 2021, when China alarmingly sharpened its language related to the issue of Taiwan's diplomatic status: "independence means war," tensions have only intensified. Promising swift military activities and response to potential threats of foreign interference,⁴ China made good on these threats after the most recent high-profile U.S. visit to the island in 25 years.⁵ Along with increased recent activity cross strait and threatening behavior from the People's Liberation Army (PLA),⁶ this signifies a shift away from Deng Xiaoping's "hide and bide" strategy, and instead an adoption of bolder confrontations than seen in past,⁷ with the 2014 PLA strategic guidelines adjusted to further emphasize informatization in "winning informatized local wars."⁸ The United States faces an equally worrying situation. As detailed by former deputy secretary of defense,

³ Paul Mozur, Amy Chang Chien and Michael D. Shear, "Nancy Pelosi Arrives in Taiwan, Drawing a Sharp Response From Beijing," *The New York Times*, August 2, 2022, <https://www.nytimes.com/2022/08/02/us/politics/nancy-pelosi-taiwan-beijing.html>; John McLaughlin, "China: Charting a Course Between Conflict and Accommodation," OZY, October 13, 2020, <https://www.ozy.com/news-and-politics/china-charting-a-course-between-conflict-and-accommodation/391439/>.

⁴ Tony Munroe and Lun Tian Yew, "China Sharpens Language, Warns Taiwan That Independence 'Means War,'" *Reuters*, January 29, 2021. <https://www.reuters.com/article/us-china-taiwan-idUSKBN29X0V3>.

⁵ Chun Han Wong, "China Rattles a Much Bigger Saber as It Prepares Live-Fire Drills Around Taiwan," *The Wall Street Journal*, August 3, 2022, <https://www.wsj.com/articles/china-rattles-a-much-bigger-saber-as-it-prepares-live-fire-drills-around-taiwan-11659517757>; Chris Buckley, Amy Chang Chien, Eric Schmitt and David E. Sanger, "Chinese Missiles Strike Seas Off Taiwan, and Some Land Near Japan," *The New York Times*, August 3, 2022, <https://www.nytimes.com/2022/08/03/world/asia/taiwan-china-military-exercises.html>.

⁶ Global Times, "PLA Friday Drills Not Warning, but Rehearsal for Taiwan Takeover: Global Times Editorial," *Global Times*, September 18, 2020, <https://www.globaltimes.cn/content/1201338.shtml>.

⁷ A. Wess Mitchell and Jakub Grygiel, "Predators on the Frontier," *The American Interest* (blog), February 12, 2016, <https://www.the-american-interest.com/2016/02/12/predators-on-the-frontier/>.

⁸ M. Taylor Fravel, *Active Defense: China's Military Strategy since 1949*, Princeton University Press: Princeton, NJ, 2019, pp. 7.

Robert Work, the U.S. has conducted wargame simulations on cyber and electronic warfare in field exercises, but the simulated enemy forces tend to shut down U.S. networks so effectively that nothing works and nobody else gets any training done: “‘Whenever we have an exercise and the red force really destroys our command and control, we stop the exercise,’ instead of trying to figure out how to keep fighting when the command post offers nothing but blank screens and radio static.”⁹ The latest simulations, though presenting moderately less dire outcomes, does not instill much confidence, either.¹⁰

Furthermore, the rate and intensity of Chinese military aircraft incursions into Taiwan’s Air Defense Identification Zone (ADIZ) is provocative and likely to continue. In March 2021, 54 PLA flights penetrated the ADIZ, forcing Taiwan’s Ministry of National Defense to scramble reconnaissance planes in lieu of interceptor jets, in hopes of conserving air force capacity. In 2020, 1,000 additional hours were flown to deter PLA jets and spy planes.¹¹ The latest incursion, April 12, 2021, at time of writing, brought with it a record 25 fighter jets and nuclear-capable bombers likely simulating an attack on a U.S. aircraft carrier group, while the USS Theodore Roosevelt Carrier Strike Group (CSG) was sailing north of the Philippines. The operation was

⁹ Sydney J. Freedberg Jr, “US ‘Gets Its Ass Handed To It’ In Wargames: Here’s A \$24 Billion Fix,” *Breaking Defense* (blog), March 7, 2019, <https://breakingdefense.com/2019/03/us-gets-its-ass-handed-to-it-in-wargames-heres-a-24-billion-fix/>; and Sandra Erwin, “Kendall: If China Can’t Beat the U.S. in the Air It Will Try in Space,” *SpaceNews*, September 20, 2021, <https://spacenews.com/kendall-if-china-cant-beat-the-u-s-in-the-air-it-will-try-in-space/>.

¹⁰ Justin Katz and Valerie Insinna, “‘A bloody mess’ with ‘terrible loss of life’: How a China-US conflict over Taiwan could play out,” *Breaking Defense*, August 11, 2022, <https://breakingdefense.com/2022/08/a-bloody-mess-with-terrible-loss-of-life-how-a-china-us-conflict-over-taiwan-could-play-out/>; Stacie Pettyjohn, Becca Wasser, and Chris Dougherty, *Dangerous Straits: Wargaming a Future Conflict over Taiwan* (Washington, DC: Center for a New American Security, 2022).

¹¹ John Feng, “Chinese Fighter Pilot Says Taiwan ‘All Ours’ after Being Asked to Leave Airspace,” *Newsweek*, March 30, 2021, <https://www.newsweek.com/chinese-fighter-pilot-says-taiwan-all-ours-after-being-asked-leave-airspace-1579730>; and Chao Deng and Chun Han Wong, “China Flies Warplanes Near Taiwan as Senior U.S. Diplomat Visits,” *Wall Street Journal*, September 18, 2020, <https://www.wsj.com/articles/china-flies-warplanes-near-taiwan-as-senior-u-s-diplomat-visits-11600449576>.

the largest single-day incursion since records began.¹² This along with numerous Chinese fighter pilot declarations during interception stating that Taiwan airspace is indeed China's.¹³

Chinese state media has also steadily penned an intensifying rhetoric. Serious military exercises and stern warnings against the island are likely to continue apace.¹⁴ On April 13th, 2021, a prominent state media figure declared Chinese fighter jets to fly over Taiwan to “declare sovereignty” if relations between Washington and Taipei continue to improve, among other pointed announcements in the recent past.¹⁵ This in the wake of a diplomatic dustup between Chinese and United States officials in Alaska on March 18, 2021; the first face-to-face meeting under a new U.S. administration. The China delegation violated an agreed upon two-minute time limit for opening statements, opting for a contentious 15-minute commentary on perceived grievances and setting a troubling tone for subsequent discussions.¹⁶ The United States has stepped up pressures against Chinese coercion in Hong Kong with an eye towards Taiwan's status.¹⁷ Twenty-four Chinese and Hong Kong officials were sanctioned over Beijing's ongoing

¹² John Feng, “China Warplanes Simulated Attack on U.S. Aircraft Carrier, Defense Analysts Say,” *Newsweek*, April 13, 2021, <https://www.newsweek.com/china-warplanes-simulated-attack-us-aircraft-carrier-defense-analysts-say-1583112>.

¹³ Chris Buckley and Amy Qin, “In a Surge of Military Flights, China Tests and Warns Taiwan,” *The New York Times*, October 3, 2021, <https://www.nytimes.com/2021/10/03/world/asia/china-taiwan-flights-airspace.html>.

¹⁴ David Rising, “China's response to Pelosi visit a sign of future intentions,” *The Associated Press*, August 19, 2022, <https://apnews.com/article/taiwan-china-beijing-congress-8857910a1e44cefa70bc4dfd184ef880>.

¹⁵ John Feng, “China Fighter Jets Will Fly over Taiwan to Declare Sovereignty, State Media Says,” *Newsweek*, April 13, 2021, <https://www.newsweek.com/china-fighter-jets-will-fly-over-taiwan-declare-sovereignty-state-media-says-1583109>.

¹⁶ Matthew Lee and Mark Thiessen, “US, China Spar in First Face-to-Face Meeting under Biden,” *AP News*, March 18, 2021, <https://apnews.com/article/donald-trump-alaska-antony-blinken-yang-jiechi-wang-yi-fc23cd2b23332fa8dd2d781bd3f7c178>; and Lingling Wei and Bob Davis, “China's Message to America: We're an Equal Now,” *Wall Street Journal*, April 12, 2021, <https://www.wsj.com/articles/america-china-policy-biden-xi-11617896117?page=1>.

¹⁷ Uri Friedman and Timothy McLaughlin, “The U.S. Is About to Do Something Big on Hong Kong,” *The Atlantic*, September 15, 2019, <https://www.theatlantic.com/politics/archive/2019/09/americas-role-hong-kong/597976/>; Sarah Zheng, “White House Faces Growing Calls to Toughen Hong Kong Stance,” *South China Morning Post*, August 16, 2019, <https://www.scmp.com/news/china/diplomacy/article/3022963/us-congress-support-hong-kong-protests-adds-pressure-white>.

crackdown on political freedoms in the semi-autonomous city.¹⁸ In addition, the U.S. Secretary of State recently warned China that any changes to the existing status quo of Taiwan by force would be a serious mistake, refusing to elaborate on hypotheticals, but asserting a serious commitment to Taiwan's self-defense and peace and security in the Western Pacific.¹⁹

Whether testing the tactical bounds of the U.S. administration or the response of the Western world,²⁰ it can be expected the pursuance of Taiwan "reunification" will be subtle, incremental, and unrelenting.²¹ It has been noted the unlimited five-year terms Xi Jinping now enjoys could allow him greater flexibility to intensify Taiwan reunification efforts.²²

In this quest, China is capable of conducting cross-domain escalatory actions.²³ U.S. reliance on space systems as a key military vulnerability, for example, is one to be exploited during a potential confrontation in the maritime domain, likely over the diplomatic status of Taiwan. Leaders of the PLA who run the space program view counter space capabilities as a way

¹⁸ Soo Zen, "US Sanctions 24 China and Hong Kong Officials Ahead of Talks," AP News, April 20, 2021, <https://apnews.com/article/beijing-hong-kong-wang-chen-china-national-security-b5b1d92f37ca1fa6ac46ce40ccb7b123>.

¹⁹ Jason Lemon, "Antony Blinken Warns China Taiwan Attack Would Be 'Serious Mistake' as Military Tensions Mount," Newsweek, April 11, 2021, <https://www.newsweek.com/antony-blinken-warns-china-taiwan-attack-would-serious-mistake-military-tensions-mount-1582710>.

²⁰ Grygiel, Jakub J. and Mitchell, A. Wess. *The Unquiet Frontier: Rising Rivals, Vulnerable Allies, and the Crisis of American Power*. Princeton: Princeton University Press, 2016. <https://doi-org.proxy1.library.jhu.edu/10.1515/9781400880621>.

²¹ A. Wess Mitchell and Jakub Grygiel, "Predators on the Frontier," *The American Interest* (blog), February 12, 2016, <https://www.the-american-interest.com/2016/02/12/predators-on-the-frontier/>; and Aaron L. Friedberg, *A Contest for Supremacy: China, America, and the Struggle for Mastery in Asia*, 1st ed (New York: W. W. Norton & Co, 2011). pp. 144.

²² Christopher Bodeen, "No Term Limit Could Allow Xi to Be Bold on Hong Kong, Taiwan," AP News, March 13, 2018, <https://apnews.com/article/9695b6c002c9494c9bcc974b2d38ddf9>.

²³ Jacqueline Feldscher, "China Could Overtake US in Space Without 'Urgent Action,' Warns New Pentagon Report," *Defense One*, August 24, 2022, <https://www.defenseone.com/technology/2022/08/china-could-overtake-us-space-without-urgent-action-report/376261>; John Olson, Steven Butow, Eric Felt, Thomas Cooley, *State of the Space Industrial Base 2022: Winning the New Space Race for Sustainability, Prosperity and the Planet* (Washington, DC: Space Force, Defense Innovation Unit, Air Force, and Air Force Research Laboratory, 2022).

to deter and defeat the United States,²⁴ without the attendant escalatory impacts.²⁵ Many U.S. policymakers worry that the political future of Taiwan may embroil the U.S. and China in a great war. Below is a sampling of government officials and experts alarmed by the ability to destroy local U.S. military power and successfully invade Taiwan. Former Secretary of State and Chairman of Exxon Mobil, Rex Tillerson, believes military confrontation over Taiwan a looming emergency:

“I think China is the biggest worry. I have a fear that we will come to military conflict with China within the decade and it will be when they make their move on Taiwan. They’ve been putting all of their pieces in place for a long time now to do that, and that is [Chinese President Xi Jinping’s] legacy, to reunite China”.²⁶

After extensive wargaming, Air Force Lt. General S. Clinton Hinote stated after alarming wargame results in March 2021:

“More than a decade ago, our war games indicated that the Chinese were doing a good job of investing in military capabilities that would make our preferred model of expeditionary warfare, where we push forces forward and operate out of relatively safe bases and sanctuaries, increasingly difficult... At that point the trend in our war games was not just that we were losing, but we were losing faster. After the 2018 war game, I distinctly remember one of our gurus of war gaming standing in front of the Air Force secretary and chief of staff, and telling them that we should never play this war game scenario [of a Chinese attack on Taiwan] again, because we know what is going to happen... The definitive answer if the U.S. military doesn't change course is that we're going to lose fast. In that case, an American president would likely be presented with almost a *fait accompli*.... We're beginning to understand what kind of U.S. military force

²⁴ Chris Messier, “China Aims to Knock Out U.S. Space Systems in Conflict – Parabolic Arc,” Parabolic Arc, December 4, 2019, <http://www.parabolicarc.com/2019/12/04/china-aims-knock-out-us-space-systems-conflict/>.

²⁵ Alison A Kaufman and Daniel M Hartnett, *Managing Conflict: Examining Recent PLA Writings on Escalation Control*, DRM-2015-U-009963-Final3, v, (Arlington, VA: CNA, 2016), https://www.cna.org/cna_files/pdf/DRM-2015-U-009963-Final3.pdf; and Tara Copp, “‘It Failed Miserably’: After Wargaming Loss, Joint Chiefs Are Overhauling How the US Military Will Fight,” Defense One, July 26, 2021, <https://www.defenseone.com/policy/2021/07/it-failed-miserably-after-wargaming-loss-joint-chiefs-are-overhauling-how-us-military-will-fight/184050/>.

²⁶ Kelly Bjorklund, “‘We’re in a Worse Place Today Than We Were Before He Came In,’” *Foreign Policy* (blog), January 11, 2021, <https://foreignpolicy.com/2021/01/11/rex-tillerson-interview-trump/>.

it's going to take to achieve the National Defense Strategy's goals... [b]ut that's not the force we're planning and building today."²⁷

This is in addition to the Vice Chairman of the Joint Chiefs of Staff, Air Force Gen. Paul J. Selva statement that the United States must act now or China will achieve its goal of equaling American technological prowess by 2020 and surpassing it by the 2030s.²⁸ Robert Gates, former DoD Secretary and Director of Central Intelligence, in an interview with *The Washington Post*, stated:

I think [Taiwan] is a really dangerous situation. I think, in the broader context of the multidimensional rivalry between the United States and China the situation with respect to Taiwan is the one that worries me, and I think many people, the most. Xi has committed himself to bringing Hong Kong and Taiwan both back, integrating them back into China, both while he is still in office. This would sort of put him in the same pantheon as Mao, as having finished the revolution of 1949.²⁹

Gates goes further to say:

And I worry that as China builds its military strength that there is the risk of either a move on their part that they think they can get away with or an unintended confrontation that escalates. They have been entering the Taiwan air defense identification zone. They have crossed the median line that they had observed for a very long time, in terms of flying their fighters and bombers near Taiwan.... I think this is a really dicey situation.³⁰

²⁷ Eric Mack, "US 'Losing Faster' in War Simulations With China, Air Force General Says," *Newsmax*, March 11, 2021, <https://www.newsmax.com/politics/wargames-chinese-military-resources/2021/03/11/id/1013488/>.

²⁸ Jim Garamone, "U.S. Must Act Now to Maintain Military Technological Advantage, Vice Chairman Says," U.S. Department of Defense, June 21, 2018, <https://www.defense.gov/News/News-Stories/Article/Article/1557052/us-must-act-now-to-maintain-military-technological-advantage-vice-chairman-says/>.

²⁹ Robert M. Gates, "Transcript: A Conversation with Robert M. Gates," by *Washington Post*, March 1, 2021, <https://www.washingtonpost.com/washington-post-live/2021/03/01/transcript-conversation-with-robert-m-gates/>.

³⁰ *Ibid.*

Retired Lieutenant General and Former U.S. National Security Advisor Herbert R.

McMaster, Jr. agrees, believing the period of greatest danger to Taiwan is 2022 onwards.³¹ While testifying March 2nd, 2021, to the Senate Armed Services Committee, he stated:

I do think it's the most significant flashpoint now that could lead to a large-scale war, is Taiwan, and I think that has to do with really Xi Jinping's belief that he has a fleeting window of opportunity that's closing and he wants to, in his view, make China whole again... Taiwan is the next big prize.³²

McMaster went further to explain the delayed modernization of DoD warfighting capabilities, which impact force presence in Asia-Pacific:

I do think that overall, all of the services are coping with a bow wave of deferred modernization, and when those defense cuts occurred while we were at war, those were bills that, if we wanted to maintain our deterrent capability, we were going to have to pay eventually. So I think that's what, sadly, you're coping with and the Department of Defense is coping with these days. So I think it's really important to understand the context of defense spending these days, that we are in catch-up mode and we are going back to rectify some of the weaknesses that developed in our deterrent and fighting capability over many years.³³

Admiral Philip Davidson, Commander of U.S. INDOPACOM, on March 9th, 2021, testifying at the Senate Armed Services Committee, reiterated multiple times his concern over the balance of U.S. conventional deterrence in the region:

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....³⁴ The greatest danger for the United States is the erosion of conventional deterrence. Without a valid and convincing conventional deterrent, the PRC will be emboldened to take action in the region to supplant U.S. interests. As the military balance in the Indo-Pacific becomes more unfavorable to the United States, we are accumulating additional risk that may embolden our adversaries and competitors to attempt unilaterally changing the status quo.... Ultimately, the steps

³¹ *Committee On Armed Services, United States Senate: Global Security Challenges and Strategy*, 117th Cong. 42 (2021) (Statement of Lieutenant General Herbert R. McMaster, Jr., USA, (Ret.), Former United States National Security Advisor). https://www.armed-services.senate.gov/imo/media/doc/21-07_03-02-2021.pdf.

³² *Ibid.*, pp. 95.

³³ *Ibid.*, pp. 37.

³⁴ *Ibid.*, pp. 2.

we take must convince our adversaries and competitors they simply cannot achieve their objectives with force.³⁵

Two weeks later, Admiral Davidson's successor, Admiral John Aquilino, testified before the Senate Armed Services Committee that:

"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 [Pacific Deterrence Initiative] in place, in the near term and with urgency."³⁶

While Professor of Politics and International Affairs at Princeton University, Aaron Friedberg, states China's approach to strategy, as related to its most prized foreign policy goal:

China's post-Cold War strategy for dealing with the United States, and with the outside world more generally, can be summed up in the following axioms:

- "Avoid confrontation"
- "Build comprehensive national power"
- "Advance incrementally."³⁷

In addition, the Chinese ambassador to the United States, Qin Gang, accused Taiwan in 2022 of:

"Walking down the road toward independence," stating that, "If the Taiwanese authorities, emboldened by the United States, keep going down the road for independence, it most likely will involve China and the United States, the two big countries, in a military conflict."³⁸

³⁵ Ibid, pp. 41.

³⁶ *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, Before The Senate Committee On Armed Services*, 117th Cong., 43 (2021) (John C. Aquilino, Admiral, USN).

³⁷ Aaron L. Friedberg, *A Contest for Supremacy: China, America, and the Struggle for Mastery in Asia*, 1st ed (New York: W. W. Norton & Co, 2011), pp. 144; *U.S.-China Economic and Security Review Commission Hearing on "China's Proliferation to North Korea and Iran, and Its Role in Addressing the Nuclear and Missile situations in Both Nations,"* 109th Cong. 1 (2006) (Statement of Professor Aaron L. Friedberg, Princeton University, Former Deputy Assistant to the Vice President for National Security Affairs, 2003-2005).

https://www.uscc.gov/sites/default/files/06_09_14_friedberd_statement.pdf; and Aaron L. Friedberg, "China's Recent Assertiveness: Implications for the Future of US-China Relations," US-China Institute, June 25, 2014, <https://china.usc.edu/aaron-l-friedberg-%E2%80%9Cchina%E2%80%99s-recent-assertiveness-implications-future-us%E2%80%9Cchina-relations%E2%80%9D-june-25-2014>.

³⁸ Steve Inskeep, "China's Ambassador to the U.S. Warns of 'military Conflict' over Taiwan." *National Public Radio*, January 28, 2022, <https://www.npr.org/2022/01/28/1076246311/chinas-ambassador-to-the-u-s-warns-of-military-conflict-over-taiwan>.

These stark warnings made by U.S. officials as to the great alarm and general weariness of adequate U.S. local force presence in region is further compounded by the importance of the region to enduring U.S. security and economic interests – in a phrase: U.S. prosperity. What happens in the Asia-Pacific matters for the American public. The Asia-Pacific region is rapidly becoming the most important area in the world for the U.S. It is home to more than half of the world’s population, nearly two-thirds of the world’s economy, and seven of the world’s largest militaries. More members of the U.S. military are based in the region than in any other outside the United States. It supports more than three million American jobs – more than any other part of the world – and is the source of nearly \$900 billion in foreign direct investment in the United States. In the years ahead, as the region drives as much as two-thirds of global economic growth, its influence will only grow—as will its importance to the United States.³⁹ It is home to five U.S. treaty allies.⁴⁰

A lack of maintaining a robust local balance of force, allowing for economic prosperity to flourish, will erode U.S. foreign policy commitments and credibility. This is likely to result in detrimental economic arrangements directly affecting the American public, in addition to impingement on uniquely American values at home and abroad. The ability to sustain American way of life; the rights, and liberties U.S. citizens enjoy today would likely atrophy. Above is but a sampling of the import the region holds to the future of the United States in the world.

³⁹ White House, *Indo-Pacific Strategy of the United States*, (Washington, DC: The White House, 2022), 4, <https://www.whitehouse.gov/wp-content/uploads/2022/02/U.S.-Indo-Pacific-Strategy.pdf>.

⁴⁰ Ryan Hass, “The Case for Continued American Leadership in Asia,” *Brookings Institution* (blog), December 29, 2017, <https://www.brookings.edu/opinions/the-case-for-continued-american-leadership-in-asia/>.

Despite some analysis which suggests that PLA functionalities are not in a position to invade Taiwan at the present time⁴¹ – such as insufficient transport and logistic capabilities,⁴² which would make reinforcements and supplies difficult for sustainment after an island landing,⁴³ coupled with the “Five Incapables”⁴⁴ – the above statements allude to a growing alarm of war over Taiwan. As Taiwan’s uncertain political future hangs in the balance, the PRC demanding “reunification” with increasing recognition by means of force, and the U.S. expecting peaceful resolution of the political question coupled with the obligation to maintain effective and

⁴¹ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2021*, 117, (Arlington, VA: Department of Defense, 2021), <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>. Ian Easton, *The Chinese Invasion Threat: Taiwan’s Defense and American Strategy in Asia* (Arlington, VA: Project 2049 Institute, 2017); Harlan Ullman, “Reality Check #10: China Will Not Invade Taiwan.” Atlantic Council (blog), February 18, 2022. <https://www.atlanticcouncil.org/content-series/reality-check/reality-check-10-china-will-not-invade-taiwan/>; Andrew Scobell and Lucy Stevenson-Yang, “China Is Not Russia. Taiwan Is Not Ukraine.” United States Institute of Peace, March 4, 2022, <https://www.usip.org/publications/2022/03/china-not-russia-taiwan-not-ukraine>; Tim Willasey-Wilsey, “The Question Why Would China Not Invade Taiwan Now?” Army University Press, June 4, 2020, <https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/September-October-2020/Wilsey-The-Question/>; Ben Westcott and Eric Cheung, “China Isn’t about to Invade Taiwan. But the Two Sides Are on a Dangerous Path,” CNN, October 15, 2021, <https://www.cnn.com/2021/10/15/asia/taiwan-invasion-us-china-tensions-intl-dst-hnk/index.html>; Michael A. Cohen, “No, Neocons, China Is Not About to Invade Taiwan,” *The New Republic*, November 19, 2021, <https://newrepublic.com/article/164485/why-china-will-not-invade-taiwan>; and Ben Blanchard, “Taiwan Says Confident Chinese Invasion Would Be Very Hard,” *Reuters*, December 13, 2021, <https://www.reuters.com/business/aerospace-defense/taiwan-says-confident-chinese-invasion-would-be-very-hard-2021-12-13/>.

⁴² Chris Horton, “China mobilizes civilian ferries for Taiwan invasion drills,” *Nikkei Asia*, August 25, 2021, <https://asia.nikkei.com/Politics/International-relations/China-mobilizes-civilian-ferries-for-Taiwan-invasion-drills>.

⁴³ Nitin Ticku, “Taiwan ‘Exposes Chinese PLA Blueprint’ To Invade The ‘Wanderer Island’ Without Giving The US Much Time To Respond,” *EurAsian Times*, December 20, 2021, <https://eurasianimes.com/taiwan-exposes-chinese-pla-blueprint-to-invade-the-wanderer-island/>.

⁴⁴ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2021*, 39, (Arlington, VA: Department of Defense, 2021), <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>; Dennis J. Blasko, “Ten Reasons Why China Will Have Trouble Fighting a Modern War,” *War on the Rocks* February 18, 2015, <https://warontherocks.com/2015/02/ten-reasons-why-china-will-have-trouble-fighting-a-modern-war/>; U.S.-China Economic and Security Review Commission: *PLA Weaknesses and Xi’s Concerns about PLA Capabilities*, Panel on “Backlash from Abroad: The Limits of Beijing’s Power to Shape its External Environment,” 116th U.S. Congress, 3 (2019) (Statement of Dennis J. Blasko, Lieutenant Colonel, U.S. Army, Retired, Independent Analyst) https://www.uscc.gov/sites/default/files/Blasko_USCC%20Testimony_FINAL.pdf; Dennis J. Blasko, “The Chinese Military Speaks to Itself, Revealing Doubts,” *War on the Rocks*, February 18, 2019, <https://warontherocks.com/2019/02/the-chinese-military-speaks-to-itself-revealing-doubts/>; and Kathrin Hille, “Spending splurge masks questions over China’s military capability,” *Financial Times*, March 3, 2019, <https://www.ft.com/content/951b708c-4121-11e9-9bec-efab61506f44>.

credible regional deterrence to assure such a peaceful outcome,⁴⁵ both great powers are at loggerheads with diminishing options. Such a conflict would be the first time two nuclear-armed great powers would engage in direct conflict against the other – war – in world history.

In light of these troubling revelations, together with other PLA writings which emphasize a worrisome, if ill-considered, escalatory approach⁴⁶ to Chinese foreign adversaries in the nascent stages of conflict, bring to the fore questions of nuclear deterrence in the twenty-first century. What is the condition of extended U.S. conventional deterrence in the Taiwan Strait today? How might this be informed by the historical record to charter guidance in preventing an uncontrollable situation from unfolding? The Taiwan Strait is at present in a general deterrence environment. To find the area embroiled in immediate deterrence strain is not the goal though can occur where the bounds of the “unthinkable” become ever-present, as happened in Cuba 1962. It is important to note that however undesirable war is, and particularly nuclear war, to all parties, war may still eventuate despite its undesirability.⁴⁷

Though there has been much study in the areas of nuclear escalation, de-escalation, and methods of escalation, these issues have been given little consideration deep into the twenty-first century, long after the end of Cold War hostilities. Moreover, there has been comparably little analysis in how this may be applied along an enumeration of bounded deterrence outcomes. Though newsclips and think pieces have discovered a newfound interest in the escalation of recent tensions, deep analysis of this nature has been generally overlooked.

⁴⁵ U.S. Library of Congress, Congressional Research Service, *President Reagan’s Six Assurances to Taiwan*, by Susan V. Lawrence, CRS Report No. IF11665 (2020) 1-2, <https://sgp.fas.org/crs/row/IF11665.pdf>.

⁴⁶ Alison A. Kaufman and Daniel M. Hartnett, *Managing Conflict: Examining Recent PLA Writings on Escalation Control* (Arlington: CNA, 2016), https://www.cna.org/cna_files/pdf/DRM-2015-U-009963-Final3.pdf, pp. iii-vi.

⁴⁷ Christopher M. Clark, *The Sleepwalkers: How Europe Went to War in 1914*, First U.S. edition (New York: Harper, 2013).

PARAMETERS OF DISCUSSION

On terminology, the terms ‘Asia-Pacific’ and ‘Indo-Pacific’ will often be used interchangeably, as they allude to the geopolitical strategic region on which this research focuses, although the Asia-Pacific seems more of a proper description when discussing explicit Taiwan relations. The terms ‘PRC’, ‘CCP’, and ‘China’ will also be used interchangeably, but to a lesser extent. The foreign affairs of the PRC are commanded by the varying organs of the CCP, to include the Central Committee of the Chinese Communist Party, of which includes the Office of the General Secretary, the Politburo Standing Committee, the Politburo, the Central Military Commission, and others.⁴⁸ So it seems fit to label the CCP as the primary driver of PRC and subsequently PLA policy and action. In recent years, decision making power and authority have been increasingly centralized by Party Secretary Xi Jinping,⁴⁹ leaving many, if not all, top directives emanating from such, particularly on issues of great sensitivity as “reunification” of Taiwan and the potential ensuing conflict to achieve this goal. The risks are great, and so are the rewards, personally, for Xi and for the legitimacy and future of the CCP. In this sense, it is more apt by shorthand to term the origination of the decision-making process of the PRC the CCP. We hope our readers will agree.

⁴⁸ U.S. Library of Congress, Congressional Research Service, *China’s Political Institutions and Leaders in Charts*, by Susan V. Lawrence, R43303 (2013), pp.3. <https://sgp.fas.org/crs/row/R43303.pdf>.

⁴⁹ Timothy R. Heath, *The Consolidation of Political Power in China Under Xi Jinping: Implications for the PLA and Domestic Security Forces*. Santa Monica, CA: RAND Corporation, 2019. <https://www.rand.org/pubs/testimonies/CT503.html>; Javier C. Hernández, “China’s ‘Chairman of Everything’: Behind Xi Jinping’s Many Titles,” *The New York Times*, October 25, 2017, <https://www.nytimes.com/2017/10/25/world/asia/china-xi-jinping-titles-chairman.html>; Charlotte Gao, “Xi Stresses the Party’s Absolute Leadership Over Political and Legal Work,” *The Diplomat*, January 23, 2018, <https://thediplomat.com/2018/01/xi-stresses-the-partys-absolute-leadership-over-political-and-legal-work/>; Chris Buckley and Steven Lee Myers, “China’s Legislature Blesses Xi’s Indefinite Rule. It Was 2,958 to 2,,” *The New York Times*, March 11, 2018, <https://www.nytimes.com/2018/03/11/world/asia/china-xi-constitution-term-limits.html>; Alice Lyman Miller, “Only Socialism Can Save China; Only Xi Jinping Can Save Socialism,” *China Leadership Monitor*, No. 56, May 17, 2018, <https://www.hoover.org/research/only-socialism-can-save-china-only-xi-jinping-can-save-socialism>; and Phillip Wen and Christian Shepherd, “China Cranks Propaganda, Xi Jinping’s Cult of Personality into Overdrive Ahead of Party Congress,” *Business Insider*, October 12, 2017, <https://www.businessinsider.com/china-propaganda-xi-jinpings-cult-of-personality-party-congress-2017-10>.

What this research is not: It is not a formulation of future U.S. grand strategy, a national security strategy, a national defense strategy, nor a proffering of advice to contain what many American strategists fear as a rising or – for the assiduous analyst⁵⁰ – a China rising at a decelerating rate in relative terms,⁵¹ in which its relative power share is limited by the bounds of the central system.⁵² Subsequent findings may draw upon certain elements of all.

I would also like to make another distinction: between measuring the strength of U.S. conventional general deterrence and its implications, rather to analyze the likelihood of CCP invasion of Taiwan and the capabilities to mount such an attack. At first this appears to be a distinction without difference, as both concepts are considerably interrelated; the failure of the former can lead to the latter. Yet prosecuting a war in the Taiwan context must conceivably fulfill three criteria: the failure of conventional general deterrence of the deterrer; the sufficient wherewithal of the attacker (as perceived by the attacker) to successfully prosecute a war, however limited it may be; and the political decision of aggressor to risk attack.

⁵⁰ John McLaughlin, “Does the Century Have to Belong to China?,” OZY, December 17, 2018, <https://www.ozy.com/news-and-politics/does-the-century-have-to-belong-to-china/91299/>.

David M. Lampton, *The Three Faces of Chinese Power: Might, Money, and Minds* (Berkeley, CA: University of California Press, 2008), pp. 214, 254; David Shambaugh, *China’s Communist Party: Atrophy and Adaptation* (Berkeley, CA: University of California Press, 2008), pp. 164; David Shambaugh, *China Goes Global: The Partial Power* (Oxford: Oxford University Press, 2013), p. 309; David Shambaugh, “The Coming Chinese Crackup,” *The Wall Street Journal*, March 6, 2015, <https://www.wsj.com/articles/the-coming-chinese-crack-up-1425659198>. Thomas Christensen, *The China Challenge: Shaping the Choices of a Rising Power* (New York: W.W. Norton & Company, 2015), pp. 81-89, 98; *PLA Weaknesses and Xi’s Concerns about PLA Capabilities: Testimony before the U.S.-China Economic and Security Review Commission, Panel on Backlash from Abroad: The Limits of Beijing’s Power to Shape its External Environment*, 116th Cong. 2-13 (2019) (Statement of Dennis J. Blasko, Lieutenant Colonel, U.S. Army, Retired, Independent Analyst); *Hearing On What Keeps Xi Up at Night: Beijing’s Internal and External Challenges*, The U.S.-China Economic and Security Review Commission, 116th Cong. 1st sess., February 7, 2019, 157-158.

⁵¹ M. Taylor Fravel, “Power Shifts and Escalation: Explaining China’s Use of Force in Territorial Disputes,” *International Security* 32, no. 3 (2007): 46-47. <http://www.jstor.org/stable/30130518>.

⁵² Charles F. Doran, *Systems in Crisis: New Imperatives of High Politics at Century’s End* (New York: Cambridge University Press, 1991) 61-62.

It is generally understood that the full ability of the CCP to do so is not yet manifest,⁵³ and the tactical intentions of the aggressor are often kept clandestine. Though capabilities are at present found marginally deficient, the CCP decision to risk attack should not be misjudged. Rationality, though preferable for structuring useful guidance, is a luxurious assumption. This is not the “madman” contention – that is categorically rejected. The U.S. does not know if premier CCP leaders have the privilege of consuming well-informed, accurate reports. Thus, confined rationality, within the bounds of the accurate knowledge and tools made available to CCP leaders, is apropos.

But as mentioned before, this research does not concern itself with tactical issues, war planning strategies, nor with examining the ability of the PLA to conduct a successful attack. Though it may necessarily be touched upon, while focusing on our priorities, it will be deemphasized. This work intently focuses on a large-scale CCP invasion of Taiwan – it does not directly address “grey zone tactics” or other contingencies such as CCP annexation of minor islands under Taiwanese control. Barring an exogenous shock, full-scale invasion is increasingly the only option at CCP disposal to achieve “reunification” how the CCP has publicly defined it.

Neither does this research aim to be a predictive analysis, but a cautionary assessment of how catastrophic a conflict would be if PRC leaders make the ill-fated decision to annex Taiwan, and to warn in the strongest terms against any erroneous decision which would do so.

The unforeseeable events to unfold could engulf the region and world into a great war, likely a regional nuclear war with opportunity for uncontrollable expansion. This analysis considers the lessons and conclusions of the defining event in nuclear escalation and the successful deterrence outcome in an immediate deterrence situation of the twentieth century,

⁵³ Please see footnotes 27, 29.

offering insightful lessons to the PRC in the likely analogous scenario of today's strategic landscape.

This research is centered around a Taiwan contingency and its implications of greater conflict in the aperture of the continuum between the Nuclear Threshold and Level of Unacceptable Damage of both defender and aggressor.

Research Question: In the environment surrounding Taiwan's contested future, what are the misperceptions, miscalculations, and misjudgments which are likely to escalate the United States and the PRC towards a nuclear confrontation, intentionally or otherwise; and, perhaps more importantly, what actions may result in a tactical nuclear exchange? Though there has been much study in the areas of nuclear escalation, de-escalation, and methods of escalation, these issues have been given little consideration deep into the twenty-first century, long after the end of Cold War hostilities. Moreover, there has been comparably little analysis in how this may be applied along an enumeration of varied deterrence outcomes. Though newsclips and think pieces have discovered a newfound interest in the escalation of recent tensions, deep analysis of this nature has been generally overlooked. This research hopes to expand the existing academic literature in application of a new direction.

Research Hypothesis: an examination of numerous possible and varied deterrence outcomes from a Taiwan Strait war provides that the central system is much closer to the precipice of nuclear confrontation than currently realized, from a general to an immediate deterrence environment. This research seeks to ascertain the present conditions which may drive a foreseeable scenario and how this will impact the stability of the international system.

Other equally valid dimensions of American strategy in the Asia-Pacific, such as economic and “soft” power levers and, to an extent, others such as electronic and cyber dimensions are deemphasized, notwithstanding the attendant importance of each to the enduring interests and U.S. commitment to a peaceful and stable Indo-Pacific. All following sections, which touch upon varied and diverse sets of literature, are intended to accord with this purpose.

HOW TO DEFINE DETERRENCE IN THE CONTEXT OF TAIWAN

Extended nuclear deterrence is a well-documented field. Classic studies have focused on a variety of modes of analysis. This study will center on the empirical-inductive model of extended nuclear deterrence, namely, the theory of bounded deterrence and its definition to be applied to the U.S. – PRC relationship regarding Taiwan.

The research will focus on that which is a primary indicator of successful deterrence: the local balance of force. The definition of successful deterrence used is one in which the deterrent state safeguards its security interests, to include extended deterrence in protection of distant allies, while avoiding war, but especially nuclear war. In practice, this translates to perceptions of the defender and aggressor, of themselves and the other party, which span a continuum. This continuum holds on one extreme the lower node known as the Nuclear Threshold (NT). On the other extreme is the Level of Unacceptable Damage (LUD). Depending on how each party *perceives* their own NT and LUD, and how each views the other’s NT and LUD, will subsequently result in two continuums with two NTs and two LUDs each on varying points of the continuum. These combine to form a singular continuum each for aggressor and defender, respectively. Perceptions can include both psychologies of fortitude or indecision, leading to

decision making behavior of risk acceptance or risk aversion.⁵⁴ The placement of these will result in a variety of outcomes to include deterrence, capitulation, conflict-win, and conflict-lose, stalemate-conflictual, and stalemate-peaceful.⁵⁵ These continuums and attendant outcomes can be explored more fully in *Appendix II* and Chapter VI.

Much has been said on conventional deterrence to deny the CCP its core interests in the region that are opposed to a free and stable Asia-Pacific.⁵⁶ This is done by affecting the decision calculus of the aggressor who weighs gains against costs in considering probabilities of deterrence or conflict.⁵⁷ Successful deterrence is achieved when war is avoided. Effectiveness of this deterrence can manifest itself in favorable concurrent or singular political, economic, or military settlements. These are also the primary tools of which deterrence is achieved, though this study will focus primarily upon the local balance of force in Asia-Pacific. For a further description of how we assess deterrence in the Taiwan Strait, please see *Appendix I*.

Considering the Asia-Pacific is a region of predominant maritime interests, a look first at the naval balance between would-be aggressor and defender alike, is as good a departure as any. All succeeding chapters are centered around establishing the parameters to measure the prospects of miscalculation, starting with the next chapter.

⁵⁴ Paul Huth, and Bruce Russett. "What Makes Deterrence Work? Cases from 1900 to 1980." *World Politics* 36, no. 4 (1984): 502. <https://doi.org/10.2307/2010184>.

⁵⁵ Charles F. Doran, Theory of Bounded Deterrence, *Journal of Conflict Resolution* 17, no. 2 (June 1973): 243–269.

⁵⁶ Elbridge Colby, *The Strategy of Denial: American Defense in an Age of Great Power Conflict* (New Haven; London: Yale University Press, 2021).

⁵⁷ J. David Singer, and Melvin Small. "Inter-nation influence: a formal model." *Amer. Pol. Sci. Rev.* 57, no. 2 (June 1963): 420 – 30; J. David Singer, and Melvin Small. *Deterrence, Arms Control, and Disarmament: Toward a Synthesis in National Security Policy* (Columbus: Ohio State Univ. Press., 1962).

BOUNDED DETERRENCE MODEL

This study will center upon the theory of bounded deterrence⁵⁸ as the framework to analyze varied possible deterrence outcomes beyond the binary concept of deterrence/no deterrence in measuring outcomes of a Taiwan Strait crisis. This formal model is anchored in the literature. The previous literature will be interpolated throughout the research to further support its claims.

Strategists have long recognized that the relative value of the objective to the deterrer influences the magnitude of force which must be threatened and the willingness to yield an objective.⁵⁹ These lower and upper bounds of nuclear conflict, Nuclear Threshold (NT) and Level of Unacceptable Damage (LUD), respectively, are the variables of which decision-making calculi of deterrer and aggressor are found. Political, economic, and military applications of the deterrer can influence an aggressor's perceptions of probability of outcomes. This manifests itself through changes in the NT and LUD of an aggressor. The aggressor seeks to maximize the expected value or minimize the expected loss; the deterrer seeks the same. Deterrent success depends upon the correct subjective perceptions of both actors.⁶⁰

By utilizing an internally consistent model of ordinary and partial differential equations, bounded deterrence theory establishes the mathematical bounds necessary to examine the multitude of outcomes possible in a deterrence setting. Bounded deterrence theory empirically demonstrates the wide variance among foreign policy priorities and the impact such variance must have on the strategic perceptions of states, specifically the NT and LUD, and thus on nuclear confrontation. Previously, static NT and LUD were prescribed across all foreign policy

⁵⁸ Charles F. Doran, "A Theory of Bounded Deterrence." *Journal of Conflict Resolution* 17, no. 2 (June 1973). <https://doi.org/10.1177/002200277301700204>.

⁵⁹ Charles F. Doran, "A Theory of Bounded Deterrence." *Journal of Conflict Resolution* 17, no. 2 (June 1973): 244. <https://doi.org/10.1177/002200277301700204>.

⁶⁰ Snyder, G., 1961. *Deterrence and Defense: Toward a Theory of National Strategy*. Princeton University Press

objectives, or in other words, equivalent commitments of nuclear deterrence were offered, from the homeland to distant third states. Bounded deterrence follows from the literature in challenging that nuclear war is necessarily “one-move” and the apparent seminal dominance of military means over political ends.⁶¹

In analysis of a Taiwan Strait crisis between the United States and PRC, this study will examine the multitude of varied nuclear deterrence outcomes above in qualitative fashion, drawing upon the historical perspective. Results and lessons will be drawn from the analysis to aid policymakers attempting to preserve general deterrence and casting a framework to think through immediate deterrence situations.

⁶¹ Charles F. Doran “A Theory of Bounded Deterrence.” *Journal of Conflict Resolution* 17, no. 2 (June 1973): 246–47. <https://doi.org/10.1177/002200277301700204>. For greater detail, please see *Appendix II*.

CHAPTER II

MILITARY TRENDLINES, 2020-2030

The most volatile region of the world lies in a 100 mile stretch of water which separates the PRC from the ROC. The Taiwan Strait has been the location of several flashpoints, starting in 1949 at the conclusion of the Chinese Civil War, up to recent history of 1996 at the start of the Third Taiwan Strait Crisis, and even in the present with the 2022 Taiwan trip. In 1996, all it took to quell the commotion was the sailing of two aircraft carrier strike groups with capital ships USS Nimitz and USS Independence, along with escort vessels, for the CCP to recognize the decisive local conventional military advantage of the regional U.S. naval presence;⁶² along with a sense of urgency of PLA planners to rethink strategy and power projection for the future.⁶³ Much has changed since. Most notably, the ascendance of the PLAN and the consequent relative gain in power and capability of the PLAN to project the desires and achieve the ambitions of the CCP.

Many pieces have focused on the alarming aspects of Chinese belligerence in the region, continuing into the present.⁶⁴ Some highlight predictions of a Chinese armed invasion of Taiwan,

⁶² John McLaughlin, “The Geopolitical Rules You Didn’t Know About Are Under Siege,” OZY, November 11, 2015, <https://www.ozy.com/news-and-politics/the-geopolitical-rules-you-didnt-know-about-are-under-siege/65892/>.

⁶³ M. Taylor Fravel, *Active Defense: China’s Military Strategy since 1949* (Princeton, NJ: Princeton University Press, 2019), pp. 202–225

⁶⁴ As a sample, please see “Territorial Disputes in the South China Sea,” Global Conflict Tracker, accessed April 15, 2022, <https://cfr.org/global-conflict-tracker/conflict/territorial-disputes-south-china-sea>; Bonnie S. Glaser and Gregory Poling, “China’s Power Grab in the South China Sea,” October 5, 2021, <https://www.foreignaffairs.com/articles/china/2021-08-20/chinas-power-grab-south-china-sea>; Oriana Skylar Mastro, “How China Is Bending the Rules in the South China Sea,” February 17, 2021, <https://www.lowyinstitute.org/the-interpreter/how-china-bending-rules-south-china-sea>; News Wire, “US Warns China against Aggressive Moves in Contested South China Sea,” France 24, April 8, 2021, <https://www.france24.com/en/asia-pacific/20210408-us-warns-china-against-aggressive-moves-in-contested-south-china-sea>; Erin Baggott Carter, “Diversionary Aggression in Chinese Foreign Policy,” *Brookings Institution* (blog), January 22, 2019, <https://www.brookings.edu/articles/diversionary-aggression-in-chinese-foreign-policy/>; Minxin Pei, “China Is Closing Its Window of Opportunity,” *Bloomberg.Com*, December 8, 2021, <https://www.bloomberg.com/opinion/articles/2021-12-08/china-s-aggressive-foreign-policy-could-thwart-its-rise>; and Yen Nee Lee, “China’s Aggressive Behavior on the Global Stage Is an ‘immense Danger,’ Says Analyst,” CNBC, June 28, 2021, <https://www.cnbc.com/2021/06/28/chinas-wolf-warrior-diplomacy-aggression-are-an-immense-danger-analyst.html>.

prospective chances of success, and a speculative conventional armed conflict between the USN and PLAN.⁶⁵ These pieces at times detail underlying troubling trendlines of deteriorating U.S. conventional general deterrence in the region, yet overlook the positive for the normative – a focus on what U.S. policymakers *should* do rather than what may *be* – and the resulting consequences if calls for a reexamination of the core tenants of U.S. strategy in Asia Pacific go unanswered. Many U.S. officials see a troubling trend in the erosion of U.S. conventional general deterrence in region, heightening the prospect of great war if the CCP was to make a fatal miscalculation,⁶⁶ yet little has been done in way of resolution. The depth of danger is often rarely plumbed to its full profundity.

This analysis looks at the primary cause of belligerent behavior in Asia Pacific – the eroding conventional military prowess, to include *quantity* of warships, *quality* of warships, and *growth rate* of these projected out to 2030 of the U.S. Navy Indo-Pacific Command, and the trend of the PLAN using similar metrics.

What will be the state of these U.S. warships in the next decade? Will there be sufficient funding and time for new hulls to commission within a decade to fulfill proportional replacement with greater quality to maintain a deterrent nature? Or will funding be diverted for maintenance of aging warships with diminishing capabilities?⁶⁷ Is there confidence within a decade that the U.S. naval position in Asia-Pacific will be as strong as is today? Subsequently, how robust will

⁶⁵ As a sample, please see Elliot Ackerman and James Stavridis, *2034: A Novel of the next World War* (New York: Penguin Press, 2021); Graham T. Allison, *Destined for War: Can America and China Escape Thucydides's Trap?* (Boston: Houghton Mifflin Harcourt, 2017); and Michael Fabey, *Crashback: The Power Clash between the U.S. and China in the Pacific*, First Scribner hardcover edition (New York, NY: Scribner, 2017).

⁶⁶ John McLaughlin, “The Spy Who Told Me: Asia Is Where the Real Trouble Is At,” OZY, November 2, 2014, <https://www.ozy.com/news-and-politics/the-spy-who-told-me-asia-is-where-the-real-trouble-is-at/36771/>.

⁶⁷ Mackenzie Eaglen et al., *The 2020s Tri-Service Modernization Crunch* (Washington, DC: American Enterprise Institute, 2021), <https://www.aei.org/wp-content/uploads/2021/03/The-2020s-Tri-Service-Modernization-Crunch-1.pdf?x91208>.

be a “coalition of the willing” – allied regional powers alongside the U.S. who militarily confront China after a general deterrence failure – if a coalition indeed materializes?

Though wargame simulations show the U.S. losing decisively in a Taiwan contingency, it has not shifted DoD strategy nor the USN procurement process of acquiring warships stationed at large and vulnerable regional naval bases. Vital changes of future force structure stand unrealized for the U.S. to engage winsomely in Asia-Pacific.⁶⁸

The research focuses conventional deterrent capability on shipbuilding production of U.S. warships of the frigate type and larger. We believe this is the most accurate metric, given public-source data, for gauging perceived deterrence capability in region. This decline in conventional capability lowers deterrence, notwithstanding the longevity of U.S. – ROC political-military ties; well-established U.S. Taiwan policy commitments to include mutual sympathies; and a robust⁶⁹ economic relationship.

The PLAN is racing ahead in warship production, as the regional balance of force tilts in favor of the PRC in both the rate of quantity and quality of warships awarded commission. This is an alarming trend and one which is and will continue to undercut the U.S. conventional deterrent of PRC aggression in the area, thereby increasing the future likelihood of great war in Asia-Pacific throughout the decade. Furthermore, the geographic advantage of the PRC regarding the Taiwan question compels an account of PLARF assets, namely the much-discussed anti-access/area denial missile networks with layered ranges extending towards the South China Sea, blanketing U.S. naval installations.⁷⁰ This trend toward PRC supremacy in the local balance

⁶⁸ James Kitfield, “‘We’re Going to Lose Fast’: U.S. Air Force Held a War Game That Started with a Chinese Biological Attack,” Yahoo! News, March 10, 2021, <https://www.yahoo.com/news/were-going-to-lose-fast-us-air-force-held-a-war-game-that-started-with-a-chinese-biological-attack-170003936.html>.

⁶⁹ “Taiwan - Country Commercial Guide,” Official Website of the International Trade Administration, September 13, 2021, <https://www.trade.gov/country-commercial-guides/taiwan-market-overview>.

⁷⁰ A. Wess Mitchell and Jakub Grygiel, “Predators on the Frontier,” *The American Interest* (blog), February 12, 2016, <https://www.the-american-interest.com/2016/02/12/predators-on-the-frontier/>.

of force has been shown through the deterrence literature that this indeed contributes to the likelihood of an aggressor engaging and potential failure of the deterrence architecture. The military implications of this will be examined further.

This analysis posits that the trend of continuously aging U.S. warships with diminishing capabilities will persist, even accelerate within the timeframe, while conventional deterrent capability will deteriorate vis-à-vis PRC. It will be increasingly difficult, in the years to come, to maintain U.S. conventional deterrent naval capacity and capability in Asia Pacific. These trends cannot easily be reversed⁷¹ as this requires sustained simultaneous policy focus, sizeable increases in USN funding, and extensive lead times from conception, research,⁷² development,⁷³ design,⁷⁴ construction,⁷⁵ and evaluation⁷⁶ spanning several years if not decades.⁷⁷ What then, might replace such deterrence, when or if the unfortunate circumstance of such a degradation of conventional general deterrence jolts the region into an immediate deterrence crisis?

⁷¹ It is assumed that naval shipbuilding is a prolonged, expensive, and difficult task given the intrinsic elements of such an endeavor, to include sufficient industrial capacity in a competitive fiscal environment for most, if not all, regional navies. This activity requires great buy-in from a country's political and industrial leadership. Given this, it can be said that current trends in naval shipbuilding will continue at its current pace in this decade for those countries of which available data is inaccessible to retrieve or lacking in accuracy, barring of course certain exogenous shocks which would shift national decisions.

⁷² Department of Defense, Naval Research and Development: A Framework for Accelerating to the Navy & Marine Corp After Next (Arlington, VA: Department of Defense, 2017),

<https://media.defense.gov/2020/May/18/2002302060/-1/-1/1/2017-NAVAL-STRATEGY.PDF>.

⁷³ Shelby S. Oakley, *Navy Shipbuilding: Increasing Focus on Sustainment Early in the Acquisition Process Could Save Billions*, GAO 20-2 (Washington, DC: Government Accountability Office, March 2020),

<https://www.gao.gov/assets/gao-20-2.pdf>.

⁷⁴ Deputy Chief of Naval Operations for Warfighting Requirements and Capabilities, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels*, (Washington, DC: Office of the Secretary of the Navy, 2022), <https://media.defense.gov/2022/Apr/20/2002980535/-1/-1/0/PB23%20SHIPBUILDING%20PLAN%2018%20APR%202022%20FINAL.PDF>.

⁷⁵ Naval Surface Warfare Center, *The Navy Ship Design Process*, (Carderock, MD: Naval Sea Systems Command, January 2012), http://doerry.org/norbert/references/4368_Ship_Design_Process_B_Section_A.pdf.

⁷⁶ David Axe, "The U.S. Navy Wasted A Whole Decade Building Bad Ships," *Forbes*, January 5, 2021, <https://www.forbes.com/sites/davidaxe/2021/01/05/the-us-navy-wasted-a-whole-decade-building-bad-ships/>.
David Sharp, "U.S. Navy Plans to Retire Troubled \$4.5 Billion Warships After Less Than a Decade," *Time*, April 8, 2022, <https://time.com/6165382/navy-retire-freedom-class-lcs/>.

Emma Salisbury, "Lessons from the Littoral Combat Ship," *War on the Rocks*, November 15, 2021, <https://warontherocks.com/2021/11/lessons-from-the-littoral-combat-ship/>.

⁷⁷ Commander Naval Sea Systems Command, *Team Ships: Surface Ships from Cradle to Grave*, (Washington, DC: Naval Sea Systems Command), <https://www.navsea.navy.mil/Home/Team-Ships/Shipbuilding-101/>.

When one envisions how might the U.S. uphold existing Asia-Pacific commitments with diminishing U.S. Navy assets and augmented PLAN assets given PRC geographic proximity, the primary consideration which comes to the fore is the great danger of CCP miscalculation to annex Taiwan as the local military balance diminishes toward CCP advantage.

The research incorporates the effects of commitment, credibility, and effectiveness, among other considerations, of the U.S. political and military leadership to transmit with effect the likely consequences so as to help the CCP avoid such miscalculation, which will be addressed in subsequent chapters.

Much public discussion has centered upon the current force structure of the U.S. Navy and the PLAN. Many analyses consider the accounting of present operational hulls in the respective fleets, with particular attention to the apparent increase of CCP shipbuilding activities. There is considerable alarm regarding the seriousness with which the CCP is devoting time, funding, and resources to accelerate the realization of a great CCP ambition – the wielding of a blue water navy.⁷⁸

In response, there has been some confusion regarding how the U.S. Navy should respond to these threats, with various calls to augment the U.S. Navy to a 355-ship navy⁷⁹ to be achieved

⁷⁸ Steven Lee Myers, “With Ships and Missiles, China Is Ready to Challenge U.S. Navy in Pacific,” *The New York Times*, August 29, 2018, <https://www.nytimes.com/2018/08/29/world/asia/china-navy-aircraft-carrier-pacific.html>. Toshi Yoshihara and James R. Holmes, *Red Star over the Pacific: China’s Rise and the Challenge to U.S. Maritime Strategy* (Annapolis, Md: Naval Institute Press, 2013).

James R. Holmes, “Blue Water Dreams,” *Foreign Policy* (blog), June 27, 2011, <https://foreignpolicy.com/2011/06/27/blue-water-dreams/>.

Sam Roggeveen, “China’s New Carrier Shows Beijing Is Done Playing Defense,” *Foreign Policy* (blog), May 10, 2019, <https://foreignpolicy.com/2019/05/10/china-carrier-new-offense-defense-navy-planavy/>.

VADM Yoji Koda, JMSDF (Ret.), *China’s Bluewater Navy Series: China’s Blue Water Navy Strategy and its Implications* (Washington, DC: Center for New American Security, March 2017), <https://www.cnas.org/publications/reports/chinas-blue-water-navy-strategy-and-its-implications>.

Kailash K. Prasad, “China’s Blue-Water Ambitions,” *The National Interest*, July 6, 2012, <https://nationalinterest.org/commentary/chinas-blue-water-ambitions-7157>.

⁷⁹ Jon Harper, “Navy CNO Aiming for 355-Ship Fleet Despite Calls for Larger Force,” *National Defense Magazine*, April 27, 2021, <https://www.nationaldefensemagazine.org/articles/2021/4/27/navy-chief-aiming-for-355-ship-fleet-despite-calls-for-larger-force>.

at approximately fiscal year 2034;⁸⁰ to create a more distributed fleet architecture;⁸¹ to advocate for a “lethal mix” of legacy and unmanned platforms;⁸² and to look to the Future Naval Force Study⁸³ with upwards to 500 USN ships as various and conflicting guides for further force development.⁸⁴

There are sizeable obstacles to this to include sustained funding for 12-13 hulls a year,⁸⁵ sustained congressional leadership to demand proportional funding, favorable economic conditions to include real growth, threat of inflation, and the general fiscal environment in Washington, D.C. for the next ten years to accomplish this goal. However, if the goal of a 355-ship U.S. navy is achieved, how would this affect the deterrence balance in the region? Will it arrest the subtle yet tangible gravitation of conventional naval superiority toward the PLAN before 2030?⁸⁶ U.S. conventional deterrence is likely to continue to be chipped away, primarily by the quantity, rate of production, and the quality of PLAN shipbuilding activities.

⁸⁰ “Report to Congress on Navy Force Structure,” *USNI News* (blog), January 29, 2020, <https://news.usni.org/2020/01/29/report-to-congress-on-navy-force-structure-6>.

⁸¹ “Report to Congress on Navy Force Structure,” *USNI News* (blog), April 7, 2022, <https://news.usni.org/2022/04/07/report-to-congress-on-navy-force-structure-31>.

⁸² Department of the Navy, *Unmanned Campaign Framework*, (Washington, DC: Department of the Navy, March 2021), https://www.navy.mil/Portals/1/Strategic/20210315%20Unmanned%20Campaign_Final_LowRes.pdf?ver=LtCZ-BPIWki6vCBTdgtDMA%3D%3D

Ronald O’Rourke, *Navy Large Unmanned Surface and Undersea Vehicles: Background and Issues for Congress*, CRS Report No. R45757 (Washington, DC: Congressional Research Service, 2022), <https://sgp.fas.org/crs/weapons/R45757.pdf>.

David B. Larter, “Unclear on Unmanned: The US Navy’s Plans for Robot Ships Are on the Rocks,” *Defense News*, January 10, 2021, <https://www.defensenews.com/digital-show-dailies/surface-navy-association/2021/01/10/unclear-on-unmanned-the-us-navys-plans-for-robot-ships-are-on-the-rocks/>.

⁸³ David Larter and Aaron Mehta, “The Pentagon Is Eyeing a 500-Ship Navy, Documents Reveal,” *Defense News*, September 24, 2020, <https://www.defensenews.com/naval/2020/09/24/the-pentagon-is-eyeing-a-500-ship-navy-documents-reveal/>.

⁸⁴ Lara Seligman, Lee Hudson and Paul McLeary, “Inside the Pentagon slugfest over the future of the fleet,” *Politico*, July 24, 2022, <https://www.politico.com/news/2022/07/24/pentagon-slugfest-navy-fleet-00047551>.

⁸⁵ Mallory Shelbourne, “China Has World’s Largest Navy With 355 Ships and Counting, Says Pentagon,” *USNI News* (blog), November 3, 2021, <https://news.usni.org/2021/11/03/china-has-worlds-largest-navy-with-355-ships-and-counting-says-pentagon>.

⁸⁶ A. Wess Mitchell and Jakub Grygiel, “Predators on the Frontier,” *The American Interest* (blog), February 12, 2016, <https://www.the-american-interest.com/2016/02/12/predators-on-the-frontier/>.

Measuring capacity and capability⁸⁷ for country-navies analysis is critical for comprehensive and successful deterrence in the Asia-Pacific. In this sense, the primary criteria are defined as necessary:⁸⁸

- Sufficient capacity⁸⁹ to defeat enemies in major combat operations and provide a credible Asia-Pacific regional presence to deter aggression;
- Sufficient technological capability⁹⁰ to ensure that the U.S. Navy is able to defeat potential adversaries.

To explore total USN inventory and production rate considerations is not enough, as the topline numbers and rates of a global force presence can obfuscate immediate forward position deployments and rapid surge capabilities within the Asia-Pacific as it relates to a Taiwan crisis. Considering this, after an enumeration of the topline numbers, the analysis proceeds to regional basing and capabilities of the U.S. Pacific Fleet which includes the U.S. Seventh Fleet and the U.S. Third Fleet, stationed in Yokosuka Japan, and Point Loma, CA, respectively. The U.S. Seventh Fleet will be more pronounced as critical time for reinforcements from the U.S. Third Fleet are considerable, and could be met with extended delays, which may impact immediate deterrence outcomes.

⁸⁷ It may be assumed that the USN and regional allied navies may possess a minimal adequate level of readiness for the demand of a Taiwan crisis. Furthermore, data for regional allied navies, to include future years defense spending and procurement plans, may be inaccessible. In this sense, the most available open-source information will be presented, although perhaps some will not extend to the year 2030. We believe this lack of information will not materially affect the following conclusions, on account of structural reasons and fundamental assumptions of the U.S. Navy role in the Asia-Pacific, but particularly in a Taiwan crisis, among others.

⁸⁸ Brent Sadler et al., *2022 Index of U.S. Military Strength, U.S. Navy* (Washington, DC: The Heritage Foundation, 2021), <https://www.heritage.org/military-strength/assessment-us-military-power/us-navy>.

⁸⁹ Capacity will be measured as the quantity and production rate of mission-oriented warships which would respond to a Taiwan crisis.

⁹⁰ Capability will be measured by the quality of mission-oriented warships which would respond to a Taiwan crisis. In particular, the replacement rates of older legacy platforms which would respond to a Taiwan crisis.

Furthermore, for the aims of this research, what constitutes U.S. conventional general naval deterrence includes major surface combatants and submarines such as capital ships (i.e. carriers and cruisers); and other offensive combat ships such as destroyers, and frigates. Defensive, auxiliary, transport, and logistics ships, and tankers are also included in the tally of U.S. conventional naval deterrence capability for obvious reasons. These provide tangible and often vital support to sustained overseas military operations, considerations which ought not to be overlooked.

However, small missile-armed fast patrol craft and corvettes will count toward the total number of PLAN ships, excluding the Chinese People's Armed Police Force Coast Guard Corps, heretofore known as the Chinese coast guard. Though this is not a direct comparison, these smaller attack vessels contribute to the overall local defense posture of PLAN coastal waters – an accounting rooted in the geographic context. This offers a more accurate depiction of the local balance of military power. On a related note, this research will include airwings, though perhaps with less devoted attention than the platforms from which these operate.

The following sections of this chapter will explore military and political backgrounds of each listed power; analyze the current trends in respective military stock and procurement; and offer an assessment of each viability in contributing to U.S.-centered general deterrence within the given timeframe. For expediency, there is a side-to-side comparison of USN and PLAN ships.

UNITED STATES NAVAL SHIPBUILDING

The U.S. Navy is seen as one of the most effective tools in the U.S. arsenal to maintain peace and stability in the Asia-Pacific. As the backbone of global maritime engagement, however, the U.S. Navy is in danger of being surpassed in capacity, and at least at risk of being parried in capability, by the PLAN.

Table I details the ship type and number of the USN dating from 2005 to 2021. Table I PLAN numbers include both less-capable older Chinese ships with more-capable modern Chinese ships. As the CRS report notes, the percentage of modern and more technologically advanced PLAN ships was growing over time even if the total number of ships for those types was changing little.⁹¹ In essence, the PLAN was growing capability while at least maintaining capacity.

Table I further shows the total number of U.S. Navy battle force ships,⁹² which includes principal combat ships and others such as auxiliary and support ships. This is compared to the total number of types of Chinese ships in the table. For accounting purposes, PLAN figures exclude certain ship types, such as auxiliary and support ships, which are able to be deemphasized for the local aggressor, while the U.S. Navy figure includes auxiliary and support ships but excludes patrol craft. This is to arrive at an accurate depiction of U.S. conventional general deterrence.⁹³

It is important, however, to keep in mind the differences in composition between the two navies. USN has many more aircraft carriers, nuclear-powered submarines, cruisers, and

⁹¹ Ronald O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, RL33153 (Washington, DC: Congressional Research Service, 2022), 7-8, <https://sgp.fas.org/crs/row/RL33153.pdf>.

⁹² Battle force ships are the types of ships that count toward the quoted size of the US Navy.

⁹³ Ibid.

destroyers, while PLAN has many more diesel attack submarines, frigates, and corvettes, centered around regional control of coastal waters.⁹⁴ The CRS report notes that on the basis of Table I figures, the total number of principal combat ships in the PLAN surpassed the total number of U.S. Navy battle force ships in 2015.⁹⁵

TABLE I: Numbers of Types of Chinese and U.S. Ships Since 2005

Year of DOD report	SSB	SSN	SS	CV	CG	DD	FF	FFL	PC	LST/ LPD	LSM	Total PLAN ship types shown to right	CCG	U.S. total	U.S. vs. PLAN ship types shown
2005	1	6	51	0	0	21	43	0	51	20	23	216	n/a	291	+75
2006	1	5	50	0	0	25	45	0	45	25	25	221	n/a	282	+61
2007	1	5	53	0	0	25	47	0	41	25	25	222	n/a	281	+59
2008	1	5	54	0	0	29	45	0	45	26	28	233	n/a	279	+46
2009	2	6	54	0	0	27	48	0	70	27	28	262	n/a	282	+20
2010	2	6	54	0	0	25	49	0	85	27	28	276	n/a	285	+9
2011	2	5	49	0	0	26	53	0	86	27	28	276	n/a	288	+12
2012	2	5	48	0	0	26	53	0	86	28	23	271	n/a	284	+13
2013	3	5	49	1	0	23	52	0	85	29	26	273	n/a	287	+14
2014	3	5	51	1	0	24	49	8	85	29	28	283	n/a	285	+2
2015	4	5	53	1	0	21	52	15	86	29	28	294	n/a	289	-5
2016	4	5	57	1	0	23	52	23	86	30	22	303	n/a	271	-32
2017	4	5	54	1	0	21	56	23	88	34	21	317	185	275	-42
2018	4	5	57	1	0	28	51	28	86	33	23	306	240	279	-27
2019	4	6	50	1	0	33	54	42	86	37	22	335	248	286	-49
2020	4	6	46	2	1	32	49	49	86	37	21	333	255	296	-37
2021	6	9	56	2	1	32	48	51	86		57	348	223	296	-52
2021: change since 2005	+5	+3	+5	+2	+1	+11	+5	+51	+35	+14		+132	n/a	+5	-127

⁹⁴ Ibid.

⁹⁵ Ibid.

Source: Table prepared by CRS based on 2005-2021 editions of annual DOD report to Congress on military and security developments involving China (known for 2009 and prior editions as the report on China military power), and (for U.S. Navy ships) U.S. Navy data as presented in CRS Report RL32665, *Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress*, by Ronald O'Rourke.

Key to abbreviations: **n/a** = data not available in annual DOD report. **SSB** = ballistic missile submarines. **SSN** = nuclear-powered attack submarines. **SS** = diesel attack submarines. **CV** = aircraft carriers. **CG** = cruisers. **DD** = destroyers. **FF** = frigates. **FFL** = corvettes (i.e., light frigates). **PC** = missile-armed coastal patrol craft. **LST** = amphibious tank landing ship. **LPD** = amphibious transport dock ship. **LSM** = amphibious medium landing ship. (The 2021 edition of the annual DOD report showed a combined figure for LST/LPD and LSM.) Column for **Total PLAN ship types shown to right**, which shows what might be thought of as the principal combat ships of China's navy, does not include other PLAN ship types not shown to right, such as auxiliary and support ships. **CCG** = China Coast Guard ships. **U.S. total** = Total U.S. Navy battle force ships, which includes auxiliary and support ships but excludes patrol craft. **U.S. vs. PLAN ship types shown** = total U.S. Navy battle force ships compared to the column for **Total PLAN ship types shown to right**.

Office of Naval Intelligence (ONI) states that “a significant portion of China’s Battle Force consists of the large number of new corvettes and guided-missile frigates recently built for the PLAN.”⁹⁶ As can also be seen in the table, most of the remaining increase since 2005 in the number of PLAN ships is accounted for by increases in amphibious ships (14 ships), cruisers, and destroyers (12 ships).⁹⁷

Table II below shows comparative numbers of Chinese and U.S. battle force ships (and figures for certain types of ships that contribute toward China’s total number of battle force ships) from 2000 to 2030, with the figures for 2025 and 2030 being projections.⁹⁸ For China, the total number of battle force ships shown excludes the missile-armed coastal patrol craft shown in Table I but includes auxiliary and support ships that are not shown in Table I. Compared to the first presented table, the figures in Table II come closer to providing an “apples-to-apples” comparison of the two navies’ numbers of ships, although it could be argued that China’s missile-armed coastal patrol craft can be a significant factor for operations in a Taiwan conflict.

⁹⁶ Office of Naval Intelligence, “UPDATED China: Naval Construction Trends vis-à-vis U.S. Navy Shipbuilding Plans, 2020-2030,” (unclassified information paper prepared for Senate Armed Services Committee, Washington, DC: Office of Naval Intelligence, 2020), pp. 4, <https://irp.fas.org/agency/oni/plan-trends.pdf>.

⁹⁷ Ronald O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, RL33153 (Washington, DC: Congressional Research Service, 2022), 8, <https://sgp.fas.org/crs/row/RL33153.pdf>.

⁹⁸ The figures for China’s ships are taken from an ONI information paper of February 2020.

TABLE II: Numbers of Chinese and U.S. Navy Battle Force Ships, 2000-2030

	2000	2005	2010	2015	2020	2025	2030
Ballistic missile submarines	1	1	3	4	4	6	8
Nuclear-powered attack submarines	5	4	5	6	7	10	13
Diesel attack submarines	56	56	48	53	55	55	55
Aircraft carriers, cruisers, destroyers	19	25	25	26	43	55	65
Frigates, corvettes	38	43	50	74	102	120	135
Total China navy battle force ships, including types not shown above	210	220	220	255	360	400	425
Total U.S. Navy battle force ships	318	282	288	271	297	287	290 or 291
U.S. total above compared to China total above	+108	+62	+68	+16	-63	-113	-135 or -134

Sources: Table prepared by CRS. Source for China's navy: Unclassified ONI information paper prepared for Senate Armed Services Committee, subject "UPDATED China: Naval Construction Trends vis-à-vis U.S. Navy Shipbuilding Plans, 2020-2030," February 2020, 4 pp. Provided by Senate Armed Services Committee to CRS and CBO on March 4, 2020, and used in this CRS report with the committee's permission. Figures are for end of calendar year. Source for figures for U.S. Navy: U.S. Navy data; figures are for end of fiscal year.

Note: In the column for the year 2000, the ONI information paper showed a figure for the total number of China navy battle force ships of 110, but the Navy later stated that this was a typo, and that the correct figure is 210.

As we see in Table II, the rate of USN shipbuilding production has remained relatively static while the capability of aging USN ships stagnates or is declining in the same period. We see not only significant growth in PLAN forces but that much of this growth is owed to new platforms⁹⁹ providing modern multi-role capabilities.¹⁰⁰

The state of U.S. Navy shipbuilding is in a period of startling flux. In December 2016, the Navy released a force-structure goal that calls for achieving and maintaining a fleet of 355 ships of certain types and numbers. The 355-ship goal was made U.S. policy by Section 1025 of the

⁹⁹ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2021*, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>, pp. 49.

¹⁰⁰ For greater analyses, please see Brent Sadler et al., *2022 Index of U.S. Military Strength, U.S. Navy* (Washington, DC: The Heritage Foundation, 2021), <https://www.heritage.org/military-strength/assessment-us-military-power/us-navy>.

FY2018 National Defense Authorization Act (H.R. 2810/P.L. 115-91, December 12, 2017). This 355-ship goal, it is important to note, only includes manned ships and not autonomous vehicles, as these are often used as extensions of manned vessels.¹⁰¹

The Pentagon wants to grow the fleet from today's 300 front-line ships to 355 by 2030, or so it used to.¹⁰² There is little plan, money, political will, or consensus on the future direction of the U.S. Navy.¹⁰³ Mark F. Cancian of CSIS and Johns Hopkins SAIS, states the reasons of the collapse of the 355-ship goal: strategy and money.¹⁰⁴ As Professor Cancian states, the plan did not explicitly include unmanned systems, which were attracting a lot of attention, and by focusing on large and expensive ships, it did not seem consistent with a developing strategy of dispersed operations for combat in the Asia-Pacific.

The other problem was that the goal was just too expensive. The Navy's FY 2020 30-year shipbuilding plan calculated spending at \$20.3 billion per year through FY 2024 and \$26 billion to \$28 billion beyond FY 2024, but the Congressional Budget Office (CBO) calculated a cost of \$31 billion per year throughout the 30-year plan, a third more than the Navy expected.¹⁰⁵ That was "50 percent larger than the Navy's average funding for shipbuilding over the past five

¹⁰¹ "Report to Congress on Navy Force Structure," *USNI News* (blog), April 7, 2022, <https://news.usni.org/2022/04/07/report-to-congress-on-navy-force-structure-31>.

¹⁰² David Larer, "Trump Just Made a 355-Ship Navy National Policy," *Defense News*, December 14, 2017, <https://www.defensenews.com/congress/2017/12/14/trump-just-made-355-ships-national-policy/>.

¹⁰³ David Axe, "Australia Has A Plan For Battling China—Add Lots And Lots Of Submarines," *Forbes*, July 3, 2020, <https://www.forbes.com/sites/davidaxe/2020/07/03/australia-has-a-plan-to-grow-its-navy-add-lots-and-lots-of-submarines/>.

¹⁰⁴ Mark F. Cancian, *U.S. Military Forces in FY 2021: Navy* (Washington, DC: Center for Strategic & International Studies, 2020), 8, <https://www.csis.org/analysis/us-military-forces-fy-2021-navy>.

¹⁰⁵ For Navy costs, see Chief of Naval Operations, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2020* (Washington, DC: Department of Defense, 2019), https://www.navy.mil/strategic/PB20_Shipbuilding_Plan.pdf; Congress of the United States, Congressional Budget Office, *An Analysis of the Navy's Fiscal Year 2020 Shipbuilding Plan*, by Eric J. Labs, 55685 (2019), 2, <https://www.cbo.gov/system/files/2019-10/55685-CBO-Navys-FY20-shipbuilding-plan.pdf>; and Brendan Thomas-Noone, "The US Navy Is Chasing the Impossible," *The Strategist*, August 27, 2020, <https://www.aspistrategist.org.au/the-us-navy-is-chasing-the-impossible/>.

years.”¹⁰⁶ The Congressional Research Service came to similar conclusions.¹⁰⁷ Budget constraints, maintenance costs, and maintaining both readiness and modernization with decreased numbers of navy personnel and increased operational tempo, are likely to shrink the goal’s chances of surviving.

Only a few years after the 2018 ship benchmark, the Navy and the Department of Defense (DoD) have been working since 2019 to develop a successor for the 355-ship force-level goal. The confusion centers around both conceptual and numeric concerns. Large vs small ships, manned vs unmanned, and are competed against by various services a The new goal has had several alternate considerations which the U.S. Navy desires to pursue, to include a new, more distributed fleet architecture featuring a smaller proportion of larger ships, a larger proportion of smaller ships, and a new third tier of large, autonomous unmanned vehicles (UVs).¹⁰⁸ There has been no consensus since 2019 between the U.S. Navy, DoD, and the Congress as to the future force structure.¹⁰⁹ Such a goal has not been decided upon as of this writing and from which springs the current multi-year quandary that the U.S. Navy faces: a deficit in force development strategy at a time when the U.S. Navy is tasked with the most alarming threat to its predominance in the most important geostrategic area of the world. Time is running out for the U.S. Navy to get its house in order.

¹⁰⁶ For CBO costs, see: Eric Labs, *An Analysis of the Navy’s Fiscal Year 2020 Shipbuilding Plan* (Washington DC: Congressional Budget Office, October 2019), 3, <https://www.cbo.gov/system/files/2019-10/55685-CBO-Navys-FY20-shipbuilding-plan.pdf>. Because the Navy did not publish a 30-year shipbuilding plan for the FY 2021 budget, CBO’s analysis of the FY 2020 shipbuilding plan is the most recent.

¹⁰⁷ Ronald O’Rourke, *Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress*, RL32665 (Washington, DC: Congressional Research Service, 2019), <https://fas.org/sgp/crs/weapons/RL32665.pdf>.

¹⁰⁸ Ibid.

¹⁰⁹ Ronald O’Rourke, *Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress*, RL32665 (Washington, DC: Congressional Research Service 2022), 4, <https://crsreports.congress.gov/product/pdf/RL/RL32665/367>.

The next year, on December 9, 2020, the U.S. Navy released its latest successor to the 355-ship goal. The document called for a Navy with a more distributed fleet architecture, including 382 to 446 manned ships and 143 to 242 large UVs.¹¹⁰ The year after, on June 17, 2021, the U.S. Navy released a long-range Navy shipbuilding document that was presented as the emerging successor to the 355-ship force-level goal.¹¹¹ The document seems to take a different view than the previous goal and rather calls for a U.S. Navy with a more distributed fleet architecture to include 321 to 372 manned ships, among other priorities.¹¹² A complete 30-year shipbuilding plan will not be available until FY2023 budget planning.¹¹³ In the midst of this, it seems there was a leading concept to help guide a future buildup of U.S. Navy warships, called the Future Naval Force Study (FNFS), or otherwise known as Battle Force 2045, calling for a 500-ship navy. An agreed-upon solution between the Department of Navy leadership, Department of Defense leadership, and the Congress will likely experience further extended delays.¹¹⁴

But the indecision does not end there. On February 18, 2022, the Chief of Naval Operations had concluded that the Navy needs a fleet of 362 or more manned ships and about

¹¹⁰ United States Navy, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels* (Arlington, VCA: United States Navy, 2020), 23.

¹¹¹ Office of the Chief of Naval Operations, Deputy Chief of Naval Operations, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels*, (Washington, DC: Office of the Secretary of Defense, 2020), https://media.defense.gov/2020/Dec/10/2002549918/-1/1/1/SHIPBUILDING%20PLAN%20DEC%202020_NAVY_OSD_OMB_FINAL.PDF.

¹¹² “Report to Congress on Navy Force Structure,” *USNI News* (blog), October 26, 2021, <https://news.usni.org/2021/10/26/report-to-congress-on-navy-force-structure-27>.

¹¹³ Deputy Chief of Naval Operations for Warfighting Requirements and Capabilities, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels* (Washington, DC: Office of the Secretary of the Navy, 2022), <https://media.defense.gov/2022/Apr/20/2002980535/-1/-1/0/PB23%20SHIPBUILDING%20PLAN%2018%20APR%202022%20FINAL.PDF>.

¹¹⁴ Lara Seligman, Lee Hudson and Paul McLeary, “Inside the Pentagon slugfest over the future of the fleet,” *Politico*, July 24, 2022, <https://www.politico.com/news/2022/07/24/pentagon-slugfest-navy-fleet-00047551>.

150 large UVs to meet the Navy’s commitments under the Biden Administration’s forthcoming national defense strategy.¹¹⁵

If to make matters more confusing – raising even further questions as to the insight of Navy planners – a quiet July 19, 2022, press report stated a new classified Navy force-level goal of a battle force of 373 ships—75 more than in the current fleet, called the Battle Force Ship Assessment and Requirement (BFSAR). Though there will be another new BFSAR report released by the Navy later this year in 2022, which will further tweak force numbers and structure.¹¹⁶ More updates and changes are to be expected in the future. It will likely be unknown for the foreseeable future the numbers and force structure the Navy, DoD, and the Congress will end up deciding upon at a time of accelerating alarm in the Asia-Pacific.

Despite the dizzying array of reports, updates, statements, and paucity of decision making, we will proceed with the 2016 force-level goal as the firmest benchmark. The Navy’s erstwhile force-level goal of achieving and maintaining a fleet of 355 ships of the types and numbers is shown in the table below.¹¹⁷ This goal is used as a baseline despite the myriad of efforts towards a change of direction. The U.S. Navy is experiencing significant difficulties in settling upon a path forward for future force development. This vacillation only further hinders the present and future of local U.S. military power in East Asia, while the PLAN races ahead in quantity and quality warships suited for a Taiwan contingency.

¹¹⁵ Sam LaGrone and Mallory Shelbourne, “CNO Gilday: ‘We Need a Naval Force of Over 500 Ships,’” *USNI News*, February 18, 2022; Justin Katz, “CNO Lays Out Future Fleet He Wants: 500 ships, 12 Carriers, 150 Unmanned Vessels,” *Breaking Defense*, February 18, 2022; Richard R. Burgess, “CNO Is ‘Sighted on a Bigger, More Capable Navy,’” *Seapower*, February 22, 2022.

¹¹⁶ Sam LaGrone, “New Navy Fleet Study Calls for 373 Ship Battle Force, Details are Classified,” *USNI News*, July 19, 2022. It is understood that this classified report bypassed the Office of the Secretary of Defense (OSD) and was provided directly to Congress, likely to overcome the present loggerhead between Pentagon leadership and the Department of the Navy.

¹¹⁷ Ronald O’Rourke, *Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress*, RL32665 (Washington, DC: Congressional Research Service, 2019), <https://fas.org/sgp/crs/weapons/RL32665.pdf>.

TABLE III: 355-Ship Force Level Goal

Ship Category	Number of ships
Ballistic missile submarines (SSBNs)	12
Attack submarines (SSNs)	66
Aircraft carriers (CVNs)	12
Large surface combatants (i.e., cruisers [CGs] and destroyers [DDGs])	104
Small surface combatants (i.e., frigates [FFGs], Littoral Combat Ships, and mine warfare ships)	52
Amphibious ships	38
Combat Logistics Force (CLF) ships (i.e., at-sea resupply ships)	32
Command and support ships	39
TOTAL	355

Source: U.S. Navy, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2020*, Table A-1, p. 10.

Notwithstanding, even if the Department of Defense has a solid, achievable plan to only reach 355 ships, America’s biggest long-term challenge, China, is outpacing U.S. shipbuilding capacities.¹¹⁸ The PLAN possesses 350 ships today, compared to the U.S. Navy of 300 vessels. By 2034, China is projected to have more than 425 ships. Even if the U.S. reached 355 ships, there would still be a minimum 70-ship disadvantage.¹¹⁹

The objective of the FNFS was to provide comparative analytic assessments of naval force structure options designed to maximize maritime dominance in the era of great power competition, consistent with the National Defense Strategy (NDS) and Tri-Service Maritime Strategy. The focus of the FNFS study was to identify the benefits and associated risks of three alternate future fleet architectures (FFAs) in order to inform future naval force structure

¹¹⁸ Joe Gould, “Smith Reveals \$3.6B Plan to Counter China,” *Defense News*, June 26, 2020, <https://www.defensenews.com/congress/2020/06/25/smith-wants-36b-plan-to-counter-china-and-way-more-study/>.

¹¹⁹ Sen. David Perdue, “To Keep up with Our Competitors, America Must Boost Shipbuilding,” *Defense News*, July 29, 2020, <https://www.defensenews.com/opinion/commentary/2020/07/29/to-keep-up-with-our-competitors-america-must-boost-shipbuilding/>.

decisions and the 30-year shipbuilding plan, notwithstanding serious concerns regarding modern PLAN platforms.¹²⁰

Even as a 30-year shipbuilding plan is presently unsettled, the FNFS, despite the compendium of latest shipbuilding plans, may provide a valuable, if didactic, guidepost to the most updated procurement plans. The numbers below roughly correlate with the latest Force Design 2045 plans.¹²¹ The suggested Battle Force Inventory from the FNFS Shipbuilding Plan for FY2022-FY2051 is as follows:¹²²

TABLE IV: Battle Force Inventory

Fiscal Year	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Aircraft Carrier	11	11	12	11	11	10	11	11	11	11	11	11	11	11	11	11	11	11	10	11	10	10	10	11	10	10	9	10	10	10
Large Surface Combatant	91	92	92	95	96	97	100	101	100	97	94	92	88	86	85	87	86	83	80	78	75	75	73	74	74	74	74	74	74	74
Small Surface Combatant	34	37	35	35	36	34	36	39	42	45	49	53	55	58	62	64	67	69	71	69	69	66	66	66	65	63	63	63	66	68
Attack Submarines	52	54	53	52	50	53	53	55	54	56	58	57	58	61	63	64	62	62	64	64	67	68	70	72	74	75	77	79	79	80
SSGN / Large Payload Submarine	4	4	4	4	2	1																						1	1	1
Ballistic Missile Submarines	14	14	14	14	14	13	13	13	12	13	13	13	13	13	13	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12
Amphibious Warfare Ships	31	28	26	27	29	32	35	37	40	42	44	47	48	52	55	57	61	62	63	64	64	64	64	66	65	63	61	62	62	62
Combat Logistics Force	31	31	32	32	32	35	37	39	40	43	45	48	50	52	54	56	58	61	62	63	65	66	66	66	69	70	69	69	68	69
Support Vessels	37	39	41	45	46	47	48	49	48	49	49	47	45	44	42	41	40	38	36	37	36	35	35	33	32	31	30	29	29	29
Total Naval Force Inventory	305	310	309	315	316	322	333	344	347	356	363	368	368	377	385	393	398	398	398	398	398	396	396	396	403	402	397	395	398	402

Table V below includes a comparison of the Navy’s current inventory and the inventory in 2045 to the FNFS platform ranges. The specific inventory for different ship classes is consistent with Department of Navy (DoN) funding that paces forecasted long-term U.S. economic growth (2.1% inflation and 2.0% real growth). Given the FNFS platform ranges, the

¹²⁰ Deputy Chief of Naval Operations for Warfighting Requirements and Capabilities, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels* (Washington, DC: Office of the Secretary of the Navy, 2020), 3, https://media.defense.gov/2020/Dec/10/2002549918/-1/1/SHIPBUILDING%20PLAN%20DEC%202020_NAVY_OSD_OMB_FINAL.PDF.

¹²¹ Sam LaGrone, “Navy’s Force Design 2045 Plans for 373 Ship Fleet, 150 Unmanned Vessels,” *USNI News*, July 26, 2022, <https://news.usni.org/2022/07/26/navys-force-design-2045-plans-for-373-ship-fleet-150-unmanned-vessels>.

¹²² Deputy Chief of Naval Operations for Warfighting Requirements and Capabilities, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels* (Washington, DC: Office of the Secretary of the Navy, 2020), 7, https://media.defense.gov/2020/Dec/10/2002549918/-1/1/SHIPBUILDING%20PLAN%20DEC%202020_NAVY_OSD_OMB_FINAL.PDF.

battle force reaches 355 ships between FY2031 and FY2033, with a better mix of ships to prevail in great power competition and conflict compared to the current inventory. The 30-year Shipbuilding Plan quantities for these platforms in 2045 are consistent with the FNFS ranges below:¹²³

TABLE V: Force Structure Comparison

Platforms	Current Inventory	Plan FY45 Inventory	FNFS FFA Ranges
Aircraft Carrier	11	11	8-11¹
CVL	0	0	0-6²
LHA/LHD	10	9	9-10
Amphibious Warfare Ships (less LHA/LHD)	23	57	52-57³
Large Surface Combatant	91	74	73-88
Small Surface Combatant	30	66	60-67
Attack Submarines / Large Payload Submarine	54	72	72-78
Ballistic Missile Submarines	14	12	12
Combat Logistics Force	29	69	69-87⁴
Support Vessels	34	33	27-30
Unmanned Surface	0	119	119-166⁵
Unmanned Subsurface	0	24	24-76⁵
Battle Force	296	403	382-446
Battle Force + Unmanned Surface	-	522	501-612
Battle Force + Unmanned Surface + Unmanned Subsurface	-	546	525-688

1. Lower range may be enabled by acquisition of cost-effective CVL
2. Further study of cost-effective CVL capabilities and capacity required
3. Includes future Light Amphibious Warships (LAW). Amphibious ship force size/mix subject to on-going analysis
4. Includes Next Generation Logistic Ships (NGLS). Logistics force size/mix subject to on-going analysis
5. UxV require follow-on analysis of future objectives

¹²³ Deputy Chief of Naval Operations for Warfighting Requirements and Capabilities, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels* (Washington, DC: Office of the Secretary of the Navy, 2020), 9-10, https://media.defense.gov/2020/Dec/10/2002549918/-1/1/SHIPBUILDING%20PLAN%20DEC%202020_NAVY_OSD_OMB_FINAL.PDF.

Whether the DoN will receive funding for the ships enumerated in the FNFS is uncertain. Mackenzie Eaglen of the American Enterprise Institute (AEI) recently diagnosed a tri-service modernization crunch, defined as “when an immense number of weapons systems must be updated or recapitalized in a short period,” to plague the U.S. military in the 2020s. Decades of shrinking DoD platform and weapons procurement budgets in part caused by sequestration and prioritization of immediate needs over strategic priorities¹²⁴ helped fuel this modernization crunch.¹²⁵ This includes the distinct possibility of cost overruns; marginal program management performance; competing demands for maintenance, sustainment, and recapitalization of legacy infrastructure; and external factors such as inflation, among others, which may adversely impact

¹²⁴ Mallory Shelbourne and Sam LaGrone, “SECNAV Memo: New Destroyer, Fighter or Sub: You Can Only Pick One,” *USNI News* (blog), June 8, 2021, <https://news.usni.org/2021/06/08/secnav-memo-new-destroyer-fighter-or-sub-you-can-only-pick-one-cut-nuclear-cruise-missile>.

¹²⁵ Mackenzie Eaglen et al., *The 2020s Tri-Service Modernization Crunch* (Washington, DC: American Enterprise Institute, 2021), <https://www.aei.org/wp-content/uploads/2021/03/The-2020s-Tri-Service-Modernization-Crunch-1.pdf?x91208>.

Megan Eckstein, “Heritage Report: Aging Navy Fleet Complicates Tradeoff Between Buying New Ships, Fixing Old Ones,” *USNI News* (blog), October 4, 2018, <https://news.usni.org/2018/10/04/heritage-foundation-index-aging-navy-fleet-complicates-tradeoff-between-spending-on-new-ships-maintaining-old-ones>.

Brent Sadler et al., *2022 Index of U.S. Military Strength, U.S. Navy* (Washington, DC: The Heritage Foundation, 2021), <https://www.heritage.org/military-strength/assessment-us-military-power/us-navy>.

Megan Eckstein, “US Navy FY22 Budget Request Prioritizes Readiness over Procurement,” *Defense News*, May 28, 2021, <https://www.defensenews.com/congress/budget/2021/05/28/us-navy-fy22-budget-request-prioritizes-readiness-recovery-over-procurement-buys-4-warships/>.

Dustin Walker, “Congress Should Rewrite the Pentagon’s Pacific Deterrence Budget Request,” *Defense News*, June 2, 2021, <https://www.defensenews.com/opinion/commentary/2021/06/02/congress-should-rewrite-the-pentagons-pacific-deterrence-budget-request/>.

Everett Pyatt, “China Will Only Benefit from the US Navy’s Shipbuilding Budget,” *Defense News*, June 4, 2021, <https://www.defensenews.com/opinion/commentary/2021/06/04/china-will-only-benefit-from-the-us-navys-shipbuilding-budget/>.

Ryan Pickrell, “China Is the World’s Biggest Shipbuilder, and Its Ability to Rapidly Produce New Warships Would Be a ‘huge Advantage’ in a Long Fight with the US, Experts Say,” *Business Insider*, September 8, 2020, <https://www.businessinsider.com/china-has-advantage-over-the-us-in-shipbuilding-2020-9>.

John Grady, “Lawmakers Say Latest Shipbuilding Plan Doesn’t Do Enough to Counter China,” *USNI News* (blog), July 21, 2021, <https://news.usni.org/2021/07/21/lawmakers-say-latest-shipbuilding-plan-doesnt-do-enough-to-counter-china>.

Dan Grazier, “Navy’s Plans to Counter China May Be Doomed by Shipbuilding Disasters,” Project On Government Oversight, January 12, 2021, <https://www.pogo.org/analysis/2021/01/navys-plans-to-counter-china-may-be-doomed-by-shipbuilding-disasters/>.

the future of a variety of platforms.¹²⁶ As detailed by CBO¹²⁷ and GAO¹²⁸, lead ships in Navy shipbuilding programs in many cases have turned out to be more expensive to build than the U.S. Navy had estimated,¹²⁹ while the aging surface fleet struggles to maintain active ships¹³⁰ with the possibility of extending the service life of others.¹³¹ Alongside the Pentagon’s lack of devoting investments in region,¹³² there is considerable uncertainty on the future force structure of the U.S. Navy.¹³³

¹²⁶ Brent Sadler, “Battle Force 2045: What It Is And Why It Matters for the U.S. Navy,” *The National Interest*, December 14, 2020, <https://nationalinterest.org/blog/buzz/battle-force-2045-what-it-and-why-it-matters-us-navy-174457>.

Deputy Chief of Naval Operations for Warfighting Requirements and Capabilities, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels* (Washington, DC: Office of the Secretary of the Navy, 2020), https://media.defense.gov/2020/Dec/10/2002549918/-1/1/1/SHIPBUILDING%20PLAN%20DEC%2020_NAVY_OSD_OMB_FINAL.PDF.

Timothy Walton and Bryan Clark, “Battle Force 2045 Could Work — If Defense Leaders Show Some Discipline,” *Defense News*, October 22, 2020, <https://www.defensenews.com/opinion/commentary/2020/10/22/battle-force-2045-could-work-if-defense-leaders-show-some-discipline/>.

Harlan Ullman, “Battle Force 2045 Raises Important Questions,” *USNI News* (blog), October 8, 2020, <https://www.usni.org/magazines/proceedings/2020/october/battle-force-2045-raises-important-questions>.

Mackenzie Eaglen et al., *The 2020s Tri-Service Modernization Crunch* (Washington, DC: American Enterprise Institute, 2021), <https://www.aei.org/wp-content/uploads/2021/03/The-2020s-Tri-Service-Modernization-Crunch-1.pdf?x91208>.

¹²⁷ Eric J. Labs, *An Analysis of the Navy’s Fiscal Year 2022 Shipbuilding Plan*, CBO Report No. 57414 (Washington, DC: Congressional Budget Office, 2021), https://www.cbo.gov/system/files/2021-09/57414-SHIPBUILDING_1.pdf.

¹²⁸ Shelby S. Oakley, *Navy Shipbuilding: Past Performance Provides Valuable Lessons for Future Investments*, GAO-18-238SP (Washington, DC: Government Accountability Office, 2018), 8, <https://www.gao.gov/assets/gao-18-238sp.pdf>.

¹²⁹ U.S. Library of Congress, Congressional Research Service, *Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress*, by Ronald O’Rourke, RL32665 (2022), <https://fas.org/sgp/crs/weapons/RL32665.pdf>.

¹³⁰ David Larter, “US Navy’s Aging Surface Fleet Struggles to Keep Ships up to Spec, Report Shows,” *Defense News*, October 5, 2020, <https://www.defensenews.com/naval/2020/10/05/the-us-navys-aging-surface-fleet-struggles-to-keep-ships-up-to-spec-report-shows/>.

¹³¹ David Larter, “The US Navy’s Fleet Is Getting Old. It Might Get a Lot Older,” *Defense News*, June 7, 2018, <https://www.defensenews.com/naval/2018/06/07/the-us-navys-ships-are-getting-old-they-might-be-getting-a-lot-older/>.

¹³² Randy Schriver and Eric Sayers, “The Case for a Pacific Deterrence Initiative,” *War on the Rocks*, March 10, 2020, <https://warontherocks.com/2020/03/the-case-for-a-pacific-deterrence-initiative/>.

¹³³ David Larter, “Proposal for Sweeping Cuts to US Navy Shipbuilding, Force Structure Could Herald a New Strategy, Experts Say,” *Defense News*, December 27, 2019, <https://www.defensenews.com/naval/2019/12/27/proposal-for-sweeping-cuts-to-us-navy-shipbuilding-force-structure-could-herald-a-new-strategy-experts-say/>.

Casting out a decade or more, there is ample uncertainty whether a competitive fiscal environment will grant the necessary funds to achieve the objectives set out in this guiding concept.¹³⁴ To illustrate, in 1986, operations and maintenance costs consumed 28 percent of the Pentagon's budget; they now drain 41 percent, which is more than twice the budget share available to buy new weapons systems. These trends have set off a vicious cycle¹³⁵ in which the Pentagon spends more and more to maintain fewer, older, and increasingly obsolete forces.¹³⁶

Yet this analysis focuses on the broad USN force structure and not the forward deployed Seventh Fleet capacity and capability, the primary indicator in local balance of force. Regional basing and capabilities of the U.S. Pacific Fleet, headquartered at Honolulu, Hawaii, includes the U.S. Seventh Fleet and the U.S. Third Fleet, stationed in Yokosuka, Japan and San Diego, CA, respectively. By virtue of geography, the Seventh Fleet is forward deployed in the region to address immediate contingencies, while the Third Fleet, though much larger, can provide ample surging capability, notwithstanding a necessary and potentially delayed time lapse. An overview of the present forward-positioned and surge-capable conventional deterrent assets in the region is below.¹³⁷

As it is difficult to ascertain the exact inventory of ship types based in-region with the U.S. Seventh Fleet at any given time, or the surge capacity in immediate deterrence of the U.S. Third Fleet, we offer approximations based on open sources.

¹³⁴ Sam LaGrone, "Pentagon Reissues FY 22 Shipbuilding Totals to Congress In Lieu of 30-Year Plan," *USNI News* (blog), June 18, 2021, <https://news.usni.org/2021/06/17/pentagon-reissues-fy-22-shipbuilding-totals-to-congress-in-lieu-of-30-year-plan>.

¹³⁵ Craig Hooper, "Pentagon Plan Sets Navy Up To Quickly Shed 30% Of Cruiser And Destroyer Fleet," *Forbes*, June 23, 2021, <https://www.forbes.com/sites/craighooper/2021/06/23/dod-plan-sets-navy-up-to-quickly-shed-30-of-cruiserdestroyer-fleet/>.

¹³⁶ Michael Beckley, "America Is Not Ready for a War With China," *Foreign Affairs*, November 12, 2021, <https://www.foreignaffairs.com/articles/united-states/2021-06-10/america-not-ready-war-china>.

¹³⁷ Commander, U.S. 7th Fleet. "The United States Seventh Fleet Facts Sheet," Department of the Navy, Undated, <https://www.c7f.navy.mil/About-Us/Facts-Sheet/>.

According to the U.S. Navy, the U.S. Seventh Fleet is the largest of the U.S. Navy's forward-deployed fleets, comprised of 50-70 ships and submarines at any given time.¹³⁸ Seventh Fleet controls 10-14 destroyers and cruisers at any given time, with 11 based in Yokosuka and 25 periodically assigned to the region from Hawaii or San Diego. At any given time, there are 8-12 nuclear powered submarines in the U.S. Seventh Fleet,¹³⁹ while many ships and submarines from the U.S. Third Fleet are on deployment in high operational tempo in the Asia-Pacific. The U.S. Navy is currently dominant, ready, and influential in the region.¹⁴⁰ This leads to strong local presence, but results in strained resources and overworked personnel while maintaining high readiness with a decreased personnel strength.¹⁴¹ These trends will further increase into the decade as the “modernization crunch” expands and strains show greater wear.

This is an approximate total of 106 ships and submarines, not including strike fighter squadrons, which are either forward deployed to address immediate contingencies or capable of surging to the region, given a necessary time lapse. The basing locations are of problematic concern given the high-density stationing of U.S. warships in several ports across East Asia. These are susceptible to surprise rocket strikes from mainland China. However, notwithstanding geographic concerns, the overall U.S. Navy force structure is suffering from both stock, procurement/commission pipeline, and capability of the current fleet as compared to PLAN.

On average, a large U.S. warship joins the fleet three to five years after it is purchased. Importantly, any decision regarding production, maintenance, or design alternations during this

¹³⁸ Ibid.

¹³⁹ Ibid.

¹⁴⁰ Daniel Whiteneck et al., *The Navy at a Tipping Point: Maritime Dominance at Stake?* CNA D0022262.A3/1REV (Washington DC: CNA, March 2010), 3, https://www.cna.org/CNA_files/PDF/D0022262.A3.pdf.

¹⁴¹ Department of the Navy, “US Navy Personnel Strength, 1775 to Present,” Naval History and Heritage Command, July 27, 2020, <http://public1.nhhcaws.local/research/library/online-reading-room/title-list-alphabetically/u/usn-personnel-strength.html>.

long production period can have significant implications for the delivery of needed ships. Production of nuclear-powered warships (i.e., submarines and aircraft carriers) involves particular issues of shipyard capacity. The industrial base, for example, has limited excess capacity over the next 30 years to accelerate the production of attack submarines.¹⁴²

Unless the Office of the Secretary of Defense (OSD) and Congress provide increased funding, the Navy will be forced either to make cuts in its shipbuilding plan or to curtail the development of new lethal technologies.¹⁴³ Despite congressional mandates that a fleet of 12 aircraft carriers be maintained, unofficial reporting of an internal Pentagon study suggests that the aircraft carrier fleet could shrink to nine.¹⁴⁴

Furthermore, the Navy's surface fleet is getting older. The cruisers are all closing in on their expected 35-year expected hull lives, and the first 27 Arleigh Burke-class destroyers are not far behind them. Keeping the radars going in earlier ships has been a particular challenge, as has maintaining the aging engineering power plants.¹⁴⁵

The combination of a fleet that is aging faster than old ships are being replaced with new ships and the rapid growth of competitor navies with corresponding deployment of the most modern technologies does not bode well for U.S. naval power.

¹⁴² Congress of the United States, Congressional Budget Office, *The Capacity of the Navy's Shipyards to Maintain Its Submarines*, by R. Derek Trunkey, 57026 (2021), <http://www.cbo.gov/publication/57026>.

¹⁴³ Sam LaGrone, "Congressional Budget Office Analysis of Navy's 30-Year Shipbuilding Plan," *USNI News* (blog), September 17, 2021, <https://news.usni.org/2021/09/17/congressional-budget-office-analysis-of-navys-30-year-shipbuilding-plan>.

¹⁴⁴ David Larter, "Defense Department Study Calls for Cutting 2 of the US Navy's Aircraft Carriers," *Defense News*, April 20, 2020, <https://www.defensenews.com/naval/2020/04/20/defense-department-study-calls-for-cutting-2-of-the-us-navys-aircraft-carriers/>.

¹⁴⁵ David Larter, "US Navy's Aging Surface Fleet Struggles to Keep Ships up to Spec, Report Shows," *Defense News*, October 5, 2020, <https://www.defensenews.com/naval/2020/10/05/the-us-navys-aging-surface-fleet-struggles-to-keep-ships-up-to-spec-report-shows/>.

It is also important to note that the current U.S. Navy operational tempo is placing its surge capacity in the event of a contingency in jeopardy.¹⁴⁶ This is evidenced by the salvaging of parts on the USS John F. Kennedy, a carrier under construction, to ready the USS Gerald R. Ford for deployment.¹⁴⁷

Taken together, the uncertainty of DoN future years funding to build new battle force ships; the difficult leadership decisions and tradeoffs between funding renovation and recapitalization of legacy systems or to devote budgets toward new hulls with fresh capabilities; and the capacity of U.S. industrial shipyards to surge production if such an increased rate of production indeed materializes, are all risks which degrade the regional conventional deterrence in region. The languishing of future forces development will make for insipid naval shipbuilding growth spanning through the decade, while legacy systems will continue to be decommissioned without advanced replacements.¹⁴⁸ In short, both capacity and capability will decline without adequate strategy.¹⁴⁹

¹⁴⁶ David Larter, “The US Navy Is Taking Extreme Measures to Preserve Its Carrier Surge,” *Defense News*, April 13, 2020, <https://www.defensenews.com/naval/2020/04/13/the-us-navy-is-taking-extreme-measures-to-preserve-its-carrier-surge/>.

¹⁴⁷ Mallory Shelbourne, “USS Gerald R. Ford Needs Parts from Carrier Kennedy for Repairs; Navy Says ‘Cannibalization’ Won’t Delay JFK Schedule,” *USNI News* (blog), November 15, 2021, <https://news.usni.org/2021/11/15/uss-gerald-r-ford-needs-parts-from-carrier-kennedy-for-repairs-navy-says-cannibalization-wont-delay-jfk-schedule>.

¹⁴⁸ John Ferrari, “The Navy is Broken. Congress Must Launch A Commission to Find the Path Forward,” *Breaking Defense*, June 8, 2022, <https://breakingdefense.com/2022/06/the-navy-is-broken-congress-must-launch-a-commission-to-find-the-path-forward/>.

¹⁴⁹ Jeff Schogol, “The Pentagon wants to get rid of 24 ships and more than 150 aircraft,” *Task & Purpose*, March 28, 2022, <https://taskandpurpose.com/news/pentagon-budget-divests-ships-aircraft/>.

PRC NAVAL SHIPBUILDING

PLAN has numerically the largest navy in the world with an overall battle force of approximately 355 ships and submarines, including approximately more than 145 major surface combatants.¹⁵⁰ In comparison, the U.S. Navy's battle force is approximately 293 ships as of early 2020.¹⁵¹ The pace of modernization of the PLA forces in general, and the PLAN in particular, is stunning.¹⁵² As of 2020, the PLAN is largely composed of modern multi-role platforms. In the near-term, the PLAN will have the capability to conduct long-range precision strikes against land targets from its submarine and surface combatants using land-attack cruise missiles, notably enhancing the PRC's global power projection capabilities. The PRC is enhancing its anti-submarine warfare (ASW) capabilities and competencies to protect the PLAN's aircraft carriers and ballistic missile submarines.¹⁵³

Some U.S. observers are expressing alarm regarding the pace of China's naval shipbuilding effort and resulting trend lines regarding the relative sizes and capabilities of the PLAN and the U.S. Navy. ONI stated that China possesses 360 battle force ships, compared with

¹⁵⁰ Ronald O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, RL33153 (Washington, DC: Congressional Research Service, 2022), 2, <https://sgp.fas.org/crs/row/RL33153.pdf>.

¹⁵¹ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2021*, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>, pp. 76.

Ronald O'Rourke, *U.S.-China Strategic Competition in South and East China Seas: Background and Issues for Congress*, CRS Report No. R42784 (Washington, DC: Congressional Research Service, 2022), <https://sgp.fas.org/crs/row/R42784.pdf>.

¹⁵² Ronald O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, CRS Report No. RL33153 (Washington, DC: Congressional Research Service, 2022), 6, <https://sgp.fas.org/crs/row/RL33153.pdf>.

¹⁵³ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2021*, vi, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>.

a total of 297 for the U.S. Navy at the end of FY2020. ONI projects that China will have 400 battle force ships by 2025, and 425 by 2030.¹⁵⁴

According to U.S. Indo-Pacific Command,¹⁵⁵ by 2025 China is projected to have roughly an 8-to-1 advantage in ships and submarines compared to U.S. forces west of the international date line, comparable advantages in aircraft, and an overwhelming lead in large land-based missiles. Specifically, the PRC is expected to have approximately 100 modern multi-warfare combatant vessels, such as the Type 055 destroyer, more than 60 submarines, 12 amphibious assault ships, and three aircraft carriers. In comparison, U.S. Navy forces in the region will be able to field only 12 destroyers or cruisers, ten submarines, four amphibious assault ships, and one aircraft carrier.¹⁵⁶

The PLAN is viewed as posing a major challenge to the U.S. Navy's ability to achieve and maintain wartime control of blue-water ocean areas in the Western Pacific—the first such challenge the U.S. Navy has faced since the end of the Cold War. PLAN forms a key element of a Chinese challenge to the longstanding status of U.S. as the leading military power in the Western Pacific.¹⁵⁷

¹⁵⁴ Ronald O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, CRS Report No. RL33153 (Washington, DC: Congressional Research Service, 2022), Summary, <https://sgp.fas.org/crs/row/RL33153.pdf>.

¹⁵⁵ *United States Senate Committee on Armed Services: United States Indo-Pacific Command*, 117th Cong., March 9th, 2021, (Appendix I, Section 1251 of statement of Admiral Philip S. Davidson, U.S. Navy Commander, U.S. Indo-Pacific Command), <https://d1e00ek4ebabms.cloudfront.net/production/uploaded-files/Appendix%20I%20to%20CDRUSINDOPACOM%20Sec.%201251%20Indendent%20Assessment%20-%20Executive%20Summary%20-%202027%20Feb%202021-c22ba69c-4e88-4d8d-90d0-1885b2589e20.pdf>; https://www.armed-services.senate.gov/imo/media/doc/Davidson_03-09-21.pdf.
Demetri Sevastopulo, "Admiral Warns US Military Losing Its Edge in Indo-Pacific," *Financial Times*, March 10, 2021, <https://www.ft.com/content/61ea7ce5-7b68-459b-9a11-41cc71777de5>.

¹⁵⁶ Elbridge Colby and Walter Slocombe, "The State of (Deterrence by) Denial," *War on the Rocks*, March 22, 2021, <https://warontherocks.com/2021/03/the-state-of-deterrence-by-denial/>.

¹⁵⁷ Ibid.

China's naval modernization effort encompasses a wide array of platform and weapon acquisition programs, including anti-ship ballistic missiles (ASBMs), anti-ship cruise missiles (ASCMs), submarines, surface ships, aircraft, UVs, and supporting C4ISR systems.¹⁵⁸ China's naval modernization effort also includes improvements in maintenance and logistics, doctrine, personnel quality, education and training, and exercises.¹⁵⁹

China's military modernization effort, including its naval modernization, is assessed as being aimed at developing capabilities for addressing the situation with Taiwan militarily, the object of much of CCP war planning.¹⁶⁰

Consistent with these goals, observers believe China wants its navy to be capable of acting as part of a Chinese anti-access/area-denial (A2/AD) force—a force that can deter U.S. intervention in a conflict in China's near-seas region over Taiwan or some other issue, or failing that, delay the arrival or reduce the effectiveness of intervening U.S. forces.¹⁶¹

The planned ultimate size and composition of the PLAN is not publicly known. In contrast to the U.S. Navy, China does not release a navy force-level goal or detailed information

¹⁵⁸ For greater discussion, please see, Heginbotham, Eric, Michael Nixon, Forrest E. Morgan, Jacob L. Heim, Jeff Hagen, Sheng Tao Li, Jeffrey Engstrom, Martin C. Libicki, Paul DeLuca, David A. Shlapak, David R. Frelinger, Burgess Laird, Kyle Brady, and Lyle J. Morris, *The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power, 1996–2017* (Santa Monica, CA: RAND Corporation, 2015). https://www.rand.org/pubs/research_reports/RR392.html. Also available in print form.

¹⁵⁹ Ronald O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, CRS Report No. RL33153 (Washington, DC: Congressional Research Service, 2022), 3, <https://sgp.fas.org/crs/row/RL33153.pdf>.

¹⁶⁰ Ronald O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, CRS Report No. RL33153 (Washington, DC: Congressional Research Service, 2022), 1, <https://sgp.fas.org/crs/row/RL33153.pdf>.

¹⁶¹ Ronald O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, CRS Report No. RL33153 (Washington, DC: Congressional Research Service, 2022), Summary, <https://sgp.fas.org/crs/row/RL33153.pdf>.

about planned ship procurement rates, planned total ship procurement quantities, planned ship retirements, and resulting projected force levels.¹⁶²

The Defense Intelligence Agency (DIA) states that “although the overall inventory has remained relatively constant, the PLAN is rapidly retiring older, single-mission warships in favor of larger, multimission ships equipped with advanced antiship, antiair, and antisubmarine weapons and sensors and C2 facilities.”¹⁶³ In the near-term, the PLAN will have the capability to conduct long-range precision strikes against land targets from its submarine and surface combatants using land attack cruise missiles, notably enhancing the PRC’s global power projection capabilities. The PRC is also enhancing its anti-submarine warfare (ASW) inventory and training to protect the PLAN’s aircraft carriers and ballistic missile submarines.¹⁶⁴

By the mid-2020s, the PRC will likely build the Type 093B guided-missile nuclear attack submarine. This new Shang class variant will enhance the PLAN’s anti-surface warfare capability and could provide a clandestine land-attack option if equipped with land-attack cruise missiles (LACMs).¹⁶⁵

China’s submarine fleet is of particular concern to foreign naval planners. According to the U.S. Office of Naval Intelligence, the Chinese navy in 2015 operated 57 diesel-electric submarines and five nuclear attack submarines. Beijing’s undersea fleet by 2030 could expand to

¹⁶² Ronald O’Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, CRS Report No. RL33153 (Washington, DC: Congressional Research Service, 2022), 4, <https://sgp.fas.org/crs/row/RL33153.pdf>.

¹⁶³ Ibid.

¹⁶⁴ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2021*, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>, pp. 48.

¹⁶⁵ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2021*, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>, pp. 49.

include 60 diesel-electric boats and at least 16 nuclear attack submarines, further eroding one of the remaining U.S. advantages in-region – undersea warfare.¹⁶⁶

Overall, the balance of force in-region is growing ever more decisively in PRC's favor. Within empirical studies and rooted in historical examples, this development introduces enormous uncertainty as to the effectiveness of erstwhile successful conventional general deterrence. What was known in the past can no longer be held true in present. The U.S. can no longer be confident in its conventional deterrent capabilities by way of sheer military force, and the PRC is no longer complacent to continue its regional power acquiescence. Expectations and perceptions on either side are changing based upon fundamental changes in the local balance of force. If not righted, the drums of war may be heard over the horizon.

Now, we shall pivot to explore regional allies and partners of the U.S. of similar metrics. When measuring the conventional deterrence assets of regional or allied navies operating within the region, the analyst must recognize the pressures of competing demands for attention and resources from other priorities deemed essential by such navies, and how this informs the respective fleet force structures, which may or may not be suited for the particulars of a Taiwan contingency. There are many elements in this determination. For example, we can understand that the South Korean navy will likely be predominately occupied with the North Korean threat more so than a Taiwan crisis and will have its forces structurally adjusted properly, with levels of relatively high inelasticity given the next several years to adopting a different strategic chance manifested by its future force development. Furthermore, even a sympathetic Indian navy,

¹⁶⁶ David Axe, "Japan Has A Plan For Dismantling China's Submarine Fleet," *Forbes*, June 22, 2020, <https://www.forbes.com/sites/davidaxe/2020/06/22/japan-has-a-plan-for-dismantling-chinas-submarine-fleet/?sh=5692905f6d6c>.

though concerned about PRC aggression towards Taiwan, may reasonably conclude the preponderance of its efforts ought to be devoted to the Indian Ocean and will have constructed and planned its fleet accordingly. These examples illustrate what may be called a qualitative deficit.

Allied navies which operate within the region yet possess minimal basing opportunities for an enlarged and continuous naval presence, such as the United Kingdom or France, may be posed with quantity problem – simply not enough conventional naval vessels to be perceived as a conventional deterrent force regarding a Taiwan crisis, if or when called upon. This may be called a quantitative deficit.

Of course, there are those countries who would be, at the least, nominally sympathetic to U.S. interests in the region vis-à-vis the CCP, if not for possessing both qualitative and quantitative deficits, such as an Indonesian navy made deeply cynical of the CCP by repeated PLAN violations of Indonesia's EEZ.¹⁶⁷ Indonesia may find little marginal utility to contribute in preventing a Taiwan contingency for reasons of both capability, strategic naval purpose, and geographical distance from a potential warzone.

Though neither of these issues consider a logistical component which, by virtue of geographical distance, makes the qualitative and quantitative issues of regional deterrence all the more important. Thus, the obvious recognition that the only navy in the region with sufficiently quantifiable conventional naval vessels in close proximity to a potential conflict which renders the greatest perceived deterrent towards the CCP has and will continue to be the U.S. Navy, notwithstanding the requisite strategic clarity and purpose for such a task.

¹⁶⁷ Reuters Staff, "Indonesia Rejects China's Claims over South China Sea," *Reuters*, January 1, 2020, <https://www.reuters.com/article/us-indonesia-china-southchinasea-idUSKBN1Z01RE>.

In sum, regional allies and partners must judge for themselves the benefits and liabilities of contributing materiel to prevent a Taiwan crisis. The contributing elements of these analyses will differ between countries based upon the respective strategic concerns vis-à-vis China; domestic limitations, including politics, of contributing conventional assets to a crisis; how a Taiwan contingency unfolds, or put another way, who is seen to be the aggressor in a crisis; importance of Taiwan to each country; impacts of future trade and investment after a decision to help deter or not; potential for CCP retaliation; as well as potential benefits and incentives from the U.S., among other factors.

However, we believe if only for pedagogic purpose, it is useful to provide a review of the regional allied and partner navies operating within the region so as to illustrate the grave risk of relying upon greater responsibility of sympathetic regional navies for conventional general deterrence to prevent a Taiwan crisis rather than the U.S. shouldering the primary burden of deterrence and its attendant obligations. Several patterns may stand out in the following section.

JAPAN NAVAL SHIPBUILDING

The JMSDF is one of the world's most powerful navies. Its fleet is larger than those of traditional European powers like France and the United Kingdom combined and is a critical component in the defense architecture of the Asia-Pacific and for prevention of a Taiwan contingency.¹⁶⁸ Japan sees its strategic environment shifting dramatically in a rapidly changing

¹⁶⁸ Felix K. Chang, "Born Again: Japan's Maritime Self-Defense Force Revitalization," *Foreign Policy Research Institute* (blog), December 4, 2020, <https://www.fpri.org/article/2020/12/born-again-japans-maritime-self-defense-force-revitalization/>.

region with increasing volatility and uncertainty.¹⁶⁹ In response, Japan is undergoing a military revival arguably not seen since World War II.¹⁷⁰ The importance of the U.S. – Japan alliance in the Asia-Pacific is unmistakable.¹⁷¹ This is evidenced by the ruling party calling for a significant rise in defense spending.¹⁷² Though the Japan Ministry of Defense in its *National Defense Program Guidelines for FY 2019 and Beyond*, does not explicitly state a policy of defense, in conjunction with the U.S. Navy, of Taiwan, it is clear that the JMSDF highly values the robust and long-standing security cooperation between these two countries.

In this sense, the official document states:

“The Japan-U.S. Alliance, with the Japan-U.S. Security Arrangements as its core, plays a significant role for peace, stability and prosperity of not only Japan but also the Indo-Pacific region and the international community.”¹⁷³

Furthermore:

“Today, no country can preserve its security by itself alone. Strengthening the Japan-U.S. Alliance as well as security cooperation with other countries are critical to Japan’s national security, and this cannot be achieved without Japan’s own efforts. The international community also expects Japan to play roles that are commensurate with its national power.”¹⁷⁴

¹⁶⁹ Government of Japan, Ministry of Defense, *National Defense Program Guidelines and the Mid-Term Defense Program: National Defense Program Guidelines for FY 2019 and beyond* (Tokyo, Japan: Japan Ministry of Defense, 2018), 1, 7, 8.

¹⁷⁰ Alastair Gale and Chieko Tsuneoka, “China Provocations Hasten Japan’s Military Revival,” *Wall Street Journal*, July 14, 2020, <https://www.wsj.com/articles/japan-china-military-provocations-revival-disputed-islands-pacifism-11594735596>.

¹⁷¹ Walter Russell Mead, “Tokyo Flexes Its Talons,” *Wall Street Journal*, April 19, 2021, <https://www.wsj.com/articles/tokyo-flexes-its-talons-11618871351>.

¹⁷² Reuters Staff, “Japan Ruling Party Manifesto Calls for Sharp Rise in Defence Spending,” *Reuters*, October 8, 2021, <https://www.reuters.com/world/asia-pacific/japan-ruling-party-manifesto-calls-sharp-rise-defence-spending-asahi-2021-10-08/>.

¹⁷³ Government of Japan, Ministry of Defense, *National Defense Program Guidelines and the Mid-Term Defense Program*, (Tokyo, Japan: Japan Ministry of Defense), 13.

¹⁷⁴ Government of Japan, Ministry of Defense, *National Defense Program Guidelines and the Mid-Term Defense Program*, (Tokyo, Japan: Japan Ministry of Defense), 2.

An analyst might reasonably conclude from this and other sources that strong bilateral security cooperation would weigh heavily upon an invasion and occupation of a democratically governed island within close proximity, which would portend dangerous future implications for Japanese sovereignty and its citizens' way of life. These are core security concerns of Japan.¹⁷⁵ Yet, for the purposes of deterrence, can the U.S. rely upon JMSDF support? Bonny Lin of the RAND Corporation testified before the U.S.-China Economic and Security Review Commission in February 2021 stating:

“There is very limited publicly available information on whether allies and partners would intervene in a China-Taiwan conflict.”¹⁷⁶

Though this is true for all U.S. allies and partners in region, this places particular emphasis on Japan as it possesses a relatively large regional and modernized navy, displaying great capacity and modern capability. The element of strategic willingness of its national leaders to engage in immediate conventional deterrence¹⁷⁷ is an open question. Though it is unlikely for Japan to change official policy documents in an explicit manner to reorient towards a more sympathetic posture of Taiwan, Japan's deputy defense minister in 2021 at an event of the Hudson Institute stated it was necessary to "wake up" to Beijing's pressure on Taiwan and protect the island "as a democratic country."¹⁷⁸

¹⁷⁵ Government of Japan, Ministry of Defense, *National Defense Program Guidelines and the Mid-Term Defense Program*, (Tokyo, Japan: Japan Ministry of Defense), 1-2.

¹⁷⁶ Bonny Lin, *U.S. Allied and Partner Support for Taiwan: Responses to a Chinese Attack on Taiwan and Potential U.S. Taiwan Policy Changes*, (Santa Monica, CA: RAND Corporation, 2021), 1, <https://www.rand.org/pubs/testimonies/CTA1194-1.html>.

¹⁷⁷ Jakub Grygiel, “The Paradox of Great Powers: Allies and Force in Montesquieu’s Considerations on the Causes of the Greatness of the Romans and Their Decline,” *Orbis* 63, no. 4 (January 1, 2019): 582–97, <https://doi.org/10.1016/j.orbis.2019.08.005>.

¹⁷⁸ Reuters, “Japanese Minister Says Taiwan Must Be Protected ‘as a Democratic Country,’” CNN, June 29, 2021, <https://www.cnn.com/2021/06/29/asia/japan-taiwan-defense-intl-hnk/index.html>.

A goal of the recent Tokyo-Washington summit was to press for a Japanese commitment to back Washington in aiding Taiwan against invasion. Taiwan was mentioned in the joint statement, a first. Prime Minister Yoshihide Suga said the leaders had agreed “to oppose any attempts to change the status quo by force of coercion” and “emphasize[d] the importance of peace and stability in the Taiwan Strait and encourage the peaceful resolution of cross-strait issues.”¹⁷⁹ Yet under domestic political considerations, he explained that Japanese forces would not be deployed to defend Taiwan and that the official statement “does not presuppose military involvement at all.” Deputy Prime Minister Taro Aso added to the muddle, stating that in the case of a “major problem” with Taiwan “then Japan and the U.S. must defend Taiwan together.” Other officials dismissed his comments as personal, and he later stated that any incidents involving the island should be resolved with diplomacy.¹⁸⁰ This indeed is a dramatic shift of views, and a confusing variation of differing views, of Japanese policymakers on the importance of Taiwan to its national interests and regional stability.¹⁸¹

As of March 31, 2021, the JMSDF operates 21 attack submarines and 47 destroyers, which includes 6 Aegis-equipped destroyers.¹⁸² *Defense of Japan 2021* and Japan’s *National*

¹⁷⁹ U.S.- Japan Joint Leaders’ Statement: “U.S. – Japan Global Partnership for A New Era,” White House Briefing Room Statements and Releases, April 16, 2021. <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/16/u-s-japan-joint-leaders-statement-u-s-japan-global-partnership-for-a-new-era/>.

¹⁸⁰ Doug Bandow, “Would Japan Help Defend Taiwan?” Cato Institute, August 12, 2021, <https://www.cato.org/commentary/would-japan-help-defend-taiwan>.

¹⁸¹ Ryan Ashley, “Japan’s Revolution on Taiwan Affairs,” *War on the Rocks*, November 23, 2021, <https://warontherocks.com/2021/11/japans-revolution-on-taiwan-affairs/>.

¹⁸² Government of Japan, Ministry of Defense, *National Security Strategy (Outline)*, Annex Table, Reference 6 (Tokyo, Japan: Ministry of Defense, 2013), 16, 29,

https://www.mod.go.jp/en/publ/w_paper/wp2021/DOJ2021_EN_Reference.pdf.

Jeffrey W. Hornung, *Japan’s Potential Contributions in an East China Sea Contingency*, (Santa Monica, CA: RAND Corporation, 2020), 46, https://www.rand.org/pubs/research_reports/RR314-1.html; Government of South Korea, Ministry of National Defense, *2018 Defense White Paper* (Seoul, South Korea: Ministry of National Defense, 2018), 19,

https://www.mnd.go.kr/user/mndEN/upload/pblictN/PBLICTNEBOOK_201908070153390840.pdf.

Government of Japan, Ministry of Defense, *National Security Strategy (Outline)*, Annex Table (Tokyo, Japan: Ministry of Defense, 2019), 471, https://www.mod.go.jp/en/publ/w_paper/wp2019/pdf/DOJ2019_reference02.pdf.

Government of Japan, Ministry of Defense, *National Security Strategy (Outline)*, Reference 10 (Tokyo, Japan: Ministry of Defense, 2019), 480, https://www.mod.go.jp/en/publ/w_paper/wp2019/pdf/DOJ2019_reference02.pdf.

Defense Program Guidelines for FY 2019 and Beyond outlines Japan's defense capabilities envisioned for approximately 10 years.¹⁸³ Projecting out to 2030, this outline of conventional naval deterrent capability will likely be augmented but retain a similar force structure. The JMSDF Medium Term Defense Plan (MTDP) of FY2019-FY2023 expects to procure additional destroyers for a total of 54, including a total of 8 aegis-equipped destroyers, and additional submarines for a total of 22.¹⁸⁴

Given the geographic propinquity of Japan, its sizeable and relevant fleet force structure, and the threat that an occupied Taiwan plays as a potential future launching pad for the CCP to dominate other contested territories, of which Japan claims, makes Japan a potentially formidable ally of the U.S. in immediate deterrence of a Taiwan annexation.

However, Japan's use of its Self-Defense Forces to aid Taiwan would still have to meet three conditions: (1) that the Chinese attack "threatens Japan's survival and poses a clear danger to fundamentally overrun people's right to life, liberty, and pursuit of happiness," (2) "there is no other proper means available to repel the attack and ensure Japan's survival and protection of its people," and (3) "the use of force will be limited to the minimal extent necessary."¹⁸⁵

¹⁸³ Government of Japan, Ministry of Defense, *National Defense Program Guidelines and the Mid-Term Defense Program: National Defense Program Guidelines for FY 2019 and beyond* (Tokyo, Japan: Japan Ministry of Defense), 32.

¹⁸⁴ Government of Japan, Ministry of Defense, *National Security Strategy (Outline), Annex Table* (Tokyo, Japan: Ministry of Defense, December 2013), 16, 28,

https://www.mod.go.jp/en/publ/w_paper/wp2021/DOJ2021_EN_Reference.pdf.

Government of Japan, Ministry of Defense, *National Defense Program Guidelines and the Mid-Term Defense Program: National Defense Program Guidelines for FY 2019 and beyond* (Tokyo, Japan: Japan Ministry of Defense), 33.

Government of South Korea, Ministry of National Defense, *2018 Defense White Paper*, (Seoul, South Korea: Ministry of National Defense, 2018), 19,

https://www.mnd.go.kr/user/mndEN/upload/pblict/PBLICTNEBOOK_201908070153390840.pdf.

¹⁸⁴ Government of Japan, Ministry of Defense, *Defense of Japan Pamphlet*, (Tokyo, Japan: Japan Ministry of Defense, 2021), 24.

¹⁸⁵ Bonny Lin, *U.S. Allied and Partner Support for Taiwan: Responses to a Chinese Attack on Taiwan and Potential U.S. Taiwan Policy Changes*, (Santa Monica, CA: RAND Corporation, 2021), 7, <https://www.rand.org/pubs/testimonies/CTA1194-1.html>.

Domestic politics may hamstring political will to counter CCP in military occupation of Taiwan, or at minimum inject indistinctness in its public statements. Yet it seems politicians are aware of the Taiwan threat, are signaling as such, and how the attendant consequences also apply to the Japanese people. This apparent dissonance induces uncertainty of a Japanese commitment to prevent a Taiwan contingency, yet the interests of the Japanese people, as perceived as such, necessitates serious consideration as to JMSDF involvement. Japanese policymakers have stated with ambiguity and at times with public reversals on their policy in a Taiwan contingency. However, it is likely that Japanese leaders are clear-eyed as to the national interest and what is at stake for Japan vis-à-vis Taiwan.

AUSTRALIA NAVAL SHIPBUILDING

The Australian Defense Department recognizes strategic competition in the Indo-Pacific, a driver of future dynamics, and sees the need to sustain credible military forces in the region.¹⁸⁶ It has sought deeper engagement in the Indo-Pacific¹⁸⁷ through agreements such as Comprehensive Strategic Partnerships with India and Indonesia; and other treaties with Singapore, while growing defense cooperation with Japan, the Philippines, and others. Most notably, the recent trilateral security pact, AUKUS, announced September 21, 2021, will help

¹⁸⁶ Commonwealth of Australia, Department of Defence, *2020 Defence Strategic Update*, (Canberra, Australia: Commonwealth of Australia, 2020), Foreword, https://www.defence.gov.au/sites/default/files/2020-11/2020_Defence_Strategic_Update.pdf.

Commonwealth of Australia, Department of Defence, *2020 Defence Strategic Update Fact Sheet*, (Canberra, Australia: Commonwealth of Australia, 2020), https://www.defence.gov.au/sites/default/files/2020-11/Factsheet_Strategic_Update.pdf.

¹⁸⁷ Commonwealth of Australia, Department of Defence, *2020 Defence Strategic Update: Defence Force Posture and Engagement 2016-2020 Fact Sheet*, (Canberra, Australia: Commonwealth of Australia, 2020), https://www.defence.gov.au/sites/default/files/2020-11/Factsheet_Force_Posture_and_Engagement.pdf.

Australia acquire nuclear submarine capabilities and enhance security cooperation.¹⁸⁸ Tellingly,

Australia recognizes the important component of time, stating:

“Previous Defence planning has assumed a ten-year strategic warning time for a major conventional attack against Australia.... Growing regional military capabilities, and the speed at which they can be deployed, mean Australia can no longer rely on a timely warning ahead of conflict occurring. Reduced warning times mean defence plans can no longer assume Australia will have time to gradually adjust military capability and preparedness in response to emerging challenges.”¹⁸⁹

However, Australia has also decided to focus defense policy on its immediate environs:

“The Government has decided that defence planning will focus on Australia’s immediate region: ranging from the north-eastern Indian Ocean, through maritime and mainland South East Asia to Papua New Guinea and the South West Pacific.... Consideration of making wider military contributions should not be an equally-important determinant for force structure compared to ensuring we have credible capability to respond to any challenge in our immediate region.”¹⁹⁰

Furthermore, on defense efforts in North Asia where a Taiwan contingency may erupt:

“North Asia is a region of global strategic and economic significance and Australia has important trade and broader partnership-based interests with countries in the region. But any such wider contributions must be based on specific national interests. Consideration of making wider military contributions should not be an equally-important determinant for force structure compared to ensuring we have credible capability to respond to any challenge in our immediate region.”¹⁹¹

¹⁸⁸ The White House, “Joint Leaders Statement on AUKUS,” *The White House Briefing Room Statements and Releases*, September 21, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/15/joint-leaders-statement-on-aukus/>.

¹⁸⁹ Commonwealth of Australia, Department of Defence, *2020 Defence Strategic Update*, (Canberra, Australia: Commonwealth of Australia, 2020), 14, https://www.defence.gov.au/sites/default/files/2020-11/2020_Defence_Strategic_Update.pdf.

¹⁹⁰ Hans J. Ohff and Jon Stanford, “Why Is Australia Still Investing in a Balanced Defence Force?,” *The Strategist*, July 7, 2021, <https://www.aspistrategist.org.au/why-is-australia-still-investing-in-a-balanced-defence-force/>.

Commonwealth of Australia, Department of Defence, *2020 Defence Strategic Update*, (Canberra, Australia: Commonwealth of Australia, 2020), 21, https://www.defence.gov.au/sites/default/files/2020-11/2020_Defence_Strategic_Update.pdf; Commonwealth of Australia, Department of Defence, *2020 Defence Strategic Update*, (Canberra, Australia: Commonwealth of Australia, 2020), Foreword, <https://www.defence.gov.au/about/publications/2016-defence-white-paper>; Commonwealth of Australia, Department of Defence, *2020 Force Structure Plan*, (Canberra, Australia: Commonwealth of Australia, 2020), Foreword, <https://www.defence.gov.au/about/publications/2020-force-structure-plan>.

¹⁹¹ Commonwealth of Australia, Department of Defence, *2020 Defence Strategic Update*, (Canberra, Australia: Commonwealth of Australia, 2020), 24, https://www.defence.gov.au/sites/default/files/2020-11/2020_Defence_Strategic_Update.pdf.

In addition, it seems the prevailing belief of regional allies can be aptly described by the Australian Defence Strategic Update:

“Only the nuclear and conventional capabilities of the United States can offer effective deterrence against the possibility of nuclear threats against Australia.”¹⁹²

The Australian navy possesses eight frigates, three guided missile destroyers, two amphibious assault ships, and six diesel-electric guided missile submarines, for a total of 19 conventional deterrent ships and submarines.¹⁹³ Force structure planning to 2030 includes much sustainment and upgrades of the current fleet, including destroyers, frigates, and submarines.¹⁹⁴ Acquisition of Nine Hunter Class Frigates (SEA 5000) are being built with prototyping in 2020¹⁹⁵ and the building of a new class of frigates will commence at a later date.¹⁹⁶ New builds include the acquisition and sustainment of 12 Australian-built Attack class submarines.¹⁹⁷ This continuous build program will see the greatest rebuilding of the Australian Navy capability since

¹⁹² Commonwealth of Australia, Department of Defence, *2020 Defence Strategic Update*, (Canberra, Australia: Commonwealth of Australia, 2020), 27, https://www.defence.gov.au/sites/default/files/2020-11/2020_Defence_Strategic_Update.pdf.

¹⁹³ Royal Australian Navy, “Royal Australian Navy: Current Ships,” Royal Australian Navy, Undated, Accessed May 2, 2022, <https://www.navy.gov.au/fleet/ships-boats-craft/current-ships>.
Royal Australian Navy, “Royal Australian Navy: Ships, Boats & Craft,” Royal Australian Navy, Undated, Accessed May 2, 2022, <https://www.navy.gov.au/fleet/ships-boats-craft>.

¹⁹⁴ Commonwealth of Australia, Department of Defence, *2020 Force Structure Plan*, (Canberra, Australia: Commonwealth of Australia, 2020), 36, <https://www.defence.gov.au/about/publications/2020-force-structure-plan>.
Commonwealth of Australia, Department of Defence, *2020 Force Structure Plan*, (Canberra, Australia: Commonwealth of Australia, 2020), 39, <https://www.defence.gov.au/about/publications/2020-force-structure-plan>.

¹⁹⁵ Commonwealth of Australia, Department of Defence, “Australian Government Department of Defence: Capability,” Australian Department of Defence, September 16, 2021, <https://www.defence.gov.au/business-industry/naval-shipbuilding/capability>.

Department of Defence of the Commonwealth of Australia, “Department of Defence: Hunter Class Frigate,” Website, January 14, 2021, <https://www.defence.gov.au/project/hunter-class-frigate>.

¹⁹⁶ Commonwealth of Australia, Department of Defence, *2020 Force Structure Plan*, (Canberra, Australia: Commonwealth of Australia, 2020), 37, <https://www.defence.gov.au/about/publications/2020-force-structure-plan>.

¹⁹⁷ Commonwealth of Australia, Department of Defence, *2020 Force Structure Plan*, (Canberra, Australia: Commonwealth of Australia, 2020), 39, <https://www.defence.gov.au/about/publications/2020-force-structure-plan>.

the Second World War.¹⁹⁸ Submarines are disproportionately powerful in the wide, deep expanse of the Pacific Ocean—and uniquely suited to battling the Chinese fleet, which lacks experience in anti-submarine warfare.¹⁹⁹ This provides a sizeable asymmetric ability, which the CCP would certainly understand as a vulnerability.

However, geographic distance prevents Australia from contributing significant deterrent ability in a Taiwan contingency – Australia lies short of 3,500 miles from Taiwan. This diminishes any power projection and minimizes the role of aerial combat, with a heavy emphasis on refueling platforms if projection is deemed necessary. As noted earlier, F-35 variants and other advanced fighters have a battle-ready range of approximately 300 miles.

Yet notwithstanding the tyranny of distance, Australia and the United States signaled a greater focus on Taiwan in a joint high-level statement that summarized discussions at the July 2020 Australia-U.S. Ministerial Consultations:

“The Secretaries and Ministers re-emphasized Taiwan’s important role in the Indo-Pacific region. Both sides stated their intent to strengthen ties with Taiwan, which is a leading democracy and a critical partner for both countries. The principals emphasized their support for Taiwan’s meaningful participation in international organizations, as a member where statehood is not a prerequisite and as an observer or guest where statehood is a prerequisite for membership. The United States and Australia reiterated continued support for a peaceful resolution of cross-Strait issues without resorting to threats or coercion. The American and Australian counterparts expressed their shared commitment to enhance donor coordination with Taiwan in the Pacific.”²⁰⁰

This signals a greater diplomatic focus on the strategic value of an independent and democratic Taiwan at present, more so than what may be noted in Australian defense white

¹⁹⁸ Commonwealth of Australia, Department of Defence, “Australian Government Department of Defence: Capability,” Australian Department of Defence, September 16, 2021, <https://www.defence.gov.au/business-industry/naval-shipbuilding/capability>.

¹⁹⁹ David Axe, “Australia Has A Plan For Battling China—Add Lots And Lots Of Submarines,” *Forbes*, July 3, 2020, <https://www.forbes.com/sites/davidaxe/2020/07/03/australia-has-a-plan-to-grow-its-navy-add-lots-and-lots-of-submarines/>.

²⁰⁰ U.S. Department of Defense, “Joint Statement on Australia-U.S. Ministerial Consultations (AUSMIN) 2020,” July 28, 2020. <https://www.state.gov/joint-statement-on-australia-u-s-ministerial-consultations-ausmin-2021/>

papers. A reasonable observation would be that as aggression towards Taiwan increases, the calculus of Australian defense planners may in turn view the future of Taiwan as a litmus test for greater instability in the Asia-Pacific. However, Australia is presently unwilling to host U.S. missiles.²⁰¹ In light of this, there is indeed a note of uncertainty in how Australia might view its own actions in a Taiwan conflict, given its lack of power projection over such a great distance and its force structure planning focused on immediate environs. In this respect, although Australia states that it may not possess the strategic capacity nor determination to play an integral part in preventing a Taiwan occupation and invasion approximately 3,500 miles away, when faced with such a time, the decision may be made otherwise. Notwithstanding, it is difficult to envision, given the above elements of capability and willingness, Australia as a substantive deterrer, or a co-equal, in a Taiwan annexation.

SOUTH KOREA NAVAL SHIPBUILDING

South Korea is a middle democratic power in a region neighbored with PRC amid the U.S. – PRC rivalry. The U.S. trip of South Korean President Moon Jae-in of 2021 may be the latest lucid example of South Korea's balancing act between the two. While Moon called for peace and stability in the Taiwan Strait alongside the U.S. president it is known that close consultations with PRC prior to the summit regarding agenda and speech coordination resulted in a relatively tame response from the PRC.²⁰² Indeed, no mention of human rights regarding Hong Kong or Xinjiang in exchange for a mention of the Quad is emblematic of such horse-trading of

²⁰¹ David S. Cloud, "U.S. Seeks to House Missiles in the Pacific. Some Allies Don't Want Them," *Los Angeles Times*, June 10, 2020, <https://www.latimes.com/politics/story/2020-06-10/pentagon-to-build-up-missiles-in-western-pacific-to-combat-chinas-expansion>.

²⁰² Yosuke Onchi, "South Korea's Tiptoeing on Taiwan Avoids Beijing Backlash," *Nikkei Asia*, May 29, 2021, <https://asia.nikkei.com/Politics/International-relations/South-Korea-s-tiptoeing-on-Taiwan-avoids-Beijing-backlash>.

South Korea between U.S. and PRC. Notwithstanding, it was the first time that the Taiwan issue was ever included in a joint statement between South Korea and U.S., in addition to Moon signaling closer coordination with Washington regarding Taiwan.²⁰³

This approach is seen as consonant with lessons learned by South Korea after the deployment of a defensive THAAD missile system with U.S. cooperation meant to protect against North Korean provocations, resulting in a furious PRC response including economic retaliation.²⁰⁴ This principle of balancing between two great powers is likely to continue for South Korea.

Furthermore, South Korea is concerned that such an explicit alignment with the U.S. regarding Taiwan's political future would provoke great ire of PRC which could delay or foil relations with North Korea and prospects of Korean unification²⁰⁵, with PRC as a recalcitrant mediator, among other negative considerations such as economic retaliation as experienced previously.

The ROK Navy possesses approximately 12 destroyers, 12 frigates, 11 corvettes, and 18 diesel electric attack submarines.²⁰⁶ The ROK Navy authorized the construction of a light aircraft carrier in February 2021, yet it will not be completed until approximately 2033.²⁰⁷ The ROK

²⁰³ Remarks by President Biden and H.E. Moon Jae-in, President of the Republic of Korea at Press Conference, White House Briefing Room Speeches and Remarks, May 21, 2021, <https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/05/21/remarks-by-president-biden-and-h-e-moon-jae-in-president-of-the-republic-of-korea-at-press-conference/>

²⁰⁴ Ethan Meick and Nargiza Salidjanova, *Staff Research Report: China's Response to U.S.-South Korean Missile Defense System Deployment and its Implications* (Washington, DC: U.S.-China Economic and Security Review Commission, 2017), <https://www.uscc.gov/research/chinas-response-us-south-korean-missile-defense-system-deployment-and-its-implications>.

²⁰⁵ Sungmin Cho, "South Korea's Taiwan Conundrum," *War on the Rocks*, December 31, 2021, <https://warontherocks.com/2021/12/south-koreas-taiwan-conundrum/>.

²⁰⁶ Government of South Korea, Ministry of National Defense, *2020 Defense White Paper*, (Seoul, South Korea: Ministry of National Defense, 2021), https://www.mnd.go.kr/user/mnd/upload/pblict/PBLICTNEBOOK_202102021153057640.pdf

²⁰⁷ Byong-su Park, "S. Korean Defense Ministry to Move Forward with Light Aircraft Carrier Program amid Controversy," *Hankyoreh*, February 23, 2021, https://english.hani.co.kr/arti/english_edition/e_national/984186.html.

Navy plans to build three additional AEGIS destroyers by 2028,²⁰⁸ and six destroyers by 2030 to replace legacy destroyers.²⁰⁹ Many of its surface vessels have vertical launch systems and advanced electronic suites that put them on par with the best warships in the world. ROK Navy also operates stealth technology on its destroyers.²¹⁰

The Frigate Experimental (FFX) program aims to replace the Ulsan-class frigates and Donghae/Pohang-class corvettes with new 2,300-ton frigates. The total number of the ships to be built is 18 to 24.²¹¹ Six FFX frigates are authorized and the first is to be delivered in 2024.²¹² ROK has announced its larger ambitions to create a task fleet capable of broader-range operations beyond its shores, in another show of its desire to build blue-water capabilities.²¹³

Chul-Jae Lee and Kyu-Seok Shim, "Military Approves Plan to Build Aircraft Carrier by 2033," Korea JoongAng Daily, In Association with The New York Times, February 23, 2021, <https://koreajoongangdaily.joins.com/2021/02/23/national/defense/aircraft-carrier-DAPA-Defense-Ministry/20210223174800354.html>.

²⁰⁸ Navy Recognition Staff, "MADEX 2017: What We Learned on the ROK Navy Future KDX-III Batch II Aegis Destroyers," *Navy Recognition* (blog), October 2017, <http://www.navyrecognition.com/index.php/news/naval-exhibitions/2017/madex-2017/5699-madex-2017-what-we-learned-on-the-rok-navy-future-kdx-iii-batch-ii-aegis-destroyers.html>.

²⁰⁹ Navy Recognition Staff, "DSME Showcasing Its next Generation KDDX Destroyer for ROK Navy at Indo Defence 2014," *Navy Recognition* (blog), November 2014, <http://www.navyrecognition.com/index.php/news/naval-exhibitions/indomarine-2014/2160-dsme-showcasing-its-next-generation-kddx-destroyer-for-rok-navy-at-indo-defence-2014.html>.

Naval Today Staff, "South Korea Approves Procurement of next Batch of Aegis Destroyers, Subs," *Naval Today*, May 6, 2019, <https://www.navaltoday.com/2019/05/06/south-korea-approves-procurement-of-next-batch-of-aegis-destroyers-subs/>.

Newsis Staff, "'Mini Aegis' next Destroyer (KDDX) Domestic R&D Confirmed," *newsis*, December 26, 2018, https://www.newsis.com/view/?id=NISX20181226_0000513293.

²¹⁰ Benjamin Brimelow, "How a War between North and South Korea Could Quickly Become a Naval Showdown," *Business Insider*, July 15, 2021, <https://www.businessinsider.com/how-north-koreas-and-south-koreas-navies-compare-2021-7>.

²¹¹ Navy Recognition Staff, "Incheon Class Frigate FFX Republic of Korea ROK Navy," *Navy Recognition* (blog), Undated, <http://www.navyrecognition.com/index.php/132-republic-of-korea-navy-vessels-ships-and-equipment/rok-navy-frigates-a-destroyers/1184-incheon-class-frigate-ffx-republic-of-korea-rok-navy-gyeonggi-hyundai-heavy-industries-hhi-dsme-south-korea-datasheet-pictures-photos-video-specifications.html>.

²¹² Navy Recognition Staff, "ROK Navy's FFX Batch III Frigate to Be Equipped with the Future Long-Range Naval L-SAM," *Navy Recognition* (blog), June 2020, <https://www.navyrecognition.com/index.php/news/defence-news/2020/june/8658-rok-navy-s-ffx-batch-iii-frigate-to-be-equipped-with-the-future-long-range-naval-l-sam.html>.

²¹³ Andrew Tunnicliffe, "South Korea's Blue-Water Naval Strategy - Global Defence Technology | Issue 95 | January 2019," *Global Defence Technology*, January 2019, https://defence.nridigital.com/global_defence_technology_jan19/south_korea_s_blue-water_naval_strategy.

South Korea is one of the few countries in Asia that has both long-standing historical ties with China and a critical alliance with the United States. This two-sided reality puts unprecedented pressure on Seoul, as the U.S.—PRC rivalry intensifies and spills over to affect trade and technology policy. As Asia's fourth-largest economy, South Korea exported goods worth over \$136 billion to China in 2019, comprising a quarter of its total exports. Moreover, since China is North Korea's only ally and indispensable patron, Seoul must also give careful consideration to the complex Beijing-Pyongyang relationship as South Korea tends to its own ties with PRC.²¹⁴

This complex and dynamic relationship between two great powers places great strategic stress upon South Korea contributing in a deterrence capacity against a Taiwan invasion, for fear of potential CCP reprisal in terms of the North Korea question or negative impacts in trade and investment. However, there seems to be a growing divide between the growing discontent of South Koreans over PRC behavior²¹⁵ and a presiding policy of closer collaboration with the CCP. This tension may likely grow in the coming years and further place the "China issue" in the spotlight for South Korea.²¹⁶

Domestic considerations may be an obstacle in the South Korean population seeing the threat of CCP military annexation of Taiwan, if simply for the fact that the distance between the

²¹⁴ Chung Min Lee, "South Korea Is Caught Between China and the United States," Carnegie Endowment for International Peace, October 21, 2020, <https://carnegieendowment.org/2020/10/21/south-korea-is-caught-between-china-and-united-states-pub-83019>.

²¹⁵ Karl Friedhoff, "South Koreans See China as More Threat than Partner, But Not the Most Critical Threat Facing the Country," The Chicago Council on Global Affairs, April 6, 2021, <https://www.thechicagocouncil.org/research/public-opinion-survey/south-koreans-see-china-more-threat-partner-not-most-critical-threat>.

²¹⁶ Kim Dongwoo, "The Politics of South Korea's 'China Threat,'" *The Diplomat*, April 5, 2021, <https://thediplomat.com/2021/04/the-politics-of-south-koreas-china-threat/>.

two lies short of 1,000 miles. South Korea, too, is unlikely to host U.S. missiles.²¹⁷ In addition, as it stands under conventional general and even immediate deterrence, it is likely South Korean leadership sees little gain compared to incurred costs of preventing a Taiwan annexation. Nonetheless, it seems unlikely the U.S. requests such assistance given perennial peninsular tensions, with ROK naval assets directed accordingly. Hence, there is less than marginal conventional deterrent potential in coordination with U.S.

VIETNAM NAVAL SHIPBUILDING

Vietnam is concerned with repeated violations of CCP Coast Guard and maritime militias entering its exclusive economic zone (EEZ), to include the recent sinking of a Vietnamese fishing boat. The Vietnam People's Navy (VPN) operates 6 diesel electric attack submarines, 2 Yugo-class midget submarines, and 12 corvettes.²¹⁸ Over the next decade, it is likely that the VPN will continue to build its forces. Though neither a long term nor medium term shipbuilding or procurement plan seems to be available, it can be reasonably assumed that a future buildup will focus upon capabilities suited for defending territorial disputes with the CCP. This likely includes, for the purposes of detailing only conventional naval deterrent capabilities, diesel electric attack submarines and perhaps a handful of surface combatants or frigates. The 2019 Vietnam defense white paper, the first in ten years, signals greater displeasure over aggressive

²¹⁷ David S. Cloud, "U.S. Seeks to House Missiles in the Pacific. Some Allies Don't Want Them," *Los Angeles Times*, June 10, 2020, <https://www.latimes.com/politics/story/2020-06-10/pentagon-to-build-up-missiles-in-western-pacific-to-combat-chinas-expansion>.

Frank A. Rose, "Not in My Backyard: Land-Based Missiles, Democratic States, and Asia's Conventional Military Balance," *Brookings Institution* (blog), September 10, 2020, <https://www.brookings.edu/blog/order-from-chaos/2020/09/10/not-in-my-backyard-land-based-missiles-democratic-states-and-asias-conventional-military-balance/>.

²¹⁸ International Institute of Strategic Studies, *The Military Balance 2021*, Volume 121, Issue 1, Chapter Six: Asia, (London, UK: International Institute of Strategic Studies, 2021), 309, DOI: 10.1080/04597222.2022.2022931.

CCP behavior and a willingness for deeper engagement with the U.S., while still adhering to the “Three Nos” policy, of no alliances, no foreign basing on its territory, and no alignment with a second country against a third.²¹⁹ Though Vietnam can be a greater U.S. partner in regional forums such as the ASEAN Defense Ministers’ Meeting Plus and ASEAN Regional Forum, the strategic environment Vietnam in which it sees itself is not likely to allow for serious engagement alongside the U.S. to prevent a Taiwan contingency.

INDIA NAVAL SHIPBUILDING

India is an emerging power positioned to balance China in future. Centered in South Asia on the subcontinent, it is short of 2,500 miles from Taiwan. As of August 2021, the Indian Navy fields eight destroyers in service, composed of three Kolkata-class (7,500 tons full), three Delhi-class (6,200 tons), and two Rajput-class (5,000 tons) destroyers. Four Visakhapatnam-class destroyers (iterative improvements of the Kolkata class) are intended to be commissioned by 2025, with the first of these aiming to enter service later this year. Of these destroyers, only the Kolkata class and Visakhapatnam class are equipped with a modern PAR and a VLS area air defense SAM, in the form of the Israeli MF-STAR AESA and a complement of 32 VLS launched Israeli-Indian Barak 8 SAMs with a current range of 100 kilometers.²²⁰

²¹⁹ Derek Grossman and Christopher Sharman, “How to Read Vietnam’s Latest Defense White Paper: A Message to Great Powers,” *War on the Rocks*, December 31, 2019, <https://warontherocks.com/2019/12/how-to-read-vietnams-latest-defense-white-paper-a-message-to-great-powers/>.

Derek Grossman and Dung Huynh, “Vietnam’s Defense Policy of ‘No’ Quietly Saves Room for ‘Yes,’” *The Diplomat*, January 19, 2019, <https://thediplomat.com/2019/01/vietnams-defense-policy-of-no-quietly-saves-room-for-yes/>.

²²⁰ International Institute of Strategic Studies, *The Military Balance 2021*, Volume 121, Issue 1, Chapter Six: Asia, (London, UK: International Institute of Strategic Studies, 2021), 218-317, DOI: 10.1080/04597222.2022.2022931. Rick Joe, “A Tale of 2 Navies: India and China’s Current Carrier and Escort Procurement,” *The Diplomat*, August 4, 2021, <https://thediplomat.com/2021/08/a-tale-of-2-navies-india-and-chinas-current-carrier-and-escort-procurement/>.

India would prefer, all things equal, to increase expenditures for a larger navy with fuller capabilities. India's Vice Chief of Naval Staff, Vice Admiral P Murugesan, has outlined that India aims to become a 200-ship navy by 2027, noting that the current force stands at 137 ships.²²¹ This is quite an ambitious goal.

However, the IN is procuring seven Nilgiri-class frigates (significant improvements of the Shivalik class) with the same MF-STAR and Barak 8 system as the Kolkata and Visakhapatnam destroyers. The first of this new class may enter service in 2022, with a goal for all seven to be commissioned by 2025. A further four improved Talwar-class frigates will also be purchased from Russia, which will replace the arm launched Shtil-1 with a VLS equivalent. It is worth noting that the Shivalik- and Nilgiri-class frigates displace 6,800 tons at full, and are only a few hundred tons lighter than various destroyer classes around the world as well as the IN's own Kolkata and Visakhapatnam class destroyers – though the Shivalik-class frigate's impressive displacement does not correspond to modern and capable AAW capability.²²²

To summarize the Indian Navy's escorts, the current fleet of escorts is composed of 21 ships – eight destroyers and 13 frigates – of which only the three Kolkata-class destroyers field high-end AAW capabilities that include both a modern PAR and VLS-launched area air defense SAMs. In fact, of the remaining 18 in-service ships, none of those are equipped with a VLS area air defense SAM or a modern PAR. This fleet of 21 escorts will grow to 36 ships, including 12

²²¹ Press Trust of India, "Indian Navy Aiming at 200-ship Fleet by 2027," *Economic Times*, July 14, 2018, <https://economictimes.indiatimes.com/news/defence/indian-navyaiming-at-200-ship-fleet-by-2027/articleshow/48072917.cms>.

Aman Thakker, "A Rising India in the Indian Ocean Needs a Strong Navy," Center for Strategic & International Studies, October 17, 2018, <https://www.csis.org/npfp/rising-india-indian-ocean-needs-strong-navy>.

²²² Rick Joe, "A Tale of 2 Navies: India and China's Current Carrier and Escort Procurement," *The Diplomat*, August 4, 2021, <https://thediplomat.com/2021/08/a-tale-of-2-navies-india-and-chinas-current-carrier-and-escort-procurement/>.

destroyers and 24 frigates, by the end of 2025, if production goes to plan and if none of the older ships are retired. Of these 36 ships, the seven Kolkata- and Visakhapatnam-class destroyers and the seven Nilgiri-class large frigates will boast a high-end AAW capability, marking 14 high-end AAW-capable multirole destroyers and large frigates. The four new Talwar-class frigates will also augment the fleet by featuring at least a VLS launched medium-range SAM capability.²²³

India is concerned of China's growing military strength. However, much India may sympathize with Taiwan's plight, strategic interests are in the Indian Ocean, far afield from Taiwan. India offers interesting basing opportunities, if stretched by the tyranny of distance, and a sizeable force. However, the author must conclude India may possess only marginal deterrent utility.

India's public stand for the cross-strait status quo would help complicate CCP efforts for annexation yet may offer little in influencing calculations.²²⁴ Indeed, India has steered clear in

²²³ Ibid.

Indian Navy, "Vikramaditya, Viraat, Delhi Class, Rajput Class, Kolkata Class," Indian Navy, July 31, 2017, <https://web.archive.org/web/20170731154754/https://www.indiannavy.nic.in/content/vikramaditya-viraat-delhi-class-rajput-class-kolkata-class>; Indian Navy, "INS Viraat Decommissioned," Indian Navy, July 31, 2017, <https://web.archive.org/web/20170731160452/https://www.indiannavy.nic.in/content/ins-viraat-decommissioned>; Indian Navy, "Vikramaditya, Viraat, Delhi Class, Rajput Class, Kolkata Class," Indian Navy, July 31, 2017, <https://web.archive.org/web/20170731154754/https://www.indiannavy.nic.in/content/vikramaditya-viraat-delhi-class-rajput-class-kolkata-class>; Indian Navy, "Shivalik Class, Talwar Class, Kamorta Class," Indian Navy, July 31, 2017, <https://web.archive.org/web/20170731154548/https://www.indiannavy.nic.in/content/shivalik-class-talwar-class-kamorta-class>; Indian Navy, "Brahmaputra Class, Godavari Class," Indian Navy, July 31, 2017, <https://web.archive.org/web/20170731154924/https://www.indiannavy.nic.in/content/brahmaputra-class-godavari-class>; Indian Navy, "Shivalik Class, Talwar Class, Kamorta Class," Indian Navy, July 31, 2017, <https://web.archive.org/web/20170731154548/https://www.indiannavy.nic.in/content/shivalik-class-talwar-class-kamorta-class>; Indian Navy, "Kora Class, Khukri Class," Indian Navy, July 31, 2017, <https://web.archive.org/web/20170731153200/https://www.indiannavy.nic.in/content/kora-class-khukri-class>; Indian Navy, "Veer Class, Abhay Class," Indian Navy, July 31, 2017, <https://web.archive.org/web/20170731151626/https://www.indiannavy.nic.in/content/veer-class-abhay-class>; Surabhi Nijhawan, "Indian Navy Corvettes INS Veer And Nipat Decommissioned After 29 and 28 Years Of Service To The Nation," *India Times*, April 28, 2016, <https://web.archive.org/web/20170731151456/http://www.indiatimes.com/news/india/indian-navy-corvettes-ins-veer-and-nipat-decommissioned-after-29-and-28-years-of-service-to-the-nation-254218.html>.

²²⁴ Rajesh Rajagopalan, "China's Invasion of Taiwan Will Be a Disaster for Asia. India Must Draw a Red Line," *ThePrint* (blog), June 28, 2021, <https://theprint.in/opinion/chinas-invasion-of-taiwan-will-be-a-disaster-for-asia-india-must-draw-a-red-line/685544/>.

voicing any support for the political entity of Taiwan.²²⁵ Like many regional powers, the Taiwan issue will be viewed through the lens of competing economic and security priorities. There is little expectation that this should change soon.

FRANCE NAVAL SHIPBUILDING

France possesses several territories in the Indo-Pacific region to include the islands of Mayotte and La Réunion, the Scattered Islands and the French Southern and Antarctic Territories, rooted in the southern part of the Indian Ocean. France also retains territories in New Caledonia, Wallis and Futuna, French Polynesia and Clipperton Island in the Pacific Ocean.²²⁶ As a result, France is likely to continue to position itself as a contributing participant towards the geopolitical pull in the region.²²⁷

The French Navy possesses 8 submarines; 4 of which are nuclear powered ballistic missile submarines, the other four being nuclear powered attack submarines; one nuclear powered aircraft carrier; three destroyers; and 18 frigates.²²⁸

French Navy shipbuilding includes six nuclear powered attack submarines of the Barracuda-class. The construction of the first boat in the class also began in 2006 and she

²²⁵ Sana Hashmi, “A Missing Link in the Quad: India’s Support for Taiwan,” *The Diplomat*, July 16, 2021, <https://thediplomat.com/2021/07/a-missing-link-in-the-quad-indias-support-for-taiwan/>.

²²⁶ Florence Parly, *France and Security in the Indo-Pacific* (Paris, France: French Ministry of Armed Forces, 2019), 2, https://franceintheus.org/IMG/pdf/France_and_Security_in_the_Indo-Pacific_-_2019.pdf.

²²⁷ Abhijnan Rej, “French Joint Commander for Asia-Pacific Outlines Paris’ Indo-Pacific Defense Plans,” *The Diplomat*, April 13, 2021, <https://thediplomat.com/2021/04/french-joint-commander-for-asia-pacific-outlines-paris-indo-pacific-defense-plans/>.

²²⁸ International Institute of Strategic Studies, *The Military Balance 2021*, Volume 121, Issue 1, Chapter Four: Europe, (London, UK: International Institute of Strategic Studies, 2021), 103, DOI: 10.1080/04597222.2021.1868793.

was commissioned in 2020.²²⁹ The additional boats in the class will enter service through the 2020s, with the sixth submarine planned for service entry in 2030.²³⁰ Further, six FREMM frigates – five mid-size frigates, planned for delivery from 2024 onward.²³¹ The FREMM *Lorraine* is scheduled for commission in November 2022.²³²

Procurements further afield include one new nuclear-powered aircraft carrier to enter service in about 2038 for the future replacement of the *Charles de Gaulle* beyond 2030.²³³ Furthermore, four nuclear-powered ballistic missile submarines (SSBN) are in the offing with current plans envisage the start of construction to begin in around 2023 with the first new SSBN to enter service between 2033 and 2035.²³⁴ Deliveries of the three follow-on boats are expected

²²⁹ Navy Recognition Staff, “New Suffren Barracuda-Class Nuclear-Powered Attack Submarine Officially Commissioned by French Navy,” *Navy Recognition* (blog), November 2020, <https://www.navyrecognition.com/index.php/news/defence-news/2020/november/9236-new-suffren-barracuda-class-nuclear-powered-attack-submarine-officially-commissioned-by-french-navy.html>.

²³⁰ Emmanuel Huberdeau, “France Launches First Barracuda SSN,” *Jane’s Navy*, July 12, 2019, <https://www.janes.com/defence-news/news-detail/france-launches-first-barracuda-ssn>.

²³¹ Navy Recognition Staff, “France Accelerates the FDI Frigates Program,” *Navy Recognition* (blog), March 29, 2021, <https://www.navyrecognition.com/index.php/news/defence-news/2021/march/9901-france-accelerates-the-fdi-frigates-program.html>.

Navy Recognition Staff, “Update to French Military Planning Law Means New Capabilities for Lafayette Class Frigates,” *Navy Recognition* (blog), May 21, 2015, http://www.navyrecognition.comhttp://www.navyrecognition.com/index.php?option=com_content&view=article&id=2747.

Christina Mackenzie, “Naval Group Starts Construction on France’s Newest Frigate,” *Defense News*, October 25, 2019, <https://www.defensenews.com/global/europe/2019/10/25/naval-group-starts-construction-on-frances-newest-frigate/>.

²³² Vincent Groizeleau, “FREMM : Sur Le Chantier de La Frégate Lorraine à Lorient,” *Mer et Marine*, October 5, 2021, <https://www.meretmarine.com/fr/defense/fremm-sur-le-chantier-de-la-fregate-lorraine-a-orient>.

²³³ Xavier Vavasseur, “President Macron Announces Start of New French Nuclear Aircraft Carrier Program,” *USNI News* (blog), December 8, 2020, <https://www.navalnews.com/naval-news/2020/12/frances-new-aircraft-carrier-will-be-nuclear-powered/>.

James Marson, “With New Aircraft Carrier, France Looks to Bolster Military Ties With U.S.,” *Wall Street Journal*, December 23, 2020, <https://www.wsj.com/articles/with-new-aircraft-carrier-france-looks-to-bolster-military-ties-with-u-s-11608724800>.

²³⁴ Vincent Groizeleau, “Marine nationale : les programmes qui vont façonner la future flotte française | Mer et Marine,” *Mer et Marine*, February 1, 2021, <https://www.meretmarine.com/fr/defense/marine-nationale-les-programmes-qui-vont-faconner-la-future-flotte-francaise>.

Martin Manaranche, “Naval Group Signs First Industrial Orders For the New Generation of French Navy SSBN,” *Naval News* (blog), June 30, 2021, <https://www.navalnews.com/naval-news/2021/06/naval-group-signs-first-industrial-orders-for-future-french-navys-third-generation-ssbns/>.

to occur thereafter at five-year intervals.²³⁵ France is currently Europe's leading presence in the Indo-Pacific, with ten ships, including four frigates, based there, along with a significant land-force footprint and a number of air assets.²³⁶

Considering the great distance between French Indo-Pacific territories and the South China Sea region, coupled with the small contingent of French frigate vessels in the Indo-Pacific, it is unlikely that France, if desired, could retain a sizeable effect to prevent a Taiwan contingency. Furthermore, the primary strategic focus for French naval forces in the Indo-Pacific is primarily to protect French sovereign interests, French nationals and France's EEZ in the Indo-Pacific. Other priorities include contributing to the stability of regional environments through military and security cooperation; preserving free and open access to maritime lines of communication; and assisting in maintaining strategic stability through comprehensive and multilateral-based action.²³⁷ However, it is telling there is little mention of the greatest potential for a regional flashpoint. In this sense, both the capability of regional French naval forces, and the willingness to prevent a Taiwan contingency appear to be lacking. This may result from a

²³⁵ Navy Recognition Staff, "France Launches Program for Third Generation of SSBN SNLE 3G Submarines for French Navy," *Navy Recognition* (blog), February 19, 2021, <https://www.navyrecognition.com/index.php/news/defence-news/2021/february/9726-france-launches-program-for-third-generation-of-ssbn-snle-3g-submarines-for-french-navy.html>.

²³⁶ Ben Barry and Hugo Decis, "Posturing and Presence: The United Kingdom and France in the Indo-Pacific," IISS, June 11, 2021, <https://www.iiss.org/blogs/military-balance/2021/06/france-uk-indo-pacific>.

²³⁷ The Republic of France, *France's Indo-Pacific Strategy*, (Paris, France: Republic of France, 2021). The Republic of France, French Ministry for the Armed Services, *France's Defence Strategy in the Indo-Pacific*, (Paris, France: French Ministry for the Armed Services, 2019).

Pierre Morcos, "France: A Bridge between Europe and the Indo-Pacific?," Center for Strategic & International Studies, April 1, 2021, <https://www.csis.org/analysis/france-bridge-between-europe-and-indo-pacific>.

The Republic of France, French Ministry for the Armed Services, *France's Defence Strategy in the Indo-Pacific*, (Paris, France: French Ministry for the Armed Services, May 2019), https://apcss.org/wp-content/uploads/2020/02/France-Defence_Strategy_in_the_Indo-Pacific_Summary-2019.pdf.

The Republic of France, *France's Indo-Pacific Strategy*, (Paris, France: Republic of France, 2021), https://www.diplomatie.gouv.fr/IMG/pdf/en_dcp_a4_indopacifique_022022_v1-4_web_cle878143.pdf.

Florence Parly, "France and Security in the Indo-Pacific," French Ministry of Armed Forces, May 2019, 6, https://franceintheus.org/IMG/pdf/France_and_Security_in_the_Indo-Pacific_-_2019.pdf.

desire for France to carve out an Indo-Pacific third way for regional countries that may wish to remain neutral between a U.S – PRC competition.

UNITED KINGDOM NAVAL SHIPBUILDING

The U.K. Ministry of Defense (MoD) has signaled its desire to project power beyond its shores and around the world in maintaining the capability to work with its allies to have a strategic presence wherever needed,²³⁸ most notably with the recent maiden voyage of the *HMS Queen Elizabeth* carrier strike group, though the forces have been careful to not antagonize Beijing.²³⁹ In this sense, the U.K. recently announced intentions to keep two warships permanently deployed in East Asia, but will not have a permanent base, meaning the vessels will need to rely on partners in the region for logistical support.²⁴⁰

It is not clear what type of ships the Royal Navy will keep in the region or what the permanent deployment's basing arrangements will be but will appear to include offshore patrol

²³⁸ United Kingdom Prime Minister, *National Security Strategy and Strategic Defence and Security Review 2015: A Secure and Prosperous United Kingdom*, (London, UK: Controller of Her Majesty's Stationery Office, November 2015), 9, 11,

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/478933/52309_Cm_9161_NSS_SD_Review_web_only.pdf.

United Kingdom Secretary of State for Defence, *Defence in a Competitive Age*, (London, UK: Controller of Her Majesty's Stationery Office, March 2021), 1-3,

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974661/CP411_-_Defence_Command_Plan.pdf.

United Kingdom Ministry of Defence Royal Navy, *Future Navy Vision: The Royal Navy Today, Tomorrow and Towards 2025*, (London, UK: Ministry of Defence, 2012), https://www.royalnavy.mod.uk/About-the-Royal-Navy/~/_media/Files/Navy-PDFs/About-the-Royal-Navy/Future%20Navy%20Vision.pdf.

United Kingdom Prime Minister, *A Strong Britain in an Age of Uncertainty: The National Security Strategy*, Cm.7953, (London, UK: Controller of Her Majesty's Stationery Office, October 2010), Foreword, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/61936/national-security-strategy.pdf.

²³⁹ Minnie Chan, "British Navy 'Shows Global Ambitions' with South China Sea Mission," *South China Morning Post*, July 31, 2021, <https://www.scmp.com/news/china/military/article/3143308/british-navy-shows-global-ambitions-aircraft-carriers-south>.

²⁴⁰ Steven Stashwick, "Britain to Keep 2 Warships Permanently in East Asia," *The Diplomat*, July 21, 2021, <https://thediplomat.com/2021/07/britain-to-keep-2-warships-permanently-in-east-asia/>.

vessels (OPV) supported by bases in Australia and Singapore. The OPVs are small patrol vessels, only a quarter of the size of the Royal Navy's destroyers, armed with small cannons and no missiles.²⁴¹

The Royal Navy's surface fleet was significantly curtailed to afford two giant Queen Elizabeth aircraft carriers, with only 19 destroyers and frigates, which includes including 13 frigates that are nearing the end of their service lives.²⁴² Britain faces challenges keeping its most advanced surface combatants deployable.²⁴³ Currently only one of the Royal Navy's six Type 45 destroyers is operational while the other five are undergoing maintenance and repairs. Nonetheless, Japan has several large naval bases capable of hosting British ships.

However, the deterrent capability may be lacking. Though cognizant that as an official mouthpiece of the CCP, the Global Times publishes a variety of material with varying intents and for varying audiences, it is illustrious that it has labeled the U.K. deployment as 'less capable,' signaling a low deterrent opinion of such a deployment.²⁴⁴

Furthermore, even though the new U.K. MoD shipbuilding plan anticipates doubling spending in the next ten years to acquire 13 frigates by 2030; and approximately five frigates and six destroyers by 2040²⁴⁵, how this will enlarge the size of its Asia-Pacific presence without permanent basing opportunities is uncertain. There seems to be promise for Japanese basing considering the 2017 Japan–U.K. Joint Declaration on Security Cooperation, the U.K. – Japan

²⁴¹ Ibid.

²⁴² Seth Cropsey, "Royal Navy in the Pacific: An Ally against China, Where We Need It," *The Hill* (blog), March 9, 2021, <https://thehill.com/opinion/national-security/542290-royal-navy-in-the-pacific-an-ally-against-china-where-we-need-it/>.

²⁴³ Steven Stashwick, "Britain to Keep 2 Warships Permanently in East Asia," July 21, 2021, <https://thediplomat.com/2021/07/britain-to-keep-2-warships-permanently-in-east-asia/>.

²⁴⁴ Xuanzun Liu, "UK Sends 'less-Capable' Warships to Asia-Pacific, 'No Threat to PLA,'" *Global Times*, September 7, 2021, <https://www.globaltimes.cn/page/202109/1233626.shtml>.

²⁴⁵ Navy Lookout Staff, "Independent Royal Navy News and Analysis: A Big Future for UK Shipbuilding," *Navy Lookout* (blog), October 18, 2021, <https://www.navylookout.com/a-big-future-for-uk-shipbuilding/>.

Defense Logistics Treaty, and the 2021 Maritime Security Arrangement.²⁴⁶ Though the U.K. will contribute some deterrent capability to a Taiwan contingency, the U.S. Navy continues to be the bedrock of such.²⁴⁷

INDONESIA NAVAL SHIPBUILDING

The Indonesian Navy is expected to operate at least 7 submarines by 2024.²⁴⁸ Currently, it has seven frigates, ten corvettes, four submarines, and one command ship. Shipbuilding plans for Indonesia have gone in fits and starts. Admirable goals for a 274-ship fleet by 2024 of which would include a 110-ship “strike force” alongside now 8 (revised down from 12) diesel-electric attack submarines, have forestalled and are not likely to be achieved.²⁴⁹

As one analyst points out:

“Indonesia has never built a navy strong enough to adequately defend its vast waterways. It is a well-known shortcoming.”²⁵⁰

²⁴⁶ Nick Childs and Matthieu Lebreton, “UK Carrier Strike Group: Meeting Indo-Pacific Expectations?,” *International Institute of Strategic Studies*, August 12, 2021, <https://www.iiss.org/blogs/military-balance/2021/08/uk-carrier-strike-group-indopacific>.

²⁴⁷ James Marson and Max Colchester, “U.K.’s Biggest Naval Fleet in Decades to Flex Muscle With Eye on China and U.S.,” *Wall Street Journal*, May 13, 2021, <https://www.wsj.com/articles/u-k-s-biggest-naval-fleet-in-decades-to-flex-muscle-with-eye-on-china-and-u-s-11620907201>.

²⁴⁸ Ridzwan Rahmat, “Indonesia Reduces Submarine Requirements from 12 to 8 in Revised Modernisation Plan,” *Jane’s Navy International*, December 19, 2017, <https://web.archive.org/web/20180206002726/http://www.janes.com/article/76542/indonesia-reduces-submarine-requirements-from-12-to-8-in-revised-modernisation-plan>.

The KRI Nanggala (402) submarine went missing as of 21 April 2021 and declared sunk on 24 April 2021 after debris was found. Modernization plans have not adapted and so though the goal is still 8 deployable submarines by 2024, the likelihood is that 7 will be operational.

²⁴⁹ Felix K. Chang, “At a Crossroads: Indonesia’s Navy Modernization,” *Foreign Policy Research Institute* (blog), September 27, 2021, <https://www.fpri.org/article/2021/09/at-a-crossroads-indonesias-navy-modernization/>. Geoffery Till, *Indonesia as a growing maritime power: possible implications for Australia*, (Canberra, AU: Sea Power Centre, 2015), 8.

²⁵⁰ Felix K. Chang, “At a Crossroads: Indonesia’s Navy Modernization,” *Foreign Policy Research Institute* (blog), September 27, 2021, <https://www.fpri.org/article/2021/09/at-a-crossroads-indonesias-navy-modernization/>.

Indonesia's strategic parameters seem to center on its archipelagic waterways, to include the important Lombok, Malacca, and Sunda Straits. However, this falls short of capability when defending against the CCP. Its current conventional deterrent capability, alongside its struggle to deter CCP harassment in its exclusive economic zone (EEZ) and ongoing territorial disputes,²⁵¹ makes for poor prospects of the Indonesian navy as a contributing element to prevent a Taiwan contingency; its likely hard feelings for the CCP notwithstanding.

Though difficult a task to project the rate of production for Indonesian navy warships, it can be assumed that current trends will continue for the next decade, barring exogenous shocks. This includes plans to purchase four stealthy multi mission frigates from Japan, coupled with the remaining four to be domestically built with the help of technology transfer, delivered in 2023 to 2024. This will be a record arms sale between the two countries if the purchase is completed.²⁵²

Furthermore, in June 2021, the Ministry of Defense of Indonesia signed a contract for the supply of a combined total of eight frigates, alongside logistical support.²⁵³ This is a positive step for the Ministry of Defense and yet, for strategic focus, capability, and logistical/geographic

²⁵¹ Felix K. Chang, "The Next Front: China and Indonesia in the South China Sea," *Foreign Policy Research Institute* (blog), January 27, 2020, <https://www.fpri.org/article/2020/01/the-next-front-china-and-indonesia-in-the-south-china-sea/>.

²⁵² Sebastian Strangio, "Japan Could Deliver 8 Cutting-Edge Frigates to Indonesia," *The Diplomat*, April 8, 2021, <https://thediplomat.com/2021/04/japan-could-deliver-8-cutting-edge-frigates-to-indonesia/>.

John McBeth, "Indonesia, Japan on Verge of Record Gunboat Deal," *Asia Times*, April 1, 2021, <https://asiatimes.com/2021/04/indonesia-japan-on-verge-of-record-gunboat-deal/>.

Naval News Staff, "Japan Could Deliver Eight Mogami-Class Stealth Frigates to Indonesia," *Navy Recognition* (blog), April 2021, <https://www.navyrecognition.com/index.php/news/defence-news/2021/april/9935-japan-could-deliver-eight-mogami-class-stealth-frigates-to-indonesia.html>.

²⁵³ Fincantieri Press Release, "Fincantieri Will Provide 8 Vessels to Indonesia," Fincantieri, June 10, 2021, <https://www.fincantieri.com/en/media/press-releases/2021/fincantieri-will-provide-8-vessels-to-indonesia/>.

Naval News Staff, "Indonesia Signs a Contract with Italian Company Fincantieri for the Supply of 6 FREMM Frigates," *Navy Recognition* (blog), June 10, 2021, <https://www.navyrecognition.com/index.php/naval-news/naval-news-archive/2021/june/10281-indonesia-signs-a-contract-with-italian-company-fincantieri-for-the-supply-of-6-fremm-frigates.html>.

Tom Kington, "Indonesia Orders Six FREMM Frigates from Fincantieri," *Defense News*, June 10, 2021, <https://www.defensenews.com/global/europe/2021/06/10/indonesia-orders-six-fremm-frigates-from-fincantieri/>.

matters, it seems Indonesia brings little marginal ability to help prevent a Taiwan contingency, even if a desirous goal on the part of Indonesian policymakers.

CONCLUSION OF NAVIES ANALYSIS

These varied regional navies are likely to be insufficient for conventional deterrent capability when accounted for in terms of capability, capacity, and substantive willingness of the listed regional powers to assist in general deterrence. In a time of crisis, each navy may even lend a portion of its fleet as a symbolic or material gesture to seek stability and control of a conflict situation. Yet as seen, not every regional navy with sympathies toward the U.S. has the same strategic focus on preventing a Taiwan contingency; these same navies are not bound by law or other agreement in explicit commitment to defend against a Taiwan annexation or specifically, to guarantee a peaceful resolution to Taiwan's political future, as is the U.S. This does not mean these allies and partners may not have a direct interest in denying the PRC its premier foreign policy objective. And if there indeed is concern, there perhaps is more concern about discouraging retaliatory CCP actions against such behavior upon neighboring countries.

This analysis also does not mean that there is no deterrence utility of uniting a coalition of the willing. This event would be a strong political statement indeed. Yet that outcome is not preordained. It will take unwavering focus and deft diplomacy on part of the U.S to weave together such an ad-hoc force.

However, it is of great question whether each of these respective countries focus on preventing a CCP military occupation of Taiwan is a serious policy priority. The requisite interoperability training, assimilated coalition force structure attitude, and political will to commit sizeable portions of each fleet within the region to maintain robust conventional

deterrence leaves this security strategy lacking. Although there has been a noticeable shift of U.S. strategy towards a piecemeal approach to deterrence, or otherwise known as integrated deterrence, which further complicates regional dynamics and perceivably lessens the burden on U.S. capability. An aggressor may divine from these developments an eroding U.S. resolve for its objective. The matter in question is the inordinate time, resources, and acquiescence of these navies to confront CCP belligerence in a material way requires, for the U.S., considering other more feasible avenues for obtaining the deterrence objective in the region, to be achieved in a more efficient way which accurately conveys intent of U.S. policymakers.

In this sense, the only regional countries from which the U.S. could consider likely support is Japan and Australia. Others may be induced to provide materiel support in the event of a Taiwan contingency,²⁵⁴ yet defense white papers and actions from these militaries in the present offer a less sanguine view.

“INTEGRATED DETERRENCE:” A SUCCESSFUL APPROACH?

Some may say that the *collective* balance of local force, or an “integrated” deterrence strategy is possible to maintain successful deterrence. These two concepts, though with slight variation, promise a “coalition of the willing” gathered and led by the United States to counter-encircle or contain the CCP threat posed by Taiwan. This is unlikely to happen for two reasons: military means and political will.

Firstly, though the aggregated quantity and quality of deterrent warships of the U.S. regional forces and regional allies may theoretically be sufficient, the sinews which would secure

²⁵⁴ Jakub Grygiel, “The Paradox of Great Powers: Allies and Force in Montesquieu’s Considerations on the Causes of the Greatness of the Romans and Their Decline,” *Orbis* 63, no. 4 (January 1, 2019): 582–97, <https://doi.org/10.1016/j.orbis.2019.08.005>.

such a particularly diverse naval coalition are unlikely to materialize. By military means alone, the CCP is engaged in building its PLAN forces for the singular purpose of forceful annexation of Taiwan. The spackled composition of force structures of allied or partner navies, for obvious reasons, is not built around prevention of a Taiwan invasion.

Within this are two further concerns: The state of technical interoperability of regional navies to deter a Taiwan invasion (as opposed to cooperation in the midst of war) and the geographic plausibility of allies.

Current bilateral and multilateral naval exercises in the Asia-Pacific are not trained for sailors and airmen to think critically on the CCP threat. These are exercises primarily focused upon freedom of navigation operations and presence operations, notwithstanding HA/DR exercises. The naval activities in the area, save the PLAN's, do little to realize tactical maneuvers coupled with operational concepts to bolster immediate deterrence, should the scenario arise. Furthermore, it is noted that there is a real possibility that these regional navies train to the exercise for the purposes of a flawless execution, or simply perform basic exercises at sea, rather than to learn and master the critical skills these sailors will rely upon to apply to live and uncertain circumstances should a war arise.

One of two critical allies, Australia, is located thousands of miles away from Taiwan and cannot reasonably contribute timely substantive materiel in such an effort. The thrust of Aussie strategy toward nuclear powered attack submarines, featured by the recently coined AUKUS, is a realization of their competitive advantage to strategic stability in the region. Yet, ample basing opportunities are critical when the tyranny of distance is present. Moreover, this could be seen as a symbolic gesture in relation to Taiwan's future, as there are numerous American SSNs and SSBNs in the region to add little marginal use in additional numbers.

Furthermore, the PLA A2/AD technologies which attempt to deny naval intervention of would-be forces in the defense of Taiwan promises dismal prospects of such an armada defense. Something must be done to neutralize the advantage these A2/AD missile systems offers. This will be pursued in further sections. Only then will quantity and quality of naval warships and the shipbuilding trends regain deterrent relevance. If the DoD does not pursue this “counter A2/AD” strategy, it will increase the chances, more so than in the better prepared alternative, of nuclear threats leading to nuclear war.

Secondly, the U.S. has considerable credibility to lose alongside important foreign policy influence in a Taiwan invasion future. This is not so with most would-be allies and partners in the region, excepting Japan and Australia. The U.S. has pledged that the issue of Taiwan’s political future be settled by peaceful means. This is the core strategic interest of the U.S. in the Asia-Pacific. As a result, the U.S. has the most to lose in the CCP fulfillment of “national rejuvenation.” Other countries will be weighing their own strategic interests. Will supporting the U.S. backfire? Will sending materiel aid to Taiwan bring about economic retaliation and the sustained enmity of the CCP? Important considerations indeed for regional countries, whose economies rely greatly on PRC trade as an engine of growth.

All these considerations and more make it unlikely to galvanize a lasting and effective coalition of regional forces to allow Taiwan’s future to be settled peacefully. This allows for the burden to be placed squarely on the U.S. So how is the current U.S. conventional deterrent capability directed toward Taiwan?

An increasingly formidable A2/AD bubble is enveloping Taiwan, so much so that the prospects of any would-be defender to mount a response are fraught with difficulties.²⁵⁵ This is not new. For any defense, the primary requirement is to neutralize these layered missile systems. This could be done a variety of ways.²⁵⁶ Yet there is only one way, it seems, which would maintain the general deterrence equilibrium. Other alternatives will be explained in the section “Beyond Naval Assets – Countering CCP A2/AD?”. This is to establish mobile, concealed, and dispersed layered missile systems and missile defense systems on regional geographies. This may include allies such as Japan, the Philippines, and South Korea. There are political considerations to these, which will be discussed in future sections. Other countries may also be viable for missile deployment. These deployments would allow for a militarily infeasible or impossible effort to successfully annex Taiwan without great loss and defeat. It would also provide for instantaneous support from regional countries against such an annexation as the first logical act of annexation would be an attempted salvo to neutralize these missile systems. This would mean an attack on any number of periphery countries, likely translating to a perceived attack on all which host these missiles.

Yet, despite this potential, DoD estimates mark such a “counter A2/AD” deployment to be ready by 2024-2025. And the host country political considerations would be substantial, based upon domestic concerns. This would require clever diplomacy. The trends in the *local* balance of force are likely to continue out to the decade. Though Taiwan may be able to defend itself for a

²⁵⁵ David Axe, “Recent Wargames Show That America’s Military Dominance Over Russia And China Has Ended,” *The National Interest*, April 10, 2020, <https://nationalinterest.org/blog/buzz/recent-wargames-show-americas-military-dominance-over-russia-and-china-has-ended-142582>.

²⁵⁶ David Axe, “America’s Tomahawk Cruise Missiles Is Shrinking—And Fast,” *The National Interest*, July 27, 2021, <https://nationalinterest.org/blog/reboot/americas-tomahawk-cruise-missiles-shrinking%E2%80%94and-fast-190597>.

period of time, the burden of general and immediate deterrence rests predominantly upon the U.S., for reasons of perceived credibility and future exercise of foreign policy influence.

At present, there are no known formal agreements of coalition navies among nations who specifically seek to deter a Taiwan military occupation, though there are other security pacts which offer mutual assistance to uphold peaceful developments in region, among other focuses. The informal Quadrilateral Security Dialogue, known as the “Quad,” could be the start of a more robust coalition of navies, yet each member country possesses differing interpretations regarding CCP ambitions and the group as a whole is not directly related to deterring a military occupation of Taiwan.²⁵⁷ This is in addition to the more technical issues of interoperability and locales for stationing of allied warships for the purpose of deterrence.²⁵⁸

It is important to note that war materiel and political decisions cannot account for the totality of outcomes in a Taiwan contingency. The CCP effectiveness in conducting complex, multidomain operations²⁵⁹ with the most penetrating intelligence; and the morale of PLA soldiers and sailors are additional critical features to the outcome of a Taiwan annexation, among others. Though not directly covered in this analysis, as tactical warfighting movements are beyond the scope of measuring deterrence laid out here, these are two elements which would bear heavily and disproportionately upon the PLA as it shows little experience in these sorts of operations while crossing a treacherous 100-mile-wide channel.

²⁵⁷ Zaheena Rasheed, “What Is the Quad and Can It Counter China’s Rise?,” *Aljazeera*, November 25, 2020, <https://www.aljazeera.com/news/2020/11/25/what-is-the-quad-can-us-india-japan-and-australia-deter-china>.

²⁵⁸ Kyle Mizokami, “Countdown: Which Navy Will Rule the Waves by 2030?,” *The National Interest*, April 16, 2021, <https://nationalinterest.org/blog/reboot/countdown-which-navy-will-rule-waves-2030-182886>.

²⁵⁹ The Diplomat Staff, “China’s A2/AD ‘System of Systems,’” *The Diplomat*, September 26, 2012, <https://thediplomat.com/2012/09/chinas-system-of-systems/>.

STATE OF U.S. GROUND BASED MISSILE SYSTEMS ON ALLIED SOIL?

On Dec. 8, 2017, U.S. policymakers expressed intent to begin research and development on a conventional, road-mobile, intermediate-range missile system.²⁶⁰ After the U.S. withdrawal of the Intermediate-Range Nuclear Forces Treaty in August 2019,²⁶¹ the DoD has been testing ground launched cruised missiles with ranges that would have violated the now defunct agreement.²⁶² This has been in an effort to reclaim eroding deterrence in the Asia-Pacific, among other reasons. Specifically, these missiles would add distance to the current options in region, allowing U.S. forces to counter PRC A2/AD systems but from a safer distance. However, the ability to deploy these missiles is several years out.²⁶³

Overall, the USN has options for basing missiles in relatively close proximity to the Taiwan Strait. However, to be less vulnerable and attain greater effectiveness, long range precision fires are an attractive option for a more powerful counter against PLARF A2/AD defenses.

²⁶⁰ Josh Rogin, “Russia has deployed a banned nuclear missile. Now the U.S. threatens to build one.,” *Washington Post*, November 16, 2017, https://www.washingtonpost.com/news/josh-rogin/wp/2017/11/16/russia-has-deployed-a-banned-nuclear-missile-now-the-u-s-threatens-to-build-one/?utm_term=.2482720d2d98. See, also, Julain E. Barnes, Paul Sonne, and Brett Forrest, “Pentagon Moves to Develop Banned Intermediate Missile,” *Wall Street Journal*, November, 16, 2017, <https://www.wsj.com/amp/articles/pentagon-moves-to-develop-banned-intermediate-missile-1510862789>. See also, U.S. Library of Congress, Congressional Research Service, *Russian Compliance with the Intermediate Range Nuclear Forces (INF) Treaty: Background and Issues for Congress*, by Amy F. Woolf, R43832 (2019), 5-6, <https://sgp.fas.org/crs/nuke/R43832.pdf>.

²⁶¹ The INF Treaty had barred the possession, production or flight-testing of all types of missiles with a range between 310 miles and 3,417 miles (500 kilometers to 5,500 kilometers). Nuclear weapons were considered especially destabilizing because of their short flight times. Please see, Daryl Kimball, “The Intermediate-Range Nuclear Forces (INF) Treaty at a Glance,” Arms Control Association, August 2019, <https://www.armscontrol.org/factsheets/INFtreaty>.

²⁶² For more information on current U.S. missile inventory, please see, CSIS Missile Defense Project Staff, “Missiles of the United States,” Missile Threat: CSIS Missile Defense Project, March 3, 2021, <https://missilethreat.csis.org/country/united-states/>. U.S. Library of Congress, Congressional Research Service, *Conventional Prompt Global Strike and Long-Range Ballistic Missiles: Background and Issues*, by Amy F. Woolf, R41464 (2021), <https://sgp.fas.org/crs/nuke/R41464.pdf>.

Ronald O’Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, RL33153 (Washington, DC: Congressional Research Service, 2022), 40-45, <https://sgp.fas.org/crs/row/RL33153.pdf>.

²⁶³ Shervin Taheran, “U.S. to Test INF Treaty-Range Missiles,” Arms Control Association, April 2019, <https://www.armscontrol.org/act/2019-04/news/us-test-inf-treaty-range-missiles>.

The likely host nation for missile deployment directed at preventing a Taiwan contingency rests in Japan. South Korea and the Philippines continue to be unlikely locations for political reasons.²⁶⁴ Placing U.S. missiles on Japanese soil would be fraught with difficulty as such a move would affect the division of roles between the American military and JMSDF, U.S. and Japan would need to discuss the details of any proposed deployment, including the locations and range of the missiles.

Though opportunity is likely to come during negotiations for missile deployment in the Japan-U.S. alliance, a decision by Japan to host American missiles would have other effects, certain to anger China, complicating diplomacy between the two economically intertwined neighbors. Furthermore, Japan is likely to encounter local opposition around potential deployment sites. A competitive financial environment will likely influence any potential future negotiations.²⁶⁵

STATE OF CCP CONVENTIONAL MISSILES

To coerce, or if necessary, defeat Taiwan to ensure its unification with the mainland, the CCP must ensure that the United States is unwilling or unable to project its maritime and

²⁶⁴ David S. Cloud, "U.S. Seeks to House Missiles in the Pacific. Some Allies Don't Want Them," *Los Angeles Times*, June 10, 2020, <https://www.latimes.com/politics/story/2020-06-10/pentagon-to-build-up-missiles-in-western-pacific-to-combat-chinas-expansion>.

Frank A. Rose, "Not in My Backyard: Land-Based Missiles, Democratic States, and Asia's Conventional Military Balance," *Brookings Institution* (blog), September 10, 2020, <https://www.brookings.edu/blog/order-from-chaos/2020/09/10/not-in-my-backyard-land-based-missiles-democratic-states-and-asias-conventional-military-balance/>.

²⁶⁵ Ryo Nakamura, "US to Build Anti-China Missile Network along First Island Chain," *Nikkei Asia*, March 5, 2021, <https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/US-to-build-anti-China-missile-network-along-first-island-chain>.

airpower in support of Taiwan.²⁶⁶ This is not a new problem and one which the hazards have only grown with little redress, as illustrated by a 2010 DoD white paper.

The Defense Department's 2010 Quadrennial Defense Review stated:

Anti-access strategies seek to deny outside countries the ability to project power into a region, thereby allowing aggression or other destabilizing actions to be conducted by the anti-access power. Without dominant U.S. capabilities to project power, the integrity of U.S. alliances and security partnerships could be called into question, reducing U.S. security and influence and increasing the possibility of conflict.²⁶⁷

This problem is not new and urgency with which to address the local military imbalance is growing. The People's Liberation Army Rocket Force (PLARF) organizes, mans, trains, and equips the PRC's strategic land-based nuclear and conventional missile forces as well as associated support forces and missile bases. In 2020, the PLARF advanced its long-term modernization plans to enhance its "strategic deterrence" capabilities.²⁶⁸

According to the Defense Department's annual report to Congress on Chinese military power, these include the ability to interdict or attack, at long ranges, air and maritime forces that might deploy or operate in the Western Pacific. It is seeking to build the capability to hold at risk regional bases and aircraft carriers. It has also developed a variety of weapons and jammers to degrade or deny an adversary's ability to use space-based platforms.²⁶⁹

²⁶⁶Thomas G. Mahnken, "China's Anti-Access Strategy in Historical and Theoretical Perspective," *Journal of Strategic Studies* 34, no. 3 (June 2011) 299-323, DOI: [10.1080/01402390.2011.574971](https://doi.org/10.1080/01402390.2011.574971).

²⁶⁷ Quadrennial Defense Review Report (Washington DC: DOD, Feb. 2010), 31.

²⁶⁸ U.S. Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2020*, (Washington, DC: Department of Defense, 2020), <https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF>.

²⁶⁹ Thomas G. Mahnken (2011) China's Anti-Access Strategy in Historical and Theoretical Perspective, *Journal of Strategic Studies*, 34:3, 313, DOI: [10.1080/01402390.2011.574971](https://doi.org/10.1080/01402390.2011.574971).
U.S. Office of the Secretary of Defense, *Annual Report to Congress: Military Power of the People's Republic of China*, (Washington, DC: Department of Defense, 2008), 21-30.

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.²⁷⁰

PRC is also fielding innovative systems as part of its anti-access strategy, including precision-guided conventional ballistic missiles and ASBMs.²⁷¹ For anti-access, China relies on advanced land-attack ballistic and cruise missiles to threaten U.S. military facilities on the islands of Okinawa and Guam. Also employed are anti-ship cruise and ballistic missile variants, which, using advanced re-entry vehicle technology, have the capability to strike with precision and bypass most sea-based missile defense platforms. China's anti-ship cruise missiles are fielded by warships, submarines, and aircraft that patrol the waters along the country's coastline, a varied and diverse target set in the event of immediate deterrence.²⁷²

Analysts argue that China's large modern missile force and air forces will pose a considerable challenge to Taiwanese and American efforts to command the air over the Taiwan Strait. They predict that massive ballistic missile salvos launched against Taiwan's air bases would hamper Taipei's ability to generate enough fighter sorties to contest air superiority. As one RAND monograph puts it, 'As China's ability to deliver accurate fire across the strait grows, it is becoming increasingly difficult and soon may be impossible for the United States and

²⁷⁰ Daniel R. DePetrìs, "Fact: 95% of China's Cruise and Ballistic Missile Inventory Would Violate INF Treaty," *The National Interest*, June 6, 2020, <https://nationalinterest.org/blog/skeptics/fact-95-chinas-cruise-and-ballistic-missile-inventory-would-violate-inf-treaty-161426>; Bryan Clark and Timothy A. Walton, *Taking Back the Seas: Transforming the U.S. Surface Fleet for Decision-Centric Warfare* (Washington, DC: Center for Strategic and Budgetary Assessments, 2019), 6.

²⁷¹ Thomas G. Mahnken, China's Anti-Access Strategy in Historical and Theoretical Perspective, *Journal of Strategic Studies*, 34:3 (2011) 302, DOI: [10.1080/01402390.2011.574971](https://doi.org/10.1080/01402390.2011.574971).

²⁷² Missile Defense Advocacy Alliance Staff, "China's Anti-Access Area Denial," *Missile Defense Advocacy Alliance* (blog), August 24, 2018, <https://missiledefenseadvocacy.org/missile-threat-and-proliferation/todays-missile-threat/china/china-anti-access-area-denial/>.

Taiwan to protect the island's military and civilian infrastructures from serious damage.' As a result, the authors observe, 'China's ability to suppress Taiwan and local U.S. air bases with ballistic and cruise missiles seriously threatens the defense's ability to maintain control of the air over the strait.' They further assert, 'The United States can no longer be confident of winning the battle for the air in the air. This represents a dramatic change from the first five-plus decades of the China–Taiwan confrontation.'²⁷³

According to U.S. and other Western estimates, China possess approximately 2,000 conventional missiles that would fall within the terms of the INF missile treaty – enough to launch saturation attacks on air bases, ports or critical infrastructure in Japan, South Korea or Taiwan.²⁷⁴

Apart from weapons covered by the INF Treaty where China has a monopoly, the PLA has other missiles in its arsenal that outperform their U.S. counterparts. These include two supersonic anti-ship cruise missiles, the YJ-12, with a range of 400 km, and the YJ-18, which can hit targets up to 540 km away.²⁷⁵

To counter these missiles, the United States relies on its subsonic, Harpoon anti-ship missile which has been modified to give it a maximum range of about 240 km. "That is a sizeable gap with CCP anti-ship missile capability exceeding those of the United States in terms of range, speed and sensor performance."²⁷⁶

²⁷³ Thomas G. Mahnken (2011) China's Anti-Access Strategy in Historical and Theoretical Perspective, *Journal of Strategic Studies*, 34:3, 314, DOI: [10.1080/01402390.2011.574971](https://doi.org/10.1080/01402390.2011.574971).

David A. Shlapak et al., *A Question of Balance: Political Context and Military Aspects of the China-Taiwan Dispute* (Santa Monica, CA: RAND 2009), 126, 139, 131.

²⁷⁴ David Lague and Benjamin Kang Lim, "Xi Jinping's Rocket Force Is Nullifying U.S. Military Primacy in Asia," *Reuters*, April 25, 2019, sec. The China Challenge: Rocket Man, <https://www.reuters.com/investigates/special-report/china-army-rockets/>.

²⁷⁵ Ibid.

²⁷⁶ Ibid.

The long-range, conventionally armed ballistic missile DF-21D is meant for attacking moving ships at sea, most notably the U.S. Navy’s showpiece nuclear-powered aircraft carriers. The theory behind its creation is that a missile speeding down to sea level on a ballistic trajectory at speeds of Mach 5 or higher would prove extremely difficult to counter.²⁷⁷

There are, however, questions about the missile’s effectiveness. China has reportedly tested the DF-21D against fixed land targets, but it’s unknown whether it was tested against a moving target. This makes it difficult to accurately assess the capability of the weapon, particularly from a maturity and efficacy standpoint. It also brings into question whether China’s sensor technology can generate the kind of real-time, highly precise data required to enable the DF-21D to accurately target an aircraft carrier maneuvering at 30 knots.²⁷⁸

In sum, this “A2/AD bubble” will continue to offer headaches for the USN operating in region, under threat of layered missile networks. This contested environment adds another level of analysis to the diminishing U.S. balance of force. Though there are methods to counteract this buildup of lethal force,²⁷⁹ U.S. policymakers can expect the quantity, quality, and layered ranges of these networks to continue to offer serious obstacles to deterring and defending Taiwan.

²⁷⁷ Ibid.

²⁷⁸ Ibid.

²⁷⁹ U.S. Library of Congress, Congressional Research Service, *U.S. Army Long-Range Precision Fires: Background and Issues for Congress*, by Andrew Feickert, R46721 (2021), <https://crsreports.congress.gov/product/pdf/R/R46721>.

BEYOND NAVAL ASSETS: COUNTERING CCP A2/AD?

Over the past two decades, China has aggressively pursued and heavily invested in land-based missiles as part of an anti-access/area-denial strategy.²⁸⁰ This strategy has focused on countering U.S. military capabilities in the Western Pacific, including forward bases throughout Japan and Guam, as well as locations of frequent rotational positioning in the Philippines and Australia.²⁸¹ Pentagon estimates indicate that China possesses around 1,200 conventionally armed short-range ballistic missiles, 200 to 300 conventionally armed medium-range ballistic missiles, an unknown number of conventionally armed intermediate-range ballistic missiles, and 200 to 300 conventionally armed ground-launched cruise missiles.²⁸² In 2015, RAND estimated that China's ballistic missiles have improved guidance systems that allow them to strike within minutes fixed targets accurate to within only a couple of meters.²⁸³

Some may say that the advantage of the U.S. Navy lies in the numerical superiority of the carrier strike group. The USN currently has 11 carriers in rotation. Carriers are wonderful in peacetime, impressively projecting airpower around the world. However, in modern war, these ships pose great risks from advanced ballistic missiles, to include the Chinese DF-21D “carrier killer”, designed to attack large ships at sea, and thus no longer enjoy the naval primacy known in wars past.

²⁸⁰ Stephen Biddle and Ivan Oelrich, “Future Warfare in the Western Pacific: Chinese Antiaccess/Area Denial, U.S. AirSea Battle, and Command of the Commons in East Asia,” *International Security* 41, no. 1 (Summer 2016): 7–48, https://doi.org/10.1162/ISEC_a_00249.

²⁸¹ Montgomery, “Contested Primacy in the Western Pacific”; Shugart and Gonzalez, *First Strike*; and Defense Department, “Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2017,” 57, https://www.defense.gov/Portals/1/Documents/pubs/2017_China_Military_Power_Report.PDF?ver=2017-06-06-141328-770.

²⁸² Thomas Shugart and Javier Gonzalez, *First Strike: China’s Missile Threat to U.S. Bases in Asia* (Washington, DC: Center for a New American Security, June 2017), pp. 4.

²⁸³ Eric Heginbotham et al., *The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power 1996–2017* (RAND Corporation, 2015), 47–54, https://www.rand.org/content/dam/rand/pubs/research_reports/RR300/RR392/RAND_RR392.pdf.

Yet, these carriers do possess an unintentional feature – namely, that these ships are potential triggers to escalating nuclear confrontation or, in more precise terms, likely attaining the nuclear threshold, not as a goal or bluff, but an action that is likely to occur given an unprecedented CCP invasion of Taiwan.

These missiles are all part of China’s “projectile-centric strategy,” which includes close integration of cyber, counterspace, counter-air, and electronic warfare capabilities. It seeks to take advantage of China’s geographic “home turf” position relative to the United States, to exploit American and allies’ lack of depth (particularly given the concentration of forces in Japan), and to leverage financial asymmetries such as the aforementioned “carrier killer” medium-range ballistic missile versus U.S. aircraft-carrier cost imbalance.²⁸⁴

What does all this mean when it comes to potential conventional military conflict between the United States and China? In 2017, Thomas Shugart and Javier Gonzalez, two active-duty U.S. Navy fellows assigned to the Center for a New American Security and Johns Hopkins University Applied Physics Laboratory, respectively, conducted an extensive modeling and simulation effort to find out. The results showed the “potential for devastation of U.S. power projection forces and bases in Asia.”²⁸⁵ While using only about 20 percent of the PLARF’s short-range ballistic missiles, 25 percent of its medium-range ballistic missiles, and 34 to 95 percent of its ground-launched cruise missiles, the simulation demonstrated that within minutes after launch the following U.S. capabilities in Japan could be struck: all major command fixed headquarters, almost all U.S. ships in port, nearly every runway at all U.S. airbases, and more than 200 aircraft

²⁸⁴ Eric Heginbotham et al., *The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power 1996–2017* (RAND Corporation, 2015), 47–54, https://www.rand.org/content/dam/rand/pubs/research_reports/RR300/RR392/RAND_RR392.pdf.

²⁸⁵ Thomas Shugart and Javier Gonzalez, *First Strike: China’s Missile Threat to U.S. Bases in Asia* (Washington, DC: Center for a New American Security, June 2017), pp. 1, <https://www.cnas.org/publications/reports/first-strike-chinas-missile-threat-to-u-s-bases-to-asia>

that were trapped due to runway cratering.²⁸⁶ Shugart and Gonzalez's realistic modeling and simulation effort confirmed this 2013 assessment of China scholar Ian Easton:

The Chinese military may achieve strategic effects that until recently were only achievable through the use of nuclear weapons . . . during the Cold War, both NATO and Warsaw Pact forces tasked nuclear missile units with the mission of destroying the other's key air bases. The PLA plans to achieve the same effect with a relatively small number of ballistic missiles armed with conventional runway penetrating submunitions.²⁸⁷

There are a number of U.S. proposals to counter PLARF A2/AD missile networks. Some include fielding regional capability to destroy the PLAN and missile networks within 72 hours.²⁸⁸ While this proposal would certainly bolster general deterrence in region by leveraging a high likelihood of this event upon annexation of Taiwan, it appears infeasible in implementation for the foreseeable future, as this would require mass reallocation of resources to bases and a variety of other more austere places in region to include highly mobile, concealable, and inexpensive missile launchers crewed by expeditionary units interspersed throughout the region. Though it is a fine proposal which would creatively shore up the eroding deterrence balance²⁸⁹, the plan to do so appears out of reach at the moment, in terms of time to build these low-cost, highly mobile, concealable, intermediate range conventional missile platforms, locate placements in region, and deploy them, notwithstanding political considerations of those powers who would

²⁸⁶ Shugart and Gonzalez, *First Strike*, 13; T.X. Hammes, "America Is Well Within Range of a Big Surprise, So Why Can't It See?" *War on the Rocks*, March 12, 2018, <https://warontherocks.com/2018/03/america-is-well-within-range-of-a-big-surprise-so-why-cant-it-see/>.

²⁸⁷ Ian Easton, "China's Military Strategy in the Asia-Pacific: Implications for Regional Stability," Project 2049 Institute, Sept. 26, 2013, 13–14, <https://project2049.net/2013/09/27/chinas-military-strategy-in-the-asia-pacific-implications-for-regional-stability/>.

²⁸⁸ Michèle A. Flournoy, "How to Prevent a War in Asia: The Erosion of American Deterrence Raises the Risk of Chinese Miscalculation," June 18, 2020, <https://www.foreignaffairs.com/articles/united-states/2020-06-18/how-prevent-war-asia>.

²⁸⁹ Hassan M. Kamara, *Countering A2/AD in the Indo-Pacific A Potential Change for the Army and Joint Force*, Joint Force Quarterly 97, 2nd Quarter 2020, https://ndupress.ndu.edu/Portals/68/Documents/jfq/jfq-97/jfq-97_102_Kamara.pdf?ver=2020-03-31-215816-687#:~:text=U.S.%20joint%20doctrine%20anticipates%20the,conduct%20joint%20forc%2D%20ible%20entry.

presumably be hosting these missiles, and at what cost financial or otherwise. This plan takes a great deal of time to implement efficaciously. Yet materiel placements are not sufficient, as it must be accompanied with stated U.S. political will, diplomatic adroitness, and other adeptly used mechanisms with which to change the decision calculus of an aggressor.

Many strategists are positing that the U.S. needs to position long range “over the horizon” cruise missiles and other ground-based missiles is overwhelming to create this A2/AD “no man’s land.” This would seem to make a Taiwan invasion success apparently unlikely if the ships necessary to conduct the invasion are sunk, and therefore influence the CCP to not undergo an invasion. This policy would be in part similar to Kennedy’s October 22nd, 1962 speech drawing redlines which was for all intents and purposes the formal beginning of the Cuban missile crisis.

A primary drawback it seems of this “counter A2/AD” strategy is that it takes time to procure the systems and establish them (preferably clandestinely) in the region. This is likely to frustrate the CCP and bring discussions of the “deterrence paradox,” namely that efforts at rebuilding an eroded conventional general deterrence may directly lead to its failure by the aggressor. This shapes the implementation of such a deterrence-focused effort on *how* it is conducted to achieve success. The U.S. military has undergone a decade or so of this pivot with little to show. With time now an increasingly important ingredient, will U.S. policymakers make this an urgency priority in deed? Will DoD give first rate sustained priority to this capability? Will Congress pass the sustainable funding to achieve such a goal? Will allies be willing to establish these systems on their land? Can all this be done expeditiously to guarantee successful deterrence in the present? Sizeable obstacles indeed with spotted track records, notwithstanding the simple calculation that it takes time for this to transpire and, indeed, time has taken a value of its own. Rather, it seems the U.S. Navy is more preoccupied on building a 355-ship navy or

confused as to its future fleet development. Two U.S. admirals have stated a Taiwan invasion could be foreseen within 5-8 years. Chinese military leaders say they will be ready within a year, according to a statement before the U.S.-China Economic and Security Review Commission on Deterring PRC Aggression Toward Taiwan.

Another proposal includes jamming ISR sensors and satellites; destroying ISR sensors and satellites. Destroying the Precision Guided Missiles (PGM) from an aggressor's A2/AD system by the defender establishing his own A2/AD system.²⁹⁰ These initiatives can cancel or neutralize threats to create a sort of "no man's land." However, is the severing of communications networks the best way to go about resolving a crisis? Was it not the use of communications channels which laid the foundation for ending the Cuban missile crisis of 1962? To sever C4ISR networks would be to countenance exceedingly high chances of disastrous miscalculation. It is necessary for the CCP and PLA leadership to understand this. China is developing the means to target the Pentagon's command-and-control systems, which rely heavily on satellites and the Internet to coordinate operations and logistics. The PLA has made substantial progress on this front in recent years. It has long demonstrated direct-ascent anti-satellite (ASAT) testing as a means to destroy orbital spacecraft,²⁹¹ at a time when the U.S. has announced an unprecedented self-imposed ban to end similar ASAT testing.²⁹² Other PLA space advancements include ability to disable satellites via grappling robotic arm,²⁹³ using lasers

²⁹⁰ Andreas Schmidt, *Countering Anti-Access / Area Denial - Future Capability Requirements in NATO*, Joint Air Power Competence Centre, APCC Journal Issue 23, January 27, 2017, <https://www.japcc.org/countering-anti-access-area-denial-future-capability-requirements-nato/>.

²⁹¹ Brian Weeden, "2007 Chinese Anti-Satellite Test Fact Sheet," *Secure World Foundation*, November 23, 2010.

²⁹² Theresa Hitchens, "US pledges no destructive ASAT missile tests, urges international norm," *Breaking Defense*, April 18, 2022, <https://breakingdefense.com/2022/04/us-pledges-no-destructive-asat-missile-tests-urges-international-norm/>.

²⁹³ Ken Moriyasu, "China can 'grapple' US satellites with robotic arm, commander says," *Nikkei Asia*, April 21, 2021, <https://asia.nikkei.com/Politics/International-relations/US-China-tensions/China-can-grapple-US-satellites-with-robotic-arm-commander-says>.

to blind U.S. satellites, and likely jamming, spoofing, and cyber capabilities.²⁹⁴ China is also enhancing its capacity to target critical U.S. military assets and limit the U.S. Navy's ability to maneuver in international waters.

To detect and target naval vessels at greater distances, the PLA has deployed powerful radars and reconnaissance satellites, along with unmanned aerial vehicles that can conduct long-range scouting missions. The PLA already has conventional ballistic and cruise missiles that can strike major U.S. facilities in the region, such as the Kadena Air Base, in Okinawa, Japan, and is developing stealth combat aircraft capable of striking many targets along the first island chain. To track carrier strike groups, the PLAN is acquiring submarines armed with advanced torpedoes and high-speed cruise missiles designed to strike ships at long distances.²⁹⁵

Perhaps the first island chain's greatest vulnerability is the U.S. battle network—the critical systems that handle everything from directing and tracking troops and supplies to guiding weapons. This network currently relies heavily on satellites and nonstealth unmanned aerial vehicles, both of which the PLA could target. The best way to reduce that risk would be to establish a communications network of fiber-optic cables buried beneath the ground and the seabed along the chain, allowing disparate forces to safely receive and transmit data from hardened command centers on land. Island-based air defense and sea-denial forces, as well as antiship minefields, could protect the cable lines running between the islands.²⁹⁶

For the most part, China's maritime neighbors are convinced that diplomatic and economic engagement will do little to alter this basic fact. Several of them, including Japan, the

²⁹⁴ Todd Harrison, Kaitlyn Johnson, Makena Young, Nicholas Wood, Alyssa Goessler, *Space Threat Assessment 2022* (Washington, DC: Center for Strategic & International Studies, 2022).

²⁹⁵ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2021*, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>.

²⁹⁶ Andrew F. Krepinevich Jr., "How to Deter China: The Case for Archipelagic Defense," *Foreign Affairs*, April 27, 2015, <https://www.foreignaffairs.com/articles/china/2015-02-16/how-deter-china>.

Philippines, and Vietnam, are increasingly focusing their militaries on the task of resisting Chinese ambitions. They know full well, however, that individual action will be insufficient to prevent Beijing from carrying its vision forward.²⁹⁷

Several countries, Japan and Vietnam in particular, have already suggested that they are serious about fielding the kind of robust defenses that would be required for Archipelagic Defense. Other states beyond the first island chain, including Australia and Singapore, appear inclined to provide basing and logistical support. But just as it took NATO well over a decade to establish a formidable conventional deterrent to the Warsaw Pact, the United States and its allies cannot establish Archipelagic Defense overnight.²⁹⁸

It is important to remind our reader that this conventional deterrent is only to bolster general deterrence, or stability maintenance. This is different from immediate deterrence and its attendant results. These optimal policies ought to be pursued yet should not substitute for deep thinking on possibilities if the ideal policy is unfulfilled and options for U.S. policymakers in a highly contested conventional general deterrence environment.

It is the belief of this author that the regional dynamics have come to a point that if China observes the U.S. making a concerted effort to install materiel – such as mobile ground launchers and antiship cruise missiles – for the express purpose to deter an authoritarian takeover of Taiwan, China will have great inducement to act on Taiwan, accepting a “now or never” attitude or experience the “loss aversion” concept similar to those of Imperial Germany and Japan.²⁹⁹

Some may say the total conventional naval armaments of allied regional nations (i.e. Japan, South Korea, Australia, India, alongside the U.S.) would be sufficient to deny the CCP the

²⁹⁷ Ibid.

²⁹⁸ Ibid.

²⁹⁹ Ibid.

political objective of invading and occupying Taiwan, without the dangerous proposition of explicitly considering nuclear deterrence. This may not be enough, when one considers “reunification” as the foremost CCP goal of which it has staked, in full, its legitimacy upon and with which are decades, indeed since the founding of the PRC, of CCP directives which state such. It is inextricably linked to the CCP’s origins. The U.S. ought to think critically on the merits of the nuclear deterrence argument as, at the very least, the necessary alternative if a “coalition of the willing” fails to deter the CCP from taking Taiwan, if indeed this coalition materializes. We have identified the quantity and capability of the navies of these regional players. Individually, they are not impressive; in aggregate, not necessarily decisive, notwithstanding interoperability and other technical concerns, to be achieved in a short timeframe if this coalition is to be successful in its deterrent goal.

Even if Chinese A2/AD capabilities are not completely integrated and thus successful in their goal, the military capability of the systems matters less to deterrence than the aspirational or likely outcome of utilizing the system.

Ross Babbage, a former senior Australian government defense official and now a non-resident fellow at the Center for Strategic and Budgetary Assessments, noted that:

“The Americans are coming back strongly. By 2024 or 2025 there is a serious risk for the PLA that their military developments will be obsolete.”³⁰⁰

As mentioned previously, what happens in the interim? There is great uncertainty without proper conventional deterrent capability in the region. This is why we should heed the lessons of

³⁰⁰ David Lague, “Special Report: U.S. Rearms to Nullify China’s Missile Supremacy,” *Reuters*, May 6, 2020, <https://www.reuters.com/article/us-usa-china-missiles-specialreport-idUSKBN22I16W>.

nuclear deterrence if found in such a delicate position, unwittingly. Better to prepare for the worst, than simply hope for the best.

A senior Marine commander, Lieutenant General Eric Smith, told the Senate Armed Services Committee on March 11 that the Pentagon leadership had instructed the Marines to field a ground-launched cruise missile “very quickly.” The new missile is being deployed in response to an “urgent operational need” for the U.S. Pacific Command, and estimates place its range at distances greater than 800 kilometers.

The gap will not close immediately, but firepower is likely to gradually improve during the next half-decade and more, as successor hypersonic and other classified munition designs complete their long periods of development, testing, production, and deployment.³⁰¹

Extra performance is being squeezed out of old U.S. air and sea-launched missiles. Boeing is upgrading the Harpoon anti-ship missile. An anti-ship variant of Raytheon’s venerable Tomahawk land attack cruise missile – with a range in excess of 1,600 km – is undergoing tests.

The U.S. Navy is working to add range to carrier strike aircraft, and new weapons are in the pipeline. Lockheed Martin said in December that it had delivered the first of its new, long-range anti-ship missiles to the U.S. Air Force after a series of successful tests. This stealthy missile could also be deployed on warships.³⁰²

Some may think that the “integrated deterrence” concept is an optimal strategy the DoD ought to pursue. Indeed, it seems to likely feature prominently in the review of a new National Defense Strategy.³⁰³ This emerging idea is a way of framing whole-of-government power, with

³⁰¹ Ibid.

³⁰² David Lague and Benjamin Kang Lim, “Xi Jinping’s Rocket Force Is Nullifying U.S. Military Primacy in Asia,” *Reuters*, April 25, 2019, sec. The China Challenge: Rocket Man, <https://www.reuters.com/investigates/special-report/china-army-rockets/>.

³⁰³ Tony Bertuca, “Austin Calls for ‘integrated Deterrence’ to Block China,” *Inside Defense*, July 27, 2021, <https://insidedefense.com/insider/austin-calls-integrated-deterrence-block-china>.

responsibilities shared with allies and partners alike, to leverage deterrence against adversaries. Though the emerging DoD concept seems fuzzy and vague in nature, the ideas under this title do not seem novel.³⁰⁴ More must be learned how in practice this policy will shift decision calculi in the Asia-Pacific. Integrated deterrence is considered a cost-dispersive strategy which shares the burden of Asia-Pacific deterrence with regional allies, to include budgetary and materiel considerations. This strategy lessens the responsibility of the U.S. in regional deterrence and subsequently, with U.S. oversight, shifts the burden of such to regional allies. Ground based layered missile networks on allied soils is a worthwhile venture to counter robust existing CCP A2/AD networks. However, current estimates pin such an operational deployment at 2024-2025. Strategy in the interregnum is left unexamined.

Another U.S. proposal to counter these missile networks includes manned or unmanned fighter aircraft attempting to penetrate A2/AD networks through flying very high or very low. Though the materiel and know-how are manifest – the temporal element is there – this is more so a tactical maneuvering in the fog of war than a tool with which to enhance deterrence by changing the calculus of the aggressor. Furthermore, this does not offer a guarantee of striking the anti-access technologies which create the environment. This operational concept is also an infeasibly expensive proposition, considering the respective costs of missile and airframe, alike, and the likelihood of loss of life and these fifth generation systems. This gambit can fail and may not have a strong likelihood of success in addition to implicitly acknowledging the formidability of the missile networks and the failure to circumvent them. Resting a deterrence strategy to flood

³⁰⁴ Mike Gallagher, “The Pentagon’s ‘Deterrence’ Strategy Ignores Hard-Earned Lessons about the Balance of Power,” *Washington Post*, September 29, 2021, <https://www.washingtonpost.com/opinions/2021/09/29/pentagons-deterrence-strategy-ignores-hard-earned-lessons-about-balance-power/>.

the A2/AD zone with scores of manned and/or unmanned aircraft on a probability that perhaps one fighter may penetrate and neutralize targets lacks imagination and needlessly risks lives, materiel, and treasure without serious chances of success. But more importantly, this does not shift the risk perception of the aggressor, and therefore does not further the goal of deterring a forced invasion of the island. The aggressor, in these circumstances, sees the A2/AD framework as a success and operating as designed.

Lastly, there is a U.S. proposal to thwart A2/AD missile networks by threatening to establish a U.S. blockade around critical chokepoints such as the Lombok, Sunda, and Malacca Straits and other alternative routes, in order to impose economic costs and limit resources to continue a conflict.³⁰⁵ This is also unwise in that the strategy forfeits the superior of the two deterrence strategies – deterrence by denial – to focus on deterrence by punishment, a less effective method in telegraphing the defender’s resolve as it shifts the burden of decision from the aggressor to the defender, placing the defender in the unfortunate position where the primary objective has already failed and at once must uphold the previous commitment so as to retain credibility, though the merits of such an action have disappeared. The strategy risks eroding the defender’s credibility with no gain from initiating the action, if the bluff is called by the aggressor.

All three proposals center on a myopic focus on military capabilities on deterring aggression, though critical in maintaining advantage in the local balance of force, overlooks the very nature of what makes deterrence possible: influencing the decision calculus of the

³⁰⁵ Ben Wermeling, “Defeating Anti-Access/Area Denial in the West Pacific,” *Real Clear Defense*, August 25, 2016, http://www.realcleardefense.com/articles/2016/08/25/defeating_anti-accessarea_denial_in_the_west_pacific_109754.html.

aggressor. After a certain threshold is reached, military capabilities tend to lose the desired deterrent effect, if not coupled with an effective telegraphing of resolve. Though each of these proposals seem of value at first look, each fails to consider the current eroding deterrence balance, and perhaps more critically, perceivably absolves the policymaker of thinking deeply of what happens if conventional general deterrence fails and the defender's local balance of force, too, fails. What happens then?

Conventional naval forces in region do not prove military capability, per se, of a nature which would affect the decision calculus of the CCP in relation to a Taiwan takeover. Though these conventional naval forces symbolize a level of commitment to defend. If a regional coalition of allied navies unite together in FONOPs, this might signal a marginal improvement in a multilateral military commitment to defend, but the credibility to come to the aid of Taiwan in the event of invasion is inherently a political question, notwithstanding the impressive might of the potential coalition of the willing.

One must then consider Chinese military capability offsetting some of this deterrence potential and the resolve of the U.S. to indeed defend Taiwan and make this commitment credible. Chinese naval capability is advancing and its navy growing. This offsets the U.S. or allied naval coalition's designed deterrence mechanism. In addition, perhaps primarily, the Chinese A2/AD defenses make it so more ships patrolling the region simply means a more target rich environment for conventional Chinese missiles. It is likely the CCP will devote greater resources to bolstering A2/AD defenses to include procurement of greater quantities of munitions in the years ahead.

Deterrence must be such that the political commitment of the deterrer is robust, to be executed with strong resolve and communicated accordingly, complemented by the proportional

military resources to make certain the commitment is supported in full by the requisite military might of the U.S. with or without allied countries. It is the author's firmly held belief this can only be achieved through the diplomatic and military utilization to prepare for the grave possibility of an unprecedented CCP invasion of Taiwan reaching the nuclear threshold. This is not to say that the deterrent capability of conventional naval warships would not be sorely felt in their absence. On the contrary, these vessels are a necessary condition for successful deterrence, but not a *sufficient* condition for its realization.

Given this recommendation, it is vital to develop a compendium of lessons learned from the seminal moment of nuclear diplomacy, the Cuban missile crisis, factoring McNamara's grave warnings of "misperceptions, miscalculations, and misjudgments," supported by the conclusions from Bounded Deterrence. Yet before this, we should look further into the aims, policies, and operations of all three parties to afford a clearer picture of the magnitude of potential miscalculations at stake.

CHAPTER III

THE CURIOUS CASE OF TAIWAN'S BELIEFS AND POSTURE

Taiwan's deterrent posture and contribution to its own defense is also evaluated along the two dimensions of willingness/resolve of its people and politicians, and force magnitude deployed to achieve and sustain its own defense. As recent polls have shown, inhabitants of Taiwan view enhanced economic and political relationships with the U.S. favorably, as opposed to mainland China.³⁰⁶ With recent events, it seems that willingness for inhabitants to defend the island against a CCP invasion or commit to a more robust defense may have shifted positively in both word and deed of the inhabitants, seemingly more so than in past.³⁰⁷ Given the recent antagonism of the CCP against Taiwan's DPP President Tsai Ing-Wen's hardline stance of a separate Taiwanese entity, the general views in Taiwan of the mainland have soured of late. From the latest high-profile U.S. visit to Taipei, politicians from both the DPP and KMT have rendered support, in line with the general sentiment from the population.³⁰⁸ This is not to say that a future KMT administration could not massage public sentiment toward a more conciliatory cross-strait approach, yet the current polling signals stunningly high pro-Taiwan sentiments unlikely to dissipate in the foreseeable future. What this portends for the future of Taiwan is alarming.

³⁰⁶ Kat Devlin and Christine Huang, "In Taiwan, Views of Mainland China Mostly Negative," *Pew Research Center's Global Attitudes Project* (blog), May 12, 2020, <https://www.pewresearch.org/global/2020/05/12/in-taiwan-views-of-mainland-china-mostly-negative/>.

³⁰⁷ Keoni Everington, "30% More Taiwanese Willing to Fight for Country after Russian Invasion of Ukraine," *Taiwan News*, March 17, 2022, <https://www.taiwannews.com.tw/en/news/4476140>.

³⁰⁸ Paul Mozur, Chris Horton and Amy Chang Chien, "As Pelosi Arrives, Quiet Defiance in Taiwan," *The New York Times*, August 2, 2022, <https://www.nytimes.com/2022/08/02/world/asia/pelosi-trip-taiwan.html>.

WILLINGNESS AND RESOLVE

Since democratization culminated in the first-ever direct presidential election of 1996, there has been a gradual trend in recognizing a separate Taiwanese identity. Numerous recent polls have signaled a distinct and robust Taiwanese identity growing among the population, particularly among the younger generations. This emerging identity is likely a primary cause of an increase in Taiwanese polling to defend Taiwan territory in the event of invasion. However, this has also been accompanied by the shocking development of a majority of Taiwanese either wanting or already believing that Taiwan is an independent country.

In August 2021, the Taiwan New Constitution Foundation conducted a poll offering several insights into how the Taiwanese view themselves. A question on national identity showed that 89.9 percent identify themselves as Taiwanese – up from 83 percent last year – and 4.6 percent as Chinese. Asked about Taiwan’s future, 50.1 percent of the public support maintaining the “status quo,” 38.9 percent back independence and 4.7 percent favor joining China.

Perceptions of other countries showed the U.S. with 75.6 percent; the majority, 70.3 percent, have a negative view of China, with only 16.4 percent have a positive view of Taiwan’s neighbor across the Strait.³⁰⁹

In June 2020, the Taiwanese Public Opinion Foundation surveyed that a stunning 54 percent of respondents support official independence for Taiwan. Meanwhile, 23.4 percent prefer maintaining the status quo. Compared to the last poll on the issue, published in December 2021,

³⁰⁹ Yu-fu Chen and Jonathan Chin, “Nearly 90 Percent of Public Identify with Taiwan: Poll,” Taipei Times, August 11, 2021, <https://www.taipetimes.com/News/front/archives/2021/08/11/2003762406>; Keoni Everington, “76% of Taiwanese believe Taiwan already independent under status quo,” *Taiwan News*, March 4, 2022, <https://www.taiwannews.com.tw/en/news/4462234>.

the most recent one saw an 8.1-point rise in support for formal independence, the highest level since the survey was first conducted in 1991.³¹⁰

Over 60 percent oppose Beijing's "one country, two systems" unification scheme. It's striking that an impressive majority – almost 75 percent – continue to believe that Taiwan is already an independent country called the Republic of China.³¹¹

In the 2017 and 2019 polls, however, almost 60 percent oppose independence if it triggers a Chinese attack. In the 2020 poll, those opposing a war over independence dropped to 51 percent, while the number supporting armed conflict jumped to 37 percent. And most Taiwanese no longer believe that unification is inevitable. For the first time, a plurality of respondents (47.5 percent) now believe that Taiwan independence is more likely than unification.

This drastic change in how Taiwanese view themselves is significant. Michael You, chairman of the Taiwanese Public Opinion Foundation reflects on the profundity of changes:

"In my research on public surveys on these issues over the past 30 years, this is the highest rate of support among Taiwanese for independence," not to mention "the lowest figure for people supporting unification with China."³¹²

³¹⁰ Tzu-ti Huang, "Poll Shows Highest Ever Support for Taiwan Independence," Taiwan News, June 22, 2020, <https://www.taiwannews.com.tw/en/news/3951560>; James Holmes, "Taiwan Number One? Pro-independence Sentiment Is Surging in Opposition to China," *National Interest* (blog), July 6, 2021, <https://nationalinterest.org/blog/reboot/taiwan-number-one-pro-independence-sentiment-surging-opposition-china-188978>.

³¹¹ Dennis V. Hickey, "More and More Taiwanese Favor Independence – and Think the US Would Help Fight for It," *The Diplomat*, December 3, 2020, <https://thediplomat.com/2020/12/more-and-more-taiwanese-favor-independence-and-think-the-us-would-help-fight-for-it/>; James Holmes, "Taiwan Is Experiencing a Surge in Pro-Independence Sentiment," *The National Interest* (blog), March 26, 2021, <https://nationalinterest.org/blog/reboot/taiwan-experiencing-surge-pro-independence-sentiment-180923>; Jason Pan, "Independence support spikes: survey," *Taipei Times*, June 23, 2020, <https://www.taipeitimes.com/News/taiwan/archives/2020/06/23/2003738708>; John Feng, "Taiwan's Desire for Unification With China Near Record Low as Tensions Rise," *Newsweek*, July 14, 2022, <https://www.newsweek.com/taiwan-china-politics-identity-independence-unification-public-opinion-polling-1724546>.

³¹² James Holmes, "Taiwan Is Experiencing a Surge in Pro-Independence Sentiment," *The National Interest* (blog), March 26, 2021, <https://nationalinterest.org/blog/reboot/taiwan-experiencing-surge-pro-independence-sentiment-180923>.

Taiwan desiring independence, accompanied with its willingness to proclaim such an outcome, coupled with the majority of the population already believing such independence exists, could be the spark which ignites such public proclamations, thereby violating a crucial element of shared understandings between Taipei, Washington, and Beijing. This is certain to intensify chances of war over Taiwan and offer the pretense Beijing may be looking for to legitimate a war of “territorial sovereignty.” But this is not the sole concern in the strait.

Taiwan’s leaders are afraid to ask their people to make meaningful sacrifice to preserve their freedoms. Deterring away the PLA entails sacrifices such as increased defense budgets supported by increased or new taxes; meaningful conscription and realistic training; and the building blocks to sustain a robust civil defense culture to include reservists. Inspiring the Taiwanese people to make these sacrifices is the job of President Tsai and the leading members of her party, which has been overlooked. Such actions are likely to confront political realities. In essence, executing prudent defense policy in Taiwan is politically unpopular. It is expedient to settle for expensive systems of record that arouses the Taiwan identity and poignant symbolism rather than a well-advised ‘porcupine strategy.’ Indeed, there is secret hope among Taiwanese that if a crisis explodes, the Seventh Fleet will arrive.³¹³

Asymmetry is a politically tricky concept to sell, particularly in the absence of a clear-cut American security guarantee. After all, Taiwanese voters can see their tax dollars at work whenever a F-16 flies overhead, whereas asymmetric capabilities are low-profile and designed to remain unseen.³¹⁴ Moreover, Taiwan’s military will struggle to hold out indefinitely without outside help. To prepare for a long and bloody war of attrition, whether the U.S. intervenes or

³¹³ Tanner Greer, “Why I Fear For Taiwan,” The Scholar’s Stage, September 11, 2020, <https://scholars-stage.org/why-i-fear-for-taiwan/>.

³¹⁴ Michael A. Hunzeker, “Taiwan’s Defense Plans Are Going Off the Rails,” *War on the Rocks*, November 18, 2021, <https://warontherocks.com/2021/11/taiwans-defense-plans-are-going-off-the-rails/>.

not, is politically difficult to sell. If the U.S. intervenes, then why prepare? If the U.S. does not intervene, why prepare for a fight Taiwan will eventually lose?

Reneging on its own defense commitments, Taiwan risks allowing the PRC to achieve domination at some point in future, that makes the costs of reversal outweigh gains. Therefore, Taiwan has a balancing act to play. It so far chooses a form of politically expedient disregard with erroneous perceptions of a great power patron. While the U.S. has lately been preoccupied with the internal defenses of Taiwan, the U.S., too, must realize that these are merely tactical. The most urgent considerations for the U.S. government are to think deeply of how to maintain its own conventional general deterrence in region, and how to respond originally and imaginatively to tests of its resolve and capabilities, without gratuitous provocation. This must be a structured exercise to clarify concepts and chart a widely understood intra-government path forward. This begins with a reexamination of what has made deterrence successful and how it can be achieved in future without the same local superiority of U.S. military power.³¹⁵ Our proposed policy is that of *realist arbitration*. Any other policy – of clarity or resignation – risks inciting Taiwanese independence or PRC adventurism, respectively. Ironically, both miscalculate and lead to greatly increased chances of war between two nuclear-armed great powers.

³¹⁵ Jakub Grygiel, “How to Deter Russia and China,” *Strategika*, No. 77, February 15, 2022, <https://www.hoover.org/research/how-deter-russia-and-china>.

CAPABILITIES

Taiwan has historically allocated much of its defense budget toward high profile assets such as M-1 Abrams tanks and fifth generation fighters.³¹⁶ However, this strategy no longer makes sense in presenting a credible deterrence against a PLA with greater quantity and comparable quality of equipment. Building domestic “prestige” capabilities have been besieged with setbacks and problems.³¹⁷ Furthermore, these assets rely on static logistical centers which can easily be identified and destroyed, in addition to Taiwanese shipbuilding reliance on parts of the CCP military-civil fusion industry.³¹⁸ Moreover, Abrams tanks are operationally challenged in the rice paddy geography of Taiwan. However, it seems Taiwan’s leadership has yet to heed the warning to take its own defense seriously.³¹⁹ There are other issues.

³¹⁶ Tanner Greer, “Taiwan’s Defense Strategy Doesn’t Make Military Sense,” *Foreign Affairs*, September 20, 2019, <https://www.foreignaffairs.com/articles/taiwan/2019-09-17/taiwans-defense-strategy-doesnt-make-military-sense>. United States Department of State, “Taipei Economic and Cultural Representative Office in the United States (TECRO) – M1A2T Abrams Tanks and Related Equipment and Support,” United States Department of State News Release, July 8, 2019, <https://www.dsca.mil/press-media/major-arms-sales/taipei-economic-and-cultural-representative-office-united-states-9>.

Keoni Everington, “Taiwan Navy Eyes Helicopter Carrier,” *Taiwan News*, March 8, 2017, <https://www.taiwannews.com.tw/en/news/3111363>.

Michal Thim and Yen-Fan Liao, “Taiwan Navy Emphasizing Domestic Shipbuilding Program in Ongoing Maritime Restructure,” *USNI News* (blog), March 25, 2016, <https://news.usni.org/2016/03/25/taiwan-navy-emphasizing-domestic-shipbuilding-program-in-ongoing-maritime-restructure>.

Wei-han Chen, “Taiwan to Develop New Stealth Fighter Jets, Ministry Says,” *Taipei Times*, January 25, 2017, <https://www.taipeitimes.com/News/taiwan/archives/2017/01/25/2003663769>.

Duncan DeAeth, “Taiwan Indigenous Defense Submarine Project Nears Construction Phase,” *Taiwan News*, December 27, 2018, <https://www.taiwannews.com.tw/en/news/3605297>.

³¹⁷ Tso-Juei Hsu, “Taiwan’s New Domestic Frigate Project Hits Roadblock,” *Naval News* (blog), April 11, 2022, <https://www.navalnews.com/naval-news/2022/04/taiwans-new-domestic-frigate-project-hits-roadblock/>.

David Axe, “With Old And New Frigates, The Taiwanese Navy Could Be Sailing Into A Big Mess,” *Forbes*, November 17, 2021, <https://www.forbes.com/sites/davidaxe/2021/11/17/with-old-and-new-frigates-the-taiwanese-navy-could-be-sailing-into-a-big-mess/>.

³¹⁸ Tanmay Kadam, “Boasting World’s Biggest Naval Power - How Key US Ally Taiwan Has Been Aiding China’s Shipbuilding Industry & Its PLA Navy,” *EurAsian Times*, April 11, 2022, <https://eurasianimes.com/taiwan-has-been-aiding-chinas-shipbuilding-industry-its-navy/>.

Matthew P. Funaiolo, Brian Hart, Joseph S. Bermudez Jr., *In the Shadow of Warships: How Foreign Companies Help Modernize China’s Navy*, (Washington, DC: Center for Strategic & International Studies, 2022), <https://features.csis.org/china-shadow-warships/>.

³¹⁹ Chun Han Wong and Joyu Wang, “Fearing Hong Kong’s Fate, Taiwan Moves to Bolster Its Military Against China,” *Wall Street Journal*, August 30, 2020, <https://www.wsj.com/articles/fearing-hong-kongs-fate-taiwan-moves-to-bolster-its-military-against-china-11598803656>.

There is no clear strategy guiding Taiwanese development or acquisition of sophisticated stealth aircraft (even the short-take-off/vertical landing F-35B), naval projects such as the helicopter carrier, indigenous diesel submarines, and land-attack cruise missiles.³²⁰ Though costly, these acquisitions do not change the Chinese calculus regarding any potential use of force. Instead, they create more targets for Chinese missiles and submarine hunters. Each of these platforms relies on static systems for support such as fuel, ammunition, maintenance, airfields, and piers. These are all easily targeted by missiles from the mainland.³²¹

Taiwan self-defense capabilities face two obstacles: problems of military strategy and problems of training, culture and morale. These problems originate from ROC military and the civilian leadership tasked with reforming the defense system. Taiwan is marred by a dysfunctional civil-military relationship, destructive partisan infighting, and a spirit of defeatism.

Alastair Gale, "U.S. Concerns About China Put Focus on Taiwan's Defensive Weakness," *Wall Street Journal*, April 22, 2021, <https://www.wsj.com/articles/u-s-concerns-about-taiwan-put-focus-on-islands-defensive-weakness-11619113253>.

Mike Yeo, "What's Preventing Taiwan from Preparing for Potential War?," *Defense News*, March 1, 2021, <https://www.defensenews.com/global/asia-pacific/2021/03/01/whats-preventing-taiwan-from-preparing-for-potential-war/>.

Klaus Bardenhagen, "Taiwan's Army 'ill-Prepared' for Potential Chinese Attack," DW.COM, May 4, 2021, <https://www.dw.com/en/taiwans-army-ill-prepared-for-potential-chinese-attack/a-57102659>.

³²⁰ United States Department of State, "Taipei Economic and Cultural Representative Office in the United States (Tecro) – F-16C/D Block 70 Aircraft and Related Equipment and Support," United States Department of State News Release, August 20, 2019, <https://www.dsca.mil/press-media/major-arms-sales/taipei-economic-and-cultural-representative-office-united-states-11>.

Brian Davis and Michael Hunzeker, "Taiwan Wants Paladins. Congress Should Say No," *Defense One*, August 18, 2021, <https://www.defenseone.com/ideas/2021/08/taiwan-wants-paladins-congress-should-say-no/184650/>.

United States Department of State, "Taipei Economic and Cultural Representative Office in the United States – F-16C/D Block 70 Aircraft and Related Equipment and Support," United States Department of State News Release, September 11, 2011, <https://www.dsca.mil/press-media/major-arms-sales/taipei-economic-and-cultural-representative-office-united-states>.

³²¹ Colin Carroll and Rebecca Friedman Lissner, "Forget the Subs: What Taipei Can Learn from Tehran About Asymmetric Defense," *War on the Rocks*, April 6, 2017, <https://warontherocks.com/2017/04/forget-the-subs-what-taipei-can-learn-from-tehran-about-asymmetric-defense/>.

These political dynamics make it difficult for Taiwan to make the reforms that might guarantee its safety and autonomy.³²²

The argument is compelling to allocate Taiwan's limited defense budget away from expensive equipment such as stealth fighters, tanks or submarines. The Taiwanese military should invest in cheap, expendable, mass-produced weapons systems that can be easily moved, disguised, and deployed against an amphibious invasion force. In practical terms, this means a navy composed of missile patrol boats, mine-laying ships, small semi-submersibles, and underwater drones; an air defense component reliant on mobile surface-to-air missile batteries; ground forces armed to the teeth with aerial drones, land mines, and antiship and antiarmor guided missiles; a reserve force and civilian population fluent in guerilla tactics; and an industrial policy focused on developing breakthroughs in missile and drone technologies.³²³

Taiwan's 2019 National Defense Strategy made some formal motions towards a conceptual shift in strategy outlined above. Yet, the ROC Army has not adopted a commensurate training program for this.³²⁴ Positive momentum continued with the so called "Overall Defense Concept" which prioritized a "porcupine strategy"³²⁵ of purchasing inexpensive, lethal

³²² Mike Yeo, "What's Preventing Taiwan from Preparing for Potential War?," *Defense News*, March 1, 2021, <https://www.defensenews.com/global/asia-pacific/2021/03/01/whats-preventing-taiwan-from-preparing-for-potential-war/>.

Charles Glaser, "Washington Is Avoiding the Tough Questions on Taiwan and China," *Foreign Affairs*, October 7, 2021, <https://www.foreignaffairs.com/articles/asia/2021-04-28/washington-avoiding-tough-questions-taiwan-and-china>.

Doug Bandow, "Why Is Taiwan Only Spending 2.1 Percent of Its GDP on Its Defense?," *Responsible Statecraft* (blog), October 26, 2021, <https://responsiblestatecraft.org/2021/10/26/how-the-us-can-compel-allies-to-spend-more-for-their-own-defense/>.

³²³ Tanner Greer, "Taiwan's Defense Strategy Doesn't Make Military Sense," *Foreign Affairs*, September 20, 2019, <https://www.foreignaffairs.com/articles/taiwan/2019-09-17/taiwans-defense-strategy-doesnt-make-military-sense>.

³²⁴ Tanner Greer, "Why I Fear For Taiwan," *The Scholar's Stage*, September 11, 2020, <https://scholars-stage.org/why-i-fear-for-taiwan/>.

³²⁵ Robert C. O'Brien and Alexander B. Gray, "How to Deter China From Invading Taiwan," *Wall Street Journal*, September 15, 2021, <https://www.wsj.com/articles/china-invade-taiwan-strait-pla-missile-mines-counterinsurgency-biden-xi-tsai-ing-wen-11631721031>.

Eric Mack, "Adm. Stavridis: US Should Make Taiwan a 'Porcupine' to China," *Newsmax*, July 4, 2021, <https://www.newsmax.com/newsfront/nato-taiwan-jamesstavridis-commander/2021/07/04/id/1027423/>.

equipment like mobile missiles, underwater mines, and other materiel well-suited to repel an invasion. However, true asymmetry undercuts the rationale for pursuing high-profile, high-prestige, and high-cost weapons.³²⁶ Furthermore, this concept has been subsequently shelved, with no mention, in the latest Taiwanese defense documents, 2021 Quadrennial Defense Review³²⁷ or the recently released National Defense Review,³²⁸ however lauded by U.S. analysts and officials.³²⁹

According to Rear Admiral Michael Studeman, the director of intelligence with the Indo-Pacific Command in Hawaii:³³⁰

To us, it's only a matter of time [of a Taiwan invasion], not a matter of if. But Taiwan does not appear to be ready. Military equipment and weaponry is [sic] dated, and mandatory conscription for most young men has inexplicably been phased out. Current efforts to field a professional, all-volunteer force are struggling.³³¹

Further, a former deputy commander of Taiwan's air force, Chang Yan-ting:

The training isn't as intense as it was before. He suggests that decades of booming global trade—including trade with China—and prosperity have encouraged a view that the

³²⁶ Michael A. Hunzeker, "Taiwan's Defense Plans Are Going Off the Rails," *War on the Rocks*, November 18, 2021, <https://warontherocks.com/2021/11/taiwans-defense-plans-are-going-off-the-rails/>.

³²⁷ Ministry of National Defense, Republic of China, *Quadrennial Defense Review: The Republic of China 2021*, (Taipei, Taiwan: Ministry of National Defense, 2021), <https://www.ustaiwandefense.com/tdnswp/wp-content/uploads/2021/03/2021-Taiwan-Quadrennial-Defense-Review-QDR.pdf>.

³²⁸ Ministry of National Defense, Republic of China, *ROC National Defense Report 2021*, (Taipei, Taiwan: Ministry of National Defense, 2021).

³²⁹ Ryan Hass, "Taiwan's Leaders Need to Coalesce around a Defense Concept," *Brookings Institution* (blog), November 1, 2021, <https://www.brookings.edu/blog/order-from-chaos/2021/11/01/taiwans-leaders-need-to-coalesce-around-a-defense-concept/>.

David F. Helvey, U.S. Taiwan Business Council: 2020 United States Taiwan Defense Industry Conference, Closing Keynote Remarks, October 6, 2020, https://www.us-taiwan.org/wp-content/uploads/2020/02/2020_october06_david_helvey_dod_keynote.pdf.

Hsi-min Lee and Eric Lee, "Taiwan's Overall Defense Concept, Explained," *The Diplomat*, November 3, 2020, <https://thediplomat.com/2020/11/taiwans-overall-defense-concept-explained/>.

Michael A. Hunzeker, "Taiwan's Defense Plans Are Going Off the Rails," *War on the Rocks*, November 18, 2021, <https://warontherocks.com/2021/11/taiwans-defense-plans-are-going-off-the-rails/>.

³³⁰ William A. Galston, "Will America Come to Taiwan's Defense?," *Wall Street Journal*, October 12, 2021, <https://www.wsj.com/articles/will-america-come-to-taiwan-defense-china-xi-navy-11634053378>.

³³¹ J. William Middendorf II, "Yes, China Could Invade Taiwan," *The Heritage Foundation*, November 1, 2021, <https://www.heritage.org/asia/commentary/yes-china-could-invade-taiwan>.

Reuters Staff, "U.S. Navy Rear Admiral Makes Unannounced Visit to Taiwan: Sources," *Reuters*, November 22, 2020, <https://www.reuters.com/article/us-taiwan-usa-military-idUSKBN2820QW>.

island no longer needed to maintain a heightened military alert. “That’s in keeping with the whole tide of the times.”³³²

However, the recent analysis of suggesting conventional general deterrence would be maintained or increased if Taiwan invests heavily in asymmetric capabilities or a “large number of small things” or the so called “porcupine strategy,” it is important to note that these are essentially tactical maneuverings which would bear upon military preparations for an invasion but are unlikely to influence substantially the strategic considerations leading to the decision of invasion. This is because the minimal defenses of an island entity are of uneven comparison to the would-be aggressor. If decision to invade focused solely upon the island’s defenses, invasion, occupation, and annexation would have likely happened decades prior. The primary strategic consideration of the CCP as to the question of invasion is the fair possibility that the U.S. would indeed marshal substantial regional naval assets to halt and reverse operations. This has been the primary deterring element. This is not to say that substantial increases in island weapon systems which can neutralize some PLA advantage while maintaining cost effectiveness is not a good direction in terms of deterrence – it surely is. However, to focus solely on this relatively myopic aspect of conventional general deterrence to the detriment of deep thinking on U.S. actions to signal willingness or resoluteness against CCP probing is a troubling, if dire, forgetfulness of the critical underpinnings of successful conventional general deterrence. These two objectives can be pursued concurrently, if given the required attention.

Taiwan’s seemingly detached political will to defend itself and its unserious arms procurement focusing on prestige systems rather than effective asymmetric capabilities – “a large number of small things” – can be seen in China as a window of opportunity to aggress. This

³³² J. William Middendorf II, “Yes, China Could Invade Taiwan,” The Heritage Foundation, November 1, 2021, <https://www.heritage.org/asia/commentary/yes-china-could-invade-taiwan>.

could lower conventional China's NT. Taiwan's military capability to deter China seems more of a tactical approach rather than a recognition that U.S. forces and credible commitments form the bulk of strategic insight into a Taiwan conflict. The only strategic matter explicitly regarding Taiwan is not military capability, or even Taiwanese will to fight, but the political leadership's desire to maintain autonomy yet not declare political independence.

This is the only Taiwan assumption, we believe, that matters for our trajectories to remain valid because this offers legitimacy and cause for U.S. to intervene, in event of Chinese abrogation of their agreement to settle Taiwan's future by peaceful means. Now this does not mean the two aforementioned elements are superfluous. They are tactically valuable if just to buy time for U.S. assets to intervene, experience conventional loss, and then to engage in further escalation. These elements buy time, not outcomes. This all seems to run quite counter to current commentary. I will say it is important for Taiwan to maintain some semblance of capability and willingness to fight, if for only buying U.S. time to act, but these are corollary at best to the primary Taiwan assumption. It is in this that Taiwan's capability and willingness to fight offer little in preservation of conventional general deterrence, yet this does not equate to unimportance. Even for general deterrence, it is U.S. regional conventional capability that the CCP is most concerned, and it is diminishing in relative terms. The two Taiwan elements only matter in immediate deterrence, and as mentioned, to buy U.S. time to act.

Presently, Taiwan does not offer a compelling case in defense. It is true many analysts of all Taiwanese political stripes understand the issues at stake and offer strikingly similar recommendations as to the remedies. Yet for political reasons the ROC Army is untrained, under-sourced, and undermanned. Conscription is unfavorable and there have been political roadblocks to building a professional fighting force in the island democracy. Much defense

spending has been wasted on so called prestige capabilities such advanced fighter jets and M1 Abrams tanks which will prove to be of little use against numerically superior and comparable quality PLAAF fighter jets and on unfavorable island terrain ill-suited for tank warfare, coupled with the potential for preemptive strikes on such significant military assets. Cheap, asymmetric, low-tech such as stingers, javelins, hand-held Surface to Surface Missiles (SSMs), and smart mines along the Strait, alongside prepositioned concealed mobile missile systems are capabilities that are easily affordable and neutralize formidable CCP advantages across the Strait. Yet for political considerations, these resources have not been procured and orthodox operational concepts have not been revised. Gone are the days of ROC technological superiority vis-à-vis the PRC. In both quantity and quality of equipment, integration of cross-domain PLA forces, and “intelligentization” of these forces has required the ROC to overhaul its outdated force structure. This has yet to occur.

The island democratized in 1996 with first ever direct presidential elections. A majority of Taiwanese seek peaceful means to settling their political future, and much of the younger generations view themselves as a distinct Taiwanese identity. Yet with such grassroots developments pulling the island away from the CCP, there exists a lack of material support for achieving these aims. There lacks a culture of civil defense, attitudes towards the ROC military make it so young high achieving Taiwanese are steered to avoid service; the incredulity of a CCP invasion among the population has contributed to taking the threat flippantly; and the risks which are inherent in military preparation – training accidents, destroyed equipment, loss of life – become instant pressure points in domestic politics, squeezing the life out what otherwise could be robust defense posture. The Taiwanese public has yet to take their own defense seriously. Years of arms purchases from Washington and informal defense commitments, which seem to

have informally strengthened to a provocative degree, have lent credibility to Taipei that the U.S., for all the formal declarations and historic distancing, will indeed commit to aid under attack. This has given way to a dangerous laissez-faire attitude of Taiwanese in having a stake in their own future. The more dire consequences is that Taiwan may indeed be unwittingly nudging the world toward a nuclear war.

All these reasons and more have granted the CCP a perception of weak resolve and capability of the U.S. and Taiwan to defend the status quo agreement of peaceful settlement of Taiwan's political future – an agreement of which the PRC has agreed numerous times. This is further exacerbated with such resurgent attitudes which desire or already believe in Taiwan as independent from mainland.

Nascent warnings are surfacing around the globe, such as Richard Moore, the new MI6 Chief, raising the alarm of China's overconfidence in taking Taiwan.³³³ What is not mentioned are the internal drivers for such a decision. These are to be explored later. This ineluctable temptation can and is likely warping CCP perceptions regarding the possibility of success within the next several years of annexing Taiwan. CCP planners, "strategic ambiguity" notwithstanding, expect or at least are planning to counter U.S. involvement. This is no surprise and sheds light on the utility of "strategic clarity," a concept recently in fashion.

The CCP likely views such outcomes through the lens of perceived resolve and capability of the would-be defenders. This is believed to be presently "weak" or degraded in a marked fashion to a nadir of decades. The perceived decline of the U.S. and perceived ascendance of the PRC is likely inducing undue confidence in CCP's newfound capabilities to assert influence

³³³ Helen Warrell, "MI6 chief warns of security threat from China 'miscalculation,'" *Financial Times*, November 30, 2021, <https://www.ft.com/content/eb8afc08-70ea-433c-8f2d-c0c1357461e3>.

beyond its coastline. These trends and others will continue to increase the likelihood of miscalculation for all parties involved cross strait.

CHAPTER IV

UNITED STATES MISCALCULATION PARAMETERS

An overview of this chapter begins with three broad dimensions that highlight the elements of miscalculation from the United States regarding the two other states involved in a future Taiwan conflict. The U.S. Asia-Pacific Policy ends are revisited as a way to ground the analysis in the fundamentals of the U.S. – PRC relationship. U.S. security strategy by way of a U.S. theory of victory further examines the general lack of U.S. forethought in the likelihoods of such a conflict reaching a nuclear threshold and the likely consequences of this development. Lastly, this chapter reviews the modern way of U.S. battle to further illuminate the miscalculations which may occur given the present U.S. understanding of what a future Taiwan conflict may look like.

U.S. ASIA-PACIFIC POLICY – ENDS

A look at U.S. Strategy on the Taiwan issue must first start with the Taiwan Relations Act of 1979 (TRA), Three Joint Communiqués, and the Six Assurances. These are the foundation of shared historical understanding which underpins the U.S. – PRC relationship, as stated by both parties. These documents have helped to contribute to a foundation of strategic stability rather than explicit deterrence.

It is important to highlight the relevant passages below. These documents are much discussed but rarely scrutinized in detail. We believe it is never a bad time to revisit the precise

language. An overview below will highlight the relevant texts in each document as it concerns the status of Taiwan.³³⁴

After the relevant manifestos are described, to include the One China Policy, then we will further explore how the present American position of strategic ambiguity can no longer achieve its objective.

The Taiwan Relations Act of 1979

The Taiwan Relations Act of 1979 constitutes a major element of the U.S. one-China Policy. Below are relevant excerpts:³³⁵

Taiwan Relations Act - Declares it to be the policy of the United States to preserve and promote extensive, close, and friendly commercial, cultural, and other relations between the people of the United States and the people on Taiwan, as well as the people on the China mainland and all other people of the Western Pacific area. Declares that peace and stability in the area are in the political, security, and economic interests of the United States, and are matters of international concern. States that the United States decision to establish diplomatic relations with the People's Republic of China rests upon the expectation that the future of Taiwan will be determined by *peaceful* (emphasis added) means and that any effort to determine the future of Taiwan by other than peaceful means, including by boycotts or embargoes is considered a threat to the peace and security of the Western Pacific area and of grave concern to the United States. States that the United States shall provide Taiwan with arms of a defensive character and shall maintain the capacity of the United States to resist any resort to force or other forms of coercion that would jeopardize the security, or social or economic system, of the people of Taiwan.

³³⁴ Shirley A. Kan, *China/Taiwan: Evolution of the "One China" Policy—Key Statements from Washington, Beijing, and Taipei*, CRS Report No. RL30341 (Washington, DC: Congressional Research Service, 2014); Shirley A. Khan, and Wayne M. Morrison, *U.S.-Taiwan Relationship: Overview of Policy Issues*, CRS Report No. R41952 (Washington, DC: Congressional Research Service, 2014).

³³⁵ Taiwan Relations Act, Pub. L. No. 96-8, 93 Stat. 14 (1979), <https://www.congress.gov/bill/96th-congress/house-bill/2479>.

Three Joint Communiqués

The first communiqué, known as the Shanghai Communiqué, took place on 28 February 1972 during President Nixon's process on the normalization of relations between the United States and the PRC. Below is a relevant excerpt as it relates to Taiwan:³³⁶

9. Neither should seek hegemony in the Asia-Pacific region and each is opposed to efforts by any other country or group of countries to establish such hegemony... Neither is prepared to negotiate on behalf of any third party or to enter into agreements or understandings with the other directed at other states.

11. The two sides reviewed the long-standing serious disputes between China and the United States. The Chinese side reaffirmed its position: the Taiwan question is the crucial question obstructing the normalization of relations between China and the United States; the Government of the People's Republic of China is the sole legal government of China; Taiwan is a province of China which has long been returned to the motherland; the liberation of Taiwan is China's internal affair in which no other country has the right to interfere; and all U.S. forces and military installations must be withdrawn from Taiwan. The Chinese Government firmly opposes any activities which aim at the creation of "one China, one Taiwan", "one China, two governments", "two Chinas", an "independent Taiwan" or advocate that "the status of Taiwan remains to be determined".

12. The U.S. side declared: The United States acknowledges that all Chinese on either side of the Taiwan Strait maintain there is but one China and that Taiwan is a part of China. The United States Government does not challenge that position. It reaffirms its interest in a peaceful settlement of the Taiwan question by the Chinese themselves.

The second communiqué of 1 January 1979, known as the Joint Communiqué on the Establishment of Diplomatic Relations, confirmed the official recognition of the PRC by the U.S. and establishment of diplomatic relations between the two countries. Below are relevant excerpts as they relate to Taiwan:³³⁷

2. The United States of America recognizes the Government of the People's Republic of China as the sole legal Government of China. Within this context, the people of the United States will maintain cultural, commercial, and other unofficial relations with the people of Taiwan.

³³⁶ Government of the United States and the Government of the PRC, "Joint Communiqué of the United States of America and the People's Republic of China (Shanghai Communiqué)," Wilson Center Digital Archive: International History Declassified, February 27, 1972, <https://digitalarchive.wilsoncenter.org/document/121325>.

³³⁷ The Government of the United States and the Government of the PRC, *Foreign Relations of the United States, 1977-1980, Volume I, Foundations of Foreign Policy*, U.S. Department of State: Office of The Historian, 1979, <https://history.state.gov/historicaldocuments/frus1977-80v01/d104>.

5. Neither should seek hegemony in the Asia-Pacific region or in any other region of the world and each is opposed to efforts by any other country or group of countries to establish such hegemony.

6. Neither is prepared to negotiate on behalf of any third party or to enter into agreements or understandings with the other directed at other states.

7. The Government of the United States of America acknowledges the Chinese position that there is but one China and Taiwan is part of China.

The third communiqué of 17 August 1982, known as the Joint Communiqué on Arms Sales to Taiwan, sought to find a common solution to the question of future arms sales to aid the defense of Taiwan. Below are relevant excerpts as they relate to Taiwan:³³⁸

1. In the Joint Communiqué on the Establishment of Diplomatic Relations on January 1, 1979, issued by the Government of the United States of America and the People's Republic of China, the United States of America recognized the Government of the People's Republic of China as the sole legal Government of China, and it acknowledged the Chinese position that there is but one China and Taiwan is part of China. Within that context, the two sides agreed that the people of the United States would continue to maintain cultural, commercial, and other unofficial relations with the people of Taiwan. On this basis, relations between the United States and China were normalized.

4. The Chinese Government reiterates that the question of Taiwan is China's internal affair. The Message to Compatriots in Taiwan issued by China on January 1, 1979 promulgated a fundamental policy of striving for peaceful reunification of the motherland. The Nine-Point Proposal put forward by China on September 30, 1981 represented a further major effort under this fundamental policy to strive for a peaceful solution to the Taiwan question.

5. The United States Government attaches great importance to its relations with China, and reiterates that it has no intention of infringing on Chinese sovereignty and territorial integrity, or interfering in China's internal affairs, or pursuing a policy of "two Chinas" or "one China, one Taiwan." The United States Government understands and appreciates the Chinese policy of striving for a peaceful resolution of the Taiwan question as indicated in China's Message to Compatriots in Taiwan issued on January 1, 1979 and the Nine-Point Proposal put forward by China on September 30, 1981.

³³⁸ Government of the United States and Government of the PRC, National Archives: *United States-China Joint Communiqué on United States Arms Sales to Taiwan* (Simi Valley, CA: Ronald Reagan Presidential Library & Museum, 1982), <https://www.reaganlibrary.gov/archives/speech/united-states-china-joint-communiqué-united-states-arms-sales-taiwan>.

The “Six Assurances” to Taiwan

With a declassification process culminating in 2020, the definitive language of the “Six Assurances” has been made public. It is thought that the act of declassification helped to bring further attention to the Taiwan issue by refocusing efforts to clarify longstanding U.S. policy regarding Taiwan.

In 1982, during negotiations for the Third United States - China Joint Communiqué on Arms Sales to Taiwan, the Taiwan government presented the United States with six points that it proposed the United States use as guidelines in conducting United States - Taiwan relations. According to former Ambassador John Holdridge, the United States agreed to these points, conveyed this assent to Taiwan, and, in late July 1982, informed the Congress of the agreement.

The six points are:

1. The United States would not set a date for termination of arms sales to Taiwan.
2. The United States would not alter the terms of the Taiwan Relations Act.
3. The United States would not consult with China in advance before making decisions about U.S. arms sales to Taiwan.
4. The United States would not mediate between Taiwan and China.
5. The United States would not alter its position about the sovereignty of Taiwan which was, that the question was one to be decided peacefully by the Chinese themselves, and would not pressure Taiwan to enter into negotiations with China.
6. The United States would not formally recognize Chinese sovereignty over Taiwan.

The latest U.S. affirmation of the TRA is the House-passed NDAA for FY2021 (H.R. 6395) which states that it is the sense of Congress that the TRA and the Six Assurances “are both cornerstones” of U.S.-Taiwan relations. The Senate-passed NDAA for FY2021 (S. 4049) also

states that it is U.S. policy that the TRA and the Six Assurances “are the foundation for” U.S.-Taiwan relations.³³⁹

The PRC views these communiqués as the political foundation for the U.S.-PRC relationship. The United States views them as a major element of its one-China policy, under which the United States since 1979 has recognized the PRC as the sole legal government of China while maintaining unofficial relations with Taiwan.³⁴⁰

It can be reasonably surmised that the official Taiwan policy of the U.S. has been one of status quo. In this sense, peaceful settlement of the Taiwan issue has historically been at the center of U.S. engagement with both Taiwan and PRC, as recognized by the Taiwan Relations Act, the Three Joint Communiqués, and the Six Assurances. This has been a historical and mutual understanding of both the U.S. and PRC, until recent events have cast this into question.

It is important to note that perhaps the most critical assumption underlying these documents is the recognition that the question of Taiwan’s status under a U.S. one-China Policy would be decided through peaceful means, as stated by both the U.S. and PRC. In this sense, recent CCP trends of aggression towards Taiwan is all the more alarming. It is perhaps the crowning achievement of “national rejuvenation” to subsume a democratically elected and independent Taiwan under CCP leadership. At the same time, recent Taiwanese opinion polls show a distinct Taiwanese identity emerging coupled by a desire to remain a democracy. This is sure to weigh upon the decision making process of Xi Jinping and the CCP regarding actions to be taken to determine the future status of Taiwan. Overall, we can see through CCP statements

³³⁹ Susan V. Lawrence, *IN FOCUS: President Reagan’s Six Assurances to Taiwan*, CRS Report No. IF11665 (Washington, DC: Congressional Research Service, 2020), <https://sgp.fas.org/crs/row/IF11665.pdf>, pp. 2-3.

³⁴⁰ Susan V. Lawrence, *IN FOCUS: President Reagan’s Six Assurances to Taiwan*, CRS Report No. IF11665 (Washington, DC: Congressional Research Service, 2020), <https://sgp.fas.org/crs/row/IF11665.pdf>, pp. 1.

and actions that there is no longer CCP adherence to the Three Joint Communiqués of which it is a party. This surfaces uneasy questions as to the new period of U.S. – PRC relations when what historically has been the bedrock of mutual understanding, is now shifting beneath.

The previous manifestos acknowledge the role of the U.S. as the sole arbiter to this international dispute between two international entities. What has allowed for “strategic ambiguity” – the official U.S. defense policy stemming from these manifestos – to achieve its goal is that this policy rests upon the critical superiority of U.S. forces in region. As explicated thoroughly in Chapter II, this can no longer be taken for granted. As the local balance of force shifts the tide toward China, China will increasingly feel liberated to pursue its core interest of Taiwan annexation without robust enforcement of the multitude of previous agreements and understandings. Without effective enforcement, peaceful reunification and the one-China policy of the U.S. will only be aspirational.

This enforcement can theoretically be achieved by a focused and local conventional buildup – even with new or novel ways – to regain this superiority. However, that is unlikely as detailed in Chapter II. Here is a reasonable departure from which to further examine how the official mutual understanding of peaceful settlement of the Taiwan issue runs counter to recent CCP trends of aggression, in deed and rhetoric.

U.S. SECURITY STRATEGY – WAYS: A U.S. THEORY OF VICTORY

It is informative to start with a baseline assessment of the strategic environment surrounding a Taiwan contingency and how the U.S. Navy is prepared to deter such an event and if necessary, defeat an aggressor. Asia’s rise has coaxed the world’s geopolitical compass towards it, and with that, new opportunities for the enhancement or deterioration of stability. As

a result, world stability has deteriorated noticeably in the last decade.³⁴¹ So much so, we believe, that the general deterrence environment, underpinned by conventional weaponry and reinforced by the Revolution of Military Affairs (RMA), is unsuitable to maintain stability, and if continued, would lead to great uncertainty.³⁴² This is because of two factors: the rise of a potentially capable PLAN and its subsequent evolving CCP strategy in taking Taiwan – the vulnerable linchpin of the U.S. alliance strategy in Asia Pacific. The other factor being the lack of a cogent and expeditious U.S. strategy to address the greatest vulnerability to its position in the region.

This chapter begins with an articulation of a theory of victory for both parties. Though there are much more expansive definitions of this term, for the purposes of the research, we will focus on a theory of victory of preventing a Taiwan contingency and if a contingency precipitates, understanding the miscalculations likely to unfold.³⁴³ These include preservation of U.S. regional interests broadly, and honoring U.S. commitments to peaceful settlement of the Taiwan question. This encompasses other vital U.S. interest such as defending regional allies, and preserving credibility in the region, and thus commitments around the globe.

The chapter further describes fundamental ways of battle of both U.S. and China, which in broad contours will offer likelihoods of strategic choices taken by both powers. This highlights the legitimacy of U.S. actions if engaged in low NT – high LUD against China. The place of diplomacy in both general and immediate deterrence can be situated by the diplomatic template of the Cuban crisis. Chapter II also tempers rote realist arguments. Looking at what is

³⁴¹ Elbridge Colby, “Guest Blog: The Substitution Fallacy,” New Paradigms Forum, December 24, 2010, <http://www.newparadigmsforum.com/p645>.

³⁴² Charles F. Doran, *Systems in Crisis: New Imperatives of High Politics at Century’s End* (Cambridge, United Kingdom: Cambridge University Press, 1991).

³⁴³ Eliot A. Cohen, *Supreme Command: Soldiers, Statesmen, and Leadership in Wartime* (New York: Free Press, 2002), 33, 177, 212.

rather than what one wishes must be situated in context. The trite saying “the enemy gets a vote” is apropos. A primary example being Taiwan cannot declare independence is likely to grant China the pretense for invasion given present dynamics. The U.S. ought not to state that it will defend Taiwan simply because it is in U.S. interest to do so – targeted messaging is vital for its strategic effect and for legitimacy in honoring previous U.S. agreements, while not violating Chinese redlines.

The rate of change can only be felt to be increasing toward a preponderance of local CCP military force and away from the U.S. presence. In other words, what has kept deterrence as a means of, and thus, stability – the preponderance of conventional U.S. forces – is deteriorating as the rate of PLAN naval shipbuilding activity increases in both the quantity and capability of warships at a time when the U.S. defense community suffers from a general sense of strategic vertigo, caused by a lack of focused understanding of imminent threats and priorities. What has achieved deterrence, and thus stability, in the past, will no longer do.

In this sense, the National Defense Strategy Commission published an illuminating, if worrisome, analysis. Below is a relevant passage:

The country’s margin for strategic error has become distressingly small. Doubts about America’s ability to deter and, if necessary, defeat opponents and honor its global commitments have proliferated. Previous congressionally mandated reports . . . warned that this crisis was coming. The crisis has now arrived . . . a crisis of American power. . . . Should war occur, America will face harder fights and greater losses than at any time in decades. Americans could face a decisive military defeat. . . . Put bluntly, the U.S. military could lose.

Although the NDS states that deterring adversaries is a key objective, there was little consensus among DOD leaders with whom we interacted on what deterrence means in practice, how escalation dynamics might play out, and what it will cost to deter effectively.

Developing innovative operational approaches that can overcome difficult operational challenges. . . is an imperative. . . detailed, rigorous operational concepts for solving these problems and defending U.S. interests are badly needed, but do not appear to exist.

The United States must develop new operational concepts to achieve strategic advantage, including by addressing the ability of aggressive regimes to achieve a fait accompli against states on their periphery, or to use nuclear or other strategic weapons in ways that would fall short of justifying a large-scale U.S. nuclear response.³⁴⁴

Concepts need to be reevaluated. The crisis of American power flows from the fact that U.S. policymakers have not thought critically regarding what the strategic parameters of a possible U.S. – China nuclear confrontation looks like.³⁴⁵ In this sense, there is little explicit thinking in U.S. policymaking of what constitutes an agreeable U.S. theory of victory in the event of a Taiwan conflict. General Joseph Dunford, who as chairman of the Joint Chiefs of Staff in 2016 declared that “we’re already behind in adapting to the changed character of war today in so many ways.”³⁴⁶

The director of military sciences at the Royal United Services Institute in London, Peter Roberts, wrote in 2017 that “potential adversaries. . .have reconceptualized warfare and reimagined conflict without the boundaries the Western mind imposes upon it. . . .A belief in Western conceptual or intellectual superiority remains deeply entrenched in the Western orthodoxy; such hubris has distinct dangers.”³⁴⁷

The thrust of CCP strategy in a Taiwan contingency is the so-called Anti Access Area Denial (A2/AD) operational concept. U.S. adversaries have created and amalgamated ideas about how to prevail in those conflicts by shaping the decisions of their adversaries in a manner

³⁴⁴ National Defense Strategy Commission, *Providing for the Common Defense: The Assessment and Recommendations of the National Defense Strategy Commission* (November 2018), 1-2. The commission was cochaired by Eric Edelman and Gary Roughead, respectively former undersecretary of defense for policy and former chief of naval operations.

³⁴⁵ Brad Roberts, *Livermore Papers on Global Security No. 7: On Theories of Victory, Red and Blue*, (Livermore, California: Lawrence Livermore National Laboratory Center for Global Security Research 2020).

³⁴⁶ Remarks at the National Defense University Graduation Ceremony, Ft. McNair, Washington D.C. (June 10, 2016).

³⁴⁷ Peter Roberts, “Designing Conceptual Failure in Warfare,” *RUSI Journal* 162, no. 1 (2017), pp. 14, 23.

conducive to their national objectives by imposing cost and risk through escalation and the threat of more to come.

Invoking Clausewitz,³⁴⁸ a theory of victory explains how to bring an enemy to a “culminating point”³⁴⁹ where it chooses not to run the costs and risks of further conflict and instead to acquiesce to the preferences of the first actor in terminating the conflict.³⁵⁰ This is inextricably linked to the faltering of strategic ambiguity and the need of a U.S. defense policy reformulation – one of *realist arbitration*.

There is no comparable U.S. theory of victory. Until 2014 or so, the United States and its allies were too busy fighting other wars to focus adequately on this task. The 2018 National Defense Strategy³⁵¹ put the defense planning focus on regional conventional conflicts against major-power rivals with nuclear and other high-leverage means to defend their interests. The Joint Staff and armed services have begun to update doctrine³⁵² to fight in contested environments. And the expert community has begun to explore CCP strategic thought³⁵³ about modern conflict. This is progress, but does it add up to success, in the form of a credible U.S. theory of victory? The previously referenced harsh judgments of Chairman Dunford in 2017 and of the National Defense Strategy Commission in 2018 provide a stark answer. The United States

³⁴⁸ Carl von Clausewitz, *On War*, Michael Howard and Peter Paret, eds. (Princeton, NJ: Princeton University Press, 1989); Antulio J. Echevarria II, Clausewitz: Toward a Theory of Applied Strategy, *Defense Analysis*, Vol 11, No. 3, (1995): 229-240.

³⁴⁹ Frank G. Hoffman, “The Missing Element in Crafting National Strategy: A Theory of Success,” *Joint Force Quarterly* 97, 2nd Quarter 2020, 55-64.

³⁵⁰ Brad Roberts, “On the Need for a Blue Theory of Victory,” *War on the Rocks*, September 17, 2020, <https://warontherocks.com/2020/09/on-the-need-for-a-blue-theory-of-victory/>.

³⁵¹ United States Department Defense, *Summary of the 2018 National Defense Strategy of The United States of America: Sharpening the American Military’s Competitive Edge* (Washington, DC: Department of Defense, 2018), <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.

³⁵² United States Marine Corps, *Commandant’s Planning Guidance: 38th Commandant of the Marine Corps*, (Washington, DC: United States Marine Corp, 2019), https://www.hqmc.marines.mil/Portals/142/Docs/%2038th%20Commandant%27s%20Planning%20Guidance_2019.pdf?ver=2019-07-16-200152-700.

³⁵³ Andrew Erickson, “Make China Great Again: Xi’s Truly Grand Strategy,” *War on the Rocks*, October 30, 2019, <https://warontherocks.com/2019/10/make-china-great-again-xis-truly-grand-strategy/>.

discovered the price of three decades of strategic atrophy in the form of the clutter of old thinking, the allure of quick fixes, and limited analytical capacity for new problems.³⁵⁴

It does not appear that the U.S. foreign policy community has thought comprehensively about what a likely conflict would entail and the ways and means to end such a conflict peacefully while preserving the regional interests, credibility, and alliance system of the U.S. If alarm and prudent thinking has undergone evaluation, these alarms do not seem to have translated into well distributed and understood – actionable – doctrine to both civilian and military leaders alike. In this sense, the U.S. has not considered deeply these plausible contingencies. Instead, intuition and piecemeal strategy concerning “preserving our interests” and “winning in a contested environment” fall short of hard-nosed analysis of CCP intentions and risk-on willingness.

A central conclusion of the bipartisan National Defense Strategy Commission in its November 2018 report was that defense planners understand neither the fundamental characteristics of regional conventional wars against adversaries capable of all-domain, transregional escalation nor how to shape the dynamics of such wars to safeguard U.S. interests.³⁵⁵ Through the scope of how defense planners ought to create future force structures for preserving U.S. interests in region, it is critical to note what can occur, if U.S. defense planners do not think deeply about a theory of victory, may include use of nuclear weapons.

Current elements of the U.S. theory of victory may be ill founded. A strong conventional deterrent may simply look like a lucrative target (just as U.S. naval forces deployed to Pearl

³⁵⁴ Brad Roberts, “On the Need for a Blue Theory of Victory,” *War on the Rocks*, September 17, 2020, <https://warontherocks.com/2020/09/on-the-need-for-a-blue-theory-of-victory/>.

³⁵⁵ U.S. Department of Defense, *Providing for the Common Defense: The Assessment and Recommendations of the National Defense Strategy Commission*, (Washington, DC: U.S. Institute of Peace, 2018), <https://www.usip.org/sites/default/files/2018-11/providing-for-the-common-defense.pdf>.

Harbor in 1941 proved to be).³⁵⁶ U.S. claims to treat an attack on an ally as an attack on itself might not be seen as credible by U.S. adversaries, who might probe for confirmatory evidence.³⁵⁷

U.S. allies may not be sufficiently assured in a widening war to stay in the fight. Leaders in Washington might conclude that the U.S. stake in defending a regional order is indeed not equal to that of the challenger, leading them to sacrifice important allied interests. Adversary leaders might have anticipated proportionate responses by the United States and its allies and absorbed them without strategic effect, leaving the United States and its allies to deliberate additional escalatory steps.³⁵⁸

Delay in responding to CCP nuclear aggression might be interpreted by CCP as a lack of nuclear resolve, potentially encouraging further nuclear attacks. Adversary leaders might be enraged rather than sobered by U.S. actions and conclude that further such actions could put national integrity and their political control at risk, potentially leading to further escalation. The offramps offered at this stage might seem unacceptable to a wounded and angry—but still powerful—adversary.³⁵⁹ These assumptions also reinforce the urgency of substantive collaboration with U.S. allies so that new strategic thought is coherent and the climb up the learning curve is accelerated.³⁶⁰

In this second element, as Herman Kahn once noted, there has to be an alternative to the wholly negative choice between oblivion and surrender.³⁶¹ Strategy must be enforced even in the most inauspicious of circumstances. Thus, driven by the need to prevail and retain rational

³⁵⁶ Thomas C. Schelling, “Foreword,” in Roberta Wohlstetter, *Pearl Harbor: Warning and Decision* (Stanford, CA: Stanford University Press, 1960).

³⁵⁷ Brad Roberts, *Livermore Papers on Global Security No. 7: On Theories of Victory, Red and Blue*, (Livermore, California: Lawrence Livermore National Laboratory Center for Global Security Research, June 2020), 79, <https://cgsr.llnl.gov/content/assets/docs/CGSR-LivermorePaper7.pdf>.

³⁵⁸ Ibid.

³⁵⁹ Ibid.

³⁶⁰ Ibid.

³⁶¹ Herman Kahn, *On Thermonuclear War*, Princeton University Press (1960), 96–116.

purpose to nuclear conflict, warfighting is the answer. Additionally, the prospect for victory further strengthens deterrence. With a plausible theory of victory in place, deterrence has three pillars, punishment, denial, and fear that the other side will achieve its objectives. The former two are negative in nature, whereas the latter is a more positive basis for deterrence. Thus, the enemy may be deterred from acting because of the costs he will endure, because he will fail to achieve his objectives, and because he fears we will achieve ours.³⁶²

Without a coherent theory of victory – why the U.S. believes events will transpire as desired – there exists the real danger that the use of force lacks positive guidance.³⁶³ Damage limitation and the reestablishment of deterrence would provide some focus for the use of nuclear weapons. However, depending upon the context, these limited goals may leave the U.S. unable to achieve its broader policy objectives. For example, without a theory of victory in place, an aggressive enemy may feel they can still make gains in the face of U.S. nuclear forces. If U.S. nuclear strategy is driven exclusively by damage limitation and the reestablishment of deterrence, then accepting ill-gotten gains may be a price the U.S. has to pay to bring an end to nuclear conflict. In contrast, a more expansive and unlimited approach to the use of nuclear weapons would enable the U.S. to adapt to the circumstances in play. If deterrence has failed, and nuclear forces are to be used, then surely it would be strategically negligent not to seek to defeat the enemy (destroy their resistance physically and/or morally) and achieve the stated

³⁶² David J. Lonsdale (2019) The 2018 *Nuclear Posture Review*: A return to nuclear warfighting?, *Comparative Strategy*, 38:2, 104, DOI: [10.1080/01495933.2019.1573074](https://doi.org/10.1080/01495933.2019.1573074).

³⁶³ David J. Lonsdale (2019) The 2018 *Nuclear Posture Review*: A return to nuclear warfighting?, *Comparative Strategy*, 38:2, 111-112, DOI: [10.1080/01495933.2019.1573074](https://doi.org/10.1080/01495933.2019.1573074).

For a discussion on the importance of victory, see Brian Bond, *The Pursuit of Victory: From Napoleon to Saddam Hussein* (Oxford: Clarendon Press, 1998).

policy objectives. Damage limitation and the reestablishment of deterrence are admirable goals, but they cannot be the sum total of objectives sought in a nuclear conflict.

What might be the consequences of continuing to limp along without a coherent U.S. theory of victory? According to Dr. Brad Roberts of the Lawrence Livermore National Laboratory, four stand out.³⁶⁴ First, without such a U.S. theory, CCP could be emboldened to test their newfound confidence and the perceived weakness of an underprepared U.S.³⁶⁵ The PRC might precipitate crises, such as taking a Taiwan-controlled outcropping or further incrementalism in the South China Sea. The goal being manipulation for long-term advantage vis-à-vis Taiwan's status. Second, the United States and allies, though armed with many powerful tools, military and otherwise, have no coherent set of ideas about how to marshal them to achieve objectives in crisis and war. The United States and allies "could lose," in the words of the National Defense Strategy. Or they could win — but in a heavy-handed manner that only sows the seeds of resentment and further conflict.³⁶⁶ Third, without such a U.S. theory, the United States may be inefficient and/or ineffective at mobilizing competitive responses to multi-domain strategic in the Asia-Pacific. And fourth, without such a U.S. theory, leaders in allied countries could choose independence and proliferation rather than continued reliance on the United States as guarantor of their security.³⁶⁷

From the perspective of U.S. deterrence strategy, the central question about U.S. strategy today is about the credibility of the U.S. promise to defend its allies. The 2018 NDS states a strong commitment, though the credibility could be seen as circumscribed by an environment

³⁶⁴ Brad Roberts, "On the Need for a Blue Theory of Victory," *War on the Rocks*, September 17, 2020, <https://warontherocks.com/2020/09/on-the-need-for-a-blue-theory-of-victory/>.

³⁶⁵ Ibid.

³⁶⁶ Ibid.

³⁶⁷ Ibid.

clouded by strategic vertigo, accompanied by political, financial, and bureaucratic, among other, obstacles, addressing crises of the moment, while the current conventional deterrence structure in Asia Pacific slides further into outmodedness. The U.S. Navy lacks a coherent strategy, a theory of victory, to confront the compelling threats of today and into the foreseeable future.³⁶⁸

Robust U.S. forward posture will help make a deterrence-by-denial approach viable by providing an in-place force that can respond rapidly to attacks with limited or no warning, helping to offset the United States' initial time-distance disadvantage.³⁶⁹ Such a force enhances deterrence by credibly demonstrating to CCP leadership that victory in a conflict will not come quickly, easily, or cheaply—and possibly not at all—while signaling to both friends and potential foes that any aggressor must contend with U.S. forces from day one of the conflict. If deterrence fails, U.S. forward-postured forces, fighting alongside allies and partners, can serve to blunt an adversary's aggression by degrading and delaying attacks and denying the rapid achievement of their objectives, thereby buying time for badly needed U.S. and allied reinforcements to arrive.³⁷⁰

This is an ideal policy goal. It is the hope of many that this will be achieved with great effect to maintain conventional general deterrence. Notwithstanding the possibility of timely

³⁶⁸ Sam LaGrone, "Navy Lacks 'Clear Theory of Victory' Needed to Build New Fleet, Experts Tell House Panel," *USNI News* (blog), June 4, 2020, <https://news.usni.org/2020/06/04/navy-lacks-clear-theory-of-victory-needed-to-build-new-fleet-experts-tell-house-panel>.

Christopher Dougherty, "Gradually and Then Suddenly: Explaining the Navy's Strategic Bankruptcy," *War on the Rocks*, June 30, 2021, <https://warontherocks.com/2021/06/gradually-and-then-suddenly-explaining-the-navys-strategic-bankruptcy/>.

³⁶⁹ This is the role envisioned for the blunt layer of the Global Operating Model articulated in Department of Defense, Summary of the 2018 National Defense Strategy of the United States of America, 7, <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.

Billy Fabian et al., *Strengthening the Defense of NATO's Eastern Frontier*, (Washington, DC: Center for Strategic and Budgetary Assessments, 2019), 1.

³⁷⁰ Billy Fabian, "Overcoming the Tyranny of Time: The Role of U.S. Forward Posture in Deterrence and Defense," Center for a New American Security, September 21, 2020, <https://www.cnas.org/publications/commentary/overcoming-the-tyranny-of-time-the-role-of-u-s-forward-posture-in-deterrence-and-defense>.

Elbridge Colby, "How to Win America's Next War," *Foreign Policy*, May 5, 2019, <https://foreignpolicy.com/2019/05/05/how-to-win-americas-next-war-china-russia-military-infrastructure/>; Billy Fabian et al., *Strengthening the Defense of NATO's Eastern Frontier*, (Washington, DC: Center for Strategic and Budgetary Assessments, 2019), 14–17.

U.S. reinforcements, conventional conflict outcomes are likely to burden U.S. policymakers with the question to escalate or capitulate. Yet there is no guarantee that this will be accomplished. What then after a conventional general deterrence failure? This is the starting point of thinking through the possibilities of what may come. The lack of a coherent U.S. theory of victory is a disturbing development which augments levels of miscalculation if general deterrence fails.

Escalation could occur by nuclear means. Nuclear war is not an impossible or implausible outcome, however much there is a universal consensus which aspires to precisely this. Both tactical and strategic nuclear weapons have a central role to play in a Taiwan conflict: to discourage asymmetric escalation from either power losing conventionally. A U.S. theory of victory must account for the escalation potential and strategies of China. It must also account for the particular roles of nuclear weapons in their strategies to deny, coerce, deter, and defeat their adversaries.³⁷¹

The United States must expect that nuclear weapons would play a role in regional wars against China. Nuclear weapons are likely to be used for coercion, blackmail, brinksmanship, and possible detonation.³⁷² Either party may be expected to explicitly use nuclear weapons – whichever power that is losing conventionally, thereby achieving an array of objectives such as equaling the field, demonstrating decisive resolve; all to showcase a higher LUD than that of the opponent.

CCP has defined their conflict with the United States in essentially zero-sum terms. As a revisionist power, CCP seeks to unmake the U.S.- backed regional security order and to make a new order aligned with CCP preferences. CCP success in doing so would have far-reaching

³⁷¹ Brad Roberts, *Livermore Papers on Global Security No. 7: On Theories of Victory, Red and Blue*, (Livermore, California: Lawrence Livermore National Laboratory Center for Global Security Research, June 2020), <https://cgsr.llnl.gov/content/assets/docs/CGSR-LivermorePaper7.pdf>

³⁷² Ibid.

consequences beyond the local balance of force. The stake of the United States and its allies in a Taiwan conflict also demands a commensurate response.

U.S. policymakers must think deeply about a theory of victory in a war against the PRC over Taiwan. If they take this event as a legitimate possibility, not beyond the scope of reason, then the U.S. will be on the right path toward understanding where its nuclear threshold and level of unacceptable damage is located. Once this is realized, the U.S. can proceed to engage in poised, decisive communications and actions, signaled to the PRC and allies/partners alike, which would increase the confidence in allies, and strengthen general deterrence against the PRC to maintain stability. The lack of a coherent U.S. theory of victory only serves to muddle the conversation around priorities and contingency preparation, alongside encouraging the CCP to take unseemly risks leading to strategic miscalculations, which would hurt not only the region and hence world, but also, through CCP actions, heap great strain and internal PRC volatility.

The Increased Risk of Miscalculation from Strategic Ambiguity

If the U.S. is to continue the policy of strategic ambiguity after it has lost its usefulness, then the U.S. will have also surrendered its objectivity in the region. What is meant by this is that sufficient local military power is the only conventional method with which to successfully enforce deterrence. This is by forcefully signaling either the inability of or the great costs to be borne by the CCP if it decides to invade Taiwan. The balance of local military power is shifting toward the CCP with little opportunity for reversal. China knows this. However noble the goals of reshoring the balance in U.S. favor, this is unlikely to come about within the decade, and likely longer. Local military power is critical for strategic ambiguity to be effective. If the U.S. does not recognize this trend and insists upon continuing the policy, then the U.S. will have deliberately discarded one of the two critical elements of successful deterrence. The U.S. must

now rely on the other: perceptions. Bluffing is a precarious game and one which could very well be lead to disastrous results for central U.S. concerns in Asia. This may lead to a loss of a credible American deterrent and may induce the CCP to erroneously believe a Taiwan invasion can be successfully played.

Central U.S. interests will be much better served by recognizing that strategic ambiguity can no longer be counted to ensure “peaceful reunification.” Such a war over Taiwan will invariably involve the U.S. because of the great national stakes. However, successful deterrence can be regained if credibility is restored. Credibility comes not through threats of punishment or through bluffing to uphold a desired position which the power dynamic does not support. Credibility results in clearly and effectively conveying the likelihood of what is to occur given an invasion and the likeliness of such an invasion failing terribly, with all the catastrophic consequences heaped squarely upon the doorstep of the CCP. The effectiveness of such deterrence rests in the great vertical and horizontal escalation which is inevitable to be unleashed. But before we examine the terrors of such an outcome and probe its prospects for successful deterrence, we must first assess the miscalculations of both the U.S. and CCP in misunderstanding the importance of the geography of Taiwan to central U.S. concerns.

Miscalculating Taiwan’s Importance to U.S. Access to Asia

Presently, U.S. policymakers might not understand or readily see the value of Taiwan remaining in its present state, particularly because the alternative: if Taiwan is controlled by China, is not often considered. This article details that possibility.

For an attempted invasion of Taiwan, the possibility of its territorial loss and its impacts would fundamentally alter the U.S. ability to defend allies, itself, and economic interests in region. This is shown through the value the island of Taiwan would give to China to conduct

submarine warfare – an actively hostile environment for allied and U.S. navies but also for commercial shipping from these countries. Submarine warfare is a much thornier security problem and arguably a more potent method of “A2/AD” than layered missile networks, on account of its stealth characteristics augmenting deniability. Rather than tracked missiles launched from mainland sites in open air, naval or commercial vessels would begin to sink from mysterious causes (or be threatened by the possibility, to coerce behavior). Placement of undersea hydrophones and other ISR devices by China would only further solidify Chinese undersea control. This aligns with the CCP policy of incremental infringement while plausible public deniability is afforded. What could result is a de facto closure of U.S. access to the South and East China Seas or beyond – the lifeblood of East Asia.

Control of Taiwan would give China a much greater submarine advantage than it now enjoys. What this argument implies is that the U.S. deterrence posture reflects a lot lower nuclear threshold and a lot higher level of unacceptable damage than China now realizes. This then implies that there is far greater potential for misinformation, misperception, and accident than perhaps either China or the United States realize. Central matters of security are at stake for the United States in its global submarine mission.

Faced with great loss, this vivifies McNamara’s misinformation, miscalculation and misjudgment. Looking at this critically through bounded deterrence, the U.S. likely possesses a lower NT and higher LUD than the U.S. or China currently realizes. Taiwan is a greater flashpoint than conventionally thought.

A U.S. Defense Policy Reformulation: Realist Arbitration

The fundamental linchpin of the success of strategic ambiguity was the superiority in the local balance of U.S. military force.³⁷³ This is eroding as explicated thoroughly in Chapter II. Because of this, one side of the strategic ambiguity formula is *directly* impacted: namely, that the PRC is unlikely to be convinced that deterrence by denial can work, coupled with the observation that the U.S. cannot assure itself that its local forces can credibly (in addition to effectively) maintain the decades-long general deterrence environment. In other words, the longstanding peace is being threatened in the present, if not accelerating in its unraveling.

Yet, if the U.S. continues its insistence on maintaining the doctrine, the second part of the deterrence formula will also be impacted. There will be great temptation in the U.S. to “double down” on its eroding credibility (caused by the change in the local balance) in an effort to restore it. This is otherwise known as ‘bluffing.’ We already see this occurring. Tinkering at the force structure margins may occur, but this event, paradoxically, will ensure the failure of the second part of the formula: restraining the Taiwanese desire for independence. Notwithstanding the inherent dangers in bluffing without sufficient power, this attempt to rescue U.S. credibility through public statements of support for Taiwan dooms the worthy goal of the original doctrine: to avoid the costs of a spiraling regional war, conventional or otherwise.

The problem is that strategic ambiguity and nuclear deterrence are at odds. They cannot convincingly be reconciled to the advantage of the employer of this doctrine. For example, if the deterrer is facing slippage in the local balance of military power, strategic ambiguity may look to an increasingly powerful (in local terms) opponent as a threadbare effort on the part of the would-be deterrer to cover up its military weakness. The opponent may simply become more convinced than ever that the deterrer is bluffing and will not use force to back up its deterrence

³⁷³ Please see *Appendix I* for a review on the deterrence literature.

claims. Strategic ambiguity may look like an attempt to use psychology as a substitute for increasingly unlikely military action. This confusion over the meaning of strategic ambiguity may be interpreted by a potential aggressor as an attempt to cover up an unwillingness or inability to defend. In observing this, the PRC may be tempted to challenge the deterrent by military action. That is why a replacement of strategic ambiguity is necessary.

The only method, as far as we are aware, to rescue the noble goals set out in the doctrine of strategic ambiguity, is to replace it wholesale with a policy of *realist arbitration*.

The “realist” formulation pertains directly to PRC. This is necessary because with the diminishing local balance of military power vis-à-vis PRC, ambiguity has failed to achieve its PRC-focused objective. It must be replaced with a hard-nosed assessment pointed directly towards the concerns of PRC leadership. Namely, that a Taiwan invasion is likely to cross the U.S. nuclear threshold, stripping bare the limits of force escalation, while simultaneously escalating the conflict horizontally; both resulting in a global and unwinnable war for the PRC. The means would have then moved beyond relying solely upon locally positioned conventional capabilities. This is in addition to the convincing argument of Chapter VII that offers a likelihood of extreme burden passing of the U.S. to the PRC, in similar fashion as the Cuban crisis, so as to exert the greatest pressure in cessation of a regional nuclear war.

It is important here to note that the above is not a threat of punishment, or a bluff. It is what *is likely to occur* if PRC acts on Taiwan. Without raising force use to a high level, China cannot take Taiwan militarily. But by raising force use to a high level, China will unleash both types of escalation. An unintended world war could be the result. This is a somber statement. The specter of regional nuclear war, though vanished since the waning days of the Cold War, has reemerged.

The second formulation must also undergo change. How can the U.S. retain ambiguity towards Taiwan's desire for independence, when the U.S. may mistakenly appear as a benefactor of Taiwan given the likely U.S. response to invasion? To minimize the confusion of Taiwan in such an arrangement, it is necessary for the U.S. to set the bounds of agreement, or, in more pointed language, diplomatically maneuver "against" Taiwan's desire for independence.

The United States is acutely aware of the danger of being dragged into a major war with China over misunderstandings involving Taiwan. Taiwan must not assume that it need not arm itself more seriously and need not defend itself to its fullest abilities. It must not assume that the United States will under any and all circumstances come to Taiwan's rescue. The United States does not want Taiwan, by ill-advised word or action, to create a situation in which the United States is dragged into an avoidable crisis as the only means of guaranteeing Taiwan's security. Taiwan must understand its own policies have consequences which will be visited upon itself, rightly or wrongly. These are the makings of a prudent actor.

Taiwan must uphold its agreements that it will not declare such independence. But enforcement of this agreement is necessary. To declare such would absolve the U.S. of responsibility to act on behalf of Taiwan, as a means of retaining the original quality of political deterrence. This reiteration of Taiwanese independence triggering absolution of U.S. responsibility should be emphasized. Preferred methods would be for Taiwan to be unaware of the first formulation between U.S. and PRC. Yet, if Taiwan was to be made aware of these deliberations, this ought not be cause for Taiwan to risk its position by declaring independence. Because to do so would simultaneously strip Taiwan of its means to achieve independence. This would be a much greater cost for Taiwan than the cost, if any, for the U.S. It may appear that the

Taiwanese population cares more about its political autonomy than an unrealistic blank check from the United States.

Taiwan may be tempted to declare irrespective of this consideration, erroneously believing that the U.S. may be bluffing about such absolution. It is indeed not. The driving U.S. logic behind a defense of Taiwan against an unprovoked PRC invasion is that the price of the U.S. not honoring its commitment to peaceful reunification would be truly great with many attendant and unknown effects of which will last decades. The U.S. would absorb all of the costs to world order as a result.

However, a Taiwan declaration of independence nullifies any responsibility of the U.S. to honor its commitment to peaceful reunification, while also keeping U.S. credibility for protecting and defending allies intact while furthering its interests in region and retaining its network of allies. This is because Taiwan would have first abrogated its own obligations to never declare independence. This is necessary not only as diplomatic recognition, but as matter in course for Taiwan to dash its delusions of finding a great power patron in the U.S.

In short, Taiwan cannot convincingly sacrifice a central concern – *the* central concern for itself, one at the heart of its territorial and political future – to goad the U.S. into defending Taiwan. It is true that there is U.S. security interest in Taiwan's defense, but its concerns rank on a lower, but nonetheless important, tranche than the fundamental way of life at stake of the Taiwanese people over Taiwan's future. This is a decision that is very ably to be made by its leaders. To do otherwise would not only be the height of foolishness, but the costs would so outweigh the gains for Taiwan that it cannot be successfully bluffed, either, in an attempt to drag the U.S. into a defense made on Taiwan's terms. Attempting to bluff against its interests will fail. This must be made clear to Taiwan.

The U.S. is an *arbiter* in this dispute, not a benefactor. Arbitration simultaneously encompasses potential defensive military action against PRC and diplomatic maneuvering “against” Taiwan.

A compelling theme in this “realist arbitration” arrangement is that PRC or Taiwan knowledge of one formulation is not dependent on the other. Simply put, knowledge of both formulations beyond the target audience does not affect the formulations’ intended outcomes. Taiwan knowing of the great vertical and horizontal escalation of a PRC invasion does not rationally induce it to declare independence, as that same act of declaration affects the U.S. decision to escalate. To be precise, that declaration alone strips the ability to fulfill it. The mechanism of doing so is credible and effective as described above. The inverse of this example is likewise true.

This “non-dependency” does not exist in the present arrangement of strategic ambiguity. Currently, one U.S. public statement is interpreted by different audiences differently and in a manner not consistent with the goals of U.S. foreign policy. The on-the-ground dynamics have changed, which now makes strategic ambiguity itself an ill fit. Though what strategic ambiguity achieved in the past – its goal – remains the same.

We believe a transition to *realist arbitration* can and should occur to arrest the deteriorating deterrence trends. This involves explicating, in detail, the erroneous thinking that China could take Taiwan and keep the war local and with consistent Chinese advantage.

- 1) China misunderstands that an unprovoked Taiwan war is likely to cross the U.S. nuclear threshold, especially if the U.S. begins to sustain irreversible conventional losses of locally stationed warships. The force escalation may quickly skyrocket from the conventional to a regional nuclear war.

- 2) China misunderstands that there is little possibility that an unprovoked Taiwan war will stay local. At a minimum, it will embroil the region and U.S. allies where U.S. warships are stationed. It is also likely to involve U.K. and French naval assets. Quickly, the war has expanded globally.
- 3) Both vertical and horizontal escalation is likely to occur, and China will be unable to control it. This includes U.S. naval blockades of critical chokepoints for China to successfully prosecute such a war. These are the Malacca, Sunda, Lombok straits, and even Strait of Hormuz.
- 4) The act of initiating such a war will simultaneously strip China of the means to achieve its end. In light of this, China must be aware of these grave miscalculations, lest the world plunges into a Cuban missile crisis in East Asia. Speculation as to the result is hazardous.

ACHIEVING ENDS – MEANS: U.S. CONDUCT OF MODERN BATTLE
U.S. armed forces specialize in what the Pentagon calls “network-centric warfare.”³⁷⁴

This approach means taking advantage of information technology to radically enhance the effectiveness of "C4ISR" -- command, control, communications, computers, intelligence, surveillance, and reconnaissance. The U.S. military operates a bewildering array of sensors to cut through the fog of war.³⁷⁵ These sensors and networked surveillance operates via numerous

³⁷⁴ U.S. Library of Congress, Congressional Research Service, Network Centric Operations: Background and Oversight Issues for Congress, by Clay Wilson, RL32411 (2007), <https://www.everycrsreport.com/reports/RL32411.html>.

Nathan Strout, “Pentagon Seeks Largest Net-Centric Warfare Budget in a Decade,” C4ISRNet, February 10, 2020, <https://www.c4isrnet.com/battlefield-tech/2020/02/11/pentagon-seeks-largest-net-centric-warfare-budget-in-a-decade/>.

³⁷⁵ Max Boot, “The New American Way of War,” *Foreign Affairs*, January 28, 2009, <https://www.foreignaffairs.com/articles/united-states/2003-07-01/new-american-way-war>.

orbiting satellites. In great power war, these sensors and communications systems are at risk by way of anti-satellite missiles. This also leads to great risk of de facto devolution of war execution on local military commanders, a great concern of both the U.S. and USSR during the Cuban missile crisis.

In analyzing a U.S. modern “way of battle,”³⁷⁶ insight can be found in John Lynn as he underscores the prevalence of three related tendencies: “1) abhorrence of U.S. casualties, 2) confidence in military technology to minimize U.S. losses, and 3) concern with exit strategies.”³⁷⁷ Colin S. Gray concurs, while illustrating a taxonomy of 13 elements which comprise an American way of battle.³⁷⁸

These are:³⁷⁹

³⁷⁶ For further discussion, please see the seminal analysis, Russell F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (1977); Thomas G. Mahnken, *Technology and the American way of war* (2008); and Eliot Cohen, *Conquered into Liberty: Two Centuries of Battles Along the Great Warpath That Made the American Way of War* (2011).

For an insightful read, please view Antulio J. Echevarria II, *Reconsidering the American Way of War: US Military Practice from the Revolution to Afghanistan* (2014).

³⁷⁷ John A. Lynn, *Battle: A History of Combat and Culture* (Boulder, CO: Westview Press, 2003), 321.

³⁷⁸ Colin S. Gray, “Irregular Enemies and the Essence of Strategy: Can the American Way of War Adapt?” (Carlisle, PA: Strategic Studies Institute, U.S. Army War College, 2006), 30.

³⁷⁹ For greater detail of these characteristics:

Apolitical – Americans often view war as simply war in a tactical sense to achieve victory and not a Clausewitzian instrument to achieve political effect or with regard to the conduct of a lasting peace.

Astrategic – Americans often overlook how military power translates to policy goals, leaving war fighting as divorced from its impact on a future peace and the attendant politics. This leaves war fighting as an unintegrated or “stovepiped” activity of statecraft.

Ahistorical – Rooted in a relatively new and idealistic American culture, U.S. defense decisionmakers are not inclined to study history and its relevance on contemporary decisions, making surprises more likely.

Problem-solving and Optimistic – An optimistic American culture where there is always a solution to problems which can be solved and conditions, which are unsolvable, and must be tolerated.

Culturally-challenged – Based on American public ideology and reasons of morality, there is a persistent difficulty in comprehending foreign cultural behaviors and attitudes, resulting in lack of critical self-knowledge of the enemy.

Technology-dependent – The culture of the American military prefers technological solutions over other approaches, which helps deny other contexts in war, such as the social or societal environment in which they operate. The misuse or overuse of technology – how the American military interacts with technology – is where problems may arise.

Focus on Firepower – this focus shapes perceptions within the American military that the primary goal is to tactically service targets, at the expense of a holistic view of war within a cultural or sociological context intent on producing political effect for a lasting post-war peace.

1. Apolitical
2. Astrategic
3. Ahistorical
4. Problem-solving and Optimistic
5. Culturally-challenged
6. Technology-dependent
7. Focus on Firepower
8. Large-scale
9. Aggressive and Offensive
10. Profoundly Regular
11. Impatient
12. Logistically Excellent
13. Highly Sensitive to Casualties

These 13 traits of the U.S. way of battle often lead to the strong American preference for decisive wars and unconditional enemy surrender. These traits at times lead to wars begun without clear objectives; difficulties in sustaining domestic and international coalitions; and the differences between winning wars at the operational level and winning the peace that follows. It further alludes to vulnerabilities in technology dependence and institutional inertia of fighting symmetrical wars rather than enemies with irregular advantages. The American public has a great say in how the U.S. fights its wars, with the general tenor being an impatient timeline that abhors significant American casualties. It also illustrates the difficulty of bringing an enemy via escalation to a “culminating point” where they choose to no longer accept the costs and risks of

Large-scale – As a country amply endowed with resources, America tends to excel at, and prefers, conflict conducted by equipping and mobilizing efforts reflecting its levels of great wealth.

Aggressive and Offensive – As geopolitically insular, with a culture focused on large-scale firepower and material wealth, America is prone towards an aggressive and offensive conduct of war to achieve victory quickly.

Profoundly Regular – As institutions, the American armed forces always prepare, to the near exclusion of other types of warfare, against a symmetrical regular enemy.

Impatient – As an ideological society, America approaches war to be concluded as decisively and rapidly as possible. This at times grates against the operational necessities for victory.

Logistically Excellent – To be able to wage war effectively for an insular geostrategic location, America must be, and is, effective at marshaling logistics to support warfighting. This can result in the downside of a costly and expansive logistical tail and insulation of the American fighting soldier from local and cultural context.

Highly Sensitive to Casualties – The American armed forces are often thought of as too small for the breadth and depth of global responsibilities. Any loss of soldier requires expensive training and retaining for replacement. In addition, American society has increasingly expects minimal American casualties in war, which may help condition sensitivity to reduce such amounts.

continued war, as escalation may only deepen the enemy's resolve. In Fred Iklé's famous short hand, "those with the power to start a war often find that they lack the power to stop it."³⁸⁰

These prevailing beliefs contribute to the paucity of sustained, systematic thought on the challenges of de-escalation and war termination in modern strategic conflict.³⁸¹ Analysts generally struggle to accurately appraise the likelihood of regional nuclear war and can be seen to overlook rational decision-making – and even decisions made under conditional nonrationality – when confronted with the specter of regional nuclear war, which is often seen as unpredictable and unthinkable. This glaring lack of serious contemporary scholarship dedicated to exploring decision points and broad contours within immediate nuclear deterrence over the world's most dangerous flashpoint is shocking.

Strategist H.H. Gaffney describes the American way of war as "characterized by deliberate, sometimes agonizing, decision-making, careful planning, assembly and movement of overwhelming forces, the use of a combination of air and ground forces, joint and combined, applied with precision, especially by professional, well-trained military personnel."³⁸²

The analyses of Gaffney contribute to an American focus on the tactical win, which lends importance to quick resolution of a conflict and the quick return of U.S. forces back to their home bases, notwithstanding the neglected political objectives and the duration of American political pressures of a post-war future. War is not considered as a political instrument, in stark contrast to Clausewitz's writings.

³⁸⁰ Brian Radzinsky et al., *De-Escalation and War Termination in Multi-Domain Regional Wars: Workshop Summary*, (Livermore, California: Lawrence Livermore National Laboratory, Center for Global Security Research, May 2021), 1-2, https://cgsr.llnl.gov/content/assets/docs/DEWT_Workshop_Summary.pdf.

³⁸¹ Brian Radzinsky et al., "De-escalation and War Termination in Multi-Domain Regional Wars" (Livermore, CA: Center for Global Security Research Lawrence Livermore National Laboratory, 2021), 1.

³⁸² H.H. Gaffney, "The American Way of War through 2020" (Alexandria, VA: Center for Strategic Studies, CNA Corporation, 2006), 3.

Allies and partners are a major source of the United States' strength. Forward posture consisting of cohesive and integrated forces drawn from the United States, allies, and partners will be a formidable and effective deterrent. As such, the United States should make every effort to approach forward posture as a combined endeavor.³⁸³ Yet there is no guarantee this is to be achieved, however likely or not it may be.

The United States has a clear overmatch, notwithstanding CCP focus on bolstering its nuclear forces, against China in nuclear weapons capability; however, as Admiral Davidson, Thomas Shugart, and Javier Gonzalez have cautioned, this overmatch does not extend to the most important conventional warfighting capabilities in the Western Pacific. This is critical because the strategy further states that the United States “must convince adversaries that we can and will defeat them — not just punish them.”³⁸⁴ This is a beginning to think through a successful U.S. theory of victory. However, the lack of forethought risks poor execution of decision making regardless of overmatch. Further, the U.S. cannot rely upon its long logistical tail to sustain a conventional war in the event of a Taiwan invasion.³⁸⁵ This dearth of forethought grows the risk of miscalculation, yet there are multiple other dimensions which increase the risks of unintentional war, by analyzing the strategic parameters of the CCP in the next section.

³⁸³ Billy Fabian, “Overcoming the Tyranny of Time: The Role of U.S. Forward Posture in Deterrence and Defense,” Center for a New American Security, September 21, 2020, <https://www.cnas.org/publications/commentary/overcoming-the-tyranny-of-time-the-role-of-u-s-forward-posture-in-deterrence-and-defense>.

³⁸⁴ United States Government, *National Security Strategy of the United States of America* (Washington, DC: The White House, 2017), 28, <https://trumpwhitehouse.archives.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf>.

³⁸⁵ Ryo Nakamura, “U.S. lacks Asian logistics support for armed conflict: Pentagon,” Nikkei Asia, May 4, 2022, <https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/U.S.-lacks-Asian-logistics-support-for-armed-conflict-Pentagon>; Timothy A. Walton et al., *Sustaining the Fight: Resilient Maritime Logistics for a New Era* (Washington, DC: Center for Strategic and Budgetary Assessments, 2019); Conrad Crane, “Too Fragile to Fight: Could the U.S. Military Withstand a War of Attrition?” *War on the Rocks*, May 9, 2022.

CHAPTER V

CHINESE MISCALCULATION PARAMETERS

The PRC also exhibits misunderstandings of a future Taiwan conflict which are prone to grow the likelihood of miscalculation of the PRC regarding U.S. involvement and actions. The CCP view – evolving as it is – of Taiwan and the stated ends of such a policy are offered as a benchmark to view these miscalculation dimensions. From this, we look at both the erroneous assumptions of both a strategic and tactical nature which are likely to embroil the CCP in a Taiwan conflict which differs widely from initial war planning estimates.

CCP Taiwan Policy – Ends

China seeks to build a regional and international order that serves its needs of enhancing security, facilitating growth, and elevating its influence to a level commensurate with its status. This requires China to reduce strategic vulnerabilities, especially in the maritime regions, and provides a primary strategic driver for China's pursuit of control over Taiwan and the East and South China Seas. China expresses the strategic value and importance of these national interests through the concept of core interests.³⁸⁶

Similarly, China and the United States have divergent views about the governance of cyberspace.³⁸⁷ Many disputes between China and the United States boil down to differences in the status, leadership, and influence of the two countries on a broad array of issues seen as key to

³⁸⁶ Bonds, Timothy M., Joel B. Predd, Timothy R. Heath, Michael S. Chase, Michael Johnson, Michael J. Lostumbo, James Bonomo, Muharrem Mane, and Paul S. Steinberg, *What Role Can Land-Based, Multi-Domain Anti-Access/Area Denial Forces Play in Deterring or Defeating Aggression?*. Santa Monica, CA: RAND Corporation, 2017. https://www.rand.org/pubs/research_reports/RR1820.html. Also available in print form. For a further discussion of PRC rise, the drivers, and attendant impacts for the international system and US, please see David M. Lampton, *The Three Faces of Chinese Power: Might, Money, and Minds* (Berkeley: University of California Press, 2008); and David L. Shambaugh, *China Goes Global: The Partial Power* (Oxford; New York: Oxford University Press, 2013).

³⁸⁷ Kimberly Hsu and Craig Murray, *China and International Law in Cyber Space*, Washington, D.C.: U.S.-China Economic and Security Review Commission, May 6, 2014.

their security and development. The most salient of these disputes centers on the question of the political and security order of Asia. As its power grows, China is seeking to revise or modify elements of the regional security order to better accord with its interests. The recent push by China to promote a “new Asian security concept” reflects this imperative.³⁸⁸ The United States, in turn, has taken action to shore up its influence, status, and leadership in Asia and counter China’s challenge, as manifested in the “rebalance to Asia,” AUKUS developments, and cementing of the “Quad” as a regional security architecture.³⁸⁹

Taiwan has long been viewed by China as the most central issue for its national security. It was a foundational issue at the founding of U.S. – PRC relations.³⁹⁰ Former State Councilor Dai Bingguo stated in a 2010 speech: “The Taiwan question constitutes China’s core interest concerning its unification and territorial integrity, dear to the heart of the 1.3 billion Chinese citizens and the whole Chinese nation.”³⁹¹

More recently, Xi Jinping at the 19th Party Congress in 2017 made at the time the most assertive stance on Taiwan’s independence than his predecessors when faced with similar circumstances.

“We will resolutely uphold national sovereignty and territorial integrity and will never tolerate a repeat of the historical tragedy of a divided country. All activities of splitting the motherland will be resolutely opposed by all the Chinese people. We have firm will, full confidence, and sufficient capability to defeat any form of Taiwan independence secession plot. We will never allow any person, any organization, or any political party to split any part of the Chinese territory from China at any time or in any form.”³⁹²

³⁸⁸ Xi Jinping, “New Asian Security Concept for New Progress in Security Cooperation,” remarks at the Fourth Summit of the Conference on Interaction and Confidence Building Measures in Asia, Shanghai, May 21, 2014.

³⁸⁹ Timothy R. Heath, “China and the U.S. Alliance System,” *The Diplomat*, June 11, 2014.

³⁹⁰ Government of the United States and Government of the PRC, “Key U.S. Foreign Policy Documents for the Region,” American Institute in Taiwan, accessed April 25, 2022, <https://www.ait.org.tw/our-relationship/policy-history/key-u-s-foreign-policy-documents-region/>.

³⁹¹ Dai Bingguo, “Adhere to the Path of Peaceful Development,” Ministry of Foreign Affairs, People’s Republic of China, December 6, 2010.

³⁹² Richard C. Bush, What Xi Jinping said about Taiwan at the 19th Party Congress,” *Brookings Institution* (blog), October 19, 2017, <https://www.brookings.edu/blog/order-from-chaos/2017/10/19/what-xi-jinping-said-about-taiwan-at-the-19th-party-congress/>.

Beijing's preferred approach is "peaceful unification." Nonetheless, China continues to strengthen its ability to use force against Taiwan. Taiwan's MND has stated that China's goal is to ensure that the PLA will be able to use force against Taiwan by 2020, if called on to do so by Chinese Communist Party leaders.³⁹³ Even if China does not use force, improving its ability to do so strengthens its bargaining leverage and threatens to erode Taiwan's ability to protect its interests as it engages with the mainland through the decade. The legal basis for Beijing's position on unification with Taiwan is China's "anti-secession law" passed in 2005 during a much more turbulent period in cross-Strait relations. According to the law, China would use force under the following conditions:³⁹⁴

In the event that "Taiwan independence" secessionist forces should act under any name or by any means to cause the fact of Taiwan's secession from China, or that major incidents entailing Taiwan's secession from China should occur, or that possibilities for a peaceful unification should be completely exhausted, the state shall employ non-peaceful means and other necessary measures to protect China's sovereignty and territorial integrity.³⁹⁵

The PRC's strategy aims to achieve "the great rejuvenation of the Chinese nation" by 2049 to match or surpass U.S. global influence and power, displace U.S. alliances and security partnerships in the Indo-Pacific region, and revise the international order to be more advantageous to Beijing's authoritarian system and national interests. This strategy can be

³⁹³ Ministry of National Defense of the People's Republic of China, 2013 Republic of China National Defense Report, Beijing, October 8, 2013.

³⁹⁴ Timothy M. Bonds, Joel B. Predd, Timothy R. Heath, Michael S. Chase, Michael Johnson, Michael J. Lostumbo, James Bonomo, Muharrem Mane, and Paul S. Steinberg, *What Role Can Land-Based, Multi-Domain Anti-Access/Area Denial Forces Play in Deterring or Defeating Aggression?*. Santa Monica, CA: RAND Corporation, 2017, 32, https://www.rand.org/pubs/research_reports/RR1820.html. Also available in print form.

³⁹⁵ 10th National People's Congress and Chinese People's Political Consultative Conference, 3rd session, Anti-Secession Law, Beijing, March 14, 2005.

characterized as a determined pursuit of far-ranging efforts to expand the PRC's national power.³⁹⁶

To understand how Xi's policy shares continuity with the past, it is important to recognize that for decades, China's leaders have been explicit in open sources that they never expected "hide capabilities and bide time" to be permanent.³⁹⁷ Deng, Jiang, and Hu's own speeches all conceded that adherence to the strategy was based on China's assessment of the "international balance of power" and (implicitly) that it would therefore one day expire.³⁹⁸

"National rejuvenation" has a long lineage that precedes Xi and that it has always been at the center of the Party's ambitions. As the scholar Zheng Wang notes: "the explicit goal of rejuvenation goes at least as far back as Sun Yet-Sen, and has been invoked by almost every modern Chinese leader from Chiang Kai-Shek to Jiang Zemin and Hu Jintao." While the term has become a prominent feature of Chinese propaganda under Xi, it has never been far from the focus of the Party.³⁹⁹

Shifts seem to have been occurring in CCP foreign policy, such as the speech of General Ma Xiaotian, Deputy Chief of the General Staff of the PLA, to the China Institute for International Strategic Studies, a PLA-affiliated think tank in Beijing. In this speech, as well as

³⁹⁶ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2021*, (Washington, DC: Department of Defense, 2021), 1, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>.

³⁹⁷ Rush Doshi, "Hu's to Blame for China's Foreign Assertiveness?," *Brookings Institution* (blog), January 22, 2019, <https://www.brookings.edu/articles/hus-to-blame-for-chinas-foreign-assertiveness/>.

³⁹⁸ For example, see Jiang Zemin's 9th Ambassadorial Conference Address in Jiang Zemin Selected Works, Vol 2 2006 as well as Hu's remarks at a 2003 diplomatic symposium Hu Jintao Selected Works, Vol 2, 2016.

³⁹⁹ Rush Doshi, "Hu's to Blame for China's Foreign Assertiveness?," *Brookings Institution* (blog), January 22, 2019, <https://www.brookings.edu/articles/hus-to-blame-for-chinas-foreign-assertiveness/>.

other by Xi Jinping, state a more active foreign policy role in the world in order to achieve CCP core interests, while maintaining a favorable international environment to do so.⁴⁰⁰

Chinese Prime Minister Premier Li Keqiang dropped the word “peaceful” before “reunification” when discussing Taiwan in his annual work report published in May 2020 for first time in nearly three decades.⁴⁰¹ And President Xi Jinping, speaking to the PLA on 26 May, suggested they should “comprehensively strengthen the training of troops and prepare for war”.⁴⁰²

China’s leaders have consistently framed their efforts as seeking to “restore” China to a preeminent place in the world after enduring what the Party characterizes as China’s “century of humiliation” beginning in the 19th century as the Qing Dynasty began to disintegrate and lasting until the founding of the PRC in 1949. While the Party’s exact articulation of this goal as “the great rejuvenation of the Chinese nation” first emerged in the late 1980s, the Party has championed the cause of rebuilding China since the 1920s. General Secretary Xi Jinping frequently points to the CCP’s steadfastness to the cause of national rejuvenation and describes it as the Party’s “original aspiration.”⁴⁰³

⁴⁰⁰ M. Taylor Fravel, “Revising Deng’s Foreign Policy,” *The Diplomat*, January 17, 2012, <https://thediplomat.com/2012/01/revising-dengs-foreign-policy-2/>.

⁴⁰¹ Chun Han Wong, “China Breaks With Taiwan Precedent, Omitting Call for ‘Peaceful’ Policy,” *Wall Street Journal*, May 22, 2020, <https://www.wsj.com/articles/china-breaks-with-taiwan-precedent-omitting-call-for-peaceful-unification-11590151372>.

News Staff, “China Removes Phrase ‘Peaceful Reunification’ from Taiwan Document,” *News.Com.Au* — *Australia’s Leading News Site*, May 27, 2020, <https://www.news.com.au/technology/innovation/military/this-sends-a-clear-signal-china-removes-phrase-peaceful-reunification-from-taiwan-document/news-story/b8c13ffa38b17eb2579f2f88691a6b94>.

⁴⁰² Sutirtho Patranobis, “‘Prepare for War’: China’s Xi Jinping Tells Army to Thwart Coronavirus Impact on National Security,” *Hindustan Times*, May 26, 2020, <https://www.hindustantimes.com/world-news/prepare-for-war-china-s-xi-jinping-tells-army-to-thwart-coronavirus-impact-on-national-security/story-dft3GPJWBXTPhzEASBna0L.html>.

⁴⁰³ U.S. Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2020*, (Washington, DC: Department of Defense, 2020), 4, <https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF>.

The PRC has characterized China's view of strategic competition in terms of a rivalry among powerful nation states, as well as a clash of opposing ideological systems. Beijing views the United States as increasingly determined to contain the PRC, creating potential obstacles to its strategy. Additionally, the PRC's leaders are increasingly willing to confront the United States and other countries in areas where interest diverge.⁴⁰⁴

As PRC leadership view a divided China as a weak China, they argue that “full reunification”— completing Hong Kong and Macau's integration by the end of 2049—is a fundamental condition of national rejuvenation. Beijing views as an imperative that China field a “world-class” military that can “fight and win” and “resolutely safeguard” the country's sovereignty, security, and development interests.⁴⁰⁵

The Party views aspects of the prevailing rules-based order as constraining the PRC's strategic ambitions and incompatible with its sovereignty, security, and development interests.⁴⁰⁶ To the PRC's leaders, revisions are necessary to accommodate the PRC's development and should reflect the CCP's preferred transformation in the distribution of power to forge an external environment more favorable to the PRC's authoritarian system and national interests.⁴⁰⁷

Chinese leaders regard the U.S. alliance system in Asia as a threat. President Xi Jinping has declared that it is “disadvantageous” for Asia if countries “strengthen military alliances with

⁴⁰⁴ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2021*, (Washington, DC: Department of Defense 2021), 1, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>.

⁴⁰⁵ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2021*, (Washington, DC: Department of Defense 2021), 3, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>.

⁴⁰⁶ Toshi Yoshihara and Jack Bianchi, *Seizing on Weakness Allied Strategy for Competing with China's Globalizing Military*, (Washington, DC: Center for Strategic and Budgetary Assessment, 2021), 15, [https://csbaonline.org/uploads/documents/CSBA8239_\(Seizing_on_Weakness_Report\)_Web.pdf](https://csbaonline.org/uploads/documents/CSBA8239_(Seizing_on_Weakness_Report)_Web.pdf); Roger Cliff, *China's Military Power: Assessing Current and Future Capabilities* (Cambridge: Cambridge University Press, 2015), p. 244.

⁴⁰⁷ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2021*, (Washington, DC: Department of Defense 2021), 3, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>.

third parties.”⁴⁰⁸ Given this declaration, the U.S. policy of “rebalancing” to Asia is clearly a source of concern. Many Chinese observers see the rebalancing policy as aimed at consolidating and strengthening the United States’ regional alliances and enhancing U.S. military power in the western Pacific. Many Chinese national security analysts also view the U.S. military’s development of ASB as aimed squarely at China.⁴⁰⁹

Despite some Chinese scholars’ doubts about the willingness and the ability of U.S. to sustain its focus on Asia given its contentious partisan politics, budget difficulties, and competing priorities, there appears to be a relatively broad consensus that the U.S. poses a serious potential threat to what China views as its most important security interests, even as Chinese officials acknowledge that a cooperative relationship with the United States also remains critical for enabling the country’s rise.⁴¹⁰

Although the PRC publicly advocates for peaceful unification with Taiwan, the PRC has never renounced the use of military force; the circumstances under which the PRC has historically indicated it would consider using force remain ambiguous and have evolved over time.⁴¹¹

⁴⁰⁸ Xinhua, “Xi Jinping’s Remarks at the Fourth Conference on Interaction and Confidence Building Measures,” May 21, 2014a.

⁴⁰⁹ Bonds, Timothy M., Joel B. Predd, Timothy R. Heath, Michael S. Chase, Michael Johnson, Michael J. Lostumbo, James Bonomo, Muharrem Mane, and Paul S. Steinberg, What Role Can Land-Based, Multi-Domain Anti-Access/Area Denial Forces Play in Deterring or Defeating Aggression?. Santa Monica, CA: RAND Corporation, 2017, 21, https://www.rand.org/pubs/research_reports/RR1820.html. Also available in print form. Furthermore, Li Yan stated, “For the Americans have said very clearly that AirSea Battle is mainly directed at anti-access and area denial warfare, and [past U.S. assessments] all show that they believe China is conducting anti-access and area denial warfare.” Quoted in Kathrin Hille, “U.S. Seeks to Calm Beijing Containment Fears,” *Financial Times*, December 8, 2011.

⁴¹⁰ Bonds, Timothy M., Joel B. Predd, Timothy R. Heath, Michael S. Chase, Michael Johnson, Michael J. Lostumbo, James Bonomo, Muharrem Mane, and Paul S. Steinberg, What Role Can Land-Based, Multi-Domain Anti-Access/Area Denial Forces Play in Deterring or Defeating Aggression?. Santa Monica, CA: RAND Corporation, 2017, 21, https://www.rand.org/pubs/research_reports/RR1820.html. Also available in print form.

⁴¹¹ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2021*, (Washington, DC: Department of Defense 2021), 115, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>.

The PRC has a range of options for military campaigns against Taiwan, from an air and maritime blockade to a full-scale amphibious invasion to seize and occupy some or all of Taiwan or its offshore islands. Though PRC appears willing to defer the use of military force as long as it considers that unification with Taiwan could be negotiated over the long-term and the costs of conflict outweigh the benefits.⁴¹² It may also be that the CCP expects the prevailing trends in conventional naval assets to increase within the decade towards CCP advantage, thus alleviating pressure to initiate annexation imminently as chances of success grow in future.

Nonetheless, the PRC conducting persistent military operations near Taiwan—and training for a Taiwan contingency—likely signals a greater urgency for the PLA to continue to develop and perfect its strategy and capabilities should PRC leaders look to a military option to achieve their objectives. The circumstances under which the PRC has historically indicated it would consider the use force have evolved over time. These circumstances have included:

- Formal declaration of Taiwan independence;
- Undefined moves toward Taiwan independence;
- Internal unrest in Taiwan;
- Taiwan’s acquisition of nuclear weapons;
- Indefinite delays in the resumption of cross-Strait dialogue on unification; and
- Foreign military intervention in Taiwan’s internal affairs.⁴¹³

Notably, the PRC would seek to deter potential U.S. intervention in any Taiwan contingency campaign – capabilities relevant to deterring or countering potential U.S.

⁴¹² Ibid.

⁴¹³ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2021*, (Washington, DC: Department of Defense 2021), 115-116, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>.

intervention were among those that the PRC highlighted during its October 2019 military parade celebrating its 70th anniversary. Failing that, the PRC would attempt to delay and defeat intervention in an asymmetric, limited war of short duration. In the event of a protracted conflict, the PLA might choose to escalate cyberspace, space, or nuclear activities in an attempt to end the conflict, or it might choose to fight to a stalemate and pursue a political settlement. The PLA could initiate the military options listed below individually or in combination.⁴¹⁴

The PRC is dedicated to a full “reunification” of Taiwan with the mainland. Although preferably under peaceful means, this is increasingly unlikely and the CCP refuses to renunciate the use of force. Taiwan is likely the most prized foreign policy objective of the CCP. A Taiwan annexation would achieve both the domestic goal of “reunification” and a foreign policy goal of leveraging a devastating blow to the U.S. led regional order and security architecture. This is to effect the broader CCP strategy of displacing the U.S. order and thus presence in region so as to afford the CCP a central position in the security and economic architecture of the Asia-Pacific. Taiwan annexation is a critical step on the CCP path to “national rejuvenation.”

As Chinese power grows, the risk and cost of a potential U.S.- China conflict increases, reflecting respective power cycles.⁴¹⁵ The consequences of war are serious enough that it is in the interest of the United States to find ways to avoid getting drawn into wars that it did not intend nor are in its interest. This logic affects actions and policies that embolden allies into provoking

⁴¹⁴ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2021*, (Washington, DC: Department of Defense 2021), 116-117, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>.

⁴¹⁵ For a further discussion on international power cycles, please see, among other works of Charles F. Doran, Charles F. Doran, “Economics, Philosophy of History, and the ‘Single Dynamic’ of Power Cycle Theory: Expectations, Competition, and Statecraft,” *International Political Science Review*, Vol. 24, No. 1, 2003; Charles F. Doran, *Systems in Crisis: New Imperatives of High Politics at Century's End*, Cambridge, United Kingdom: Cambridge University Press, 1991; Charles F. Doran and Wes Parsons, “War and the Cycle of Relative Power,” *American Political Science Review*, Vol. 74, No. 4, 1980, pp. 947–996;

China or that unintentionally encourage escalation and conflict through strategies of military competition.⁴¹⁶

There are limits, however, to how much the United States can disengage itself from crises and conflicts involving its allies. As China challenges U.S. leadership of the regional order, U.S. credibility becomes increasingly interlinked with the disputes between China and U.S. allies. China's growing rivalry with Japan, a key U.S. ally, adds another layer of strategic significance to the region's territorial and sovereignty disputes. Although it is tempting to dismiss arguments over reefs and rocks as overblown, properly estimating the risks of conflict should acknowledge the strategic dimensions of the various maritime disputes.⁴¹⁷

U.S. interests in these issues are not insignificant. Ensuring stability and the retention of access and influence in Asia are in the interest of the United States. Allies provide the forward defense of U.S. interests and remain the pillars of an international security order favorable to the exercise of U.S. power. The United States should attempt to balance the need for stability and peace with China with policies that deter aggression and reassure and support U.S. allies.⁴¹⁸

What is at stake in disputes between China and the U.S. over Taiwan goes beyond the particular annexation. Because Japan and the Philippines are U.S. allies, among others part of regional mutual defense treaties,⁴¹⁹ and because the United States has a long-standing interest in the security of Taiwan, disputes between those powers and China unavoidably carry implications for the relative status and leadership of China and the United States. As competition intensifies,

⁴¹⁶ Timothy M. Bonds, Joel B. Predd, Timothy R. Heath, Michael S. Chase, Michael Johnson, Michael J. Lostumbo, James Bonomo, Muharrem Mane, and Paul S. Steinberg, *What Role Can Land-Based, Multi-Domain Anti-Access/Area Denial Forces Play in Deterring or Defeating Aggression?*. Santa Monica, CA: RAND Corporation, 2017, 19, https://www.rand.org/pubs/research_reports/RR1820.html. Also available in print form.

⁴¹⁷ Ibid.

⁴¹⁸ Ibid.

⁴¹⁹ John McLaughlin, "The Spy Who Told Me: Asia Is Where the Real Trouble Is At," OZY, November 2, 2014, <https://www.ozy.com/news-and-politics/the-spy-who-told-me-asia-is-where-the-real-trouble-is-at/36771/>.

the danger increases that any challenge between China and a U.S. ally will be viewed through a zero-sum lens of increasing or decreasing Chinese and U.S. influence and leadership in Asia. If a crisis escalates to conflict and the United States becomes involved militarily against China, the underlying drive for regional dominance is likely to become difficult to control. This inherent danger is a major reason why conflict between major powers—especially those of a system leader, such as the United States, and an aspiring regional leader, such as China—has traditionally been associated with the most destructive types of wars.⁴²⁰

Thus, the United States faces a considerable challenge in making credible its support to its allies in defense of their interests against potential Chinese coercion and aggression. With U.S.-China relations defined by economic interdependence and overall cooperation, the United States remains reluctant to engage in the sort of hostile competition that characterized its relationship with the Soviet Union in the Cold War. Because the risks of confrontation and conflict are so high, the United States has increasingly looked to its allies to take on a growing share of the burden of deterrence. But this approach has inherent limits because of the underlying competition between China and the United States.⁴²¹

It is important to note that while the U.S. has pledged various assurances and signed strong agreements to see Taiwan's political future settled peacefully, the U.S. has several robust Mutual Defense Treaty allies: the Philippines, Australia, the Republic of Korea, Japan, and

⁴²⁰ Timothy M. Bonds, Joel B. Predd, Timothy R. Heath, Michael S. Chase, Michael Johnson, Michael J. Lostumbo, James Bonomo, Muharrem Mane, and Paul S. Steinberg, What Role Can Land-Based, Multi-Domain Anti-Access/Area Denial Forces Play in Deterring or Defeating Aggression?. Santa Monica, CA: RAND Corporation, 2017, 19-20, https://www.rand.org/pubs/research_reports/RR1820.html. Also available in print form; David Rapkin and William Thompson, *Transition Scenarios: China and the United States in the Twenty-First Century*, Chicago: University of Chicago Press, 2013.

⁴²¹ Bonds, Timothy M., Joel B. Predd, Timothy R. Heath, Michael S. Chase, Michael Johnson, Michael J. Lostumbo, James Bonomo, Muharrem Mane, and Paul S. Steinberg, What Role Can Land-Based, Multi-Domain Anti-Access/Area Denial Forces Play in Deterring or Defeating Aggression?. Santa Monica, CA: RAND Corporation, 2017, 20, https://www.rand.org/pubs/research_reports/RR1820.html. Also available in print form.

Thailand, pledging both parties to the agreements that each would come to the aid of the other in case of an attack to either by an external party. If Taiwan were to be under siege, it would be imprudent for the CCP to preemptively attack U.S. assets in region, as this may provoke surge support from these defense treaty allies and others in region and around the world. This is but another variable which can engulf the Asia-Pacific in a regionally, if not global, war if the CCP make a grave miscalculation upon Taiwan.

China attaches considerable importance to maintaining a stable relationship with the United States. For China, a stable relationship is essential for regional and global stability, which it needs for national development. Avoiding a costly and debilitating confrontation with the United States appears to be one of the central goals of the “new type of great power relationship” that Beijing has proposed for U.S.-China ties.⁴²² At the same time, however, China sees the United States as the greatest potential threat to its core national security interests and objectives, a perspective that is informed not only by its perception that the United States is determined to prevent China from challenging the position of the United States as the world’s leader but also by its interpretation of a number of specific incidents, such as the accidental U.S. bombing of the Chinese Embassy in Belgrade in May 1999.⁴²³

At present there is a seismic shift within U.S. – PRC relations. As mentioned above, the primary documents in which this relationship was founded have faltered in achieving their collective purpose, as recognized by the corroding agreement which underpins all other agreements. That is, the historical mutual understanding of both parties to agree to a peaceful

⁴²² Michael S. Chase, “China’s Search for a ‘New Type Great Power Relationship,’” *China Brief*, Vol. 12, No. 17, September 7, 2012.

⁴²³ Bonds, Timothy M., Joel B. Predd, Timothy R. Heath, Michael S. Chase, Michael Johnson, Michael J. Lostumbo, James Bonomo, Muharrem Mane, and Paul S. Steinberg, What Role Can Land-Based, Multi-Domain Anti-Access/Area Denial Forces Play in Deterring or Defeating Aggression?. Santa Monica, CA: RAND Corporation, 2017, 20-21, https://www.rand.org/pubs/research_reports/RR1820.html. Also available in print form.

settlement of the political future of Taiwan. Recent CCP words and actions are the primary drivers which have undermined this understanding, throwing both parties into a new and uncertain era. Public statements from the head of the CCP, stating such propensity for violence as foreign powers will "get their heads bashed bloody" if they attempt to bully or influence the country destabilize the foundations of any peaceful political settlement of the Taiwan issue.

This in addition to now hundreds of Taiwan ADIZ violations by the PLAAF and the building of mock U.S. carrier groups used in exercises designed to train on attack a U.S. naval presence.⁴²⁴ This, alongside the impressive modernization of the PLA, robust PLAN shipbuilding activities, and formidable A2/AD defenses, overall capabilities of the PLA, lend credence to potential success of a Taiwan invasion, while considering the analyst's risk of presuming intent from capabilities. Alongside, the political environment in Taiwan as it relates to "reunification", these are trends that would suggest the appeal of an invasion attempt, as it will be explored in subsequent sections.

In conclusion, the CCP is dedicated to "reunification" to Taiwan and refuse to renunciate forceful means to achieve this. The declaratory policy is given weight by the CCP's vast naval modernization, coupled with missile network capabilities. As the CCP forsakes its previous agreements of a peaceful settlement to Taiwan, this marks a new, more dangerous, era of U.S. – PRC relations. This "collision course" heightens the risk of miscalculation between the two great powers.

⁴²⁴ Yew Lun Tian, "China Builds Mockups of U.S. Navy Ships in Area Used for Missile Target Practice," *Reuters*, November 8, 2021, <https://www.reuters.com/world/china/china-builds-mockups-us-navy-ships-area-used-missile-target-practice-2021-11-08/>.

CCP SECURITY STRATEGY – WAYS: STRATEGIC MISCALCULATIONS OF U.S. ACTIONS

Despite CCP public declarations which state similar refrains such as “China will not, repeat, not repeat the old practice of a strong country seeking hegemony,” “Peaceful development,” and Xi Jinping insisting in September 2017 that China “lacks the gene” that drives great powers to seek hegemony,⁴²⁵ it is important to divine true intention from authoritative sources and developing doctrines and capabilities.

The PRC’s leaders stress the imperative of strengthening the PLA into a “world-class” military by the end of 2049 as an essential element of its strategy to rejuvenate the PRC into a “great modern socialist country.” In 2020, the PLA added a new milestone for modernization in 2027, to accelerate the integrated development of mechanization, informatization, and intelligentization of the PRC’s armed forces, which if realized would provide Beijing with more credible military options in a Taiwan contingency.⁴²⁶

PLA spokespeople have stressed that the 2027 goal means that the Chinese military should comprehensively push forward the modernization of military theories, military organizational form, military personnel, and weapons and equipment.” If realized, this would provide Beijing with more credible military options in a Taiwan contingency. PRC media, citing a military source, connected the PLA’s 2027 goals to developing the capabilities to counter the U.S. military in the Indo-Pacific region, and compel Taiwan’s leadership to the negotiation table on Beijing’s terms.⁴²⁷

⁴²⁵ Oriana Skylar Mastro, “The Stealth Superpower,” *Foreign Affairs*, April 19, 2022, <https://www.foreignaffairs.com/articles/china/china-plan-rule-asia>.

⁴²⁶ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2021*, (Washington, DC: Department of Defense 2021), 30, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>.

⁴²⁷ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2021*, (Washington, DC: Department of Defense 2021), 36, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>.

The PLA 2027 goal is to “Accelerate the integrated development of mechanization, informatization, and intelligentization, while boosting the speed of modernization in military theories, organizations, personnel and weapons and equipment.”⁴²⁸ These ends of these goals is to establish the full ability of the PLA to successfully invade Taiwan if necessary. But how might the CCP view its own storyline of how success can be achieved?

As described by Dr. Brad Roberts of the Lawrence Livermore National Laboratory's Center for Global Security Research, a generic CCP theory of victory for Taiwan would likely include:

1. If CCP views war with the United States as inevitable as its chances of “reunification” are diminishing, it is likely the CCP will plan for preemptive invasion on favorable terms. The possibility of a meaningful military response by the United States and its allies to attempt to thwart the invasion apparatus can be significantly reduced by presenting an image of significant costs in blood and treasure of any effort to restore the status quo ante militarily. Victory would be measured in the territory gained but also in the demonstration to the world, and especially to U.S. allies, that the extant regional security order is not viable.⁴²⁹
2. If the United States nonetheless resolves to try to restore the status quo ante militarily, this can be effectively halted by separating its allies from each other and from the United States. This puts the United States in the difficult position of having to choose between fighting alone or not at all. Victory would be measured as above but also in the demonstration of coercive leverage over U.S. allies.⁴³⁰
3. If these efforts fail, U.S. military action can be made sufficiently costly to it by kinetic and non-kinetic attacks on any forces actively engaged in the attempted restoration, on the territories of those allies, and on U.S. forces in theater or en route to the theater (anti-access, area denial strategies). This puts the United States in a difficult position of having to choose between escalating and terminating without achieving its objectives. Victory would be measured as above but also in calling into question globally the credibility of America’s power projection strategy. In certain extreme circumstances, the kinetic means might include non-strategic nuclear weapons.⁴³¹

⁴²⁸ Ibid.

⁴²⁹ Brad Roberts, *Livermore Papers on Global Security No. 7: On Theories of Victory, Red and Blue*, (Livermore, California: Lawrence Livermore National Laboratory Center for Global Security Research, June 2020), <https://cgsr.llnl.gov/content/assets/docs/CGSR-LivermorePaper7.pdf>.

⁴³⁰ Ibid.

⁴³¹ Ibid.

4. If these efforts fail to bring timely war termination and something significant is newly at risk, such as the bulk of the forces that created the *fait accompli* and/or the survival of the regime, then CCP can remind the United States of the vulnerability of its homeland to attack with a limited strike, whether kinetic or non-kinetic, conventional or nuclear. This would put the United States and its allies in a difficult position of having to choose between further escalation after it has once failed to achieve its intended objective and terminating without achieving its objectives while under direct attack. Here victory would not be measured by the metrics noted above but by the domestic benefits, both domestic and international, of having “taught the United States a lesson” while retaining the capability to fight again another day.⁴³²

However, this generic theory of victory is founded on critical assumptions of U.S.

behavior that may very well fail. These include the assumptions that:

1. The citizens of the Western democracies would not be willing to bear costs or risks to defend their interests;
2. That CCP escalation would induce Western restraint rather than even stronger resolve and;
3. That limited nuclear employment by CCP against the West would result in a Western choice to de-escalate rather than to punish the nuclear aggressor and teach the right lesson for history, as the American public would see it.⁴³³

The CCP theory of victory likely seeks to do so by reminding the allies of their vulnerabilities, of the practical difficulties for the United States in protecting them, and of doubts about American credibility. In this sense, the U.S. Theory of Victory must take account of this and counteract accordingly.

In short, these theories place a huge bet on an understanding of Western stake and resolve that is not well supported by historical experience. Their calculus of asymmetry of stake and resolve is less theory than wishful thinking. In his famous book *On Escalation*, Herman Kahn reminded Soviet leaders of the American propensity to see the world in terms of good and evil

⁴³² Ibid.

⁴³³ Ibid.

and right and wrong.⁴³⁴ Thus, he cautioned, as a people we are slow to rouse but once roused are willing to use “extravagant force to expunge a hated enemy.”⁴³⁵ In employing a nuclear weapon against the United States or against someone the United States has promised to protect, an enemy may discover that the United States is both sobered and enraged.⁴³⁶ This may also include an elaborate cross-strait conventional invasion of Taiwan. A primary pre-invasion act may be extensive shelling of strategic areas that are perhaps in dense urban settings. The coverage to be seen around the world would accelerate mutual sympathies and feelings of “oneness” with the besieged Taiwanese, to not think further of urban island warfare. Beyond detailing strategic elements which are likely to induce miscalculation, CCP thought on tactical maneuvering and war posturing is also likely to compound problems of miscalculation.

ACHIEVING ENDS – MEANS: TACTICAL MISCALCULATIONS OF CCP WARFIGHTING

In this section, we will attempt to understand the way in which the CCP prosecutes war in the modern context. Admittedly, there are relatively few examples of this, as the last time CCP sanctioned war was in the PRC – Vietnamese conflict of 1979, was considered a tactical loss against a battle-hardened Vietnamese force. Much has changed in terms of modernization of the PLA forces since,⁴³⁷ yet it is possible to deduce from authoritative sourcing the culture,

⁴³⁴ Ivo H. Daalder and Dina Smeltz, “2019 Chicago Council Survey,” The Chicago Council on Global Affairs, September 16, 2019, <https://www.thechicagocouncil.org/research/public-opinion-survey/2019-chicago-council-survey>.

⁴³⁵ Herman Kahn, *On Escalation: Metaphors and Scenarios* (New York: Praeger, 1965).

⁴³⁶ For more on the reputational dilemmas associated with escalation and war termination in contemporary conflict, see Brad Roberts, “How Wars Must End,” in Victor Utgoff, ed., *The Coming Crisis* (Cambridge, MA: MIT Press, 1999).

⁴³⁷ Edmund J. Burke, Kristen Gunness, Cortez A. Cooper III, and Mark Cozad, *People's Liberation Army Operational Concepts*, (Santa Monica, CA: RAND Corporation, 2020). https://www.rand.org/pubs/research_reports/RRA394-1.html.

methodologies, and ways of thinking about escalation and war termination which will undoubtedly contribute to CCP war prosecution in a Taiwan contingency.

To start, we must recognize the origination of PLA's multi-decade modernization effort. What did the CCP learn from observing closely U.S. prosecution of war efforts since post-Cold War hostilities? Several indications stand above the rest:

- The conventional superiority of the U.S. military is available to it only in a long war or in a war with a long lead up. It is, in any case, eroding.
- To prevail in conventional conflict, the United States must project military power over great distances and operate to and from bases, ports, and airfields that are vulnerable to attack and disruption.
- To project power, the United States is heavily dependent on allies—operationally and politically. It can act alone but may choose not to do so.
- The United States has the ambition to seize and hold dominant positions in cyber space and outer space and thus to reap the full benefits of the revolution in military affairs. But in these domains, it is also vulnerable.
- Its strategic nuclear force remains credible and effective but the forces associated with extended deterrence were radically drawn down as the Cold War ended. What remains has been aging out.
- The American public is wary of war, deeply casualty averse, and wants quick, decisive, and bloodless victories. It pressures its political class accordingly.⁴³⁸

In the midst of these “lessons learned,” as the PRC has gone to school on the American way of battle, it is important to examine how the PRC views its own approach to war, its way of battle, and operational concepts. The primary conclusion is the most alarming: Overall, the PRC offers topline war concepts, from its authoritative sources such as the Academy of Military

⁴³⁸ This characterization summary draws on Roberts, *The Case for U.S. Nuclear Weapons in the 21st Century*. See also Peng Guangqian and Yao Youzhi, eds., *The Science of Military Strategy* (Beijing: PLA, 2015). Brad Roberts, *Livermore Papers on Global Security No. 7: On Theories of Victory, Red and Blue*, (Livermore, California: Lawrence Livermore National Laboratory Center for Global Security Research, June 2020), <https://cgsr.llnl.gov/content/assets/docs/CGSR-LivermorePaper7.pdf>.

Sciences, which allows for seriously escalatory moves to gain “war control” and other moves to maintain the battlefield advantage for presumably favorable political terms.

A few assumptions are necessary. First, the description of “war control” and other seemingly escalatory concepts do not address specific scenarios, nor distinguish between PLA or CCP thought, which could differ significantly.⁴³⁹ PRC command and control traditionally emphasizes hierarchy, deference to leaders, reliance on central direction, top-heavy organization, reluctance to delegate authority, and adherence to script.⁴⁴⁰ Though there is recognition that delegation of authority in PLA C2 is necessary for tactical maneuverings and agility, structural signs of implementation are, at the moment, unseen.⁴⁴¹ The U.S. cannot be sure these publicly available writings accurately reflect the real state of CCP thought on this subject. It is possible, indeed probable, that there are classified documents containing more explicit discussion of how to manage an emerging crisis and prevent undesired escalation.⁴⁴²

It seems reasonable to assume, however, that the public writings reflect the general tenor of any more detailed classified discussion, both in the general concepts involved and the level of interest in the subject. Given the nature of the Chinese political system, it is likely that the public writings of PLA academics do not diverge sharply from the general outlook of the top leadership, though with large caveats about the role of individual personalities within the leadership

⁴³⁹ Alison A. Kaufman and Daniel M. Hartnett, *Managing Conflict: Examining Recent PLA Writings on Escalation Control* (Arlington: CNA, 2016), 5, https://www.cna.org/cna_files/pdf/DRM-2015-U-009963-Final3.pdf; Burgess Laird, *War Control: Chinese Writings on the Control of Escalation in Crisis and Conflict*, (Washington, DC: Center for a New American Security, April 2017), 6, <https://s3.us-east-1.amazonaws.com/files.cnas.org/documents/CNASReport-ChineseDescalation-Final.pdf?mtime=20170328141457&focal=none>.

⁴⁴⁰ Dennis J. Blasko, “The PLA Army/Ground Forces,” in Kevin Pollpeter and Kenneth Allen, eds., *The PLA as Organization v2.0*, Vienna, Va.: Defense Group Inc., 2015, p. 260.

⁴⁴¹ David C. Gompert, Astrid Stuth Cevallos, and Cristina L. Garafola, *War with China: Thinking Through the Unthinkable*. Santa Monica, CA: RAND Corporation, 2016, 16, https://www.rand.org/pubs/research_reports/RR1140.html. Also available in print form.

⁴⁴² Andrew Scobell and Larry M. Wortzel, *Shaping China's Security Environment: The Role of the People's Liberation Army*, (Washington, DC: US Army War College 2006), 91, <https://press.armywarcollege.edu/cgi/viewcontent.cgi?article=1709&context=monographs>.

collective.⁴⁴³ These concepts may not necessarily reflect the PRC's actual behavior in crisis situations.

Lastly, there remain important areas where Beijing continues to conceal information other countries believe a major power should make public in the interests of mutual understanding and stability. The withholding of such information only increases risks of miscalculation.⁴⁴⁴

The PRC appears unaware of the possibility that they may misjudge the United States and may themselves face difficult choices between whether to escalate or seek a way out of a conflict. There has been considerable depth of thought that has gone into Chinese thinking on escalation control and, conversely, the dearth of thought that has appeared to have gone into overall war termination.⁴⁴⁵

China's strategic thought on de-escalation focuses on de-escalation by its enemies and seems not to concern itself with the possibility that China may face difficult choices about whether and how to de-escalate. China's strategists differentiate between wars that have gone nuclear and wars that have not. In a war that has gone nuclear, China expects to counter-attack and re-attack until the enemy chooses to stop its nuclear attacks.⁴⁴⁶

⁴⁴³ Andrew Scobell and Larry M. Wortzel, *Shaping China's Security Environment: The Role of the People's Liberation Army*, (Washington, DC: US Army War College 2006), 92, <https://press.armywarcollege.edu/cgi/viewcontent.cgi?article=1709&context=monographs>.

⁴⁴⁴ Andrew Scobell and Larry M. Wortzel, *Shaping China's Security Environment: The Role of the People's Liberation Army*, (Washington, DC: US Army War College 2006), 99, <https://press.armywarcollege.edu/cgi/viewcontent.cgi?article=1709&context=monographs>.

⁴⁴⁵ Brian Radzinsky et al., *De-Escalation and War Termination in Multi-Domain Regional Wars: Workshop Summary*, (Livermore, California: Lawrence Livermore National Laboratory, Center for Global Security Research, May 2021), 1-2, https://cgsr.llnl.gov/content/assets/docs/DEWT_Workshop_Summary.pdf.

⁴⁴⁶ Brian Radzinsky et al., *De-Escalation and War Termination in Multi-Domain Regional Wars: Workshop Summary*, (Livermore, California: Lawrence Livermore National Laboratory, Center for Global Security Research, May 2021), 3-4, https://cgsr.llnl.gov/content/assets/docs/DEWT_Workshop_Summary.pdf.

This blanket assertion that the PRC LUD is always higher than an opponent's is likely to be erroneous. In a war that has not gone nuclear, China expects to be able to put the burden of escalation and de-escalation onto its enemies, through dominance at the conventional level of war and implementation of its "war control" strategies.⁴⁴⁷ The assumption PRC military planners assert for this to be true is that a conventional regional conflict is unlikely to develop into tactical regional nuclear warfighting. Between two great powers, this certainly can occur; to not believe so and adjust war doctrine accordingly courts ample opportunity for miscalculation. In a war with the U.S. over Taiwan, the PRC would rely on escalatory threat of large-scale space, cyber, and conventional missile weapons to coerce U.S. decision-makers.⁴⁴⁸

The PRC's military strategy is based on what it describes as "active defense," a concept that adopts the principles of strategic defense in combination with offensive action at the operational and tactical levels. Active defense is neither a purely defensive strategy nor limited to territorial defense. Active defense encompasses offensive and preemptive aspects.⁴⁴⁹ It can apply to the PRC acting externally to defend its interests.⁴⁵⁰

First adopted by the CCP in the 1930s, active defense has served as the basis for the PRC's military strategy since its founding in 1949. Although the PRC has adjusted and tailored the specifics of active defense over time based on changes in strategic circumstances, its general principles have remained consistent.

⁴⁴⁷ Ibid.

⁴⁴⁸ Brian Radzinsky et al., *De-Escalation and War Termination in Multi-Domain Regional Wars: Workshop Summary*, (Livermore, California: Lawrence Livermore National Laboratory, Center for Global Security Research, May 2021), 3-4, https://cgsr.llnl.gov/content/assets/docs/DEWT_Workshop_Summary.pdf.

⁴⁴⁹ M. Taylor Fravel, *Active Defense: China's Military Strategy since 1949*, Princeton University Press 2019.

⁴⁵⁰ Caitlin Campbell, *China's Military: The People's Liberation Army (PLA)*, CRS Report No. R46808 (Washington, DC: Congressional Research Service, 2021), 23, <https://sgp.fas.org/crs/row/R46808.pdf>; Ian E. Rinehart, *The Chinese Military: Overview and Issues for Congress*, CRS Report No. R44196 (Washington, DC: Congressional Research Service, 2016). <https://sgp.fas.org/crs/row/R44196.pdf>.

PLA writings promote a number of crisis and conflict control actions that appear escalatory, without consideration of how these might be perceived by other countries. Some of these escalatory measures include seeking advantage while resolving a crisis; conducting kinetic strikes as deterrence before outbreak of war; during first stages of war, conducting strikes to gain the initiative; and viewing the utilization of space and cyber domains as means through which to achieve objectives without the escalatory impacts of more traditional means.⁴⁵¹

It appears that perceptions of principal actors in the region are given little consideration in PLA thought, which could lead to escalatory actions and ultimately unintentional conflict without the strategic responsiveness necessary for offramps to de-escalation. Cited PLA actions which would be greatly escalatory include “taking limited military action to ‘clarify the situation’ or persuade the other side to de-escalate.”⁴⁵² This “escalate to de-escalate” greatly increases the possibilities for misperception, misjudgment, and miscalculation in an intense environment where deterrence can fail.

Initial PRC military action to capture control a fast-developing crisis is the existence of a highly visible and capable military force obviously ready to take action. Overt shows of force and vigorous deployments toward a crisis zone put pressure on the U.S., helping China gain the initiative and control development of the crisis. In modern high-technology local war, the first battle is often decisive.⁴⁵³

As respected analysts, Andrew Scobell and Larry M. Wortzel, state: One way or another, the proper posture (and posturing) of China’s forces is seen as a central aspect of early crisis

⁴⁵¹ Kaufman, Alison A, and Daniel M Hartnett, *Managing Conflict: Examining Recent PLA Writings on Escalation Control*, https://www.cna.org/cna_files/pdf/DRM-2015-U-009963-Final3.pdf.

⁴⁵² Ibid; Roger Cliff, John F. Fei, Jeff Hagen, Elizabeth Hague, Eric Heginbotham, and John Stillion, *Shaking the Heavens and Splitting the Earth: Chinese Air Force Employment Concepts in the 21st Century* (Santa Monica, CA: RAND Corporation, 2011). <https://www.rand.org/pubs/monographs/MG915.html>. Also available in print form.

⁴⁵³ Xiao Tianliang, Zhazheng Kongzhi Wenti Yanjiu, *On War Control*, Beijing: National Defense University Press, 2002, pp. 176.

management. In an age of local wars, Chinese strategists believe, the primary deterrent factor is no longer nuclear weapons, important though they remain.⁴⁵⁴

Throughout Chinese discussion of war control, the emphasis is on seizing the political and military initiative and avoiding situations that would put China in a reactive, passive, defensive posture. Holding the initiative creates leeway and freedom of action, letting China set the agenda with conclusion of hostilities that protects CCP interests.⁴⁵⁵ A reactive position limits China's options, making it impossible to maintain control of the situation. Seizing and holding the initiative requires rapid reaction to an incipient crisis, including immediate deployment of sizeable forces as early as possible. It requires avoiding internationalization of the problem or outside political and military intervention, especially by hegemonic powers.⁴⁵⁶

It is difficult to overstate how prominent the concept of the initiative is in Chinese writings. Though there is some discussion about the need to avoid provoking the enemy beyond the point of tolerance, as discussed above, driving the actor to a quest for vengeance that renders the conflict beyond control.⁴⁵⁷

But Chinese war control theorists give little thought to the possibility that what China considers a resolute response that maintains the initiative, the opponent might misconstrue as alarming preparations for aggressive military action. Chinese military authors seem to be unable to get outside their own subjective view of China's innocent intentions, unable to view China as

⁴⁵⁴ Andrew Scobell and Larry M. Wortzel, *Shaping China's Security Environment: The Role of the People's Liberation Army*, (Washington, DC: US Army War College 2006), 86-87, <https://press.armywarcollege.edu/cgi/viewcontent.cgi?article=1709&context=monographs>.

⁴⁵⁵ Liu Shenyang, "On War of Control—Mainly from the Military Thinking Perspective," China Military Science, April 2014. Liu is the deputy commander of the Jinan Military District and a lieutenant general of the PLA.

⁴⁵⁶ Xiao Tianliang, Zhanzheng Kongzhi Wenti Yanjiu, *On War Control*, Beijing: National Defense University Press, 2002, pp. 138, 145, 175; Lonnie Henley, "War Control: Chinese Concepts of Escalation Management," in Andrew Scobell and Larry M. Wortzel, eds., *Shaping China's Security Environment: The Role of the People's Liberation Army*, Carlisle, Pa.: Strategic Studies Institute, U.S. Army War College, 2006.

⁴⁵⁷ Ibid.

others might view it. The Chinese are certainly not alone in this weakness. It is possible this strong belief in seizing the initiative as the key to crisis management and war control could itself contribute to unwanted escalation.⁴⁵⁸

The United States and PRC hold opposing beliefs about escalation above and below the nuclear threshold that may also contribute to instability.⁴⁵⁹ U.S. experts worry more than Chinese experts that the two countries might not be able to control the escalation of a conventional war to high levels of intensity, which could push a conflict over the nuclear threshold, but are more sanguine about controlling nuclear escalation after nuclear weapons have been used.⁴⁶⁰

Chinese experts hold an opposing perspective. They are quite pessimistic about controlling nuclear escalation once the threshold for the use of nuclear weapons has been crossed. By contrast, however, they are quite confident about controlling conventional escalation before the nuclear threshold is crossed.⁴⁶¹

These contrasting beliefs about the feasibility of controlling conventional and nuclear escalation suggest that a conventional conflict is more likely to escalate to high levels of intensity, increasing the chances of nuclear escalation. China, for example, could take actions it believes will deter the United States at the conventional level, only to be confronted with a U.S. desire to overmatch China in response and establish the same extent of conventional dominance

⁴⁵⁸ Andrew Scobell and Larry M. Wortzel, *Shaping China's Security Environment: The Role of the People's Liberation Army*, (Washington, DC: US Army War College 2006), 91, <https://press.armywarcollege.edu/cgi/viewcontent.cgi?article=1709&context=monographs>.

⁴⁵⁹ Fiona S. Cunningham and M. Taylor Fravel, "Dangerous Confidence? Chinese Views on Nuclear Escalation," *International Security*, Vol. 44, No. 2 (Fall 2019), 105-106, doi.org/10.1162/ISEC_a_00359.

⁴⁶⁰ For recent examples, see Elbridge Colby, "If You Want Peace, Prepare for Nuclear War," *Foreign Affairs*, January 28, 2019, <https://www.foreignaffairs.com/articles/china/2018-10-15/if-you-want-peace-prepare-nuclear-war>; Vince A. Manzo, John K. Warden, "After Nuclear First Use, What?", *Survival*, 60:3, 2018, 133-160, DOI: [10.1080/00396338.2018.1470770](https://doi.org/10.1080/00396338.2018.1470770); and Jeffrey A. Larsen and Kerry M. Kartchner, eds., *On Limited Nuclear War in the 21st Century* (Palo Alto, Calif.: Stanford University Press, 2014).

⁴⁶¹ Fiona S. Cunningham and M. Taylor Fravel, "Dangerous Confidence? Chinese Views on Nuclear Escalation," *International Security*, Vol. 44, No. 2 (Fall 2019), 106, doi.org/10.1162/ISEC_a_00359.

that the United States has enjoyed for several decades against other adversaries.⁴⁶² Despite models that show U.S. nuclear superiority and the ability to limit damage using a nuclear first strike,⁴⁶³ U.S. leaders have appeared reluctant to accept significant nuclear risk, especially in the post–Cold War era.⁴⁶⁴

There is a continual goal of creating a strategic advantage or “*shi*” on the battlefield, in diplomatic relations, geostrategic settings (through considerations of numerous factors, such as distance attenuation, etc.), supply chains, and any area in which China has an interest. A strategic advantage is the goal of any manipulation of the strategic environment, and it is probably the most important Chinese concept to keep in mind.⁴⁶⁵ There is a higher reliance on the offensive aspect of active defense in the cyber age, where the first battles will establish who has attained the strategic initiative in war. Once the armed conflict is inevitable, no effort should be spared to strive for strategic initiative, one author noted. Conflict will proceed quickly once unleashed and involve all domains.⁴⁶⁶

As Oriana Skyler Mastro asserts, the three major wars China has fought since 1949—the Korean War, the Sino-Indian War and the Sino-Vietnamese War—CCP leaders demonstrated confidence that they could escalate to rapidly impose peace against both stronger and weaker

⁴⁶² Ibid.

⁴⁶³ Keir A. Lieber and Daryl G. Press, “The End of MAD? The Nuclear Dimension of U.S. Primacy,” *International Security*, Vol. 30, No. 4 (Spring 2006), pp. 7–44, doi.org/10.1162/isec.2006.30.4.7; Brendan Rittenhouse Green and Austin Long, “Stalking the Secure Second Strike: Intelligence, Counterforce, and Nuclear Strategy,” *Journal of Strategic Studies*, Vol. 38, Nos. 1–2 (February 2014), pp. 38–73, doi.org/10.1080/01402390.2014.958150; and Keir A. Lieber and Daryl G. Press, “The New Era of Counterforce: Technological Change and the Future of Nuclear Deterrence,” *International Security*, Vol. 41, No. 4 (Spring 2017), pp. 9–49, doi.org/10.1162/ISEC_a_00273.

⁴⁶⁴ Fiona S. Cunningham and M. Taylor Fravel, “Dangerous Confidence? Chinese Views on Nuclear Escalation,” *International Security*, Vol. 44, No. 2 (Fall 2019), 107, doi.org/10.1162/ISEC_a_00359; Richard K. Betts, *Nuclear Blackmail and Nuclear Balance* (Washington, D.C.: Brookings Institution Press, 1987); and Brad Roberts, *The Case for U.S. Nuclear Weapons in the 21st Century* (Stanford, Calif.: Stanford University Press, 2016), pp. 11–50.

⁴⁶⁵ Timothy Thomas, *The Chinese Way of War: How Has it Changed?* (McLean, Virginia: MITRE, Sponsor: US Army Futures and Concepts Center, 2020), 20-1450, 2, <https://apps.dtic.mil/sti/pdfs/AD1114504.pdf>.

⁴⁶⁶ Ibid.

opponents. This tendency created a sense of urgency that hindered sound decision making on all sides.⁴⁶⁷ The PRC may escalate rapidly to bring about war termination on CCP terms, to limit the window for possible intervention by the defender.⁴⁶⁸ The CCP intent is that this would signal high costs of U.S. intervention thereby crippling U.S. resolve to engage.⁴⁶⁹ Furthermore, the fervency of Chinese nationalism, both organic and CCP induced, may contribute to CCP desires for great escalation to achieve favorable political settlement in war termination.⁴⁷⁰

The deterrence paradox assertion, that bolstering conventional defenses weakens conventional general deterrence, that each concept is at cross purposes with the other because boosting defense may induce opportunity loss from the aggressor, focuses on only one part of the defender's deterrence formula (capability), to the detriment of the other (willingness/resolve), notwithstanding the usual lack of appreciation of both elements regarding the aggressor's perceptions concerning itself and adversary. The other being effectively telegraphing or transmitting what is likely to occur if an aggressor was to act, and that this action would result in inevitable loss. This posits a decision point for the aggressor: should we do nothing as the local balance of military force slips away, or do we engage in war with increased chance of bloodshed and loss with little guarantee of victory on our political terms? The latter may prove a costly military and political liability with a multitude of unknowns, whereas the former offers a similar

⁴⁶⁷ Oriana Skylar Mastro, "How China Ends Wars: Implications for East Asian and U.S. Security," *The Washington Quarterly*, 2018, 41:1, 46, DOI: 10.1080/0163660X.2018.1445358.

⁴⁶⁸ Zhanlue, *Science of Military Strategy* (Beijing: Academy of Military Sciences Publishing, 2013), 141.

⁴⁶⁹ Oriana Skylar Mastro, "How China Ends Wars: Implications for East Asian and U.S. Security," *The Washington Quarterly*, 2018, 41:1, 49-50, DOI: 10.1080/0163660X.2018.1445358; If a Small-Scale Conflict Were to Break out between China and Japan, the United States Would Be Unlikely to Intervene, Sina Military, September 30, 2012, <http://mil.news.sina.com.cn/2012-09-30/1015702559.html>.

⁴⁷⁰ Xiangwei Wang, "New Silk Road: Why China Should Be Wary of Overconfidence," *South China Morning Post*, May 20, 2017, <http://www.scmp.com/week-asia/opinion/article/2094866/new-silk-road-why-china-should-be-wary-overconfidence>; Jessica Chen Weiss, *Powerful Patriots: Nationalist Protest in Chinese Foreign Policy* (Oxford: Oxford University Press, 2014); "The Evolution of Chinese Nationalism," STRATFOR Worldview, October 4, 2012, <https://worldview.stratfor.com/article/evolution-chinese-nationalism>.

future at reduced cost while maintaining stability. Though nothing is a guarantee, the reintroduction of willingness/resolve into deterrence paradox makes it not so much an axiom, rather than a caution for which to be accounted.

This is not to address the aggressor's own perceived levels of capability and willingness/resolve. Is the PLA able to confidently deploy its capabilities for a successful Taiwan invasion? Are CCP perceptions of its own sense of success and attendant risks, both domestic and international, adequate to submit its future to such a decision? Are political factions within CCP united in invasion or opposed for reasons unknown? Aside from other elements, there are many considerations which factor into "deterrence paradox" calculations. Considering this, analysts ought to be more circumspect when accounting for these strategic assumptions, which can seize the minds of policymakers, particularly in moments of urgency.

In addition to the stated PLA war doctrine, there is a relatively poor understanding of the emotional dimensions of war termination, particularly how feelings of indignation, vengeance, humiliation and fear could influence the kinds of aims that belligerents in a conflict pursue. Emotions could drive both sides to misperceive attempts at de-escalation, foment greater escalation, create disincentives for war termination, and generally make it difficult for analysts to use a rational frame to understand future wars. Guilt and shame could also play a role in shaping war termination processes. On the other hand, a degree of emotional volatility could also be a strategic asset. Looking back on U.S. history, feelings of fear, anger, and betrayal allowed the United States to respond forcefully to the Japanese attack on Pearl Harbor in 1941 and the invasion of South Korea in 1950.⁴⁷¹

⁴⁷¹ Brian Radzinsky et al., *De-Escalation and War Termination in Multi-Domain Regional Wars: Workshop Summary*, (Livermore, California: Lawrence Livermore National Laboratory, Center for Global Security Research, May 2021), 2, https://cgsr.llnl.gov/content/assets/docs/DEWT_Workshop_Summary.pdf.

The CCP way of battle operates are several erroneous assumptions, which offer “blind spots” that can increase the likelihood and magnitude of miscalculation vis-à-vis the U.S. In such jarring immediate deterrence, U.S. officials must accept risk without being reckless, and it must permit the possibility of escalation while maintaining stability.⁴⁷² The U.S. mindset needs to shift to accept greater risk without being reckless. Military power alone does not guarantee a credible deterrent. U.S. efforts to bolster its military presence in the Asia-Pacific—a central pillar of the rebalancing strategy—can counter the geographic, kinetic and political pillars of China’s A2/AD strategy.⁴⁷³

China is currently testing the waters not because its leaders are uncertain about the balance of force, but because they are probing the balance of resolve. This means that staying ahead in terms of military might is insufficient in contemporary Asia Pacific.⁴⁷⁴

China’s strategists are betting that the side with the strongest military does not necessarily win the war—the foundation of the deterrent pillar of A2/AD strategy. Indeed, China’s experience in fighting the Korean War proves that a country willing to sacrifice blood and treasure can overcome a technologically superior opponent. The belief that balance of resolve drives outcomes more so than the balance of force is the foundation of China’s new, more assertive strategy; but U.S. responses to date have failed to account for it. Canned demonstrations of U.S. power fail to address the fundamental uncertainty concerning U.S. willingness, not ability, to fight.⁴⁷⁵

⁴⁷² Oriana Skylar Mastro, “Why Chinese Assertiveness is Here to Stay,” *The Washington Quarterly*, 37:4 (2014) 151-170, DOI: [10.1080/0163660X.2014.1002161](https://doi.org/10.1080/0163660X.2014.1002161).

⁴⁷³ Ibid.

⁴⁷⁴ Ibid.

⁴⁷⁵ Ibid.

The U.S. focus on de-escalation in all situations only exacerbates this issue. The Cold War experience solidified the Western narrative stemming from World War I that inadvertent escalation causes major war, and therefore crisis management is the key to maintaining peace.⁴⁷⁶ This has created a situation in which the main U.S. goal has been de-escalation in each crisis or incident with Beijing. But Chinese leaders do not share this mindset—they believe leaders deliberately control the escalation process and therefore wars happen because leaders decide at a given juncture that the best option is to fight.⁴⁷⁷ China is masterful at chipping away at U.S. credibility through advancing militarization and coercive diplomacy. It often uses limited military action to credibly signal its willingness to escalate if its demands are not met. Strategist Thomas Schelling theoretically captured this approach when he wrote it is “the sheer inability to predict the consequences of our actions and to keep things under control ... that can intimidate the enemy.”⁴⁷⁸ It is important to consider that the side that is biased toward restraint must seek to either end the conflict or intensify its attacks, by doing so matching the intensity of the aggressor.⁴⁷⁹

China analyst Oriana Skylar Mastro confirms that U.S. focus on crisis management de-escalation is unlikely to produce any change in Chinese behavior as China introduces risk for exactly this reason. Beijing has identified the U.S. fear of inadvertent escalation and is exploiting it to compel the United States to give in to its demands and preferences. In this way, the U.S. focus on de-escalation may actually be the source of instability by rewarding and encouraging

⁴⁷⁶ Richard N. Rosecrance and Steven E. Miller, eds., *The Next Great War? The Roots of World War I and the Risk of U.S.-China Conflict* (Cambridge: MIT Press, 2014).

⁴⁷⁷ For more on Chinese views on escalation, see Forrest E. Morgan, Karl P. Mueller, Evan S. Medeiros, Kevin L. Pollpeter, and Roger Cliff, *Dangerous Thresholds: Managing Escalation in the 21st Century*, (Santa Monica: RAND Corporation, 2008), 47–58.

⁴⁷⁸ Thomas C. Schelling, *Arms and Influence*, Yale University Press (1966), pp. 109.

⁴⁷⁹ David C. Gompert, Astrid Stuth Cevallos, and Cristina L. Garafola, *War with China: Thinking Through the Unthinkable*. Santa Monica, CA: RAND Corporation, 2016, 18, https://www.rand.org/pubs/research_reports/RR1140.html. Also available in print form.

further Chinese provocations. To signal to China that the United States will not opt out of a conflict, Washington must signal willingness to escalate to higher levels of conflict when China is directly and purposely testing U.S. resolve. This may include reducing channels of communication during a conflict, or involving additional regional actors, to credibly demonstrate that China will not be able to use asymmetry of resolve to its advantage.⁴⁸⁰

The United States needs to fundamentally change its approach by accepting higher risk and allowing for the possibility of escalation—both vertically in force as well as horizontally to include other countries. This admittedly is a difficult balance, especially given the need to avoid emboldening U.S. allies to take actions that run contrary to U.S. interests. But only by mastering these two balancing acts—focusing on balancing resolve and strengthening local balance of force, the United States is able to maintain peace and stability in Asia Pacific without sacrificing U.S. or allied interests.⁴⁸¹

Understanding the PLA's weaknesses, and its own assessment of them, can help to improve the ability of the United States and its allies and partners to deter China from using force or the threat of force to resolve disputes with its neighbors. This can come in the form of revealing the development and testing of new capabilities, alongside new operational concepts and training exercises, designed to exploit specific PLA vulnerabilities.⁴⁸² This would likely signal greater uncertainty before undertaking a Taiwan invasion and occupation, though other considerations can and do contribute to such a decision, to include the costs of action over

⁴⁸⁰ Oriana Skylar Mastro, "Why Chinese Assertiveness is Here to Stay," *The Washington Quarterly*, 37:4 (2014) 151-170, DOI: [10.1080/0163660X.2014.1002161](https://doi.org/10.1080/0163660X.2014.1002161).

⁴⁸¹ Ibid.

⁴⁸² Michael S. Chase, et. al., *China's Incomplete Military Transformation: Assessing the Weaknesses of the People's Liberation Army (PLA)* (Arlington, VA: RAND Corporation, 2015), p. 137, available at https://www.rand.org/pubs/research_reports/RR893.html; and Toshi Yoshihara and Jack Bianchi, *Seizing on Weakness Allied Strategy for Competing with China's Globalizing Military*, (Washington, DC: Center for Strategic and Budgetary Assessment, 2021), 16, [https://csbaonline.org/uploads/documents/CSBA8239_\(Seizing_on_Weakness_Report\)_Web.pdf](https://csbaonline.org/uploads/documents/CSBA8239_(Seizing_on_Weakness_Report)_Web.pdf).

inaction, particularly if the CCP perceives its core interests to be threatened, such as political legitimacy (stemming from the top priority for CCP preservation), deriving from slower economic development, untamable nationalistic fervor commensurate with a rise in national status, or an acute sense of a narrowing window of opportunity to achieve its core objectives. Allowing for the U.S. and CCP miscalculation parameters as a foundation which will influence a Taiwan war, the next section details the impact of these elements in such a war, through the Bounded Deterrence Model.

“In reading the history of past wars and how they began, we cannot help but be impressed how frequently the failure of communication, misunderstanding, and mutual irritation have played an important role in the events leading up to fateful decisions for war.”

– John F. Kennedy, response to July 5, 1962, letter from Khrushchev⁴⁸³

CHAPTER VI

TAIWAN AS AN UNWINNABLE WAR

The intent of this section is to connect the preceding chapters with the criteria set in bounded deterrence and examine the multitude of bounded deterrence outcomes in a U.S. – CCP conflict. Great power war is a real possibility. In the 2021 Chicago Council on Global Affairs survey, for the first time, half of Americans favor defending Taiwan if China invades:

The American public supports a range of U.S. policies in support of Taiwan. Majorities favor U.S. recognition of Taiwan as an independent country (69%), supporting its inclusion in international organizations (65%), and signing a U.S.-Taiwan free trade agreement (57%).

When asked about a range of potential scenarios, just over half of Americans (52%) favor using U.S. troops to defend if China were to invade the island. This is the highest level ever recorded in the Council’s surveys dating back to 1982, when the question was first asked. At the same time, Americans are divided over whether the United States should (50%) or should not (47%) sell arms and military equipment to Taiwan.

Distrust of China is a significant factor in U.S. public support for Taiwan: while most Americans see Taiwan as an ally (30%) or necessary partner (30%), most see China as a rival (32%) or an adversary (29%).⁴⁸⁴

⁴⁸³ Serhii Plokhyy, *Nuclear Folly: A History of the Cuban Missile Crisis*, New York, NY: W W Norton and Company (2021) pp. 103.

⁴⁸⁴ Craig Kafura and Dina Smeltz, “For First Time, Half of Americans Favor Defending Taiwan If China Invades,” The Chicago Council on Global Affairs, August 26, 2021, <https://www.thechicagocouncil.org/research/public-opinion-survey/first-time-half-americans-favor-defending-taiwan-if-china-invades>.

Within the context of a large-scale PLA attack on Taiwan (this assuming that conventional general deterrence has failed), there are four U.S. outcomes or choices, all with varying degrees of likelihood attached.

First, to fight a bloody conventional war to a peaceful or conflictual stalemate, though likely to result in an uneasy interregnum with potential for future provocations further afield in region. In present conditions projected towards foreseeable future, this would likely be achieved not by the superior war planning and tactical operational concepts of the U.S. as it would be more a miscalculation upon the CCP's trust in a rehearsed, decisive, and commanding PLA operation. However, presuming the PLA captures the full essence of surprise as the initiating aggressor, U.S. wargames conclude this to be a decisive advantage, which may tip the scales to PLA neutralization of U.S. assets in region.

Second, for the U.S. to concede capitulation without conflict after witnessing a concerted invasion of Taiwan. U.S. policymakers would deem the effort to reverse gains too burdensome to justify the costs. This, of course, would have resounding secondary effects. The political calculations to make such a decision would be stifling both domestically and internationally for the U.S.

Third, to fight a bloody conventional war with inevitable conventional loss without further U.S. escalation. This conflict loss would result in political settlement favorable to CCP terms.

The fourth option, for the U.S. to resort to nuclear brinkmanship, likely after stunning loss of conventional advantage after a surprise PLA attack on regional U.S. Navy bases and installations. Based on present regional conditions, this seems more likely to succeed than fail, though failure with such a high risk is always a possibility.

Lastly, chosen from the others, appears most likely to occur, as conventional war simulations illustrate great loss in conventional conflict.⁴⁸⁵ Surrender would be deemed anathema to American public sentiments⁴⁸⁶ and the credibility of U.S. foreign policy globally. This leaves the only plausible, though not optimal, choice of nuclear threats and escalation. Conventional conflict is likely to be an initial U.S. response before transition to the nuclear threshold, achieved by PLAN modernization and theories of victory which will likely have cornered the U.S. into such a decision.

Nuclear threats are quite different than nuclear use. This distinction must be examined further. After a nuclear threat is utilized, the pressures – militarily, political, issues of future credibility and otherwise – to “make good” on such threats compounds greatly, making the use of nuclear weapons, particularly when the objective is great for its extrinsic (protection of a democratic island) and intrinsic (maintain credibility for allies and a great power’s own standing in the central system) purposes.

In a critical interval, increased inelasticities regarding future security and role lead to inverted force expectations: the uncertainties and shocks to foreign policy sensibility cause both potential aggressor and deterrer to find acceptable or necessary a use of force previously considered unthinkable.⁴⁸⁷ As nuclear exchanges between the U.S. and CCP are considered unthinkable in foreign policy circles,⁴⁸⁸ the Taiwan contingency as previously enumerated,

⁴⁸⁵ Tara Copp, “‘It Failed Miserably’: After Wargaming Loss, Joint Chiefs Are Overhauling How the US Military Will Fight,” *Defense One*, July 26, 2021, <https://www.defenseone.com/policy/2021/07/it-failed-miserably-after-wargaming-loss-joint-chiefs-are-overhauling-how-us-military-will-fight/184050/>.

⁴⁸⁶ Craig Kafura and Dina Smeltz, “For First Time, Half of Americans Favor Defending Taiwan If China Invades,” *The Chicago Council on Global Affairs*, August 26, 2021, <https://www.thechicagocouncil.org/research/public-opinion-survey/first-time-half-americans-favor-defending-taiwan-if-china-invades>.

⁴⁸⁷ Charles F. Doran, “WWI as existential crisis amidst the shifting tides of history,” *International Relations*, Vol. 28(2014:2), 263-267.

⁴⁸⁸ Robert D. Blackwill and Philip Zelikow, *The United States, China, and Taiwan: A Strategy to Prevent War* (Washington, DC: Council on Foreign Relations, 2021), <https://www.cfr.org/report/united-states-china-and-taiwan-strategy-prevent-war>.

would leave the U.S. in such a position as to engage in the previously “unthinkable” acts.

According to Dr. Charles F. Doran, in intervals of massive structural change, states struggle for comprehension amidst discordant and seemingly contradictory realities. At these existential moments, with the ingredients necessary for rational choice absent, strategy itself is flawed, a condition labeled as ‘conditional nonrationality.’ The abnormal mechanism of inverted force expectations initiates the conflict spiral into major war.⁴⁸⁹

We posit that the likelihood of nuclear war may abruptly increase if, suppose, the trend of local military balance continues in CCP’s favor and wields an insurmountable balance of force in the local theater. This is no surprise, as supported by Russett and Huth 1984 and Huth 1988. The likelihood of an aggressor engaging with a third state or pawn is greater when the local balance of force favors the aggressor rather than the defender.

One outcome could be no conflict, or a complete U.S. capitulation. This particular outcome seems to be viewed as unlikely on both sides. It would be unwise for CCP to assume little involvement inasmuch the same would be true for the U.S., with its sizeable regional forces, would be unlikely to stand idly by after much hand wringing and ink has been spilled.

To answer the likelihood of a U.S. capitulation, we first must ask why has the CCP built its military in such a way as to singularly negate many of the local advantages the U.S. possesses? If there was little likelihood of a U.S. intervention, why bother directing such great largesse and decades-long strategic attention in constructing such a formidable missile bubble? This infers that such a U.S. intervention is a primary assumption in annexing the island. The author could explain further why the CCP has kept equal fervor in building an apparently

⁴⁸⁹ Charles F. Doran, “WWI as existential crisis amidst the shifting tides of history,” *International Relations*, Vol. 28(2014:2), 263-267.

capable blue water navy, with impressive shipbuilding production rates historically and out to the foreseeable future, but this is hardly an important consideration. The primary reasons why fall moot when scoped within the regional context. The answer may well be because of a growing sense of national prestige attendant with the rise of the PRC as a great power – a great power deserves a great navy commensurate with foreign policy influence. The answer may also be for securing its security and economic interest within the region, with an eventual eye toward global commitments. It may also lie in a paranoid sense of survival, to learn from a terrifying past in “the century of humiliation”. We might also find a plausible answer within intra-nation politics: the object of cementing enduring legacies, realizing important CCP milestones, retaining power by indulging the PLA, or pleasing bureaucratic interests. Whatever the reason, the PLAN is growing in great quantity and capability. We see this for what it is, and for what this means regarding world stability. Though capabilities do not necessarily lead us toward intentions, in this respect, we see intentions align accordingly, as will be shown later.

And so, we find ourselves unconvinced that the CCP expects a U.S. capitulation. In fact, the CCP expects such an intensive American involvement that the attempted categoric shutout of the local U.S. naval presence offers us a greater insight into its intentions, rather than capabilities.

Therefore, we must ask ourselves: Does the U.S. expect itself to become embroiled in preventing annexation or engaging in an immediate, rather than general, deterrence crisis?

Recent statements from the President of the United States,⁴⁹⁰ The Secretary of Defense,⁴⁹¹

⁴⁹⁰ Stephen McDonnell, “Biden Says US Will Defend Taiwan If China Attacks,” *BBC News*, October 22, 2021, <https://www.bbc.com/news/world-asia-59005300>.

⁴⁹¹ “U.S. Will Defend Taiwan From Chinese Attack, Austin Says,” October 22, 2021, Bloomberg Quicktake, Multimedia Video, 2:27, <https://www.youtube.com/watch?v=k4GwdxtzuXo>; Tara Copp, “‘We Will Not Flinch’: Austin Promises US Will Continue to Bolster Taiwan’s Self-Defense,” *Defense One*, July 27, 2021, <https://www.defenseone.com/policy/2021/07/we-will-not-flinch-austin-promises-us-will-continue-bolster-taiwans-self-defense/184058/>.

Chairman of the Joint Chiefs of Staff,⁴⁹² and other officials⁴⁹³ coalesce around a strong uncompromising view of a U.S. response.⁴⁹⁴ So much so, that these recent statements, often informal, risk upending the foundational documents which have underpinned the U.S. – PRC relationship since its founding in 1979 and contributes to instability. This will be examined further later. Indeed, it has become fashionable for political actors to make pilgrimage to Taipei in believing they, too, are doing their part in signaling resolve,⁴⁹⁵ with the possible CCP misinterpretation of approving commitment of U.S. forces to Taiwan’s defense.⁴⁹⁶

U.S. naval assets and infrastructure have been a mainstay in the region. Any analysis of these conventional deterrent capabilities would conclude a strong presence. But what of its relative strength vis-à-vis the PLAN? The trend – and perception – of this local balance of force is tilting steadily toward a local CCP military advantage. This is shifting the deterrent equation both parties view, guided by their own perceptions, of what is thought to be the objective strength of both forces. For war to precipitate, there need only be such a change of perception of one party, the would-be aggressor, enough so either the willingness, the capability, or both of the would-be defender is under such strain as to make credible their commitment. This increased chance of success for invasion need only cross an unknown threshold of acceptable risk for conflict to commence.

⁴⁹² Ellen Mitchell, “Milley: US ‘Absolutely’ Could Defend Taiwan from China,” *The Hill* (blog), November 3, 2021, <https://thehill.com/policy/defense/579869-milley-us-absolutely-could-defend-taiwan-from-china/>.

⁴⁹³ Demetri Sevastopulo and Kathrin Hille, “US Sends Delegation of Ex-Defence Officials to Taiwan in Show of Support,” *Financial Times*, February 28, 2022, <https://www.ft.com/content/fdf0f21b-1f7b-4d10-a198-dad24634952f>.

⁴⁹⁴ Michael Martina and David Brunnstrom, “Exclusive: Biden Sends Former Top Defense Officials to Taiwan in Show of Support,” *Reuters*, February 28, 2022, <https://www.reuters.com/world/china/exclusive-biden-sends-former-top-defense-officials-taiwan-show-support-2022-02-28/>.

⁴⁹⁵ Ivan Kanapathy, “Taiwan Doesn’t Need a Formal U.S. Security Guarantee,” *Foreign Policy* (blog), April 26, 2022, <https://foreignpolicy.com/2022/04/26/taiwan-us-security-guarantee-defense-china-ukraine-war/>.

⁴⁹⁶ Josh Chin, “Taiwan Hosts Second U.S. Congressional Delegation in Two Weeks,” *Wall Street Journal*, November 26, 2021, <https://www.wsj.com/articles/taiwan-hosts-second-u-s-congressional-delegation-in-two-weeks-11637918337>.

There seems to appear from across the U.S. political spectrum, a growing willingness to defend. How might the CCP view such an unequivocal tenor? The CCP has grown more rigid in its unwillingness to renunciate use of force in “reunification,” seeming to increasingly cast doubt on its long held public understanding of a peaceful settlement to the Taiwan issue. With now a modern PLA military and a growing local balance of force, an unseemly tendency in world politics is resurfacing; that is, a country will do what it pleases if the objective can be attained.

The CCP understands power. And it is through the raw display – the politics of power in all its forms – and lastly, the execution of power, does it achieve its aims. This is imperative in understanding PRC relations with the world.

Yet, the provocative public statements of U.S. leaders contribute little to the stability of the region. Why is this so? The CCP is aware of this growing imbalance of force away from the historical predominance of the U.S. and toward the PRC. For all the willingness of a de facto “strategic clarity”⁴⁹⁷ when examining these public statements, this does little to rebalance the deterrence equation. To illustrate, take for example the basic premise that there is a marked difference between “desire” and “ability.” To want without the ability to obtain results is little progress in achieving a goal. Conversely, to be able, without desire, equally leads nowhere, because though power is present, it is not used in a purposeful way. The trends in local balance of force saddles the U.S. with deteriorating “ability” though it seems excessive “desire”, beyond

⁴⁹⁷ Richard Haass and David Sacks, “American Support for Taiwan Must Be Unambiguous,” *Foreign Affairs*, December 7, 2021, <https://www.foreignaffairs.com/articles/united-states/american-support-taiwan-must-be-unambiguous>; Richard Haass and David Sacks, “The Growing Danger of U.S. Ambiguity on Taiwan,” *Foreign Affairs*, February 15, 2022, <https://www.foreignaffairs.com/articles/china/2021-12-13/growing-danger-us-ambiguity-taiwan>; George F. Will, “Strategic Ambiguity About Taiwan Must End,” *Herald & Review*, September 9, 2020, https://herald-review.com/opinion/columnists/george-f-will-strategic-ambiguity-about-taiwan-mustend/article_4548bd92-9913-5caf-abbf-873b8b8bb5d0.html; Urban C. Legner, “US Strategic Clarity on Taiwan Could Deter China,” *Asia Times*, September 23, 2020, <https://asiatimes.com/2020/09/us-strategic-clarity-on-taiwan-could-deter-china/>; and Raymond Kuo, “The Counter-Intuitive Sensibility of Taiwan’s New Defense Strategy,” *War on the Rocks*, December 6, 2021, <https://warontherocks.com/2021/12/the-counter-intuitive-sensibility-of-taiwans-new-defense-strategy/>.

what is useful, is abundantly present. These two developments make for a reconfiguration in the eyes of the CCP of what can be attained given acceptable risk. As this trend of ability decreases, while U.S. desire increases, the risks for invasion will appear as increasingly acceptable, *ceteris parabis*.

It may well be that one day, before the decade is out, the CCP decides for purposes of striving for new sources of legitimacy in nationalism rather than economic growth; stirring great instability across the world to minimize or distract from rising domestic troubles; succumbing to the furor of nationalist sentiments within the CCP bureaucracy; on account of cementing legacies in the pantheon of Chinese communism; or for other unanticipated causes, to plan a crippling conventional attack upon Taiwan, with the full preparation of excising U.S. forces from mounting a timely or capable defense. Though the timing of such a momentous event is unknowable at present, this would indeed be a bloody war, though perhaps not circumscribing to the precise definition of a *fait accompli*.⁴⁹⁸ Such a Taiwan invasion would require massive transportation of troops, carriers, and materiel to strategic embarkation ports in, at least, the PLA Eastern Theater. Such an extraordinary movement would likely be discovered by U.S. ISR elements before a preemptive attack. Moreover, it is unlikely that, even if, planning for a surprise attack does undiscovered, that such an attack could gain a strategic foothold enabling political capitulation of the island without a forceful U.S. naval effort. Such immense efforts are also unwieldy and take time, no matter how fast such an operation is expected to go. The island's

⁴⁹⁸ Michael Kofman, "Getting the *Fait Accompli* Problem Right in U.S. Strategy," *War on the Rocks*, November 3, 2020, <https://warontherocks.com/2020/11/getting-the-fait-accompl-i-problem-right-in-u-s-strategy/>.

A precise definition being that "the territorial *fait accompli* is a limited land grab based on the bet that the opponent won't risk a larger fight for the territory. The *fait accompli* is about imposing gains at the expense of an adversary without getting into a larger war. They are not conquests of states via war.

geography alone is formidable. It is unlikely that a *fait accompli* will materialize.⁴⁹⁹ However, these advantages are no excuse for lackadaisical island deterrence for both Taiwan or the U.S.

The likelier outcome, one in which the author believes both sides are contemplating for differing reasons, is a conventional fight in which the CCP ultimately prevails from its immense local balance of force, and one in which U.S. engages yet inevitably loses. It is important to take stake of the contours of such a conventional battle. How will the enduring features of the region and character of the actors likely influence events? This section is not a futuristic nor predictive analysis of specific orders of battle, replete with autonomous drone swarms and artificial intelligence applications. What it will be is a mapping of the broad contours which would outline such a conventional conflict and its progress.

However, there is a third outcome, a most dangerous outcome, of which the author believes the CCP is little aware. That is an outcome in which a losing U.S., after taking considerable naval losses, resorts to escalate the conflict with the most efficient available means. This escalation may not be nuclear at the onset, yet because of CCP modern war doctrine and war termination requirements, will likely beget further escalation – escalation to the point of crossing the U.S. nuclear threshold. Little commentary in neither the CCP nor the U.S. DoD has contemplated this in great depth. This is an arena in which two nuclear-armed great powers seem to have little incentive nor foresight to reach a settlement short of nuclear war. This is in part because the author believes both sides have yet to think deeply about the unthinkable. This dangerous lack of understanding may lead to outcomes of which both parties do not desire, yet must come face to face, with little time to examine optimal decisions.

⁴⁹⁹ Tanner Greer, “Taiwan Can Win a War With China” *Foreign Policy*, September 25, 2018, <https://foreignpolicy.com/2018/09/25/taiwan-can-win-a-war-with-china/>.

Herman Kahn's escalation ladder assumes a rational and gradual escalation of conflict through stages of incrementally dangerous thresholds. This infers both parties of Kahn's experiment may hold similar risk calculation frameworks as to the benefits and risks of stepping up a "rung" as opposed to the different sorts of benefits and risks from capitulating to a more risk-prone adversary.

Yet, as shown in Chapter IV and Chapter V, the way of battle and war termination strategies of the U.S. and CCP are markedly different. This induces great uncertainty as to the various miscalculations which may occur on such "rungs." Whereas the U.S. mobilizes at scale with great firepower, supplemented through impressive logistics focused on tactical wins, the CCP is, at risk of sounding trite, an opponent with a competitive advantage in exploiting weakness in an opponent's doctrinal deficiencies for tactical and strategic effect. For example, an annexation of Taiwan is a deliberate and premeditated provocation. Though there may be initial hints toward Kahn's lower rungs beforehand, the invasion itself will likely be prosecuted with preemption, surprise, and secrecy.

This approach bypasses such previous engagements that would be more common among regular, symmetrical countries, with similar ways of war, edging to the brink. And it is in this sense, that this peculiar variation of "escalate-to-deescalate," is all the more dangerous as it thrusts the parties into a highly fluid, variable environment where the would-be defender is ripped from the comforts of traditional parameters under which rationality can be ascertained.

This jarring experience risks precipitating what the aggressor assumed away; namely, a resurgence of resolve that was deemed irrational given the presumed great expense and loss of life which would accompany any serious reversal of the aggressor's actions. This concept of rationality must be interrogated and questioned for validity when in high-intensity, short-duration

conflict where strategic decisions in rapid sequence must be made without what otherwise would be considered forethought or due diligence.

In this sense, we see the likelihood of starting such a conflict not at the rungs of “subcrisis maneuvering” or “traditional crises,” but an instant elevation to the “intense crisis” threshold with its various rungs occurring simultaneously, or in periods out of sequence with Kahn’s ladder. It is a volatile occupation to assign accurate assumptions to an adversary’s actions in such a joltingly foreign reality, transformed overnight.

It is prudent now to interact with what may be considered a parallel escalation, occurring in tandem, influencing and being influenced by, a conventional – nuclear ladder continuum. This is one of electronic warfare or otherwise thought of as maintaining communications integrity. It is no secret that the party which can maintain the information and decision advantage without interference is likely to prevail in its objective. This is why this domain will be hotly contested, likely sparked by a preemptive CCP attempt at corrupting and neutralizing U.S. communications networks, both local and distant. Severing communications channels between regional U.S. capital ships intra-fleet and these communications links to local and homeland headquarters will likely leave the U.S. fleet impotent and at risk of conventional salvos unable to be recognized and repelled. This action may also inhibit ground-based forces stationed in Japan, the Philippines, and South Korea, which may have maintained autonomy of their missile systems, yet links to ISR nodes may be severed to strip the possibility of accurate targeting and information awareness, if instructions to do so were even received in such an electronically

contested environment. This is one of the more sensational, and public, aspects of PLA doctrine and training.⁵⁰⁰

I assert that the “unthinkable” threshold for a Taiwan confrontation is not the use of nuclear weapons, but use of nuclear weapons beyond the *regional* field of play. Though nuclear weapons possess in the minds of many an understandably stark threshold loathe to breach, it is indeed one in which the pressures of the moment would ironically ease the burden of such use from a strategic sense, while simultaneously translating that same burden of the unthinkable onto the plane of regional/global. The mechanism used to reach such an assertion rests upon the principles of proportionality and burden-passing, with a corollary of legitimating decisions with intent of preserving existing world order. While many countries may wish dearly to postpone or avoid siding definitively against the CCP in order to preserve relations; the reality is that the world does not wish for Taiwan to be forcefully annexed, *ceteris paribus*.

There are several alarming ways in which the U.S. and CCP could stumble into a nuclear war. Many of these center around dual-use technologies to communicate with, identify targeting for, and deliver both conventional and nuclear weapons,⁵⁰¹ so called “entanglement”, in addition to general situational ISR awareness of the battle space. Two particular mechanisms are the

⁵⁰⁰ Sandra Erwin, “Pentagon Report: China Amassing Arsenal of Anti-Satellite Weapons,” SpaceNews, September 1, 2020, <https://spacenews.com/pentagon-report-china-amassing-arsenal-of-anti-satellite-weapons/>.

Matthew P. Funaiolo and Joseph S. Bermudez, Jr., “China Is Ramping Up Its Electronic Warfare and Communications Capabilities near the South China Sea,” Center for Strategic & International Studies, December 17, 2021, <https://www.csis.org/analysis/china-ramping-its-electronic-warfare-and-communications-capabilities-near-south-china-sea>.

Katherine Fung, “China Building Destructive Space Weapons to ‘Blind’ U.S. Satellites, Intelligence Report Reveals,” Newsweek, April 14, 2021, <https://www.newsweek.com/china-building-destructive-space-weapons-blind-us-satellites-intelligence-report-reveals-1583672>.

Harry J. Kazianis, “What If China Destroyed America’s Satellites?,” *The National Interest*, November 9, 2020, <https://nationalinterest.org/blog/reboot/what-if-china-destroyed-america%E2%80%99s-satellites-172102>.

William J. Broad, “How Space Became the Next ‘Great Power’ Contest Between the U.S. and China,” *The New York Times*, January 25, 2021, <https://www.nytimes.com/2021/01/24/us/politics/trump-biden-pentagon-space-missiles-satellite.html>.

⁵⁰¹ Dennis C. Blair and Caitlin Talmadge, “Would China Go Nuclear?,” *Foreign Affairs*, April 15, 2019, <https://www.foreignaffairs.com/articles/2018-12-11/would-china-go-nuclear>.

“misinterpreted warning” and “damage-limitation window,” first described by James M. Acton of the Carnegie Endowment for International Peace.⁵⁰²

First, suppose within the decade, the CCP prosecutes a forced annexation of Taiwan. The U.S. would then find itself in its first strategic decision cycle: Will the U.S. commit to defend, or refuse to do so, in whichever way that saves the most face? If the U.S. surrenders, with all the traumatic political consequences and subsequent transformation of world order that would occur, then we need not go further.

Yet if the U.S. decides to pursue a conventional defense of Taiwan and attempted reversal of whatever gains the CCP may have accrued at the moment, the U.S. would then be establishing itself to confront its second strategic decision cycle. If the U.S. is winning a conventional conflict, it is then well on its way to reestablishing the status quo ex ante, with a political settlement reached on the victor’s and possibly Taiwan’s terms at some time in future. Based on previous chapters, this seems to be – within the five to ten-year timeline – an unlikely, though not impossible, scenario.

If the conventional conflict stalemates or drags on for an inordinate time, the U.S. may face its first tactical decision cycle: Whether or not to contribute more warships, submarines, and materiel to break the stalemate. Resources are not unlimited. This would inevitably sap reserves from other global threat areas, such as capital ships from the European and Middle East theaters. This has inherent trade-offs and may create more problems than it solves. Rejiggering the global presence of the USN and other services may induce instability and crises elsewhere from the

⁵⁰² James M. Acton, “Escalation through Entanglement: How the Vulnerability of Command-and-Control Systems Raises the Risks of an Inadvertent Nuclear War.” *International Security* 2018; 43 (1): 56–99.
DOI: https://doi.org/10.1162/isec_a_00320.

same areas where these assets were drained— a great risk policymakers are likely loathe to consider.

This places the U.S. in its second strategic decision cycle: to escalate the conflict to the precipice of regional nuclear confrontation or to, once again, find face-saving means to capitulate in conventional battle. The latter option faces similar and likely excruciating political costs as to the first “off-ramp” presented in the first strategic decision cycle. The primary difference being whereas the U.S. in its first decision cycle would have walked away prestige and foreign policy legitimacy in tatters, yet with minimal or zero casualties to count; this new decision cycle has presumably higher sunk costs in terms of the deaths of American servicemen and women, incapacitated expensive American ships, planes, and possibly submarines. To walk away at this moment is not an impossibility, but arguably a more difficult task resulting from American domestic politics demanding something instead of nothing for loss of life and property. This may be in addition to the immediate deterrence recognition of U.S. policymakers that to defend Taiwan, an entity which could be seen as a significant ally,⁵⁰³ is to also defend intimate U.S. economic and security interests, which underpins a free, open, and independent U.S. society. The leap of logic is not far, in immediate deterrence, the fate of the U.S. and of Taiwan could take correlated paths. This recognition is likely to heighten the urgency of a forceful U.S. response. It is true that the future of the U.S., in terms of its intimate U.S. economic and security interests, which in turn underpins a free, open, and independent U.S. society hinges upon, at least in part, the successful deterrence of Taiwan, whether general or immediate. There is a linkage between the value of a significant ally and U.S. national independence when looking at the elements which constitute such independence, i.e. to secure its interests abroad in economically

⁵⁰³ Charles F. Doran, Theory of Bounded Deterrence, *Journal of Conflict Resolution*, Vol. 17 No.2, June 1973, pp. 247.

advantageous regions. The leap of logic is not far, in immediate deterrence, the fate of the U.S. and of Taiwan could take correlated paths. This recognition is likely to heighten the urgency of a forceful U.S. response.

These decisions are likely to surface and be decided in quick succession, not because there has been premeditation as to, what appears in present time, an unlikely scenario but rather because the moment demands action, however ill-conceived those subsequent actions may or may not be. The lack of deep forethought would be disturbing. The decision times and rate of event-transpiration, alongside fluid variables that are both known and unknown, lend decision makers to make as best of calculated risks as possible, with the circumstances ordering reactive, rather than proactive, policy adoption based on information available and when it is available to decision makers.

This analysis states that the U.S. may well intentionally escalate to veiled nuclear threats, open nuclear threats, or deployment of tactical nuclear weapons visited upon symbolic or strategic regional targets. This so-called “asymmetric escalation” coined by MIT professor Vipin Narang exists when a state deploys a nuclear arsenal to present a credible threat of a first nuclear strike, in response to a conventional, non-nuclear attack.⁵⁰⁴ Yet many analysts who wrestle with this concept see only a potential application for those great or regional powers who possess small nuclear arsenals without robust conventional means to rebuff a conventional attack. Historically, the CCP may have been considered, while in a conflict with a great power, to find such scenario

⁵⁰⁴ Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (Princeton: Princeton University Press, 2014), 8-9; Peter Dizikes, “The Varieties of Nuclear Strategy,” Massachusetts Institute of Technology, May 28, 2014, <https://news.mit.edu/2014/mit-political-scientist-examines-multiple-political-uses-nuclear-weapons-0528>.

plausible, yet unlikely.⁵⁰⁵ The author finds this concept applicable to a U.S. in the throes of the second strategic decision cycle; a period of discontinuity.

It is unlikely for the CCP to engage in nuclear weapons deployment preemptively. First, there is a long-standing CCP no-first-use policy, however untrusting it may seem.⁵⁰⁶ Also, the international opprobrium after preemptive CCP nuclear engagement, after already initiating as the aggressor, would be staggering and in stark violation of the assumed principles of proportionality and legitimating nuclear decisions.

It is prudent at this juncture to make clear that the above exposition does not equate to endorsement of tactical maneuvering which would precipitate such outcomes. This exercise is meaningful only in that understanding the great risks and dangers of the present regional dynamics leads policymakers of all three parties to truly grasp the devastation unleashed from an immediate deterrence crisis over Taiwan. This leads to a primary consideration: the only guarantee of muting such immense uncertainty, often the forebear to grave miscalculations, is for any of the three parties to never to take action which may plausibly lead to such an outcome.

Annexation of Taiwan is a positive act against an internationally accepted stasis. This meaning an act which is definite, quantifiable, and verifiable. It is an act that changes what is present and what is deemed legitimate. What would likely be the consequences of such an exertion, a change of what is? First, we must see whether this act would be viewed harmoniously within the system or as illegitimate, required in spoken word or deed to annul. This positive act introduces great uncertainty within the present international order and with great uncertainty also

⁵⁰⁵ Caitlin Talmadge, *The U.S.-China Nuclear Relationship: Growing Escalation Risks and Implications for the Future*, Testimony Before the U.S.-China Economic and Security Review Commission, Hearing on China's Nuclear Forces, United States-China Economic and Security Review Commission, June 7, 2021. https://www.uscc.gov/sites/default/files/2021-06/Caitlin_Talmadge_Testimony.pdf.

⁵⁰⁶ Alastair Gale, "China Is Accelerating Its Nuclear Buildup Over Rising Fears of U.S. Conflict," *Wall Street Journal*, April 9, 2022, <https://www.wsj.com/articles/china-is-accelerating-its-nuclear-buildup-over-rising-fears-of-u-s-conflict-11649509201>.

brings increased probability of great war. This sort of positive act introduces instability into the international system, a system which inherently desires stability and predictable relations of countries accorded legitimacy by the great powers of the central system.

In this sense, annexation of Taiwan would be considered by the central system as an illegitimate act, which also delegitimizes the means marshaled in which to achieve such an end. As this is understood, the means marshaled to reverse such an illegitimate action would likely be accepted as legitimate coupled with the condition that the costs attached to such means would not be greater than the gains acquired by reversing or halting the initial illegitimate act. There may be a likelihood that nuclear threats or actuated proportional nuclear activity may be, in the immediate deterrence dimension, the only viable method with which to achieve the elimination of an illegitimate action. If this is so, the immediate policy debate would then center not on the merit of means to counter a grievously illegitimate act, but whether to then legitimize extemporaneously a once-considered and presently understood illegitimate act.

This would be likely to beget future destabilizing acts from actors perceiving opportune moments to advance national interests at the cost of present international order. Yet if the initial goal remains throughout the decision cycle, then by a regrettable yet objective understanding, the U.S. may observe and proceed with the available means to counter the illegitimate act for the purposes of order preservation and maintenance stability in the system. The world would have then entered into the realm of nuclear escalation.

For the defender to win in a nuclear war, however limited or expansive, the deterrer's LUD must be greater than LUD of aggressor. It is always the aggressor who possesses the extraordinary task of convincing the central system for allowance to indulge its adventures. This did not materialize in 1962 as USSR aggressed, and similarly, the "burden of proof" to show the

central system in legitimating such a Taiwan annexation could be thought of as almost insurmountable, though not a pretense to dismiss such an act from possibly transpiring.

It is because the adventures of the aggressor do not occur in a vacuum, but jostle for influence amongst the great powers. The symbolic or tangible central system privileges accrued by successful adventurism, whether they be newly acquired legitimacy ad-hoc or increased foreign policy influence, are attended by the requisite loss of those same privileges from the defender and its allies or those otherwise unaligned countries whose parochial country interests are nonetheless adversely affected, such as the Non-Aligned Movement member states at the height of the Cuban crisis.

It is the author's belief that since the end of Cold War hostilities, the expending of nuclear force has not been seriously considered, as the likelihood of confrontation between nuclear armed great powers was an afterthought. Open-source data reveals little "realistic assessment" of how or in what circumstances might the U.S. find it acceptable to threaten or expend nuclear force in an immediate deterrence environment, notwithstanding general declarations in the 2018 Nuclear Posture Review.⁵⁰⁷ This is the peril of believing an event to be "unthinkable." It is quite unlikely if, and highly destabilizing for, the U.S. to extend the nuclear umbrella to Taiwan in general deterrence. Yet, this is not so in immediate deterrence. This is troublesome, as this lack of forethought can lead to uneven or uninformed decision making without crisp communication of U.S. intent. Goal multiplicity is the most fundamental element of bounded deterrence. As such, the lack of clear conceptual thinking in expending nuclear

⁵⁰⁷ United States Department of Defense, *2018 Nuclear Posture Review* (Arlington, Va: Department of Defense, February 2018), 20, <https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>.

weapons perhaps offers the greatest injection of uncertainty and possibility of miscalculation for both the PRC and U.S.

Geographic propinquity may prove to be less potent of an animating variable in deciding the utility of a goal in a hyper-connected world. What happens thousands of miles away in this context can be just as important – and indeed is – in relation to a great power’s closely held interests, be they security or economics, than what occurs on a country’s borders or domestic lands, though the effects of such external developments may display considerable lapse in manifestation. This temporal element can only do little to diminish the impact of such global events in relation to the great power in question, if only by allowing the ease to ignore uncomfortable developments, no matter the magnitude. The U.S. cared mightily, and rightfully so, about the peace of Europe post WWII, an Atlantic Ocean away. What is it to not do the same to the continent a Pacific Ocean away, in the opposing direction? As it was so where the world economy centered around Europe in the post WWII and subsequent Cold War period, with nuclear guarantees granted Western European allies – where interests and stated commitments aligned – why would geographic distance now become a limiting factor in an Asia-Pacific where the world economy is now anchored, and vital allies stand at the vanguard of a potentially world order altering event?

STATE OF U.S. NUCLEAR POSTURE

U.S. nuclear forces play the following critical roles in U.S. national security strategy:

- Deterrence of nuclear and non-nuclear attack;
- Assurance of allies and partners;
- Achievement of U.S. objectives if deterrence fails; and
- Capacity to hedge against an uncertain future.⁵⁰⁸

⁵⁰⁸ Ibid.

According to the 2018 NPR:

An important element of maintaining effective deterrence is the articulation of U.S. declaratory policy regarding the potential employment of nuclear weapons: The United States would only consider the employment of nuclear weapons in extreme circumstances to defend the vital interests of the United States, its allies, and partners. Extreme circumstances could include significant non-nuclear strategic attacks. Significant non-nuclear strategic attacks include, but are not limited to, attacks on the U.S., allied, or partner civilian population or infrastructure, and attacks on U.S. or allied nuclear forces, their command and control, or warning and attack assessment capabilities.⁵⁰⁹

The 2018 NPR in particular references potential of CCP provocations:

The United States will maintain the capability to credibly threaten intolerable damage as Chinese leaders calculate costs and benefits, such that the costs incurred as a result of Chinese nuclear employment, at any level of escalation, would vastly outweigh any benefit. The United States is prepared to respond decisively to Chinese non-nuclear or nuclear aggression. U.S. exercises in the Asia-Pacific region, among other objectives, demonstrate this preparedness, as will increasing the range of graduated nuclear response options available to the President. Both steps will strengthen the credibility of our deterrence strategy and improve our capability to respond effectively to Chinese limited nuclear use if deterrence were to fail. The United States will also continue to seek a meaningful dialogue with China on our respective nuclear policies, doctrine, and capabilities in pursuit of a peaceful security environment and stable relations.⁵¹⁰

The 2018 NPR decided to improve U.S. deterrent capability against nonstrategic nuclear attack by deploying low-yield Trident missile warheads⁵¹¹ to boost a small inventory⁵¹² and

⁵⁰⁹ United States Department of Defense, *2018 Nuclear Posture Review*, (Arlington, Virginia: Department of Defense, February 2018), 21, <https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>.

⁵¹⁰ United States Department of Defense, *2018 Nuclear Posture Review*, (Arlington, Virginia: Department of Defense, February 2018), 32, <https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>.

⁵¹¹ United States Department of Defense, “Statement on the Fielding of the W76-2 Low-Yield Submarine Launched Ballistic Missile Warhead,” Department of Defense Press Release, February 4, 2020, <https://www.defense.gov/News/Releases/Release/Article/2073532/statement-on-the-fielding-of-the-w76-2-low-yield-submarine-launched-ballistic-m/>; U.S. Library of Congress, Congressional Research Service IN FOCUS, *A Low-Yield, Submarine-Launched Nuclear Warhead: Overview of the Expert Debate*, by Amy F. Woolf, IF11143 (2021), <https://sgp.fas.org/crs/nuke/IF11143.pdf>.

Amy F. Woolf, *Nonstrategic Nuclear Weapons*, CRS Report No. RL32572 (Washington, DC: Congressional Research Service, 2022), <https://sgp.fas.org/crs/nuke/RL32572.pdf>.

⁵¹² Hans M. Kristensen and Matt Korda, “Nuclear Notebook: United States Nuclear Weapons, 2021,” *Bulletin of the Atomic Scientists* (blog), January 12, 2021, <https://thebulletin.org/premium/2021-01/nuclear-notebook-united-states-nuclear-weapons-2021/>.

developing nuclear submarine-launched cruise missiles (SLCM).⁵¹³ Though the program faced uncertainty,⁵¹⁴ it has recently been cancelled, with little prospects for the future of the low-yield warhead SCLM program.⁵¹⁵

With a forthcoming 2022 Nuclear Posture Review,⁵¹⁶ there may be changes to the U.S. declaratory policy in reserving the right to first-use.⁵¹⁷ However, it seems now there may not be any big departures from the 2018 review.⁵¹⁸ Whatever the 2022 NPR holds, the uncertain waffling between these consequential changes offers a view of middling resolve in approaching seriously the Asia-Pacific deterrent environment.

If the 2018 NPR is continued, this U.S. policy affords the option of the U.S. to initiate veiled or open nuclear threats and deployment of nuclear weapons for strategic effect. Though an extreme option, the CCP must countenance this possibility in the event of a Taiwan annexation. To not account for such a potentially devastating U.S. reaction would be for the CCP to court disaster upon itself, its political leadership, and the world, akin to the Cuban missile crisis. If the

⁵¹³ Aaron Mehta, “The US Navy’s New Nuclear Cruise Missile Starts Getting Real next Year,” *Defense News*, February 21, 2020, <https://www.defensenews.com/smr/nuclear-arsenal/2020/02/21/the-navys-new-nuclear-cruise-missile-starts-getting-real-next-year/>.

⁵¹⁴ Lara Seligman, Bryan Bender, and Connor O’Brien, “Biden Goes ‘Full Steam Ahead’ on Trump’s Nuclear Expansion despite Campaign Rhetoric,” *Politico*, June 2, 2021, <https://www.politico.com/news/2021/06/02/biden-trump-nuclear-weapons-491631>.

⁵¹⁵ Valerie Insinna, “Biden Administration Kills Trump-Era Nuclear Cruise Missile Program,” *Breaking Defense* (blog), March 28, 2022, <https://breakingdefense.sites.breakingmedia.com/2022/03/biden-administration-kills-trump-era-nuclear-cruise-missile-program/>.

Bryan Bender, “Biden Team Weighs Killing Trump’s New Nuclear Weapons,” *POLITICO*, January 12, 2022, <https://www.politico.com/news/2022/01/12/biden-trump-nuclear-weapons-526976>.

Matthew Beinart, “Pentagon Leaders Not Consulted On Acting SecNav’s Memo To Scrap Sea-Launched Cruise Missile,” *Defense Daily* (blog), June 10, 2021, <https://www.defensedaily.com/pentagon-leaders-not-consulted-acting-secnavs-memo-scrap-sea-launched-cruise-missile/navy-usmc/>.

⁵¹⁶ United States Department of Defense, *2022 Nuclear Posture Review Fact Sheet*, (Arlington, Virginia: Department of Defense, 2022), <https://media.defense.gov/2022/Mar/29/2002965339/-1/-1/1/FACT-SHEET-2022-NUCLEAR-POSTURE-REVIEW-AND-MISSILE-DEFENSE-REVIEW.PDF>.

⁵¹⁷ Demetri Sevastopulo and Henry Foy, “Allies Lobby Biden to Prevent Shift to ‘No First Use’ of Nuclear Arms,” *Financial Times*, October 30, 2021, <https://www.ft.com/content/8b96a60a-759b-4972-ae89-c8ffbb36878e>.

⁵¹⁸ Demetri Sevastopulo, “Biden Steers Away from Big Change to US Nuclear Weapons Policy,” *Financial Times*, March 25, 2022, <https://www.ft.com/content/4c72b45d-37ac-431f-838c-cf8704cad6c3>.

CCP thinks this too incredulous or outrageous of a reality in present day, the body must understand that such duress can induce conditional nonrationality, where the hallmarks available to policymakers to make informed decisions have vanished, which would further thwart CCP assumptions of U.S. behavior. However, rationality may yet persist for U.S. policymakers, strategy which may prove advantageous in such extreme circumstances for the U.S. to conduct veiled or open nuclear brinkmanship. How could the CCP control escalation then? The opportunity for unpredictable events to unfold would be numerous.

An unrestrained theory of victory is an important part of bolstering perceptions, which goes beyond deterrence but to “think through the unthinkable” in order to telegraph strong resolve to potential adversaries. This ultimately assists in decreasing the risk of miscalculation.

STATE OF CCP NUCLEAR POSTURE

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.⁵¹⁹ While its nuclear arsenal is small compared to that of the United States, China fielded roughly 320 nuclear warheads as of 2020⁵²⁰; China’s nuclear arsenal is constantly upgrading, modernizing, and expanding.⁵²¹

⁵¹⁹ Susan Turner Haynes, *Chinese Nuclear Proliferation: How Global Politics is Transforming China’s Weapons Buildup and Modernization* (Lincoln, NE: Potomac Books, 2016), pp. 90.

⁵²⁰ China Power Team. “How Are China’s Land-based Conventional Missile Forces Evolving?” China Power. September 21, 2020. Updated May 12, 2021. Accessed April 25, 2022. <https://chinapower.csis.org/conventional-missiles/>.

⁵²¹ “Nuclear Weapon Modernization Continues but the Outlook for Arms Control Is Bleak: New SIPRI Yearbook Out Now,” Stockholm International Peace Research Institute (SIPRI), 15 June 2020, accessed 25 September 2021, <https://www.sipri.org/media/press-release/2020/nuclear-weapon-modernization-continues-outlook-arms-control-bleak-new-sipri-yearbook-out-now>.

The accelerating pace of the PRC's nuclear expansion may enable the PRC to have up to 700 deliverable nuclear warheads by 2027. The PRC likely intends to have at least 1,000 warheads by 2030, exceeding the pace and size the DoD projected in 2020.⁵²² New developments in 2020 further suggest that the PRC intends to increase the peacetime readiness of its nuclear forces by moving to a launch-on-warning (LOW) posture with an expanded silo-based force.⁵²³ This dramatic change raises fundamental questions of CCP nuclear strategy, as it appears that the PRC may be building capability to engage in limited nuclear war. Many U.S. analysts do not believe that the PRC's no first-use policy is a credible pledge, because China has not stated how it plans to end a conventional war it is losing.⁵²⁴ This recent development further places suspicion on CCP intentions of building this nuclear force and how it is expected to be utilized.

This is a critical technical detail. In the event of a U.S. tactical nuclear detonation, CCP would face overwhelming pressure to engage in-kind, yet with a greatly increased ICBM yield, though it is still possible for the CCP to detonate it at a U.S. CSG at sea.

The U.S.-based Union of Concerned Scientists reported that as of 2016, China had 192 satellites in orbit, a number that has since increased, with nearly all of these belonging to organizations or companies with close ties to the government and having dual roles to for civilian and military use.⁵²⁵

⁵²² Hans M. Kristensen and Matt Korda, "The Pentagon's 2020 China Report," *Federation Of American Scientists* (blog), September 1, 2020, <https://fas.org/blogs/security/2020/09/the-pentagons-2020-china-report/>.

⁵²³ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2021*, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>, pp. viii.

⁵²⁴ See, for example, Thomas G. Mahnken, "Future Scenarios of Limited Nuclear Conflict," in Larsen and Kartchner, *On Limited Nuclear War in the 21st Century*, pp. 138–140.

⁵²⁵ Mike Yeo, "China's Missile and Space Tech Is Creating a Defensive Bubble Difficult to Penetrate," *Defense News*, June 1, 2020, <https://www.defensenews.com/global/asia-pacific/2020/06/01/chinas-missile-and-space-tech-is-creating-a-defensive-bubble-difficult-to-penetrate/>.

Some of China's satellites include several payloads that are almost certainly for military purposes, such as electro-optical sensors, synthetic aperture radar and electronic intelligence technology. The country also uses a constellation of Naval Ocean Surveillance System satellites providing persistent coverage of water surrounding China. These capabilities can also support targeting for China's anti-ship ballistic missiles, and with sufficient numbers and integration, they could provide real-time target triangulation data to build up a robust picture of a target's location to ultimately generate a targeting approach.⁵²⁶

VERTICAL ESCALATION: NUCLEAR WAR

Bounded deterrence shows us the great risk of miscalculation that can lead to nuclear war or near-misses to nuclear war. Such dramatic vertical escalation is unaccounted for in numerous simulations conducted by the U.S. Government, think tanks, and likely the CCP. Each bounded deterrence outcome will be analyzed to offer vividness to the U.S. – PRC context. Each outcome is meant to show the great escalation dangers of the CCP to change the status quo.

Bounded Deterrence Model Outcomes in U.S. – PRC Conflict

Successful Deterrence

As events presently stand, evidently, conventional general deterrence is valid. Outcomes a, b, and c of bounded deterrence apply. These three successful general deterrence outcomes share a low LUD_A . This also includes a LUD_A below that of the NT_D or LUD_D , resulting in general deterrence. Outcome a describes the situation in which neither actor has much interest.⁵²⁷ In outcomes a, b, and c, successful deterrence results as a consequence of the aggressor

⁵²⁶ Ibid.

⁵²⁷ Charles F. Doran, Theory of Bounded Deterrence, Journal of Conflict Resolution, Vol. 17 No.2, June 1973, pp. 256.

possessing a very low LUD, lower than its NT. The reasons for this could be numerous. It is possible that the aggressor holds this continuum not because of an understanding of deterrer's continuum but because of a refusal to engage in conventional warfare. It is possible that each continuum of outcome a is realized not through calculation of the other but *sui generis*, from domestic or other elements. The risks for the aggressor to engage in war far outstrip the benefits of the aggressor's goal and this understanding creates an environment where these three outcomes are manifest.

These three deterrence outcomes may represent, at different times, the present situation. Though there are low level "escalation rungs", as described by Kahn, which are attributable to the diplomatic, informational, economic, or military operation jostling between the CCP and Taiwan, and CCP and U.S., these tensions, evidently, have not fundamentally changed either great power's decision calculus. However, these same tensions may have clarified the positions of either party, which further confirms the successful deterrence outcome. No party has signaled willingness to change the present balance. This displays a certain acceptance of the equilibrium. However suboptimal it may be for either party, the costs to change the equilibrium are unacceptably high, at present, though this is a snapshot in time and not predictive of shifting dynamics which may change NT and LUD levels.

Conflict / win

Outcomes d, e, f, g, and g' are conflict/win outcomes for deterrer. Outcomes d, e, and f result from miscalculation on the part of the aggressor about the location of the deterrer's LUD. Outcomes g and g' indicate in reality an aggressor very reluctant to use nuclear weapons, but a

deterrent who readily accepts such use.⁵²⁸ Outcomes d, e, f witness a low aggressor NT initiating nuclear conflict. Yet notwithstanding the location of a deterrent's NT, whether low or high, in each of these three outcomes the deterrent's LUD is higher, resulting in a conflict/win. Outcome f is unique in that though the deterrent's NT is above its LUD, the deterrent's LUD is still above the aggressor's LUD. This indicates that the deterrent is willing to absorb high costs, yet unwilling, even with its LUD reached, to use nuclear weapons. This signals the possibility of the deterrent to engage in conventional and cyber conflict in reaching the aggressor's LUD while refusing to use nuclear weapons. This seems an unlikely occurrence, though certainly possible, as an aggressor's use of nuclear weapons is likely to initiate a deterrent's use of nuclear weapons in response. Yet outcome f signifies the potentially concurrent dimensions of conventional, cyber, and nuclear escalation occurring.

Though outcomes g and g' signals deterrent's miscalculation of aggressor's NT – LUD continuum, it may also indicate deterrent's inclination to engage in preemptive nuclear war, only possible by miscalculation. With any variation of the aggressor's NT – LUD in the conflict/win tranche, a deterrent in an immediate deterrence environment could intentionally choose any of the deterrent's continua in outcomes d, e, f, g, and g' to reach the aggressor's LUD and initiate conflict resolution. The mechanics of achieving conflict/win or immediate deterrence success rests in Kahn's escalation rungs which commence an end at regional tactical nuclear exchanges, as the consequences beyond regional exchanges leads to global exchanges, thus inviting Armageddon, an outcome of which would reach any great power's LUD. This will be described more later.

⁵²⁸ Charles F. Doran, Theory of Bounded Deterrence, Journal of Conflict Resolution, Vol. 17 No.2, June 1973, pp. 257.

Conflict / lose

Outcomes h, i, j, k, and k' indicate conflict/lose outcomes for deterrer. The aggressor's LUD in this tranche of outcomes is higher than the deterrer's, indicating that the aggressor is less willing to yield the objective, although both opponents suffer greatly in the protracted war.⁵²⁹

Outcomes h, i could describe both U.S. and CCP equal willingness to use nuclear weapons early in a conflict, but with a deterrer's LUD being reached before the aggressor's LUD. This could be a plausible outcome over Taiwan conflict. If CCP conducted conventional operations against Taiwan in conjunction with nuclear threats on condition of U.S. intervention, but for whatever reason, after U.S. experiences losses such as a sunk carrier group, threat of or actuated cyber attacks on regional forces structure, the U.S. LUD is reached and capitulation negotiations begin favoring CCP goals. This outcome could also be interpreted separately. The U.S. would also be engaging in nuclear threats or tactical nuclear exchange. However, this may turn out – whether threats go unheeded by CCP or tactical nuclear use does not reach CCP LUD – the U.S. LUD will be still be reached first. A tactical exchange could include a first strike by either U.S. or CCP. A U.S. strike, not to include detonation of a nuclear weapon in an immaterial though symbolic location as an example of U.S. willingness to carry out a nuclear strike, would likely occur against PRC warships in the strait and not initially against mainland bases or staging areas. This action would guarantee a CCP nuclear strike, of comparable proportions to exhibit restraint and proportionality – principles necessary to justify such extreme actions – on perhaps a U.S. carrier group operating in nearby waters. In this conflict/lose outcome h, this action would likely reach U.S. LUD, resulting in capitulation. The game could plausibly be played with one more turn. The U.S. could initiate a lateral move or an escalatory move, meaning the U.S. could

⁵²⁹ Charles F. Doran, Theory of Bounded Deterrence, Journal of Conflict Resolution, Vol. 17 No.2, June 1973, pp. 258.

detonate another tactical nuclear weapon against PRC warships nearby the strait, only to likely conclude a similar attack on another regional U.S. carrier group. Or the U.S. may escalate further and detonate upon mainland cross strait targets material in staging Taiwan annexation operations. This would see a direct strike against the Chinese mainland. In this conflict/lose outcome, this CCP turn necessitates an action which will reach U.S. LUD. The only escalatory move available would be to attack the U.S. homeland and begin Armageddon. This is unlikely to take place in this outcome as this would reach both parties' LUD and not be within the bounds of outcome h. Thus, the CCP must reach the U.S. LUD without nuclear escalation. This could include a lateral move to detonate once again upon a regional U.S. carrier group. Or CCP can threaten or execute first-order cyber attacks against U.S. regional warships hence decapitating U.S. naval capability, U.S. naval communication networks to include anti-satellite operations, U.S. homeland infrastructure, or large-scale cyber operations against large U.S. firms thus crippling U.S. economy. Whatever is the means, the outcome is that this action reaches U.S. LUD and resolution negotiations begin with favorable outcome to CCP and its attendant consequences for the U.S. and world.

Outcome j starts with a low U.S. NT, willing to engage in nuclear threats or nuclear exchanges. Yet U.S. LUD is lower than CCP LUD resulting in conflict/lose for deterrer. However, CCP NT is higher than its own LUD. This means a U.S. LUD is reached through CCP executing sufficient conventional or cyber costs which reach U.S. LUD. Conventional loss would likely include, given an attempted Taiwan annexation, the loss of U.S. carrier groups via PLAN warships or the multilayered A2/AD missile networks exacting substantial cost in regional U.S. lives and assets, whether out at sea or at bases in Japan, South Korea, or

Philippines. CCP cyber attacks, as previously mentioned, could include incapacitating regional military assets or crippling U.S. homeland infrastructure, communication, or economic assets.

Outcome k describes quite low CCP NT, indicating a Taiwan invasion with conventional military assets and nuclear threats or detonation to command a capitulation of Taiwanese will to fight or dissuade U.S. intervention. The U.S. in outcome k refuses to use nuclear weapons and so attempts conventional immediate deterrence supplemented by cyber kinetics. However, this does not reach the CCP LUD before CCP actions reach U.S. LUD. Perhaps a CCP invasion is accompanied by surprise or telegraphed nuclear detonation of a nearby U.S. carrier group, paralyzing U.S. political leadership, resulting in negotiations on favorable CCP terms. If brinkmanship continues, U.S. may respond via crippling cyber kinetics which incapacitate PRC civilian/military infrastructure or partial elimination of PLA military capacity. This may provoke a second regional nuclear detonation on U.S. assets or increased conventional destruction of U.S. carrier groups at sea or regional bases in Japan, South Korea, or Philippines. After this turn, the U.S. would capitulate. The primary tenets of such a settlement could include CCP political autonomy over Taiwan perhaps given the lapse of a certain time horizon, a situation similar to Hong Kong today. If not explicit U.S. allowance of CCP autonomy over Taiwan, a graduated U.S. force drawdown in region may be another driving tenet of an unfavorable settlement for deterrer. A third potential could include a formal political understanding or treaty recognizing CCP preferences for a certain sphere of influence in region where U.S. forces would maintain minimal presence, if any, and a new “parallel” or parameter of U.S. force presence is drawn.

Outcome k’ is a much simpler configuration of outcome k. In a surprise or telegraphed nuclear attack on U.S. assets in region to dissuade U.S. intervention, whether or not in

conjunction with conventional conflict and cyber kinetics, the first CCP turn simultaneously reaches U.S. LUD, instantly bringing U.S. leadership to negotiations at CCP advantage.

Capitulation

Outcome 1 represents the argument of Porter. The deterrer's local LUD is lower than aggressor's homeland LUD. CCP naval superiority in the region, during a Taiwan crisis, with potential for CCP nuclear threats against U.S., would likely exceed local U.S. LUD necessary to continue brinkmanship pre-conflict and capitulate. Outcome 1 can transpire through various means. Implicit or explicit nuclear threats in conjunction with surprise conventional and cyber operations directed against U.S. to dissuade intervention in Taiwan, while a Taiwan annexation is underway. Taiwan may be invaded, with warned or preemptive conventional attacks on regional U.S. naval forces at sea or stationed at local bases. There would be sufficient destruction of U.S. warships and warfighting capability to paralyze local U.S. forces. This would question the value in sending reinforcements far afield if indeed this would be possible in expeditious time and if so, if these reinforcements would be able to avoid a similar fate and reverse the conventional balance of force in region. It is expected there would also be CCP cyber kinetics operations similar to the description of possible actions above. The game could end in this turn and U.S. capitulate. If the game continues for another turn, the U.S. may send reinforcements, resulting in similar fate as previous. The U.S. may conduct cyber kinetics in response but this is unlikely to reach CCP LUD. The U.S. may exchange implicit or explicit nuclear threats, but in outcome 1 these would not be heeded or believed credible. The U.S. would refuse to engage in use of nuclear weapons. The final event of outcome 1 is U.S. capitulation.

Whether CCP decided to implement a naval blockade supplemented by existing multilayer A2/AD missile networks, the projected U.S. costs necessary to overcome this force

would outstrip the utility of the political goal at hand. The U.S. in outcome l would view Taiwan's political future as a peripheral objective warranting more cautious use of military measures and greater readiness to yield if costs become or are foreseen as too high.⁵³⁰

Outcome m is similar to outcome l but with the critical provision that the aggressor is willing to use nuclear weapons in pursuing the goal, whereas the deterrer is not and thus the deterrer LUD is easily reached. The CCP would execute implicit, explicit threat, credible to U.S., but would not be required to execute the threats of nuclear weapons, supplemented by conventional force, and cyber kinetics. The U.S. is unlikely to use implicit or explicit nuclear threats yet use conventional and cyber kinetic operations directed at a reversal of invasion operations. These operations would likely be specifically tailored to neutralizing military operations and not, for example, U.S. cyber kinetic operations directed at PRC society, unless reciprocating in a similar fashion from CCP cyber kinetic operations at U.S. homeland and civil society.

Outcome n is similar to outcome m. The relative positions of aggressor NT – LUD are the same as well as the deterrer NT – LUD, with the only difference being the specific points at which the NT and LUD are located on each party's respective spectrum. The aggressor possesses similar LUD point as outcome m but with a much higher NT point. The deterrer possesses similar LUD point as outcome m with a much lower NT point. Yet it is the U.S. which is likely to threaten nuclear conflict against a CCP unlikely to engage in believable nuclear threats of their own. Yet the conventional or cyber kinetics of a CCP invasion is likely to induce U.S. LUD, without a U.S. reprisal considering the very low point of U.S. LUD.

⁵³⁰ Charles F. Doran, Theory of Bounded Deterrence, Journal of Conflict Resolution, Vol. 17 No.2, June 1973, pp. 255.

Peaceful Stalemate

Outcomes o results in peaceful stalemate whereas outcome p results in conflictual stalemate. Outcome o illustrates both an aggressor and deterrer's LUD at the same point. This does not preclude conventional conflict or cyber elements, which may have varying rungs in a Taiwan annexation if indeed U.S. sees utility in involvement. Yet both parties possess simultaneous LUDs with NTs at similar points significantly above LUD. This guarantees stalemate without nuclear use. Though it may be possible that each party delivers equally credible or uncredible nuclear threats, these are not actuated by either.

Conflictual Stalemate

Outcome p describes a conflict in which nuclear weapons are used, likely in conjunction with conventional and cyber operations. However, with similar points of NT and LUD of both aggressor and deterrer, nuclear weapons are exchanged, resulting in great loss, with no advantage gained for either party and therefore cessation of nuclear hostilities. This is the nuclear conflictual stalemate. Outcome p demonstrates the futility of nuclear war.⁵³¹ This is most reminiscent of the result of strategic nuclear exchange.

HORIZONTAL ESCALATION: A GLOBAL WAR

Not only will an attempted Taiwan invasion escalate vertically and likely beyond the nuclear threshold, but also beyond the region. Below is a general explication of which horizontal escalations are likely to occur and how these may precipitate. In such a Taiwan invasion, China will be unable to stop the U.S. from establishing naval blockades in the Malacca, Lombok,

⁵³¹ Charles F. Doran, Theory of Bounded Deterrence, Journal of Conflict Resolution, Vol. 17 No.2, June 1973, pp. 260.

Sunda straits, and Hormuz straits. The U.S. is likely to do this as China is dependent on critical maritime imports of oil, metal ores, even food imports as China one of the world's five biggest importers of corn, wheat, beef, pork and rice.⁵³² This instantly escalates a regional conflict into an international issue of supply of essential goods needed for the populace, but also materiel required for the CCP to prosecute the war. Yet this is not all.

An interconnected web of military alliances, though often overlooked by a traditional “hub and spoke” perspective of the Indo-Pacific, is likely to involve European powers arrayed against an aggressive China. The U.K., part of a U.S.-British-Australia security pact, will likely be heavily involved in the outcomes, as it already is militarily invested in the region, as will the two other actors.⁵³³ Japan's diverse security pacts with global allies – U.K., France, Germany, and NATO – further solidifies the internationalized implications⁵³⁴ of such a Taiwan invasion.⁵³⁵ France possesses a variety of overseas territories dotted along the Indo-Pacific, of which its intention to protect from aggression or domination is a core interest.⁵³⁶ Germany's shift in attitude toward Beijing has been accompanied with a renewed outlook of its interests in the Asia-Pacific.⁵³⁷ This does not include the variety of local “fence sitters” whose long term interest is not served by an undeterred Chinese takeover of Taiwan. Such a dramatic escalation of global

⁵³² Derek Scissors, “China's Economic Vulnerabilities,” *American Purpose* (blog), April 4, 2022, <https://www.americanpurpose.com/articles/chinas-economic-vulnerabilities/>

⁵³³ Rosa Balfour, “What the U.S.-British-Australian Security Pact Means for Europe,” *Carnegie Europe*, September 21, 2021, <https://carnegieeurope.eu/strategieurope/85392>.

⁵³⁴ Each of these pacts recognize the importance of protecting the international order; recognize China as a security challenge; recognize the importance of the Indo-Pacific; and acknowledge the primacy of the United States.

⁵³⁵ Jeffrey W. Hornung, *Allies Growing Closer: Japan–Europe Security Ties in the Age of Strategic Competition* (Santa Monica, CA: RAND Corporation, 2020), https://www.rand.org/pubs/research_reports/RR186-1.html. Also available in print form.

⁵³⁶ Government of France, “French Overseas Territories,” *Explore France*, March 9, 2020, <https://uk.france.fr/en/news/article/french-overseas-territories>.

⁵³⁷ David Hutt, “Will Germany reduce its security role in Southeast Asia?” *DW*, March 25, 2022, <https://p.dw.com/p/492eO>; Vanessa Geidel, “Germany ramps up Indo-Pacific engagement,” *ASPI: The Strategist* (blog), January 10, 2022, <https://www.aspistrategist.org.au/germany-ramps-up-indo-pacific-engagement/>.

scope is not something that Chinese leadership is likely to have thought through thoroughly and one element, among others, in this potential invasion that will strip China of the means to achieve its goal. A coalition of diverse global actors is likely to array against a China as aggressor. Yet China is likely unaware of this consequence and may well initiate a war that it is unlikely to win.

The localized invasion of Taiwan would spark a global war. A war that China cannot possibly win. With maritime imports and export capability cutoff, China will have lost the resources and good will needed to sustain a successful invasion and occupation of Taiwan. U.S. forces are stationed in Japan, Korea, Australia, Philippines, Guam others. If a CCP attack destroys U.S. assets on foreign soil, this is an instantaneous link to horizontal escalation.

After the U.S., in the original scenario, destroys the mainland missile batteries, it is time for the CCP to respond. This response will shape the remainder of the conflict. If the CCP has not already managed to preemptively neutralize the regional U.S. naval presence in a surprise attack before such an invasion (which I believe there is strong incentive for the CCP to do so), then the CCP will now instantly face a large escalation rung: to attack other U.S. forces stationed nearby, which will simultaneously horizontally escalate the conflict by activating nearby U.S. allies such as Japan and Australia. This event alone may catalyze British and French involvement, among others. Events are quickly spiraling out of CCP hands by now.

The CCP may not decide to immediately retaliate after mainland missile batteries are destroyed. It may simply continue its invasion and burden-pass to the U.S. to halt the invasion and thereby escalate the conflict. This inevitably includes U.S. attacking, once again, mainland military assets and military staging areas. This is likely to be by conventional means. However, the CCP will need to eventually neutralize these U.S. assets if they are desiring success in this

invasion. The CCP will be facing a two-front war: one against Taiwan to achieve the original aim and one against the U.S. and allies involved. These U.S. assets are stationed in other countries. Horizontal escalation is inevitable and uncontrollable for the CCP.

With the horizontal escalation as described above, the straits of Hormuz, Malacca, Sunda, and Lombok will surely be blockaded by the U.S. which will eventually choke the PRC of energy resources (and critical food imports, among others), though the PRC may possess enough immediate resources to complete an invasion.

Beyond the scenario of a concerted Taiwan invasion by PLA forces, the CCP may opt for an incremental effort at sustaining a naval blockade of the island, crippling contact with the outside world, and forcing a Taiwan capitulation with U.S. acquiescence, for fear of dramatic escalation. This act of war would be counterproductive to the CCP and provide the CCP with minimal leverage. For example, a U.S. response could easily be a naval blockade, in turn, at the critical straits of Hormuz, Malacca, Sunda, and Lombok to restrict PRC oil imports and other vital materials necessary for the CCP to continue prosecuting such a blockade. Such a blockade of a blockade would negate many of the advantages the CCP would attempt to gain.

A NOTE ON THE NATURE OF CYBER OPERATIONS WITHIN BOUNDED DETERRENCE

Cyber operations have been deemphasized in bounded deterrence outcomes. There is much literature to discuss the present nature and role of cyber activity in the central system. Yet, little seems to have been examined of cyber struggles in the aperture of nuclear escalation. Though traditional cyber activity will undoubtedly persist, and even intensify, in such an environment; this same environment invites new potential risks of cyber operations of perhaps a

more startling variety. When thinking through these “unthinkable” degrees, we may liberate ourselves to explore the strategic effects of our worst fears: structural energy grid outages, access denial of mass communication channels and news sources, severed military C4ISR links, and other cyber exploits which may cripple the foundation of modern society. However, these outcomes are unlikely to transpire.⁵³⁸

Cyber kinetics may not impact substantively the nuclear outcomes exhibited earlier through bounded deterrence. Cyber kinetics may contribute to decisions of retaliation or to initiate use of nuclear weapons, but these operations would only be supplemental, not causal, in executing nuclear decisions because the structural dynamics of nuclear escalation would already exist in the trend of diminishing conventional general deterrence which may precipitate nuclear immediate deterrence. Cyber kinetics may only exacerbate existing trends, which could manifest though prolongation of nuclear escalation until a LUD is reached by either party. These kinetics can accelerate the trend of diminishing U.S. conventional general deterrence through a myriad of ways such as, for example, the incapacitation of electronics systems on capital warships or communication networks intra- and inter-ship or carrier group. The author would consider this an acceleration of the trend identified in Chapter II.

⁵³⁸ For a deeper analysis on the role and nature of electronic warfare between great powers, please see Herbert Lin and Amy B. Zegart, eds., *Bytes, Bombs, and Spies: The Strategic Dimensions of Offensive Cyber Operations* (Washington, D.C: Brookings Institution Press, 2018); Ben Buchanan, *The Cybersecurity Dilemma: Hacking, Trust and Fear between Nations* (Oxford New York: Oxford University Press, 2016); P. W. Singer, *Cybersecurity and Cyberwar: What Everyone Needs to Know* (Oxford ; New York: Oxford University Press, 2014); and Kim Zetter, *Countdown to Zero Day: Stuxnet and the Launch of the World's First Digital Weapon*, First Edition (New York: Crown Publishers, 2014).

⁵³⁸ Ben Buchanan, *The Hacker and the State: Cyber Attacks and the New Normal of Geopolitics* (Cambridge, Massachusetts: Harvard University Press, 2020).

⁵³⁸ Justin Lynch, “Why Reversible Cyberattacks Could Become Standard in Digital Warfare,” C4ISRNet, August 29, 2018, <https://www.c4isrnet.com/dod/cybercom/2018/08/29/why-reversible-cyberattacks-could-become-standard-in-digital-warfare/>.

Anti-satellite and C4ISR attacks are possible in cyber escalation, but ironically, these attacks, and other cyber or “grey zone” attacks mentioned above, likely would only accelerate the decision to depend on tactical nuclear exchange as C4ISR systems may be severed with the fear that the reserved decision to launch tactical nuclear further down the decision pipeline would be preempted. This would make haste to such a momentous decision, potentially without the foresight of necessary immediate first-order effects and responses from CCP of a tactical nuclear exchange. The other outcome of C4ISR attacks could conceivably be of little strategic effect as redundant communications networks could continue delivery of important messages.

If CCP attacks U.S. C4ISR on the outset of an initially conventional conflict, then with the help of potential redundant communications systems and other mechanisms, the U.S. would almost immediately be persuaded, if it so chooses, to bypass conventional immediate deterrence and cross U.S. NT to conduct tactical nuclear operations. The only effect guaranteed by C4ISR attacks, a propensity publicly declared by the PRC, is to infuriate and further hasten the use of tactical nuclear weapons. This is, of course, against any conceivable PRC interests.

It is important to note at this time that we do not disaggregate conventional, nuclear, and cyber escalations artificially. It is reasonable to believe that each escalation dimension, to varying degrees, will be occurring concurrently, though with progression likely from a conventional –cyber element towards a cyber – nuclear element, though it may be in this second phase that there can be remnants of conventional conflict, yet only peripheral as the dominant means of reaching any party’s LUD will be decided through this second phase of conflict. Throughout this sequence, cyber operations will likely take a secondary role.

It is important to note the likely response from the American public as a result of cyber kinetics, nuclear threats, or use of nuclear weapons directed against the U.S. As described in the

literature of Chapter IV, capitulation has often been a rejected proposition in the American way of battle. Numerous crucible moments in history point to this assertion, to include the national response after Pearl Harbor, September 11, 2001, or moments of gravely disadvantageous positions during American military actions throughout WWII such as in the Ardennes Offensive and others, it seems unlikely that the U.S. population would capitulate without extracting further leverage to ascertain CCP LUD or without acceptable solutions to adequately justify the aforementioned great costs borne. Hence, burden-passing is likely to commence given these conditions and escalation increase with stated reasons of proportionality and legitimacy in achieving a noble goal and end-state, and order preservation -- even within escalation -- to attempt to achieve stability of world order.

The American strategic mind, regarding great conflicts of existential import, has shown that it must find great costs justified by acceptable forms of compensation. In this sense, a “pound of flesh” is seen necessary to be exacted by U.S. policymakers in order to bring a sense of satisfaction for the pains endured by the American public. This is a defining feature of a democracy in the throes of war, accountable to a public which expects just compensation for loss. This cannot be said, *per se*, of other forms of government where policymakers are largely unaccountable to the public save only to other elite peers.⁵³⁹

CONCLUDING OBSERVATIONS

There are many outcomes which lead to nuclear war or “near misses” to nuclear war, notwithstanding the increasingly likely possibility of conventional conflict, over Taiwan’s political future.

⁵³⁹ For greater detail, please see *Appendix III*.

1. If conventional confrontation is overwhelmingly unfavorable, tactical nuclear capability will equalize the power balance. Just the threat of such possible use, may aid deterrence.
2. Escalation is not automatic and is determined by the location on the force hierarchy of the nuclear threshold and the level of unacceptable damage for each country.
3. China may say that it will forgo a first use of nuclear weapons, but its word has been quite unreliable in the South China Sea, for example. China may pretend to forego nuclear first use for propaganda reasons and then use these weapons first if the circumstances suit Beijing.

The probability of conventional conflict over Taiwan turning into a nuclear war is higher than traditional American foreign policy wisdom recognizes. This distinct possibility, though presently considered in the realm of “unthinkable” scenarios, should not be discounted as an impossibility. Particularly after a conventional conflict erupts, this likelihood is to increase dramatically.

To understand how a nuclear conflict may unfold, it is paramount to acknowledge the usefulness of the bounded deterrence model, the several buckets of outcomes, and each respective mechanism, which may lead to nuclear deterrence, conflict/win, conflict/lose, capitulation, or stalemate. To illustrate briefly, there are 24 theoretical outcomes in a deterrence situation. Six outcomes result in deterrence; another six outcomes result in capitulation; and the remaining twelve outcomes result in conflict. These are not assigned values of determinative probabilities. As a formal model, these outcomes illustrate all the possible results of a deterrence outcome, so as to describe the complexity of the relationship. This forces the analyst to consider all logical possibilities and guides the analyst in avoiding exclusion any part of the deterrer – aggressor relationship.

For the U.S. to prepare sufficiently for such a nuclear war, policymakers must ask critical questions of how they will respond at the brink of nuclear war. The tactical maneuverings will be left to U.S. tacticians and military planners.

The U.S. would do well to understand that time, energy, and resources are best devoted to evaluating future U.S. actions in a given Taiwan conflict rather than public recognition and push to arm Taiwan, as considered by the “porcupine” strategy or a “large number of small things,” however tactically useful these initiatives indeed are. Though these actions can be beneficial in the equilibrium of general deterrence, these reassurances are not material to final outcomes. In this sense, asymmetric capabilities are of tactical import. Its achievement may buy time for U.S. policymakers to decide on course of action but unlikely to alter significantly a CCP intent on annexation. This does not recommend a schizoid approach to Taiwan’s defenses, but a realization of Taiwan’s role as third-state in the deterrence formulation. Likewise, simply pursuing such a porcupine strategy, internally or externally proposed, for Taiwan does not abrogate the intelligent responsibility of a deterrer in evaluating likelihoods of real outcomes which can transpire given conflict and the frontloaded homework necessary of U.S. policymakers to provide their future selves with internal lucid choices in such events.

This so-called porcupine strategy also rests upon the erroneous assumption that the bulk of responsibility of successful deterrence rests upon the third-state actor. Indeed, it is of the utmost importance for the Taiwanese to arm themselves as readily as possible in order to provide for its own defenses. This most certainly ought to be a priority impressed upon it. However, the bulk of general deterrence maintenance activity rests upon the great power of which has signaled intent and possesses sufficient capability to enact deterrence, and of which the fate of the island’s future hangs more heavily on the consequences of U.S. policy and actions. Once we reorient ourselves to the present debate of whether the U.S. ought to reinvigorate the strategy of ambiguity towards something more reminiscent of *realist arbitration*, we must also recognize that this public debate would only be made possible if changing a policy of ambiguity would

matter for the sake of Taiwan deterrence – as it indeed does – and more so than the state of local Taiwanese defenses.

Focusing on this “porcupine” strategy does not absolve the U.S. from vital and unavoidable questions of its own NT – LUD continuum; this elicits questions paramount for successful regional deterrence. In other words, to what the U.S. commits, in word and deed, and its conveyance to the aggressor, matters more in view of CCP leadership than does the tactical posturing of the island of Taiwan. This should be manifest.

Conventional conflict may commence over Taiwan. But the present conventional regional military balance and the trends of warship production of PLAN and USN look to accelerate this trend in the next decade.

Geographic propinquity may count less than previously understood for protection of national interests, as CCP’s proclivity to alter world order has pulled the geopolitical, economic, and security interests of the U.S. in the Asia-Pacific, several thousand miles across the Pacific Ocean.

Ideally, to maintain general deterrence, it is vital to shore up the stock and trend of regional conventional naval superiority, perhaps most recently expounded by Elbridge Colby in his recent book, *Deterrence by Denial*. However, this is not a guarantee and – more worrisomely – can fail. After failure of general deterrence, U.S. policymakers must give serious thought to what an immediate deterrence environment cross-strait looks like and the U.S. projection of its likely actions to preserve world order and core U.S. interests.

War, nuclear or not, resulting from cyber operations is unlikely based upon the nature of cyber activities. It is an enhancer, an augments, perhaps an accelerator, which does not occupy the strategic dimension in full alongside nuclear weapons. In other words, cyber activity is a

means mechanism which can induce decisions along the NT – LUD continua of both parties yet is secondary to nuclear threats and action.

During nuclear conflict, it is unrealistic for the U.S. to execute operations intended to disarm the entirety of the CCP nuclear arsenal. Not only because of the logistical difficulties in locating, identifying, and guaranteeing the destruction of the entirety of the arsenal, both intercontinental and tactical, an arsenal that will be increasingly exponentially by the end of the decade, but also because such mass attack may trigger in real time what it is designed to prevent: a nuclear attack on the U.S. homeland. This would be an expenditure of nuclear weapons before the opportunity to use is lost – this is the argument of “use or lose.” Such massive attack on the territorial integrity would guarantee a similar attack on the U.S. homeland, courting Armageddon. Actions which invite global nuclear exchange are actions which would be considered thoroughly illegitimate by all parties and result in Armageddon: a price no great power is willing to pay at any time. This is a LUD which far outstrips any U.S. or CCP LUD and would not be reached, given any outcome.

The current Taiwan deterrence situation can include any of outcomes a, b, or c. To know an exact outcome is to be omniscient, although it is the responsibility of a great power to ascertain temporal intent and the driving elements of policy formulation which may shed light on trajectory of future outcomes. Though bounded deterrence continua account for both a party’s own likely actions towards the goal and that same party’s projections of the other’s likely evaluation of the goal,⁵⁴⁰ this does not necessarily entail an accurate transmission of intent and force magnitude between the two parties or a dynamic mechanism of modification of a party’s evaluation based upon the other’s recent activities and perceived significance to the other – a

⁵⁴⁰ Charles F. Doran, Theory of Bounded Deterrence, Journal of Conflict Resolution, Vol. 17 No.2, June 1973, pp. 250.

jostling of will toward the utility of the goal. This allows for miscalculation, as the model describes, but also in how the continua of both parties in a given outcome may interact with the other to transform into a different outcome as described by the model. The outcomes stand alone as conditions in stasis. Though in a fluid environment, these outcomes can morph into others as the underlying fundamentals shift. These characteristics allow for a four-part continuum of Public – Intra Government communication overlaid atop of General – Immediate deterrence. Immediate deterrence meaning both conventional and nuclear, supplemented by a parallel spectrum in cyber escalation, and what this means for local escalation dynamics.

For whatever reasons, the CCP currently is unwilling to presently engage in a conflict over Taiwan which may catalyze U.S. military involvement. Though much commentary has analyzed the various reasons for this, some include unfavorably CCP projections in timing, capability, domestic or international political pressure, which would prompt CCP decisionmakers to make a gambit towards a top priority on the road to “national rejuvenation.” The next section helps create four-part continua which may help structure U.S. policy decisions when transitioning from a general to immediate deterrence environment within local nuclear warfare.

OBSERVATIONS ON TACTICAL NUCLEAR WARFIGHTING

In order to think structurally of a transition between conventional general deterrence and nuclear immediate deterrence, we posit a four-part continuum of both aggressor and deterrer, an extension of the bounded deterrence model, configured along Public – Intra government dimensions overlaid with General and Immediate Deterrence dimensions. This assumes that the NT – LUD continuum of both parties can change, at times dramatically, when transitioning through either of these dimensions, rather than assigning a static NT – LUD continuum for both

deterrent and aggressor. Instead, it is more realistic to analyze the U.S. and CCP NT and LUD before use and after use of nuclear weapons. An actor is also capable of changing its bounded deterrence continuum during limited nuclear warfighting. This is where the four-part continuum applies.

In the words of James Schlesinger, Secretary of Defense, 1973 – 1975, testifying to the Senate Committee on Foreign Relations:

“[b]ut I might also emphasize, Mr. Chairman, that doctrines control the minds of men only in periods of non-emergency. They do not necessarily control the minds of men during periods of emergency. In the moment of truth, when the possibility of major devastation occurs, one is likely to discover sudden changes in doctrine.”⁵⁴¹

It is not assumed that one, both, or either actor is consciously playing this “game.” And so, to play is to gain advantage in immediate deterrence. I argue the U.S. unintentionally played this game in 1962. We know this because a primary advantage of this game, as mentioned in our earlier threads, is to “burden-pass” to one’s adversary to such extreme that the only viable choice available to adversary is capitulation or a large-scale attack on U.S. homeland, which is tantamount to Armageddon for the direct consequence which will follow. When an adversary is contemplating Armageddon, it has lost the game. Global opprobrium would be stifling and there is no legitimacy in that action. This was the decision faced by Khrushchev and a primary, if not the primary, reason of Soviet capitulation. Soviet LUD was reached as fear of further provocation or escalation would lead to Armageddon.

This framework is underpinned by bounded deterrence’s NT and LUD. This general-immediate deterrence part seems obvious, but what is needed for general deterrence to be successful is *different* than what is required for immediate deterrence to be successful. That is the

⁵⁴¹ Testimony in U.S. Congress, Senate Committee on Foreign Relations, Nuclear Weapons and Foreign Policy, Hearings, 93rd Congress, 2nd session (Washington, DC: U.S. Government Printing Office, 1974), p. 160.

non-obvious part. It is assumed what's successful for one is successful for the other. And I think that is in part the prevailing mentality which contributes to a future realization of a tactical nuclear war that no one wants or can foresee. Ambiguity is important for general deterrence to work, and the track record of it proves its success, I think. Or at least it is better than the alternatives: unambiguous for- and unambiguous against- Taiwan options.

The Intra-government node is important because these are the ideas secretly discussed where U.S. NT and LUD are truly decided upon before a crisis. This is where the U.S. knows it will commit to Taiwan deterrence but never says such publicly. This is where the “roadmap” is formed in the event of a foreign reality. It foresees this foreign reality and plans for it. What would otherwise be viewed as a jolting experience for the U.S. (to resort to tactical nuclear), this roadmap would already anticipate such. This is the great advantage: one of forethought. This is so U.S. can dominate up and down the escalation ladder. However, this cannot be known to the CCP, nor the true U.S. NT and LUD. The Public node is what is stated publicly, of course, which is formal ambiguity with the occasional informal statements and actions signifying commitment, when the occasion requires it, without gratuitous provocation. This is a sequence of stages which starts basically at maintenance stability, and increasingly progresses to conventional conflict and at its extreme, tactical nuclear exchange:

The General Deterrence – Public node is essentially diplomatic public relations. Similar to what's happening presently, i.e., going about cobbling together diplomatic agreements and shaping global opinion against Chinese provocations against Taiwan. This is maintenance of a public conventional NT and LUD that is thought of as sustainable in relation to China's. This is what has been happening since 1979.

The General Deterrence – Intra-government intersection is one where goals are pursued which would maintain general deterrence, ideas such as Colby’s, in a manner which would not cause a sense of “opportunity loss” from CCP. This would help alleviate the paradox of deterrence: that bolstering it, by way of increasing local balance of military force, could lead to its failure and war.

However, this also is when, in a general deterrence environment, plans are laid as to the U.S. NT and LUD in immediate deterrence. This is the creation of the “roadmap” that will guide successful deterrence, with a low NT and high LUD. This occurs when the U.S. NT and LUD are placed in potential jeopardy because of trends toward Chinese local balance of force advantage.

The Immediate Deterrence – Public node is crisis diplomacy. This is the U.S. making its legitimate case for world order to the globe, legitimating tactical nuclear decisions and “burden-passing” while campaigning on China’s great gamble contorting the world into a volatile, dangerous unknown. This has obvious 1962 parallels: the U.S. persuasion of the non-aligned third world and the informing of European allies. The U.S. would hear the world’s – allies’ and partners’ alike – honest opinions about China and its role in the world, to be sure. This is the global case for a low U.S. NT and high U.S. LUD.

The Immediate Deterrence – Intra-government node is what transpires below: where the U.S. creates a foreign reality for the CCP, thereby undermining their assumptions of future U.S. actions, and so doing cast self-doubt onto their assumptions of themselves, what they, the CCP, would do.

What will work in immediate deterrence is almost a “180” of general deterrence: declaration and actions which show a low NT and high LUD – say NT on the 20%ile and LUD on the 80%ile, for illustrative purposes. This is a risk, of course, but the clear conveyance of this

to CCP would help “burden-pass” because the simple knowledge of likely future U.S. actions would influence CCP decision making in the present. Now, a jarring experience such as Taiwan invasion causes warped views of rationality. But with the foresight of already deliberating upon what we are precisely talking about now – possessing a copied “intellectual map” of the landmarks of objective rationality from the previous reality – the U.S. could convey the pretense of acting as any country would in a crisis, resulting from the foreign reality it finds itself in (losing conventionally and thinking about risking nuclear) – and it would be believable because others would act in a similar fashion. Yet, in a sense this is all an elaborate and believable bluff (though able to become an “actuated bluff”) to undermine the confidence in CCP risk-appetite for escalation. It is imperative for the U.S. to act in a disoriented state, natural for the wildly foreign reality. But then make an abrupt break from its disoriented state to signal a communicative and intentional actor, completely breaking away from the previous mold of general deterrence, as it transitions from conventional to nuclear. This would likely stun a CCP who would be beside itself. This all takes deliberation. This is why the intra-government – public continuum is important. Perceived intentions of one party projected onto the other influence everything. Perceptions which are baked into the bounded deterrence formula.

So, the U.S. has ambiguity in general deterrence. As you say: “such ambiguity might lead China to take great risks during an actual war.” This is true. In this sense, I think it important to distinguish between formal and informal declarations. So it may be well for Biden or other high ranking officials to publicly warn China of provocations. The balance is in communicating the necessary resolve without gratuitous provocation. This is to rebuff China’s tactical probing of resolve, while the formal ambiguity remains intact.

Suppose China invades Taiwan with its preconceived idea of U.S. withdrawal after conventional loss. The author believes this is one of the prevailing CCP assumptions of the U.S. The U.S., in immediate deterrence, already knows what it will resolve itself to have, a low NT and high LUD, and the strategic effect of this is to completely flip the assumptions of CCP. It is imperative this is a surprise.

This “strategic surprise” will blur their perceptions of what is real and illusion. Because in a crisis environment, CCP would have been given overwhelming evidence by the U.S. to break with its (the CCPs) past assumptions. But it is precisely these erroneous assumptions that offer them a feeling of normality, a feeling of a foundation to work from. This agonizing cognitive dissonance would lead to disorientation, paralysis, and ultimately capitulation, with any number of domestic political scenarios as fallout. This is because the final decision CCP would have to make is to bring about risk of or actual Armageddon without any guarantee that that bluff would win. And once in that decision cycle, the CCP has already lost. There is no win, perceived or not, in debating Armageddon. It only matters for political influencing of the U.S. But that would only work if China is the one “burden-passing.” The burden passing would have already been conducted by the U.S. Worldwide opprobrium would be stifling. And actually, there would be strong evidence this CCP bluff in fact would not win, resulting in playing with Armageddon for no perceived reward. That is true madness, or as Kahn labels “insensate” annihilation. This is “burden-passing” taken to its logical extreme. The U.S., accompanied by the world, would call CCP’s empty bluff, if they even bluffed at Armageddon. Furthermore, this burden-passing to extreme, one where the decision rests on the aggressor to execute Armageddon or capitulate with compromise, strips the element of uncertainty in the escalation ladder which fuels the incentive to take risk via future escalation. This is because there is always a possibility

that escalating further places the onus of possible capitulation upon the other party. Yet, this extreme burden passing crystallizes certainty of future actions; namely, that the great power whose homeland is attacked with nuclear weapons is *guaranteed* to retaliate in-kind with a proportional, if not more expansive attack on the aggressor's homeland. This guarantee of such action strips any leverage from actuating the decision or even bluffing about its execution. It is this stark choice which can sober even the most irrational leaders. It is in itself a commitment to suicide. By definition, there is no gain, in any circumstance, to execute upon such an insensate action.

However, this is indeed the most extreme burden passing available to deter only the most irrational leaders of aggressing powers. This is not to say that many leaders would buckle under the yet uncertain but potentially vastly devastating options presented in lower rungs of escalation, thus reaching an aggressor's LUD.

It is important to note here that the LUD – Level of Unacceptable Damage – does not have to be the physical damage realized through nuclear warfare. The future must always be kept as an element of present decision making. LUD can also describe the threshold in which leaders' limits of uncertainty of future devastating actions if escalation is to continue is reached. In this sense, future levels of *likely* unacceptable damage are already “priced in” to present decisions made.

This raises the question of escalation or risk tolerance and its impact on NT – LUD continuum.

And the U.S., instead of being a co-victim of this foreign reality with China, would indeed be its creator. For this to work, the U.S. must understand and accept (privately) the boldness in originating the “burden passing” through a low NT and high LUD. For the CCP, this

would be, in a sense, the same pressure Khrushchev experienced when he boxed himself into a soured gamble, hopefully resulting in CCP capitulation.

The CCP cannot know U.S. intra-govt NT and LUD, because if so then it can calculate with foresight to neutralize its inherent advantages. This U.S. NT and LUD can only be discovered by CCP when in this “foreign reality.” This will make them question their previously-held assumptions about the U.S., and thereby question their assumptions of themselves.

This is because the CCP would already know future U.S. actions, taking them as already part of the future (yet still foreign) reality. Their own perceptions of U.S. NT and LUD would be totally erroneous, inevitably resulting in self-doubt which could lead to paralysis. The CCP would not know what is reality and what is not reality. But with the help of this four-part continuum, the U.S. would have a “relic”, or a “map” of what objective reality is.

To be sure, a government deliberately presenting itself one way while acting with impunity to not just influence, but to create a foreign reality for its opponent is truly dazzling, notwithstanding attendant risks which need to be enumerated and deeply pondered. To further explore such analytic forethought and the risks of great miscalculation, the next section investigates the seminal moment of nuclear immediate deterrence – the Cuban missile crisis – and the similarities with a future Taiwan conflict.

CHAPTER VII

CUBAN MISSILE CRISIS: LESSONS REGARDING TAIWAN

There has only been one other moment in history that such was the case – the Cuban missile crisis. In this respect it is prudent to examine the lessons extracted ex-poste to inform us of the world in which we find today; one which we may discover ourselves disoriented by the rapid and increasingly uncontrollable cycle of escalation to the nuclear dimension. Indeed, a dramatic transformation from a general to an immediate deterrence environment and all the attendant dangers beyond.

To understand a Taiwan Strait crisis, where the CCP signals intent followed by concerted kinetic action to overtake the island, the Robert S. McNamara assessment of the Cuban missile crisis provides a concrete foundation from which to embark, resulting from the Havana Conference of 1992. In the think-piece, “One Minute to Doomsday”, published by *The New York Times* October 14, 1992, McNamara illustrated a much bleaker mosaic of how close the world was to the destruction of countries than any party realized in the moment. In sum, de-escalation required a good deal of restraint and luck on both parties in the face of “misinformation, misjudgment, miscalculation.”⁵⁴²

The application of McNamara’s assessment as a complete mosaic of actions ex-poste undertook by both the U.S. and Soviet Union at the time of the Cuban missile crisis is a lens in which to examine the most analogous scenario unfolding in the present, a Taiwan Strait crisis. This is coupled with bounded deterrence theory, alongside the historical perspective of other dimensions. This presents a unique opportunity to apply theory in novel ways which may reveal,

⁵⁴² Robert S. McNamara, “One Minute to Doomsday,” *The New York Times*, October 14, 1992, <https://www.nytimes.com/1992/10/14/opinion/one-minute-to-doomsday.html>.

qualitatively, the present alarming dynamics which would impact a potential conflict as it stands today.

When contemplating nuclear-armed great power war, we must assess the sole moment in history where disastrous nuclear war was closest to occurrence. The Cuban missile crisis first began with a fundamental miscalculation. Soviet Premier Nikita Khrushchev, after observing the failed Bay of Pigs invasion and Operation Mongoose, along with concluding President John F. Kennedy as young and inexperienced at the Vienna Summit, saw an opportunity to duplicitously rejigger⁵⁴³ the nuclear posture between the world's two superpowers when the newfound socialist Cuban dictator Fidel Castro requested military assistance from the leader of the international communist movement to deter what was thought to be another imminent American invasion attempt.

Khrushchev's calculus was made possible by his perceptions of a United States acquiescent to let exist a nuclear power 90 miles off her shores – across the Florida Strait. Indeed, it seemed the perception of a failed invasion attempt and display of an inexperienced commander in chief, with the invitation to intervention, led reasonably to this conclusion. Thus, after Soviet emplacement of nuclear weapons in Cuba, the United States instantaneously found herself in a situation where general deterrence had failed and immediate deterrence forced U.S. policymakers scrambling for workable solutions. Immediate deterrence defined as an overt military threat from a potential attacker that has already become manifest.⁵⁴⁴ The Cuban missile imbroglio is the only example in the nuclear age of how general nuclear deterrence transformed to immediate deterrence, literally overnight, plunging the world into great uncertainty.

⁵⁴³ Timothy Naftali, "Snort and Talk," *Foreign Affairs*, April 6, 2022, <https://www.foreignaffairs.com/articles/russian-federation/2022-03-30/snort-and-talk>.

⁵⁴⁴ Paul Huth and Bruce Russett. "What Makes Deterrence Work? Cases from 1900 to 1980." *World Politics* 36, no. 4 (1984): 524. <https://doi.org/10.2307/2010184>.

Understanding the extractable lessons of this fateful event will prove timely in the present analog: a potential Taiwan Strait crisis. These lessons will be different in nature to those of other successful extended deterrence outcomes in history, such as the defense commitments to West Berlin in the Cold War. Though these episodes ought not to be overlooked, the analysis of nonexistent or reality altering outcomes is a trying endeavor. Indeed, it is the hope of many that the Taiwan Strait in future should be synonymous with these other successful deterrence outcomes.

Notwithstanding an immense local balance of force in one's favor, there is no way to occupy a nearby island with force, when that island is bitterly contested by another Great Power, without precipitating nuclear war.

In nuclear crises like the Cuban missile crisis, according to Robert McNamara, mistakes of misperception, misunderstanding, and misjudgment will lead to nuclear war. According to the bounded deterrence model (extended deterrence) there are just too many possible outcomes that lead to nuclear escalation to be able to acquire territory by force, and likewise, to be able to preserve the peace.

China will try every means possible short of force use to gain political control of Taiwan including trade, finance, investment, and cyberwarfare to manipulate and to dominate Taiwan. This is China's preferred modus operandi. However, if the United States and its allies indicate weakness or irresoluteness, China could choose to use military force to try to invade and to occupy the island.

One conclusion the author believes will be that Taiwan must make very clear, backed fully by the United States, that it has no plans to declare independence as a separate state. Small states historically have dragged great powers into war. Taiwan by its own mistaken actions

could also precipitate a war, a war neither the United States nor China want. Of course, everything else considered equal, China would like to occupy and annex Taiwan under the direct control of Beijing, an objective the United States and Taiwan strongly oppose.

The Cuban Crisis first started before Soviet missiles were introduced into Cuba in the summer of 1962. The Soviet Union and Cuba believed the U.S. intended to invade, overthrow Fidel Castro and remove his government. The U.S. had no such intention.⁵⁴⁵ How might an analogous circumstance be met in the Taiwan Strait? Indeed, the Central Intelligence Agency (CIA) sponsored the failed Bay of Pigs invasion, yet noticeably absent was the intent or actions supported by the U.S. military to this effect. This important detail went unnoticed if it was communicated at all. Military support of an invasion of Cuba was unauthorized. It was specifically the decision of President Kennedy not to support the operation with the use of U.S. military force, but the U.S. had assisted in carrying it out.⁵⁴⁶ It is evident, extracting from this example, that effective communication *before* a potential crisis is paramount. Operating, as comparably as possible, upon similar decision frameworks will act to help ameliorate missteps, by acquiring a more accurate understanding of consequences within realm of the respective sides. In 1992, McNamara recognized the issue. In this age of high-technology weapons, crisis management is dangerous, difficult and uncertain. Therefore, we must direct our attention to avoiding crises. At a minimum, avoidance requires that potential adversaries take great care to try to understand how the other party will interpret their actions.⁵⁴⁷

Second, the U.S. believed the Soviets would not move nuclear warheads outside the Soviet Union as they never had before. But they did. Third, the Soviets believed the missiles

⁵⁴⁵ Robert S. McNamara, "One Minute to Doomsday." *The New York Times*, 1992.
<https://www.nytimes.com/1992/10/14/opinion/one-minute-to-doomsday.html>.

⁵⁴⁶ Ibid.

⁵⁴⁷ Ibid.

could be secretly introduced and that when their presence was disclosed, the U.S. would not respond. Here, too, they erred Fourth, and perhaps most important, those who urged John F. Kennedy to destroy the missiles by an air attack, which likely would have been followed by a sea and land invasion, were almost certainly mistaken in their belief that the Soviets would not respond with military action.⁵⁴⁸

It is important in analyzing the Cuban missile crisis, that details of human action and tactical moves and countermoves do not distract from the broader parameters which structured the state of play for both parties. Khrushchev evidently believed that his gambit of placing nuclear missiles in Cuba would have only been worthwhile if there was little material retaliation from U.S. He catastrophically misjudged U.S. acquiescence to the missile emplacement. This is the catalyzing event of the crisis. The guiding concept of the ExCom, unspoken at the time, which percolated during intense U.S. deliberations, was to conduct actions which maximized burden-passing away from the U.S. and onto the Soviet Union. Some scholarly research insinuates the blockade decision was reached by consensus of “middle of the road” options, or by U.S. desire to de-escalate, or by buying time for diplomacy to work. Yet none of these reasonings fully explains the way in which Khrushchev responded to the blockade. They can be thought more properly as means through which the “burden passing” – the jolting transformation of Khrushchev’s NT – LUD continuum from pre-crisis to mid-crisis.

Khrushchev did not capitulate by recognizing the reasonableness of U.S. “middle of the road” blockade option and understanding this was of great rapport with the international community, and thus was left to pullback in the face of supreme American moderation. Nor did Khrushchev engage his actions for reasons of U.S. desire to de-escalate a fragile and volatile

⁵⁴⁸ Ibid.

flashpoint. If anything, the U.S. blockade further escalated the crisis, requiring a choice of doubled wager from the USSR or capitulation, which requires an understanding of where the USSR LUD was at time of conflict. The LUD of a great power is often not reached myopically or instantaneously. In this I mean that world leaders possess the skill of foresight; they know that each action taken in the present shapes potential trajectories to be encountered in the near future. This is to be tactically rational; to understand the logic of cause and effect, while allowing for uncertainty to inexorably be ever-present. Tactical rationality can be identified in what I call a “foreign reality,” where “conditional nonrationality” exists as Dr. Charles F. Doran asserts, which is differentiated from an “objective reality,” of what truly is occurring when erroneous perceptions are stripped away, from the aggressor or defender or both.

The cost of nuclear escalation must be considered acceptable to the advantage potentially gained from such an act. Such costs can primarily be considered political, both domestic and international, in nature.

Lastly, though international diplomacy in 1962 particularly with the non-aligned third world partners and European allies, was an important legitimacy building measure for U.S. blockade against USSR, it was not the driving mechanism of what settled the crisis. This took place between the USSR and U.S. in real time in an immediate deterrence environment. Though a political settlement was the outcome of the Cuban crisis resolution, which was forged through crisis diplomacy, the crisis was instantly solved when Khrushchev understood that – because of the U.S. enactment of blockade – the choice placed to him, and the Politburo was to escalate further and risk real probability of Armageddon or to capitulate. This is because the cost of foreign policy preference vastly outweighed what was to be gained by USSR through nuclear emplacement on an ideological ally’s soil. In this, diplomacy was a public manifestation of the

cause of resolution. The political settlement was only made possible by U.S. putting the extreme choice to USSR of Armageddon or capitulation, which drastically transformed the context in which the catalyzing event of the crisis once seemed worthwhile. This cognitive dissonance is a jarring experience which shatters originally held assumptions and questions the value of the original proposition. It is this acceptance of risk-taking which paradoxically ameliorates risk of great destruction.

Now, CCP values Taiwan annexation more than the USSR valued Cuba as an ideologically. The personal relationship between Khrushchev and Castro was strained and the self-proclaimed ascension of Cuba into the international communist movement was met with uneasy acceptance in Moscow, not in the least because of the perceived cynicism of Castro's proclamations of communist brotherhood for nationalist purposes. Yet Castro's Cuba was useful for Khrushchev's perceived solution to rejigger the global nuclear balance. Cuba was viewed as a foot-soldier for Moscow against the West. Cuba was not a priority for Khrushchev. However, Taiwan annexation has been declared the crowning jewel of the "rejuvenation" of China led by CCP. Taiwan is a vital priority of the CCP, arguably only second in importance to the survival of the CCP regime itself. In this sense, in 1962, Soviet LUD did not require great escalation to be reached, as the foreign policy preference in conflict was not much of a principled security priority as much as a reckless gamble by an irresponsible Soviet premier. This is not the case regarding CCP. Because Taiwan is precisely a great foreign policy priority for CCP, arguably the most coveted foreign policy interest, the escalation must be all the greater to reach the CCP LUD. This will likely require, if conventional general deterrence fails, threatened and actuated tactical/regional nuclear war to offer the most extreme burden-passing choice to the CCP, in similar conception that was unbeknownst achieved by the U.S. against USSR in 1962.

No nuclear exchange occurred. It can be reasoned that Castro's Cuba was not a vital national security priority for the USSR Politburo or Khrushchev in particular, especially when the gambit risked the security of the adversary's homeland and/or hold on the regime's political power. Though the ideological similarities between USSR and Castro's Cuba were notable – to the point of USSR nuclear missile emplacement on Cuban soil – Khrushchev was unwilling to risk USSR security and regime/personal power for a desired foreign policy objective, no matter how pressing the policy preference. Similarly stated, Khrushchev executed a great bluff – the gamble – and it was “called” by the ExCom, with the attendant folding that was observed. An annexation of Taiwan would be no bluff; and would debatably be a much greater crisis than exhibited in 1962. Though Cuba was a most volatile crisis, it was relatively short-lived with few turns played. In fact, it was only a one-turn game for either side. It is possible the game could have continued into a second turn. It is unwise to speculate on nonexistent realities of history to ascertain alternative outcomes. Yet, the Taiwan question is differentiated from the Cuban crisis in important ways. USSR miscalculated U.S. intentions to invade Cuba and in turn placed offensive nuclear missiles for alleged defensive capability against invasion. While an aggressor placed nuclear missiles in a third state against a defender in 1962, there is no analogous situation in the present.

There are many attendant dangers which can precipitate after a failed conventional general deterrence in region. Yet, the U.S. has found itself in a strategic interregnum of the next decade or less where a particularly aggressive and ambitious China has shown an easy willingness to resort to threats, coercion, and ultimately, invasion to achieve a so called “reunification” of ROC. The conventional general deterrence which has maintained stability in the region; namely, a strong U.S. naval presence with cooperation of regional allies – coupled

with a PLAN unsophisticated in advanced operational concepts or potent military technology aligned together to achieve a core CCP objective – kept the great ambitions of the CCP at bay. These elements are now in flux. The former eroding and the latter advancing. Though alarming, this dynamic on its own has not had the weight to impress a rethinking of the U.S. decision calculus. However, the alternatives are unsatisfying if the U.S. is to keep its albeit officially informal defense commitment to Taiwan, or to uphold American interests and prosperity in an increasingly fluid and uncertain world order. The alternatives – namely a rejiggering of U.S. conventional naval assets, an ‘integrated deterrence’ approach, or a buildup of first-round missile salvo capabilities – are unconvincing in swaying CCP perceptions to change its calculus.

It is important that although these lessons need to be enumerated, expanded, and contextualized toward a Taiwan conflict, it is also important not to appear risk-averse, and willing to shape the risk environment in order for the U.S. to manipulate the deterrence equilibrium to its advantage.

Perhaps it may present itself as an enticing opportunity to achieve the CCP objective of subsuming Taiwan while there lasts a window of opportunity, possibly accentuated as what the CCP perceives to be a general malaise resulting in American weakness. Yet past performance may not be indicative of future results. In this, history can be a defining guide.

Indeed, it is well documented that an element which weighed heavily in Soviet Premier Nikita Khrushchev’s fateful gamble to place nuclear armaments in Cuba was a perception, ill-founded as it came to be known, that U.S. President John Kennedy signaled weakness on the international stage from what was seen as poor performance regarding Operation Mongoose and the failed Bay of Pigs invasion, in addition to the 1961 Vienna Summit where it was acknowledged that Khrushchev held court over the young and relatively inexperienced U.S.

leader. From the eyes of Khrushchev, the inklings of a successful gamble were in the making. How fatal that proved for the domineering Soviet Premier, who possessed a strong centralization of leadership decisions, perhaps driven by personal preferences more so than what was expected at the time. In this sense, Chinese President Xi Jinping has displayed at least some similar penchants for centralization of politburo activities. Of course, there is great uncertainty in such matters, compounded by the lack of germane publicly available information. Yet these matters are great, for their consequences are great. And in this, it is of the utmost prudence for the CCP to understand the astounding dangers of a claim by force made upon Taiwan, for the U.S. would be obligated to respond, whether the U.S. presently understands its obligations or that these responsibilities are thrust upon the U.S. in event of immediate deterrence, while global attention demands action.

As detailed previously, the supremacy the U.S. Navy once enjoyed in the Asia-Pacific has deteriorated markedly. So much so, in wargame simulations, the U.S. cannot guarantee victory. This leaves the Asia-Pacific in a volatile corner. The options are 1) to concede Taiwan to the CCP without a war; 2) engage in a costly and bloody conventional war, while eventually losing; or 3) resort to nuclear threats, likely in conjunction with the assessment that engaged U.S. conventional forces are losing the advantage.

The CCP would be far better off than plunging the U.S. and the world, and itself, into this situation by insisting that Taiwan not declare statehood while avoiding the scenario that leads to nuclear threats from the U.S. This also allows the critical, if understated, element of time to assuage tension, if indeed CCP allows for such an amelioration. The CCP can live with such a Taiwan, just as the U.S. has learned to live with an unattractive Cuban regime following the Cuban missile crisis.

It has been shown that bullying and graduated aggression has been a reliable tool for the CCP to exploit continuously. Yet this same bullying can result in miscalculations which can lead to nuclear war, a war that the CCP could stumble into unwittingly. It is imperative that the tides of the Asia-Pacific do not reach a point in which the options of great powers become limited and inflexible.

It is proper then in light of the alarming trends of CCP aggression toward Taiwan to hold the CCP to the Three Joint Communiques with a reaffirmation of peaceful means to determine the future political status of Taiwan.

In this sense, it is wise to recall the words of one of Khrushchev's letters to Kennedy, in which he states:

"Mr. President, we and you ought not now to pull on the ends of the rope in which you have tied the knot of war, because the more the two of us pull, the tighter that knot will be tied. And a moment may come when that knot will be tied so tight that even he who tied it will not have the strength to untie it, and then it will be necessary to cut that knot, and what that would mean is not for me to explain to you, because you yourself understand perfectly of what terrible forces our countries dispose."⁵⁴⁹

Excerpt of a Khrushchev speech August 7, 1961 on the alarm raised from U.S. DoD budget increases:

"The Western Power are now pushing the world to a dangerous brink, and the threat of a military attack by the imperialists on the socialist states is not ruled out... when a situation like this arises, it would be impermissible for us to sit with folded hands. History teaches us that when an aggressor sees that he is not rebuffed, he becomes brazen and when, on the contrary, he is rebuffed, he calms down."⁵⁵⁰

This speech can be recognized as acknowledging the need of deterrer to match the aggressor's risk tolerance levels for successful deterrence. Xi, like Khrushchev, may not realize

⁵⁴⁹ State Department, Office of the Historian. Foreign Relations of the United States, 1961–1963, Volume VI, Kennedy-Khrushchev Exchanges, Telegram From the Embassy in the Soviet Union to the Department of State. October 26, 1962. <https://history.state.gov/historicaldocuments/frus1961-63v06/d65>.

⁵⁵⁰ Kahn, On Escalation (1965) pp. 70.

that a Taiwan attack is likely to cross U.S. NT. This would be a jarring revelation, just as it was with Khrushchev when he realized he miscalculated Kennedy's resolve. This would likely not halt a Taiwan attack, but it would likely inform risk-appetite in further escalation and with that, sober Xi's analysis of completing his objective in full. And in this, I think, that like the Chinese loss after invading a battle-hardened Vietnam in 1979, an attack on Taiwan that reaches U.S. NT would be able to be, and be spun as, a CCP political statement – a “we taught them a lesson” moment. It would be much harder for Xi to make that case if a tactical nuclear exchange occurs on Chinese soil without CCP retaliation. CCP retaliation likely would occur. But as mentioned earlier, on a likely UC carrier group at sea. This would catalyze a likely second U.S. tactical nuclear strike against China. This is when the CCP LUD would likely be reached. Because for CCP to escalate, it would risk Armageddon. The CCP would be trapped by U.S. burden passing.

The crisis would likely resolve with a political settlement, barring total destruction of PLAN/PLARF capabilities to inflict sufficient harm of defender's local forces to halt the defender's objective. And it would be similar to status quo ante, with perhaps reaffirmation of previous promises for Taiwan's future to be settled peacefully *and* promises to not invade Taiwan ever again, with installed parameters to ensure such an outcome. This is when an arms-reduction treaty could be implemented. Make this globally publicized so as to hold China to international account and reinforce regional conventional capacity asymmetrically to neutralize any CCP conventional armaments. It would then be easy to mount a global coalition to reestablish general deterrence, deployed in increased basing opportunities regionally. U.S. troops could leave Taiwan and the Strait, but still maintain regional presence. This can help with the CCP narrative of “teaching the U.S. a lesson.” A first-order consequence would be China (or CCP, if it is in existence at its status quo ante form) would give up any pretense for

“reunification.” Through all this, it would be vital to not subject China to perceived humiliation. What is brought about should be proportional and considered fair. Yet safeguards must be installed so as not to repeat a future occurrence. Lessons from end of WWI would be instructive.

The entirety of the research has illustrated the numerous dimensions of the Taiwan issue which elicit great miscalculation, increasing chances of nuclear war between great powers. It is almost universally accepted that miscalculation is to be avoided. To avoid miscalculation, the U.S. should be risk averse. This fundamentally lowers the U.S. risk-appetite against China’s. In this way, China will own the escalation ladder, if this is true.

What if leaving the door open to court miscalculation, can be utilized? What if a Chinese miscalculation can enable the U.S. to own the escalation ladder, and the U.S. to allow this miscalculation to occur to do so? In this sense, miscalculation would be of strategic foresight for U.S. Though no one wishes for general deterrence to fail, Khrushchev’s miscalculation was the catalyst for his own demise. His miscalculation boxed him into a corner of risking nuclear war on the U.S. homeland which would have likely precipitated Armageddon. In this sense, the U.S. inadvertently dominated the escalation ladder, without intention, because Khrushchev had a most miserable choice: to backdown with a hopefully politically “face-saving” settlement or be the instigator of Armageddon which would have inflicted grievous injury to his own countrymen, which meant reaching the Soviet LUD.

As the head of the Communist world, was Cuba’s accession to it more important to Khrushchev than his own country? Evidently not. In the same vein, as the head of the Chinese communist party, is Taiwan’s accession to the PRC more important to Xi than his own country? History may incline us to doubt this declaration.

In this sense, the CCP LUD would be higher than CCP NT. But CCP LUD would be lower than U.S. LUD because the U.S. actions as mentioned above to dominate the escalation ladder would cast doubt as to CCP's willingness to countenance Armageddon; CCP would have strong incentive not to test the U.S. LUD. Such declarations are instantly discredited as to its ludicrousness. Even if such a declaration is forwarded, notwithstanding its seriousness, the world would certainly heap great condemnation upon China, instantly stripping China of successfully achieving its goal.

It may be interesting to see China's century of humiliation as analogous to Germany's humiliation after the soured political settlements of post-WWI. China's resurgent and nationalistic CCP may be further compared to the structural leadership, not technical, dynamics which marked Germany's inter-war years, notwithstanding hyperinflation and other technical developments during that time. Though Germany's inter-war period lasted only a generation, China's rise from Century of Humiliation to the warlord period, republican period, the Chinese civil war, and now its perceived rightful resurgence in the world, has spanned several generations. Though the hallmark analogous indicator between the two is the desire for recognition and foreign policy influence in the world, driven by an internal desire for reclaiming its rightful place in the world; in so doing fulfilling what it perceives to be its destiny or rejuvenation.

CHAPTER VIII

CONCLUDING REMARKS AND POLICY RECOMMENDATIONS

In Chapter I, we focused on the parameters of what we meant by deterrence in the Asia-Pacific and offered basic direction as to the course of research.

In Chapter II, we learned of the alarm from U.S. policymakers regarding the erosion of conventional general deterrence in the region. Furthermore, we saw the numbers themselves, with capability and capacity of the USN now and projected to 2030 as static while the PLAN grows considerably in both capacity of its fleets and the capability of warships awarded commission. Chapter II goes on to detail similar metrics for U.S. regional allies and partners to examine the capability of their navies and the political willingness of its leadership in committing to shore up conventional general deterrence. Other elements were also considered such as interoperability, logistics, and geographic proximity – all values which contribute to deterrence. The section concludes that, notwithstanding the noble goal of diplomatic initiative to achieve this coalition of the willing, it is likely that the only two countries in region which would materially contribute are Japan and Australia, though Australia is located far afield of Taiwan.

We further learned of the alarm from U.S. policymakers regarding the erosion of conventional general deterrence in the region. There is a general inability to reverse such a sweeping trend, in both quantity and quality of warships, in a timely manner. It was only a matter of time before China was to possess a local superiority of military power off its shores. Counting on integrated deterrence or a “coalition of the willing” to constitute deterrence ignores both political, military, logistical, geographic, and interoperability realities in region. CCP A2/AD only exacerbates the trend. These all aim to erode deterrence and heighten the prospects of Chinese miscalculation.

Chapter II continued by exploring the missile misbalance effected by PRC A2/AD missile networks and the difficulties of the U.S. currently placing ground launched missiles on allied soil. This jeopardizes U.S. ships at sea and homeported in region, further eroding deterrence and heightening chances of CCP miscalculation.

We have observed in Chapter II that U.S. conventional general deterrence is eroding in region, just as PLAN metrics are strengthening to deny U.S. access and presence necessary to deter a Taiwan annexation. We have seen that if conventional general deterrence fails, there are, alarmingly, many possibilities which can lead to nuclear war or near-misses to nuclear war. Are military planners and strategists considering, in a serious manner, potential contingencies of which a CCP invasion and occupation of Taiwan crosses the U.S. Nuclear Threshold? Does the CCP know of this great danger if the communist party attempts to achieve its “rejuvenation?” A tense Taiwan crisis between two nuclear armed countries with comparable degrees of regional conventional armaments is an intrinsically unpleasant scenario to imagine, more so planning for such a sinister event. Yet it would be irresponsible to be so unprepared as a nation as to grasp at myriads of variables in real time, coupled with tyrannizing decision timelines, without the fortunes of forethought if such regrettable calamity was to occur. Better some thinking beforehand than none when faced with a jarring immediate deterrence environment, which would, perhaps by necessity, demand great escalation so as to find a more illusory acceptable resolution than if some incisive forethought had been systemically applied previously.

Chapter III helped recognize the probability of conflict by understanding a distinct Taiwanese cultural and political identity is emerging in which Taiwanese think of themselves as a separate people from mainland Chinese. This growing trend is likely to minimize the chances of peaceful “reunification”, which in turn increases the probability of war in future. The strategic

consideration for Taiwan is not that of a porcupine strategy, though this is indeed important, but for Taiwan's leaders to be vividly aware of the need to abstain from any declarations of political independence, assisted by the diplomatic efforts of the United States. It is also important to note that although it is an admirable policy choice to effectively strengthen Taiwanese defenses against a hypothetical CCP invasion, these are only tactical considerations which will affect minimal influence on the broader strategic concerns of CCP and U.S. leadership. It would behoove U.S. policymakers to instead focus on the greater issues of likely U.S. actions in the event of failure of conventional general deterrence and how this may translate to, in turn, a U.S. losing in conventional immediate deterrence and how this portends for the possibility of nuclear brinkmanship or regional tactical nuclear war. History shows that war planners tend to claim, and leaders tend to accept, that war will end much sooner than it actually does.⁵⁵¹

In Chapter IV and Chapter V we saw the positions staked out by U.S. and CCP (the importance placed on the Taiwan by both parties); how each views the assumptions of the other's projected actions in building broad parameters of what constitutes respective victory; and the general operational concepts of how each conducts modern battle. This illuminated the varied parameters in which miscalculation and misperception become palpable concerns. This ends, ways, means construct helped us to orient toward Chapter VI in describing bounded deterrence outcomes as they may precipitate.

⁵⁵¹ David C. Gompert, Astrid Stuth Cevallos, and Cristina L. Garafola, *War with China: Thinking Through the Unthinkable* (Santa Monica, CA: RAND Corporation, 2016), 17, https://www.rand.org/pubs/research_reports/RR1140.html. Also available in print form.

Underestimating the duration of conflict was a significant factor in most major strategic blunders of modern times, including Napoleon's invasion of Russia, Germany's decision during World War I to attack neutral shipping, Hitler's invasion of the Soviet Union, Japan's attack on Pearl Harbor, China's invasion of Vietnam, the Soviet invasion of Afghanistan, Argentina's invasion of the Falklands, and the U.S. invasion of Iraq.

David C. Gompert, Hans Binnendijk, and Bonny Lin, *Blinders, Blunders, and Wars: What America and China Can Learn* (Santa Monica, Calif.: RAND Corporation, RR-768-RC, 2014).

Chapter VI examines the entirety of the bounded deterrence outcomes on the NT – LUD continua of both parties. We see that there is strong evidence of many outcomes which lead to either nuclear war or to its brink, described as “near misses.” The U.S. must see the struggle not through the fallacy of mirror imaging, but to identify what the CCP holds paramount in the journey of “national rejuvenation” and find successful and immediate ways of deterring such attendant goals of the CCP which violate American interests in the region.

Chapter VII offers an analogous scenario in the Cuban missile crisis. Exploring this chapter, we find that evidence of the four-part continuum which achieved for the U.S. a “burden passing” upon the USSR that exceeded the USSR LUD by exceeding the risk Khrushchev was willing to take in the first round of immediate deterrence escalation. Misperceptions slipped the world from nuclear general deterrence to nuclear immediate deterrence, literally overnight. The U.S. unintentionally exceeding the USSR LUD catalyzed a peaceful political resolution to the crisis.

This transposed to Asia today offers thought provoking questions: What level of unacceptable damage is the CCP willing to commit? How low or high is its nuclear threshold? Does the CCP understand the great dangers, because of the great uncertainty, of what can occur if regional stability is shattered, and conventional general deterrence fails? A primary lesson is that the CCP must understand the likely first and second order effects of its tactical and strategic miscalculations in invading Taiwan. War does not occur in a vacuum. CCP misperceptions of likely U.S. actions, can send the world into the abyss, as it did Khrushchev’s poor judgment in being too clever by half to satisfy domestic and foreign policy goals with bold yet erroneously misguided actions.

A tense Taiwan crisis between two nuclear armed countries with comparable degrees of regional conventional armaments is an intrinsically unpleasant scenario to imagine, more so planning for such a sinister event. Yet it would be irresponsible to be so unprepared as a nation as to grasp at myriads of variables in real time, coupled with tyrannizing decision timelines, without the fortunes of forethought if such regrettable calamity was to occur. Better some thinking beforehand than none when faced with a jarring immediate deterrence environment, which would, perhaps by necessity, demand great escalation so as to find a more illusory acceptable resolution than if some incisive forethought had been systemically applied previously.

The importance of incisive forethought at the plausibility of nuclear threats and exchanges over Taiwan may come aptly from power cycle theory. It exposes the dilemma that arises for rational choice when agents – long accustomed to rational decision making – suddenly are unable to meet the criteria for acting ‘rationally’. The dilemma is not that the agents choose not to be rational, but that they suddenly confront a situation in which the criteria for being rational are not present.⁵⁵² This may very well may be displayed in a transformative moment for the central system as a Taiwan crisis would present.

In a critical interval, increased inelasticities regarding future security and role lead to inverted force expectations: the uncertainties and shocks to foreign policy sensibility cause both potential aggressor and deterrer to find acceptable or necessary a use of force previously considered unthinkable.⁵⁵³ As nuclear exchanges between the U.S. and CCP are considered unthinkable in professional foreign policy circles, the Taiwan contingency, as previously enumerated, would lead the U.S. to such a position as to engage in previously “unthinkable” acts.

⁵⁵² Charles F. Doran, “WWI as existential crisis amidst the shifting tides of history”, *International Relations* 2014, Vol. 28(2), 263-267.

⁵⁵³ *Ibid.*

In intervals of massive structural change, states struggle for comprehension amidst discordant and seemingly contradictory realities. At these existential moments, with the ingredients necessary for rational choice absent, strategy itself is flawed, a condition labeled by Dr. Charles F. Doran as ‘conditional nonrationality’. The abnormal mechanism of inverted force expectations initiates the conflict spiral into major war.⁵⁵⁴

The danger of such confusion can be cast upon the U.S. – CCP relationship today.

We can draw several lessons from the bounded deterrence model situated in the unique context of a U.S. – CCP conflict over Taiwan. There are many “near misses” to nuclear war, notwithstanding the increasingly likely possibility of conventional conflict, over Taiwan’s political future. The probability of conventional conflict over Taiwan turning into a nuclear war is greater than traditional American foreign policy wisdom recognizes. This distinct possibility, though presently considered in the realm of “unthinkable” scenarios, should not be discounted as an impossibility. Particularly after a conventional conflict precipitates, this likelihood increases dramatically. To understand how a nuclear conflict may unfold, it is paramount to acknowledge the usefulness of the bounded deterrence model and the several buckets of outcomes, and each respective mechanism, which may lead to nuclear deterrence, conflict/win, conflict/lose, capitulation, or stalemate.

For the U.S. to prepare sufficiently for such a nuclear war, policymakers must ask critical questions of how they will respond at the brink of nuclear war. The tactical maneuverings will be left to U.S. tacticians and military planners; however, we posit a four-part continuum of both

⁵⁵⁴ Ibid.

aggressor and deterrer, an extension of the bounded deterrence model, which overlays General and Immediate deterrence atop a Public – Intra-government dimension. This suggests that the NT – LUD continuum of both parties can change, at times dramatically, when transitioning through either of these dimensions.

A laser focus on training and simulations of nuclear diplomacy, is perhaps an area of renewed interest for U.S. policymakers. Some of which has been demonstrated in Chapter VI and which includes varied and diverse allied coalitions to include experimentation in psychological operations and focused information warfare. It is critical in immediate deterrence to factor in the importance of audience costs, both domestic and international. In this sense, cementing all U.S. military decisions in the universally recognized language of “legitimacy”, “stability preservation” and “proportionality” helps catalyze a favorable international response.

The U.S. must be precisely clear in its intentions and to communicate in ways that not only the U.S. believes to be clear but that effectively transmits the necessary knowledge to the intended audience. In this, the U.S. needs a forceful yet innovative diplomatic effort to iterate in no uncertain terms that satellite communications and command/control are considered part of U.S. nuclear deterrent option and neutralizing any satellite or command/control network instantly risks dramatic nuclear escalation. The U.S. should be as clear as possible in order to minimize any chances of misjudgment, miscalculation or misperception. Give every opportunity to aggressor which would provide a peaceful settlement and not diminish their national security or be a public humiliation.⁵⁵⁵ While making declarations toward the Taiwan issue, the U.S. need not describe what actions it may or may not take, but rather impress upon the CCP the dangers of miscalculation of erroneously planned CCP actions currently and if the PRC were to invade. This

⁵⁵⁵ Serhii Plokhyy, *Nuclear Folly: A History of the Cuban Missile Crisis*, New York, NY: W W Norton and Company (2021) pp. 248.

shift in attention – away from self-explanation of the deterrer’s actions and towards demand of the evidential burden the aggressor assumes through its actions – is subtle but important.

The U.S. helping train Taiwanese troops appears to offer little in terms of denial-deterrence and only exacerbates tensions with CCP, a most unhelpful initiative as efforts at symbolism without robust deterrence do not garner credible commitment in the eyes of the CCP.⁵⁵⁶

Signaling the growing likelihood of nuclear confrontation over Taiwan’s future, and the regretfulness of such a grave possibility to unfold, can potentially beget success. This framework can gain traction in defense of stability, not to fundamentally change the rules of the current world order. Bold claims to defend the great peace and stability which has been achieved since 1945 and 1989 ought to rouse like-minded allies and would-be allies alike from around the world in defense of what the world has worked hard to produce, to the objective benefit of all. This cannot be a policy of half-steps. A necessary condition of success is to change the decision calculus, the perception, of CCP. To do so requires credibility to be believed as stout, regarding the likelihood of a Taiwan invasion to reach the U.S. nuclear threshold, if the CCP makes the ill-fated mistake to take the island by force.

The U.S. must understand the deteriorating general deterrence environment in the region and adopt proper measures accordingly, to include a strategic rethinking of how the U.S. defense community views risk acceptance, stability, calculated yet bold escalation, and limited nuclear war in the 21st Century. Ideas such as Colby’s Strategy of Denial and “anti-hegemonic coalition” building in Asia-Pacific is admirable and ought to be pursued, however idealistic the goals.⁵⁵⁷

⁵⁵⁶ Gordon Lubold, “U.S. Troops Have Been Deployed in Taiwan for at Least a Year,” *Wall Street Journal*, October 7, 2021, <https://www.wsj.com/articles/u-s-troops-have-been-deployed-in-taiwan-for-at-least-a-year-11633614043>.

⁵⁵⁷ Elbridge Colby, *Strategy of Denial: American Defense in an Age of Great Power Conflict*, New Haven, CT: Yale University Press (2021).

This research, however, focuses on an equally likely possibility that similar goals are not achieved and the U.S. finds itself in a losing conventional immediate deterrence environment with the need to regain general deterrence.

It is time for U.S. policymakers to think deeply regarding perceptions of their own likely future actions given a CCP invasion of Taiwan and what this means for America's standing in the world today and world order for decades to come. It is equally important to focus intelligence efforts on ascertaining to the most practical extent possible how the CCP views its likely future actions in such an event. Does the CCP understand the humbling gravity of a Taiwan invasion, and its impact on the central system and to the future governance of the CCP? Is the U.S. prepared to experience a jarring Cuban missile crisis in Asia? How will our policymakers observe, decide, communicate, and act in a nuclear immediate deterrence environment? Will we make the right choices as we did in 1962? To create the makings of a "map" to safeguard U.S. interests in a conditionally nonrational environment, understanding the differences between the current U.S. NT-LUD and the U.S. NT-LUD in a "foreign reality" of immediate deterrence, would prove a prudent step to guarantee a safer future for all.

The effect of the lessons drawn from Chapter I is that McNamara's "misinformation, misperception, and misjudgment" all loom large regarding the Taiwan dispute. Unless these trends of misjudgment and miscalculation are sorted and resolved, the concern McNamara had about the Cuban missile crisis is now thoroughly likely to be revisited in some future Taiwan crisis.

In at least one aspect, the Cuban missile crisis and an impending Taiwan crisis are remarkably similar, as described in Chapter VII. Even though the United States "won" the Cuban missile crisis in that Khrushchev backed down, the larger significance is that the United

States realized that despite its intense distaste for Castro and Cuban Communism, located just 60 miles off the U.S. coast, the United States would not try to displace Castro militarily. In fact, the U.S. army was never employed, even in the Bay of Pigs imbroglio, to try to invade Cuba. The United States learned it had to live with a government that it despised.

So, China, despite its immense displeasure with the democratic government of Taiwan will, in the nuclear age, never be able to uproot a government in Taipei with which it has no empathy. The costs and risks of uncontrollable escalation are just too high. Trade, investment, financial policy, and enticement will be needed to replace force use against an irritant just 100 miles off the Chinese coastline. China can manage this relationship in a fruitful way that achieves some of the same ends as unacceptable force use, against a people so similar to those of China itself.

It is not beyond the “unthinkable” to see the world plunged into a regional nuclear war in Asia. In this, we may evaluate the McNamara analysis of the Cuban crisis as a guide. When confronted with the gravity of the previous assessment, it is prudent for U.S. policymakers to think deeply in how they might measure the U.S. nuclear threshold and the U.S. level of unacceptable damage preceding and during a regional nuclear war. It is equally valuable to telegraph, with gusto, to the Chinese Communist Party that a conventional conflict over Taiwan is likely to morph into the nuclear dimension, startled actors notwithstanding. Moreover, it is critical to note in these structural discussions that the U.S. is likely to “win” a regional nuclear war in Asia over Taiwan, with unknown devastation wrought upon the PRC and the CCP. May these somber assessments be a catalyst in reacknowledging the original agreements which form the bedrock of the U.S. – PRC relationship; namely, a recognition to settle the future political status of Taiwan by peaceful means, and to abide by this agreement. Perhaps in time may this

blossom into fruitful nuclear armament limitation accords, similar in disposition as those between the U.S. and Soviet Union after the terror of the Cuban crisis subsided. It took a glimpse of Armageddon for both superpowers to step back from the abyss. Let us hope for, and assist in, the PRC internalizing this history to charter calmer waters in Asia. Indeed, the world is counting on it.

APPENDICES

APPENDIX I

LITERATURE REVIEW OF DETERRENCE

Generally, a review of the literature can be organized via taxonomy of three waves on an empirical spectrum, from abstract conception, advanced study of concepts, to aggregate data analysis. The first wave can be summarized as those studies which explore basic concepts and theoretical logic of nuclear deterrence.⁵⁵⁸ The second wave encompasses studies which advance these generalizations.⁵⁵⁹ The third wave examines these advanced generalizations with empirical evidence.⁵⁶⁰ These studies are not exhaustive of the literature.

DIMENSIONS OF DETERRENCE

The study of the idea of deterrence falls along multiple dimensions: strategy of deterrence; proximity of deterrence; temporality of deterrence; and scope of deterrence.⁵⁶¹ All these aspects help further define the broad concept.

⁵⁵⁸ Schelling, Thomas C. 1960. *The Strategy of Conflict*. Oxford: Oxford Univ. Press.

--1966. *Arms and Influence*. New Haven: Yale Univ. Press.

Garthoff, R. L. 1962. *Soviet Strategy In the Missile Age*. New York: Praeger.

Kahn, Herman. 1962. *Thinking About the Unthinkable*. New York: Horizon.

--1960. *On Thermonuclear War*. Princeton: Princeton Univ. Press.

--1965. *On Escalation*. New York: Praeger.

Brodie, Bernard, ed. 1973. *From Crossbow to H-Bomb*. Bloomington: Indiana Univ. Press.

⁵⁵⁹ Snyder, G. H. 1960. "Deterrence and Power." *Journal of Conflict Resolution* 4: 163 – 78.

--1971. "Prisoner's Dilemma and Chicken Models in International Politics."

International Studies Quarterly 15: 66

Wohlstetter, Albert. 1959. "The Delicate Balance of Terror." *Foreign Affairs* 37: 211 – 34.

Jervis, Robert. 1976. *Perception and Misperception in International Politics*. Princeton: Princeton Univ. Press.

--1979. "Deterrence Theory Revisited." *World Politics* 31: 289-324.

--1989. "Rational Deterrence: Theory and Evidence." *World Politics* 41: 183 – 207.

⁵⁶⁰ Morgan, Patrick M. 1977. *Deterrence: A Conceptual Analysis*. Beverly Hills, CA: Sage.

Russett, Bruce M. 1967. "Pearl Harbor: Deterrence Theory and Decision Theory."

Journal of Peace Research 2: 89-106.

--1963. "The Calculus of Deterrence." *Journal of Conflict Resolution* 7: 97-109.

Fink, Clinton F. 1965. "More Calculations About Deterrence." *Journal of Conflict Resolution* 9: 54 –65.

George, Alexander, and Richard Smoke. 1974. *Deterrence in American Foreign Policy: Theory and Practice*. New York: Columbia Univ. Press.

Huth, Paul K., and Bruce M. Russett. 1984. "What Makes Deterrence Work? Cases from 1900-1980." *World Politics* 36: 496-526.

--1988. "Deterrence Failure and Crisis Escalation." *International Studies Quarterly* 32: 29-45.

--1990. "Testing Deterrence Theory: Rigour Makes a Difference." *World Politics* 42: 466-501.

Huth, Paul K. 1988a. *Extended Deterrence and the Prevention of War*. New Haven: Yale Univ. Press.

-- 1988b. "Extended Deterrence and the Outbreak of War." *American Political Science Review* 82: 423-43.

-- 1990. "The Extended Deterrent Value of Nuclear Weapons." *Journal of Conflict Resolution* 34: 270-90.

⁵⁶¹ Mazarr, Michael. 2018. *Understanding Deterrence*, The RAND Corporation. <https://doi.org/10.7249/PE295>, pp. 2.

The two fundamental strategies of deterrence are deterrence by denial and deterrence by punishment. Deterrence by denial seeks to achieve an outcome of deterrence by creating the perception and, ideally, reality that the aggressor possesses improbable chances of attaining its objective, thus denying an aggressor's opportunity to act. Deterrence by punishment seeks to threaten great retaliation towards an aggressor so as to meet or surpass the aggressor's perceived level of unacceptable damage, thus dissuading an aggressor to act, although the aggressor is indeed capable of achieving its goal. This study focuses on deterrence by denial as the more effective method.⁵⁶²

Proximity of deterrence includes direct deterrence and extended deterrence. Direct deterrence consists of actions taken to prevent attacks on the homeland. Extended deterrence seeks to prevent attacks on a third state which the defender has made a commitment to defend. This study focuses on extended deterrence.

Temporality of deterrence includes general deterrence and immediate deterrence. General deterrence is considered a long-run effort of a deterrent state in safeguarding its security interests, by preventing undesirable outcomes from occurring. This is an enduring priority with a significant time horizon, focused on stability maintenance. Immediate deterrence refers to a crisis moment where deterrence must be achieved immediately to prevent impending or subsequent attacks on a deterrer's specific security interests. Immediate deterrence is inherently situational. This study focuses on both temporalities.

Lastly, scope of deterrence includes narrow and broad concepts of deterrence. A narrow scope focuses upon strategic military superiority alone to deter an aggressor's actions. This is the only tool. A broad scope of deterrence includes multiple tools – to include political and economic leverage, perhaps even cyber capabilities, in addition to military means – with which to achieve deterrence. This study focuses on the narrow scope of deterrence, while recognizing other levers possess value. The scope of deterrence is related to the strategy of deterrence above.

Permeating these various dimensions is the necessity that successful deterrence can only be achieved by affecting the perceptions of the adversary towards a favorable outcome for the deterrer. The tools or means to achieve this are not the ends themselves. The end is the shifting decision calculus which results in the desired state of play for the deterrer.

RELEVANT REVIEW OF DETERRENCE

Russett's⁵⁶³ analysis of 17 crises between 1935 and 1961 is an early aggregate study of deterrence. Each crisis in his data set conformed to the necessary and sufficient conditions for a situation of extended deterrence. Russett⁵⁶⁴ assessed the impact of several potential determinants of credibility, including the "economic, political, and military interdependence of pawn and

⁵⁶² Jakub Grygiel, "How to Deter Russia and China," *Strategika*, February 15, 2022.

<https://www.hoover.org/research/how-deter-russia-and-china>.

⁵⁶³ Russett, Bruce M. 1963. "The Calculus of Deterrence." *Journal of Conflict Resolution* 7: 98

⁵⁶⁴ Russett, Bruce M. 1963. "The Calculus of Deterrence." *Journal of Conflict Resolution* 7: 103.

defender.” Military linkage between the “pawn” and “defender” and the connection with successful deterrence was readily apparent. As Russett states, “in every instance of success the defender supported the pawn with military assistance in the form of arms and advisers,”⁵⁶⁵ and further explains that some degree of military cooperation is virtually essential to successful deterrence.⁵⁶⁶ It is worth noting that if the attacker thinks the chances that the defender will fight are substantial, he will attack only if the prospective gains from doing so are great.⁵⁶⁷ Yet however important these indices of economic, military, and political interdependence are between pawn and defender are, these same indices signify a broader political and cultural indication,⁵⁶⁸ similar to what K. W. Deutsch refers to as mutual sympathy and loyalties, “we-feeling,” trust, and mutual consideration.⁵⁶⁹ Dr. Charles F. Doran explains this in terms of “geographic propinquity, ideological closeness, and commercial attractiveness.”⁵⁷⁰

Huth and Russett⁵⁷¹ expanded Russett’s original sample of 17 to include 54 cases of extended deterrence. The study’s results generally confirmed Russett’s 1963 study. Three hypotheses were supported by the data: (1) An aggressor will be more likely to fight if its existing local military capabilities exceed those of the deterrer; (2) an aggressor is less likely to fight the stronger the economic linkages between the deterrer and the third state; and (3) an aggressor is less likely to fight the stronger the political-military linkages, to include arms transfers, between the deterrer and the third state. One of the primary conclusions of Huth and Russett is that “Insofar as military strength is critical, local military forces in some combination of forces of defender and local protege are likely to prove more effective than overall forces.”⁵⁷² Huth and Russett go on to state an “important contribution to effective deterrence may emerge from achievement of a goal that is usually sought for other purposes – maintaining and strengthening the ties of mutual interest among nation-states in an open global economic system.”⁵⁷³

Fink⁵⁷⁴ replicated Russett⁵⁷⁵ and contributed the distinction between effectiveness and credibility. Effectiveness being the behavioral outcome of the deterrer’s threat, while credibility as the aggressor’s cognitive reaction – belief or disbelief – to the deterrer’s threat. This further complicated the assessment of what constitutes successful deterrence, whereas the reasonings behind such success may be inextricably linked between the two. A primary inference to be drawn is the criticality of linking effectiveness to transmission of such *communication* to the

⁵⁶⁵ Ibid.

⁵⁶⁶ Russett, Bruce M. 1963. “The Calculus of Deterrence.” *Journal of Conflict Resolution* 7: 104.

⁵⁶⁷ Russett, Bruce M. 1963. “The Calculus of Deterrence.” *Journal of Conflict Resolution* 7: 107.

⁵⁶⁸ Russett, Bruce M. 1963. “The Calculus of Deterrence.” *Journal of Conflict Resolution* 7: 108.

⁵⁶⁹ Deutsch, Karl W. *Political Community at the International Level*. Garden City, N.Y.: Doubleday, 1954, pp. 33-64.

⁵⁷⁰ Charles F. Doran, *Theory of Bounded Deterrence*, *Journal of Conflict Resolution*, 17, no. 2, (June 1973): 247.

⁵⁷¹ Huth, Paul K., and Bruce M. Russett. 1984. “What Makes Deterrence Work? Cases from 1900-1980.” *World Politics* 36: 496-526.

⁵⁷² Huth, Paul, and Bruce Russett. “What Makes Deterrence Work? Cases from 1900 to 1980.” *World Politics* 36, no. 4 (1984): 524. <https://doi.org/10.2307/2010184>.

⁵⁷³ Huth, Paul, and Bruce Russett. “What Makes Deterrence Work? Cases from 1900 to 1980.” *World Politics* 36, no. 4 (1984): 524. <https://doi.org/10.2307/2010184>.

⁵⁷⁴ Fink, Clinton F. 1965. “More Calculations About Deterrence.” *Journal of Conflict Resolution* 9: 54 –65.

⁵⁷⁵ Russett, Bruce M. 1963. “The Calculus of Deterrence.” *Journal of Conflict Resolution* 7: 97-109.

aggressor through a medium likely to be understood, to increase the likelihood of credibility in achieving successful deterrence.

Huth⁵⁷⁶ analyzed 58 cases of extended immediate deterrence and produced findings similar to those of Huth and Russett.⁵⁷⁷ Summary of results is as follows:

Deterrence is likely to succeed when the immediate or short-term balance of forces favors the defender, when any previous crisis involving the same adversaries resulted in stalemate rather than a clear victory for either, and when the military and diplomatic bargaining process is characterized by tit-for-tat or firm-but flexible strategies rather than bullying or appeasement. The long-term balance of forces and the defender's possession of nuclear weapons make little difference.⁵⁷⁸

Deterrence can fail. George and Smoke⁵⁷⁹ identified 11 major cases for the United States between 1948 and 1962, beginning with the Berlin Blockade and ending with the Cuban missile crisis. They found at least one of three types of deterrence failure to be present in each instance: (1) *fait accompli*, (2) limited probe, and (3) controlled pressure. *Fait accompli* is achieved when the initiator believes the defender lacks commitment, resulting in a maximum effort to "achieve the objective quickly so as to deprive the defender of the time and opportunity necessary to reverse his policy of no commitment." The limited probe failure occurs when the initiator believes that the defender's commitment is "uncertain." Here the option chosen is a controlled application of force that requires a clarification of the defender's interests. Controlled pressure means the commitment is "unequivocal" but soft. Subsequently, pressure is applied to convince the defender that "great difficulty and ... unacceptable risks" would result from attempting to honor the commitment.⁵⁸⁰ Further, George and Smoke state that "the requirements for implementing deterrence are much less a matter of acquiring, proving possession of, or using raw military capabilities than a matter of demonstrating concern, motivation and commitment."⁵⁸¹

⁵⁷⁶ Huth, Paul K. 1988a. *Extended Deterrence and the Prevention of War*. New Haven: Yale Univ. Press.

-- 1988b. "Extended Deterrence and the Outbreak of War." *American Political Science Review* 82: 423-43.

⁵⁷⁷ Huth, Paul K., and Bruce M. Russett. 1984. "What Makes Deterrence Work? Cases from 1900-1980." *World Politics* 36: 496-526.

⁵⁷⁸ Huth, Paul K., and Bruce M. Russett. 1988. "Deterrence Failure and Crisis Escalation." *International Studies Quarterly* 32: 29.

⁵⁷⁹ George, Alexander, and Richard Smoke. 1974. *Deterrence in American Foreign Policy: Theory and Practice*. New York: Columbia Univ. Press: 537-544.

⁵⁸⁰ George, Alexander, and Richard Smoke. 1974. *Deterrence in American Foreign Policy: Theory and Practice*. New York: Columbia Univ. Press: 537, 541.

⁵⁸¹ Alexander George and Richard Smoke, *Deterrence in American Foreign Policy* (New York: Columbia University Press, 1974), 52.

APPENDIX II

BOUNDED DETERRENCE MODEL

The bounded deterrence model develops the primary variables of NT and LUD in the following ways:

1. *Goal multiplicity*. A nuclear power realistically assesses the degree to which it would threaten or expend nuclear force in pursuit of any of a number of political goals. The orientation of the deterrence model must express an actor goal.
2. *Utility of a goal (W)*. Describes the utility of the deterrer's extending commitments of nuclear defense to state S at time t. The utility of S to D at time t is W_d . Inversely, the aggressor's valuation of goals is reflected in the varying utility attributed to the proposition that the aggressor favors the use of nuclear force as means to achieve goal G associated with state S at time t. The utility of G_s to A at time t is W_a utiles.⁵⁸²
3. *Force magnitude (i)*. The amount of force expended by the aggressor in pursuit of a particular goal at any given time during the period of tensions. The range is from 0 to n, the total amount of destructive capability in a government's stockpile.
4. *Hostilities continuum* $X(W, i) \rightarrow Y(i^*)$. The degree of hostilities felt by a state is a function of the utility of the goal threatened and the amount of force used or threatened by an opponent. This two-space, itself a map from an n-space in which are located the p components of utility suggested above and the q components of threatened or used force ($n = p + q$), may be projected onto a one-dimensional continuum representing the degree of hostilities by the functions f and g defined below. The resultant continuum ranges from 0 to n units of force.⁵⁸³
5. *Nuclear Threshold (NT)*. An index of the willingness of an actor to expend nuclear force in defense or pursuit of a goal, the nuclear threshold is the first use of nuclear weapons. It is the greatest lower bound of nuclear conflict. The NT for a particular goal is a function of both the utility of the goal for an actor and the force magnitude an aggressor uses or threatens: $NT_d = f(W_d, i_a)$. The functional relation f is the nuclear threshold for a given objective as directly proportional to the threat from the aggressor and inversely proportional to the utility of the goal to the deterrer. The greater the desirability of the goal and the lower the force magnitude inducing nuclear retaliation, the lower the NT. The NT is located on the hostilities continuum by the functional relation $NT_d = j_a/W_d$. Similarly, $NT_a = j_d/W_a$.⁵⁸⁴
6. *Level of unacceptable damage (LUD)*. The LUD is an index of the willingness of a government to yield an objective in the face of excessive costs, human and financial. It is

⁵⁸² Charles F. Doran "A Theory of Bounded Deterrence." *Journal of Conflict Resolution* 17, no. 2 (June 1973): 247. <https://doi.org/10.1177/002200277301700204>.

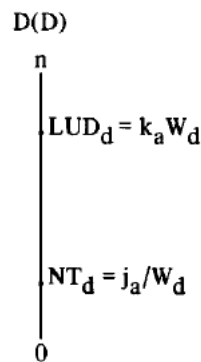
⁵⁸³ Charles F. Doran "A Theory of Bounded Deterrence." *Journal of Conflict Resolution* 17, no. 2 (June 1973): 248. <https://doi.org/10.1177/002200277301700204>.

⁵⁸⁴ Ibid.

the least upper bound of nuclear conflict. The term refers to the point at which hostilities become so extreme that a deterrer will concede a disputed objective. Again, the LUD for a given objective is a function of both the utility of the goal and the force magnitude employed by the aggressor: $LUD_d = g(W_d, i_a)$. This functional relation g is the LUD for a particular goal as directly proportional to both the threat from the aggressor and the utility of the goal to the deterrer. The greater the utility of the goal and the greater the force magnitude which the actor is willing to absorb in defense of that goal, the high the LUD. The LUD is located on the hostilities continuum by $LUD_d = W_d k_a$. Similarly, $LUD_a = W_a k_d$.⁵⁸⁵

7. *Probability of outcomes.* Given these lower and upper bounds to nuclear confrontation in a political world of variable goals, one can represent the situations in which the probability favors deterrence, capitulation, conflict, win, lose, peaceful stalemate, and conflictual stalemate. These relations are best seen with the aid of a schematic representation of the bounded deterrence model.

FIGURE I: Deterrer's NT and LUD Related to Utility of Goal to D

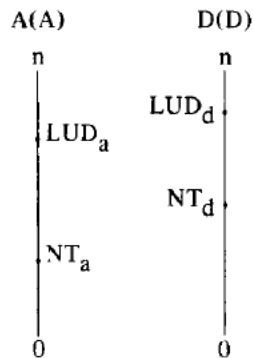


We may locate the $NT_d = j_a / W_d$ and the $LUD_d = k_a W_d$ on the vertical hostilities continuum. Here the NT and the LUD correctly reflect the utility of the goal to D and appear as the lower and upper bounds respectively of D's participation in a nuclear conflict. The distance ($LUD_d - NT_d$) and the absolute location of the NT show the true extent of the deterrer's nuclear "guarantee" to a third state. But we must also locate the $NT_a = j_d / W_a$ and the $LUD_a = k_d W_a$ on a hostilities continuum in order to determine the upper and lower bounds to the interaction between deterrer and aggressor.⁵⁸⁶

⁵⁸⁵ Ibid.

⁵⁸⁶ Charles F. Doran "A Theory of Bounded Deterrence." *Journal of Conflict Resolution* 17, no. 2 (June 1973): 249-250. <https://doi.org/10.1177/002200277301700204>.

FIGURE II: Upper and Lower Bounds of Deterrer's and Aggressor's NT and LUD



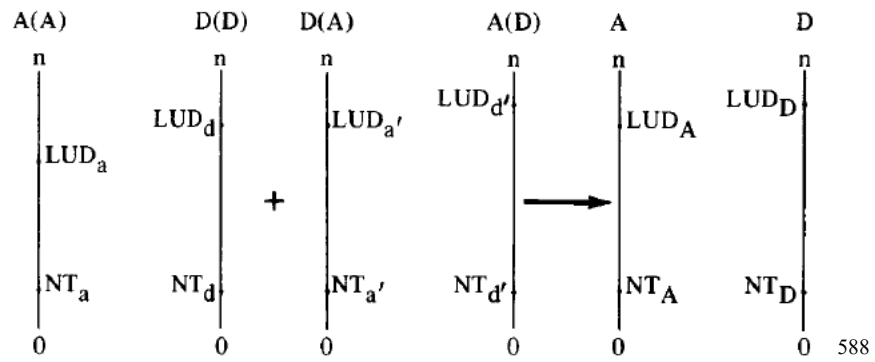
A visual comparison of their bounds suggests the following outcomes, the number of cases being determined by permutation of the bounds subject to the inequality constraint.⁵⁸⁷

Probability of deterrence	$LUD_a < NT_a, NT_d, LUD_d$	6 cases
Probability of capitulation	$LUD_d < NT_a, NT_d, LUD_a$	6 cases
Probability of conflict:	$NT_a, NT_d < LUD_a, LUD_d$	12 cases
Probability of win	$LUD_a < LUD_d$	
Probability of lose	$LUD_d < LUD_a$	

An analysis of the logical outcomes emerging from bounded deterrence appears below. Any calculus of the possible outcomes of a nuclear conflict situation prior to the actual use of such weapons must incorporate each actor's evaluations: the deterrer's own attitudes toward the object of conflict and his projection of the aggressor's view, and vice versa. These partial views A(A), D(D), A(D), and D(A) together determine the constituents of the conflict paradigm A,D. Of course, the individual components are not simply added but are averaged, with equal weight being given to the egocentric and exocentric views (unless otherwise consciously or subconsciously weighted).

⁵⁸⁷ Ibid.

FIGURE III: Final Formulation of Deterrer and Aggressor Interaction



⁵⁸⁸ Charles F. Doran "A Theory of Bounded Deterrence." *Journal of Conflict Resolution* 17, no. 2 (June 1973): 251. <https://doi.org/10.1177/002200277301700204>.

APPENDIX III

A NOTE ON CYBER OPERATIONS

In contemplating nuclear war outcomes, cyber kinetics are likely to be very fluid, dangerous, unpredictable, and likely to be only retaliatory for both sides while failing to achieve a dominance or “burden-passing” in escalation for either side.⁵⁸⁹ This is because there are not truly any definable, or mutually recognized, thresholds – “rules of the road” – in cyber-attacks notwithstanding conventional use for theft, espionage, deception, or political signaling of discontent and the obvious electronic attacks which affect physical property, such as the infamous Stuxnet virus. There are always weaknesses to exploit in computer networks. For an aggressor, in bounded deterrence, to destroy some portion of the defender’s military, infrastructure, industry, or society, is to invite an in-kind, and unlikely preventable, response. There is little advantage to be gained from cyber attacks in immediate deterrence that go beyond the aforementioned conventional uses. This perhaps is why great powers at present are content with the relentless cycle of espionage and deception, attack and counterattack, destabilization and retaliation activity which has come to characterize a less destructive, more ubiquitous, and quiet way of great power cyber struggles.⁵⁹⁰

There is also a sense of reversibility in the cyber dimension. An attack on a country’s entire electric grid could also conceivably be retracted with the proviso that sensitive physical material is not irreparably destroyed.⁵⁹¹ There is no retraction after a tactical nuclear weapon is detonated. There is a finality which looms over nuclear escalation that the structural parameters of cyber struggles cannot accomplish at similar scale. A coded attack is detonated or a weakness exploited; for political reasons, it can be retracted. This makes for little care in attempting to foresee and calculate how a country’s cyber attack may impact the decisions of follow-on rounds of cyber attack. It is simply assumed there would be proportional retaliation after each bout of destabilization and retaliation. In this sense, cyber attacks are acceptably mindless, with little strategic effect achieved, at scale comparable within the bounded deterrence parameters, though there are obvious tactical advantages. There is no equivalent of a “cyber Armageddon” that cannot, at least in part, be retracted after being reached. Even if a “Cyber Armageddon” is reached, this is not an existential crisis to humanity to the progeny of the human race. Cyber can only attack connected electronic devices. Yes indeed, our way of modern life is predicated upon much of these electronic networks and systems. Lives would invariably be lost; famine and other natural disasters may begin through disruption of supply chains to deliver necessities and goods. And though certainly very troubling, this is not existential. Furthermore, this can be, at least in

⁵⁸⁹ For a deeper analysis on the role and nature of electronic warfare between great powers, please see Herbert Lin and Amy B. Zegart, eds., *Bytes, Bombs, and Spies: The Strategic Dimensions of Offensive Cyber Operations* (Washington, D.C: Brookings Institution Press, 2018); Ben Buchanan, *The Cybersecurity Dilemma: Hacking, Trust and Fear between Nations* (Oxford New York: Oxford University Press, 2016); P. W. Singer, *Cybersecurity and Cyberwar: What Everyone Needs to Know* (Oxford ; New York: Oxford University Press, 2014); and Kim Zetter, *Countdown to Zero Day: Stuxnet and the Launch of the World’s First Digital Weapon*, First Edition (New York: Crown Publishers, 2014).

⁵⁹⁰ Ben Buchanan, *The Hacker and the State: Cyber Attacks and the New Normal of Geopolitics* (Cambridge, Massachusetts: Harvard University Press, 2020).

⁵⁹¹ Justin Lynch, “Why Reversible Cyberattacks Could Become Standard in Digital Warfare,” C4ISRNet, August 29, 2018, <https://www.c4isrnet.com/dod/cybercom/2018/08/29/why-reversible-cyberattacks-could-become-standard-in-digital-warfare/>.

part, reversed by cyber defenders or those attackers who for global pressures and political reasons decide to also retract and cleanup the mess. In this sense, there would likely be overwhelming desire across the globe to retract dangerous malware, cleanup disarrayed grids and systems, and embark on a de-escalatory path that is of course mutually beneficial for the two parties and the world. This would be a great mess indeed but would not solve the fundamental desires of CCP annexation of Taiwan. And perhaps during this period of “Cyber Armageddon,” the CCP would still solidify its goal of annexation. This would be a most chaotic moment in history where one problem causes another magnitudinous global problem without solving the initial and indeed, Taiwan may be annexed regardless.

In this, cyber escalation can be at best only a complement or auxiliary to a nuclear escalation ladder. This fluidity makes for greatly heightened risk of destruction without any material chance for either side to gain an advantage, as there are exploitable weaknesses in every valuable and protected cyber structure. It would be uninformed destruction without strategic effect. Also, this is inherent in the nature of cyber: it is difficult to ascertain when one is attacked, how one was attacked, and what to do about it in order to justify a retaliatory response. Inherently so because of lack of direct and immediate attribution, and long lead times to discover the depths of the damage. Cyber can knock out vast swaths of a countries economic or energy grid, resulting in months or years of semi-permanent damage. This directly affects, in very real material everyday ways, the lives of the population, causing potentially uncontrollable nationalistic impulses which may be hard to control for policy elites. At its best, cyber attacks induce political pressure, but are secondary to nuclear weapons in changing the decision calculi. This is a consequence of no great power possessing structural leverage over another solely in the cyber dimension.

Cyber also greatly increases escalation as it seems to be a higher-sloped escalation ladder. No one “sees” the damage, only feels it. This is a dangerous dynamic for escalation and making sober policy decisions. Ironically, tactical nuclear exchange would be more pinpointed and casualties and/or damage lessened than a cyber attack, in even a strategic location where a tactical nuclear weapon is detonated, instead of a mere symbolic location.

CCP cyber operations, to include cyber influence operations, may attempt to unilaterally reach the U.S. LUD if or when the U.S. begins to execute veiled or open threats of nuclear force as a means to preempt such use. It is unclear whether CCP cyber kinetics would be proficient in penetrating redundant C4ISR communications for nuclear use for a variety of reasons. If so, however unlikely, the U.S. may find itself in the uncomfortable circumstance where its nuclear forces have been electronically neutralized by an adversary, by default reaching the U.S. LUD, whether agreeable to policymakers. Yet, if this task is impossible or unchosen by CCP, it seems cyber kinetics on national targets such as power grids, large utility firms, or indiscriminate attack of influential American firms to include capital and population centers like Silicon Valley, California would be high-value targets in attempting to arrive at the U.S. LUD through punishment of domestic sectors vital to internal stability. Though not a nuclear option, this can occur at the nascent stages of nuclear brinkmanship which may prevent further escalation in the context of CCP maneuvering to outplay the U.S. This may also accelerate the U.S. policy option to use regional nuclear weapons as a means to “burden-pass” to the CCP, a move which would be advantageous to the U.S. if its LUD was not reached simultaneously in cyber operations. If

not, however, the U.S. will indeed be conducting similar operations to achieve a similar goal. How effective U.S. cyber kinetics would be against the PRC is an unknown in the public domain, yet it is reasonable to conclude attacks on power grids, infrastructure, national champions, and other fundamental pillars of PRC society would be executed in the attempt to reach the CCP LUD before furthering escalation into the more inexorable tranches of nuclear brinkmanship.

Also, though tempting, it is unlikely the CCP will retaliate after first exchange with a full-length ICBM, because though it offers greater damage, the structural dynamics of the “burden-passing” would be so that this gratuitous act would only seem to infuriate U.S. without offering CCP an escalation advantage or strategic leverage. The foreseeable consequences would be seen plainly in countering. If a counterattack were to occur, the U.S. would surely reciprocate, and the certain U.S. response of a CCP nuclear attack would be made explicitly clear through recent experience. The strategic decision cycle would then have been completed with the CCP forced to decide whether to continue visiting nuclear devastation upon itself or to come to terms.

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